



TECHNICAL ASSISTANCE REPORT

URUGUAY

Monetary Policy Implementation and Liquidity Management

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Prepared By

Thiago Christiano Silva; Ole Gregarek (both MCM); Kei Moriya (ITD); Andre de Oliveira Amante (MCM STX)

Authoring Department

**Monetary and Capital Markets
Department**

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International Monetary Fund, IMF Publications
P.O. Box 92780, Washington, DC 20090, U.S.A.
T. +(1) 202.623.7430 • F. +(1) 202.623.7201
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Glossary

AFAP	Pension Fund Administrator
ARDL	Autoregressive Distributed-lag
ARIMA	Auto-Regressive Integrated Moving Average
BCU	Central Bank of Uruguay
BEVSA	Bolsa Electrónica de Valores de Uruguay
BVM	Bolsa de Valores de Montevideo
CCP	Central Counterparty
CD	Certificate of Deposit
CIC	Currency in Circulation
COPOM	Monetary Policy Committee
ELA	Emergency Liquidity Assistance
ETS	Exponential Smoothing
FPL	Permanent Liquidity Facility
FRFA	Fixed Rate Full Allotment
FSR	Financial Stability Report
FTO	Fine-Tuning Operation
FX	Foreign Exchange
GovD	Government Deposits
ISF	Fine Tuning Operations
ITLUP	Sovereign Nominal Yield Curve
LRM	Monetary Regulation Bills
M1	Money Aggregate
MAE	Mean Absolute Error
MEF	Ministry of Economy and Finance
MPC	Monetary Policy Committee
MRR	Minimum Reserve Requirement
MoU	Memorandum of Understanding
NFA	Net Foreign Assets
OIN	Other Items Net
OMO	Open Market Operation
PG-Call	Secured peso call market
RF	Machine Learning Model (Random Forest)
RMSE	Root Mean Squared Error
TA	Technical Assistance
TMM	Overnight Interbank Money Market Rate
TPM	Monetary Policy Rate
T1D	Overnight Interbank Rate
UI	Inflation-indexed
UYU	Uruguayan Peso
UFEX	Bolsa de Valores S.A.
VAR	Vector Autoregression

Preface

At the request of the Central Bank of Uruguay (BCU), an MCM visited Montevideo from November 24 to December 5, 2025, to provide technical assistance on monetary policy implementation and liquidity management. The mission reviewed BCU's operational framework, including open market operations, reserve requirements, standing facilities, central bank bills, liquidity forecasting, and institutional arrangements for monetary operations.

The mission met with BCU management, including Mr. Guillermo Tolosa, President of the BCU; Ms. Isidra Delfino, Manager of Institutional Communications; Mr. Gerardo Licandro, Manager of Economic Advisory; Mr. Leonardo Vicente, Manager of Monetary Policy; Mr. Fabio Malacrida, Manager of the Asset and Liability Management Area; and other senior officials and technical staff at BCU. The mission wishes to express its gratitude for their warm hospitality, excellent cooperation, and the candid and constructive discussions held throughout the visit.

The mission also met with representatives from banks, non-bank financial institutions, journalists, unions, consultancy companies, academia, and the media. The mission would like to thank the authorities for their hospitality, excellent cooperation, and the candid and constructive discussions held throughout the visit.

Executive Summary

Uruguay's interest-rate-based framework is both credible and effective in ensuring monetary policy transmission. Since adopting the overnight interbank rate (T1D) as its operational target, the BCU has consistently maintained it within a few basis points of the Monetary Policy Rate (Tasa de Política Monetaria, TPM), with steering errors comparable to those observed in advanced inflation-targeting regimes. This tight operational control is transmitted effectively along the short end of the peso yield curve: policy rate changes pass through strongly to short-tenor Monetary Regulation Bills Letras de Regulación Monetaria, (LRM) yields and key peso deposit rates. Term premia are economically small at the front end of the curve. Although they rise at longer maturities, term premia remain moderate and are primarily explained by the country's risk and medium-term inflation expectations.

At the same time, achieving this performance requires an operationally intensive framework in a shallow, highly dollarized financial system. Approximately three-quarters of bank deposits remain denominated in foreign currency, constraining peso intermediation and limiting the scope for market-based monetary policy transmission. Unsecured peso interbank activity is thin beyond overnight, structural excess liquidity remains substantial, and routine liquidity redistribution is channeled mainly through the central bank's balance sheet. Under these conditions, the BCU has relied on frequent—but not always entirely predictable—fine-tuning operations, which, in practice, establish a very narrow “mini-corridor” around the TPM within a much wider formal standing facility range. This configuration is effective in keeping the T1D close to the policy rate but constrains interbank price discovery and market development.

The mission recommends strengthening the liquidity management framework by adding a weekly fixed-rate, full-allotment seven-day operation at the TPM as the core liquidity management tool. The weekly tender would be able to address short-term fluctuations in the aggregate liquidity conditions, allowing the interest rate anchoring to TPM with fewer and more predictable operations. To support short-term liquidity management, the standing facilities should be recalibrated to provide a narrower corridor of ± 50 basis points around the policy rate. In addition, LRM should continue to be issued to absorb structural liquidity and shape the short end of the curve, under a renewed operational framework that concentrates issuance in three standardized maturities—3, 6, and 12 months—to improve the transmission mechanism and price discovery. During the transitional phase, the BCU is expected to continue relying on fine-tuning operations with rates around the TPM until the new operational setup fully anchors short-term rates. Further operational improvements to standing facilities and reserve requirements are also proposed to strengthen liquidity management and enhance monetary policy transmission.

Modernizing liquidity forecasting and data infrastructure is essential to support this operating framework and reduce operational risk. Today's forecasts deliver usable point estimates but rely heavily on complex Excel files, tacit knowledge, and incomplete information on government cash flows, with forecast vintages often overwritten and uncertainty not systematically quantified. The mission recommends reframing liquidity forecasts around a standard liquidity table, in which autonomous factors such as currency in circulation (CiC) and government deposits feed directly into projections of aggregate reserves relative to the requirement, plus a small buffer. The IMF MCMCO liquidity forecasting toolkit would automate model estimation, forecast evaluation, and the production of prediction intervals, preserving immutable forecast vintages for ex-post assessment. Strengthened information sharing with the Treasury, including a currency split of fiscal flows and structured coordination on auction calendars, is critical to improve the forecast of government deposits, the primary source of volatility.

Uruguay's LRM market serves a dual purpose: it enables the BCU to absorb structural liquidity surpluses through regular issuances and anchors the short end of the yield curve, including the

segment most relevant for market development. Empirical analysis confirms that short-dated LRMs move closely with the policy rate, while the 12-month node increasingly reflects expectations and risk premia. In addition, auction results suggest that the BCU acts as a price maker at short tenors and more as a price taker at 6- and 12-month maturities. Against this background, the mission recommends concentrating issuance in three standardized tenors—3, 6, and 12 months—with clustered maturities and discontinuing the 30-day bill, which largely duplicates the operational target while fragmenting liquidity. In this structure, the 3-month LRM operates as a near-implementation instrument tied to the expected policy path, while the 6- and 12-month LRMs function primarily as benchmark points for market development. Standardizing auction rules and cutoff conventions, and pre-announcing fixed issuance amounts, would deepen benchmark lines, foster secondary trading, and give banks, firms, and institutional investors a clearer, more reliable peso curve for funding and portfolio decisions.

At the horizon of structural liquidity absorption, the mission further recommends maintaining a split-curve arrangement in which the BCU issues LRMs up to 12 months while the Treasury concentrates on longer-dated securities. This configuration preserves operational autonomy for monetary policy at the short end, while supporting the development of a unified sovereign curve at longer maturities. To make this split effective in practice, cash- and debt-management coordination needs to be strengthened so that LRM issuance volumes, Treasury calendars, and the use of government paper for structural absorption are planned on a joint, forward-looking basis.

Strengthening the institutional structure of the BCU's operating framework would help consolidate the transition from a monetary aggregates approach to an interest-rate-based regime.

At present, liquidity forecasting remains within Monetary Policy Management, while the execution of LRMs and fine-tuning operations is placed in the Asset and Liability Management area, with a small Monetary Operations Division responsible for day-to-day implementation. The mission recommends consolidating these functions in a dedicated Monetary Operations and Market Development area, with sufficient staffing and a mandate to keep the overnight rate close to the TPM, supported by specialist units for execution, short-term liquidity forecasting, market intelligence, market-development initiatives, and back-office support. These organizational adjustments are essential to make the proposed operating framework workable in practice and to sustain strong rate control as peso markets deepen and de-dollarization advances.

Recommendations

Table 1. Recommendation Summary

Recommendations	Priority	Timeframe ¹	Paragraph
Monetary Policy Framework			
Introduce a weekly fixed-rate, full-allotment 7-day main operation at the policy rate as the core liquidity-management tool to reinforce transmission and simplify allocation.	High	Short-term	82
Calibrate the width of the corridor for deposit and lending standing facilities to at least ± 50 bps around the policy rate, ensuring it remains wider than typical market transaction costs to avoid excessive use of the facility and encourage market transactions.	High	Short-term	109
Ensure that standing facilities are accessible to all eligible counterparties that meet collateral and risk management requirements, removing time-based caps and similar quantitative constraints.	High	Short-term	119
Remunerate peso reserve requirements at the policy rate to improve transmission.	High	Immediate	96
Unify reserve requirement ratios in pesos across tenors to better align liquidity management incentives with the operating framework, reduce distortion, and simplify the application of the requirement.	Medium	Short-term	103
Move MRR from contemporaneous averaging to a backward-looking calibration to reduce operational complexity.	Medium	Medium-term	107
Lower the effective reserve requirement ratios in pesos to reduce liquidity parked in non-marketable assets.	Medium	Short-term	106

De-stigmatize the standing lending facility by clearly separating it from emergency liquidity assistance (ELA).	Medium	Medium-term	122
Strengthen the organizational capacity of the monetary policy operations area to reinforce sound liquidity management practices.	Medium	Medium-term	125
Liquidity Forecasting			
Reframe liquidity forecasts around a standard liquidity table focused on reserves, avoiding references to “money supply” or “money demand”, and treating the reserve requirement as a constraint rather than a forecast object.	High	Immediate	43
Distinguish forecasting horizons and purposes (short-term, one-month-ahead, and medium-term) and preserve immutable forecast vintages to improve operational use and separate statistical forecasts from judgment.	High	Immediate	44
Increase the robustness and the frequency of forecasts once the new toolkit is in place and calibrated to improve the responsiveness of operations to evolving liquidity conditions during the MP.	Medium	Medium-term	46
Systematically produce and use forecast uncertainty (prediction intervals) as an explicit operational input for calibrating liquidity buffers and operation sizes to improve the risk-based calibration of structural and fine-tuning operations.	Medium	Short-term	49
Evaluate forecast errors regularly and transparently, including structured reviews before new monthly forecasts and periodic model re-evaluation to detect structural changes in liquidity drivers early on.	High	Immediate	50
Strengthen information sharing with the Treasury through a formal MoU that provides fiscal reports disaggregated by currency for better GovD forecast.	Medium	Medium-term	53

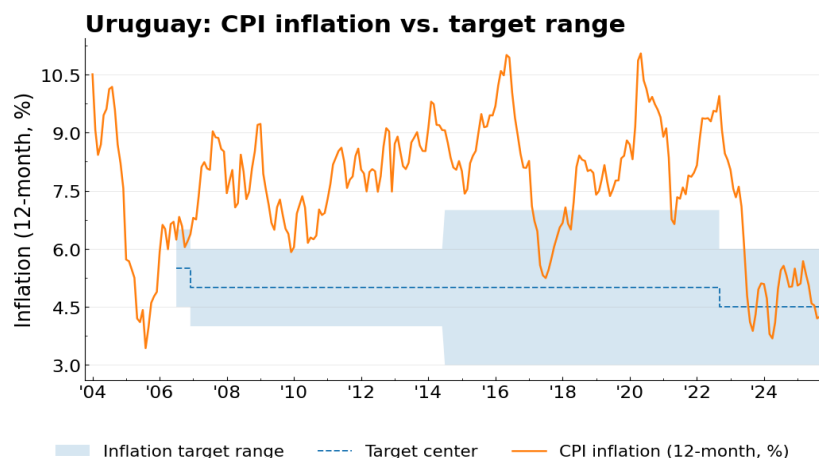
Money Market Development and Managing Liquidity Surplus			
Concentrate LRM issuance in three standardized tenors—3 months, 6 months and 12 months—to deepen liquidity, support secondary-market trading, and strengthen the reference-rate role of LRMs.	High	Short-term	137
Standardize LRM auction design and cut-off conventions, and pre-announce fixed issuance amounts to support transparent price discovery.	Medium	Short-term	143
Adopt LRM maturity concentration and reduced auction frequency to enhance market liquidity and improve price formation.	Medium	Short-term	147
Maintain, in the short term, a split-curve arrangement—BCU LRMs up to 12 months and Treasury securities beyond—while strengthening cash- and debt-management coordination with the Ministry of Economy and Finance and assessing, over the medium term, the merits of a transition toward a single-instrument (Treasury-only) model for structural liquidity absorption.	Medium	Medium-term	155

¹ Near term: < 12 months (split here as “Immediate” and “Short-term”); Medium term: 12–24 months.

Introduction

- 1. The BCU has conducted monetary policy with a primary mandate of price stability within an inflation-targeting framework since 2005.** The BCU has operated with an explicit inflation target range—currently 3–6 percent—guiding its policy decisions. To implement this framework, the BCU controls the marginal cost of peso funding by targeting the overnight interbank peso rate (TMM/T1D), which has served as the operational target since 2020 and is kept closely aligned with the TPM set by the Monetary Policy Committee (COPOM). This set-up is intended to ensure that short-term money-market rates accurately reflect the policy stance and transmit it to broader financial conditions, providing banks with a clear overnight price signal and a stable anchor for the term structure of interest rates.
- 2. The mission aims to support the BCU in refining its operational framework so that changes in the policy rate are transmitted to money markets and, more broadly, to credit, funding conditions, and the real economy.** At the request of the authorities, an IMF Monetary and Capital Markets Department (MCM) technical assistance mission was tasked with reviewing the implementation of monetary policy, including liquidity management practices and instrument calibration. The mission focuses on strengthening the design and use of the operating toolkit—including open market operations (OMOs), central bank bills, standing facilities, and reserve requirements—and on modernizing liquidity forecasting so that the overnight rate remains aligned with the TPM under varying conditions. Enhancing these elements should support more predictable transmission, reduce reliance on ad hoc fine-tuning, and create more substantial incentives for market-based liquidity management.
- 3. The BCU has recently undertaken significant institutional reforms to enhance the effectiveness of monetary policy within its inflation-targeting framework.** Since 2020, these measures have included: adopting the overnight interbank rate as the primary operational target; narrowing the inflation tolerance band from 3–7 percent to 3–6 percent, with greater emphasis on the midpoint; increasing the frequency of COPOM meetings; and strengthening transparency through improved communication of policy decisions. Collectively, these measures have strengthened the credibility of the monetary policy framework and enhanced the effectiveness of inflation control (Figure 1).

Figure 1. CPI Inflation versus Target Range



Source: IMF staff calculation using BCU data.

4. **Despite recent progress, monetary policy implementation in Uruguay is complicated by high financial dollarization and a shallow peso money market.** Approximately three-quarters of bank deposits—and a significant share of lending—are denominated in U.S. dollars, so many financial contracts respond more to foreign interest rates and exchange-rate expectations than to domestic peso rates. At the same time, unsecured interbank trading in pesos is limited, as liquidity is often redistributed through central bank operations, with peer-to-peer trades accounting for only a small share of turnover. Given the relatively wide interest-rate corridor around the TPM and the presence of structural excess liquidity, the overnight rate would tend to fluctuate more widely—and gravitate toward the floor—if the BCU did not intervene frequently through fine-tuning operations. In practice, mission analysis indicates that the BCU has had to intermediate a large share of routine liquidity shocks through its own balance sheet to keep the overnight rate on target, with limited market-based price discovery and shallow secondary markets for BCU instruments. By providing more predictable liquidity conditions and deeper benchmark instruments, the suggested framework can reduce premia embedded in peso assets and, at the margin, support a gradual shift to peso portfolios.
5. **This report outlines a roadmap to modernize the operational framework and enhance liquidity management in this challenging environment.** Section I reviews the current monetary policy implementation framework and proposes adjustments to the operational toolkit—particularly the design and use of OMOs, the interest-rate corridor, and reserve requirements—to support more predictable and market-friendly transmission. Section II focuses on liquidity forecasting, assessing current practices, and presenting a streamlined, model-based framework to forecast key autonomous factors and system-wide liquidity over relevant horizons. Together, these sections provide a coherent set of recommendations to align instruments, liquidity forecasts, and market incentives with the BCU's price-stability mandate, while considering Uruguay's high dollarization and the need to deepen the peso money market over time.

I. Performance Assessment

6. **The BCU conducts monetary policy with an interest rate target aiming to influence short-term market rates and guide expectations.** To achieve this goal, the BCU relies on a comprehensive set of instruments, including fine-tuning operations, issuance of LRM, a reserve requirement system based on maintenance-period averaging, and an interest rate corridor. Fine-tuning operations are intensively used to manage short-term liquidity fluctuations and ensure that market rates remain aligned with the policy rate, while LRMs serve as a sterilization tool to absorb excess structural liquidity. Reserve requirements complement these instruments by offsetting the impact of short-term liquidity fluctuations. Together, these instruments enable the BCU to maintain effective control over monetary conditions and to influence short-term interest rates. The framework also incorporates an interest rate corridor, but its large spread between lending and deposit rates (ranging from 1 percent to 15 percent) reduces its role in guiding market rates.
7. **This section assesses how effectively the BCU's operating framework aligns the marginal cost of peso funding with its policy stance and transmits policy changes along the yield curve and other market rates.** It first examines whether the T1D, used as the operational target, effectively reflects the marginal cost of funding and measures how closely it tracks the TPM using deviation metrics benchmarked against peer central banks. It then analyzes the pass-through from the policy rate to overnight and term money market rates, as well as to bank deposit and lending rates. Ultimately, the assessment focuses on whether controlling the overnight operational target translates into a broader alignment of banks' overall marginal cost of funding with the desired monetary policy stance.

8. **To complement the quantitative analysis, the IMF team designed and implemented a structured pre-mission survey of key market participants.** The questionnaire was sent to institutions that act as primary dealers in central bank and government securities, and to major pension-fund administrators. Responses were received from a group of banks that together account for close to 90 percent of total system deposits and a similar share of banking assets. Thus, the banking survey results can be considered highly representative of the core financial system. On the institutional-investor side, the responding pension-fund administrators manage over half of total assets under management in the mandatory pension-fund system, implying that the survey evidence broadly captures the perspective of the dominant peso-denominated institutional investor base. The survey covered liquidity-management practices, the role of peso yield curves and reference rates in pricing, the strength and speed of monetary-policy pass-through across instruments and maturities, and views on the drivers of financial dollarization.

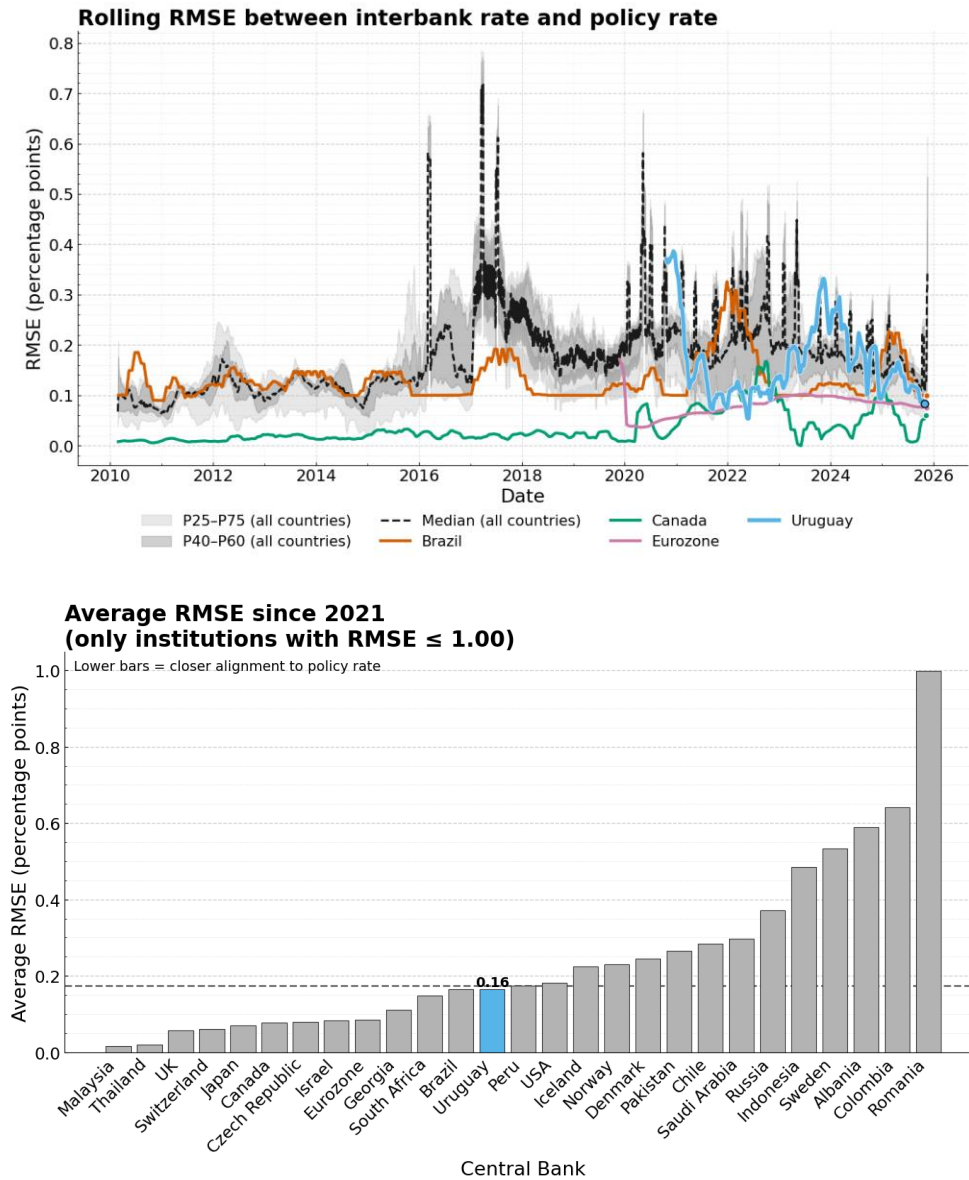
A. Marginal Cost of Funding

9. **The BCU sets the TPM to steer the T1D, which serves as the primary proxy for the marginal cost of funding in domestic currency.** The operating framework aims to keep T1D—the operational target—close to the TPM so that banks face a marginal funding cost consistent with the desired policy stance. In practice, the T1D is the reference rate for the overnight money market and reflects the daily rate at which financial institutions lend to one another for short-term periods.
10. **The design and construction of the T1D are consistent with good benchmark practices, providing a reliable measure of marginal funding costs.** The BCU publishes the T1D every business day, together with monthly averages and detailed transaction volumes, disaggregated into interbank trades and operations with the BCU, showing sizable activity in the overnight peso segment of the money market. Market and BCU reports indicate that overnight call-peso instruments account for most peso money-market operations, so the T1D is effectively a volume-weighted average of the main pool of overnight peso funding for banks rather than a thin or idiosyncratic segment. Viewed against IOSCO principles for benchmark rates, the T1D reflects data sufficiency, high quality, and a reasonable degree of representativeness: it is based on actual arm's-length overnight transactions in an active wholesale market rather than expert judgment, is referenced in private contracts and legal provisions, and is calculated using a straightforward transaction-weighted average methodology—subject to the usual need to monitor market depth and concentration over time.

B. Pass-through to Overnight Rates

11. **The pass-through from the policy rate to the overnight market rate is rapid, nearly complete, and compares favorably with international peers.** Daily data show that changes in the TPM are quickly reflected in T1D, with limited and short-lived deviations. This qualitative evidence is corroborated by rolling Root Mean Squared Error (RMSE) measures of the gap between the overnight interbank rate and the policy rate. Figure 2 plots a 60-day rolling RMSE for Uruguay and a set of emerging and advanced inflation-targeting central banks since 2010. Uruguay's average deviation of the operational target from the policy rate declines markedly after the adoption of the current operating framework. It now fluctuates within or below 16 basis points, broadly in line with some selected inflation-targeting frameworks, including the Eurozone in recent periods.

Figure 2. Steering the Interbank Rate Around the Policy Rate



Source: IMF staff calculation using BCU data.

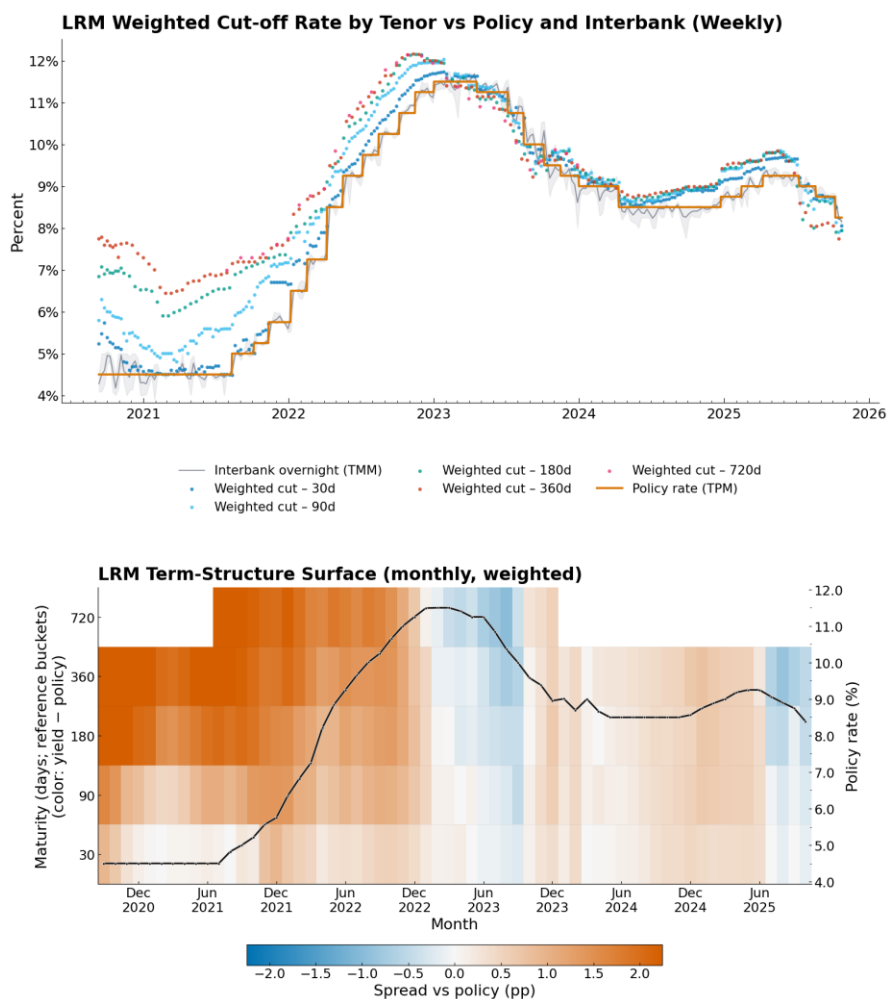
Notes: The top panel displays the 60-observation rolling RMSE between the overnight interbank rate and the policy rate, using daily data from 2010 to the latest available observation, for Uruguay and other emerging and advanced inflation targeters. The gray fan chart reports the cross-country distribution (P25–P75 and P40–P60 ranges, with the dashed line as the median), while colored lines highlight Uruguay, Brazil, Canada, and the Eurozone. Lower values indicate closer alignment of the overnight rate with the policy rate. The right panel summarizes the average RMSE from January 2021 to the latest, ranking each institution against the cross-country median (dashed line). Formally, for each country c and date t , the rolling RMSE is defined as $RMSE_{c,t} = \sqrt{\frac{1}{N} \sum_{j=0}^{N-1} (r_{c,t-j}^{interbank} - r_{c,t-j}^{policy})^2}$, where $r_{c,t}^{interbank}$ is the overnight interbank rate and $r_{c,t}^{policy}$ is the policy rate for country c and time t , and $N = 60$ represents the number of daily observations. The bottom panel is the average RMSE since 2021 for all central banks in the sample with RMSE smaller than or equal to 1.

- 12. The strong steering of the overnight rates in Uruguay, however, is achieved through intensive use of the operational toolkit rather than deep market intermediation.** With a wide standing facility corridor and persistent structural excess liquidity, maintaining the operational target close to the policy rate requires the intensive use of fine-tuning operations. Routine liquidity redistribution is thus channeled through the BCU's balance sheet, constraining price discovery, market development, and a broader transmission of monetary policy to market rates. Absent structural measures to reduce excess liquidity and foster genuine interbank activity, day-to-day micro-management by the central bank will remain necessary, and money-market signals will continue to be shaped primarily by its operations rather than by decentralized trading.

C. Pass-Through to Term Rates

- 13. The next step is to assess how policy changes are transmitted along the term structure and into retail deposit and lending rates.** In a standard framework, the yield curve constructed from central bank and government securities incorporates expectations of the future path of the policy rate, along with term and risk premia. Meanwhile, banks adjust the pricing of deposits and loans gradually, ensuring that their overall marginal cost of funding aligns with the policy stance.
- 14. In Uruguay, the LRM yield curve serves as the primary building block of the short-end risk-free peso term structure.** The BCU issues LRMs at different maturities (30, 90, 180, 360 days, and occasionally longer) to absorb structural excess liquidity and provide reference yields along the curve. In a well-functioning market, shorter LRM maturities should move broadly one-for-one with the expected path of the TPM over their life. At the same time, longer tenors add premia that reflects uncertainty about future policy, inflation, and liquidity conditions. The analysis that follows compares this benchmark with the actual behavior of LRM yields and related market rates in Uruguay.
- 15. LRM auctions cut-off rates across maturities generally track the policy rate and the interbank overnight rate, indicating that investors respond systematically to realized decisions rather than strongly anticipating them (Figure 3, top graph).** The weekly dotted curves show that, for most of the sample, LRM yields of different tenors move together with the TPM, sometimes with anticipation, highlighting the expectation channels in market pricing. However, at the start of the latest easing cycle in mid-2025, markets did not price in cuts ahead of time: 30-day LRM yields adjust only once the policy rate actually begins to decline.
- 16. The spread-based LRM term-structure heatmap complements the finding by indicating sizable and asymmetric premia around tightening and easing cycles (Figure 3, bottom graph).** As the policy rate began to increase from mid-2021, the entire LRM curve traded persistently above the overnight rate, with warm colors across tenors indicating that markets were pricing not only the next move, but a long and uncertain tightening path. This is particularly visible in late 2021 and early 2022, when spreads at 90–360 days widened well before the policy rate itself reached those levels, suggesting that investors were charging a premium for uncertainty about where the cycle would end (during the post-COVID-19 inflationary wave). By contrast, around December 2022 and again in the most recent period, the heatmap showed pockets of blue at intermediate maturities: markets began to anticipate rate cuts ahead of the actual easing, pulling term yields below the policy rate even while the overnight rate remained elevated. This asymmetry—significant positive premia when policy is expected to tighten and early compression or negative premia when easing is expected—implies that, without a clearer and more systematic forward-looking narrative on the reaction function and the likely policy corridor, the central bank may face higher ex-ante funding costs in tightening phases than would be needed under a more predictable communication framework.

Figure 3. LRM Term Structure Relative to Policy—Weekly Tenor Dynamics and Monthly Spread Surface



Source: IMF staff calculation using BCU data.

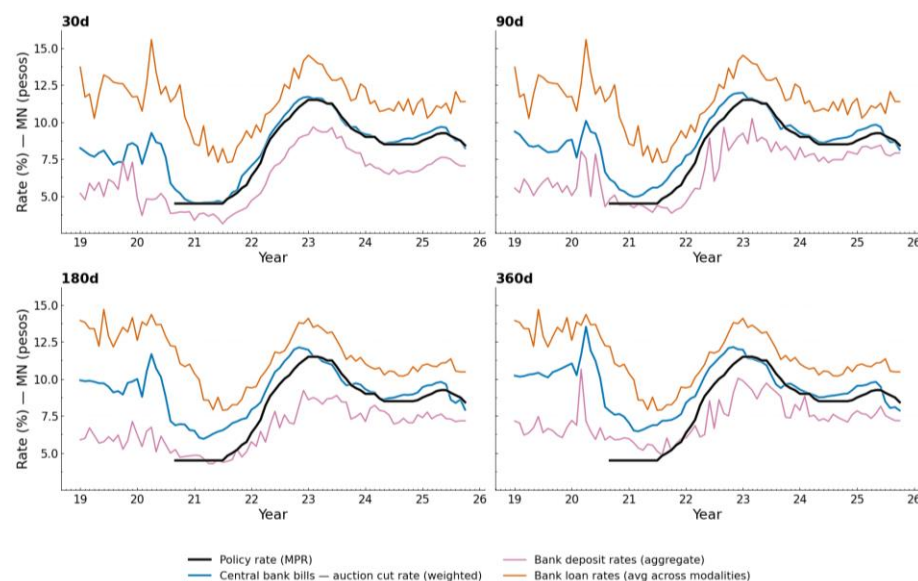
Notes. The top panel plots weekly, volume-weighted local currency LRM cut-off yields by standardized tenor (30–720 days); weights correspond to adjudicated amounts under Uruguay’s single-price auction format, meaning each point represents the market-clearing yield applied to all winning bids. The amber step line shows the policy rate (TPM), while the thin slate line with a light band shows the interbank overnight rate (TMM)—weekly mean with minimum and maximum ranges (the “mini-corridor”). The bottom panel shows the term structure of peso LRM yields relative to the policy rate at a monthly frequency. Each column corresponds to a month-year, each row to a representative LRM maturity bucket (in days), and each cell’s color is the spread between the volume-weighted LRM yield and the policy rate for that month (LRM yield – policy rate, in percentage points). Warm colors indicate yields above the policy rate, and cool colors indicate yields below it. The black line traces the policy rate (right-hand axis), providing a reference for how the curve trades relative to policy across maturities and over time.

17. As a key consideration, adopting a clear policy rate target significantly compressed spreads and risk premia embedded in local interest rate curves, reinforcing the policy rate’s role as the primary benchmark for funding costs. Figure 4 illustrates that, following the introduction of the interest rate target, spreads—and consequently risk premia—across various instruments and maturities, such as LRM, bank deposits, and lending rates, became closely aligned with the interbank market rate within a relatively short period (approximately six months).

Conversely, the absence of a well-anchored interest rate structure in the preceding period tended to increase risk premia, widening spreads across local market instruments. A more granular qualitative analysis of this improvement is constrained by the lack of a representative interest rate for the marginal cost of peso funding during the previous period. Although an interbank market rate existed before 2020, BCU staff deemed it unrepresentative of the true marginal funding cost at that time.

18. Tenor-matched comparisons between LRM yields and retail peso deposit and lending rates confirm that all series generally move in the same direction as the policy rate, but with stronger co-movement for funding than for credit pricing (Figure 4). Corporate loan rates in pesos respond more slowly and less symmetrically, incorporating policy tightening rapidly and remaining elevated even as policy and LRM rates begin to fall, reflecting the additional influence of borrower credit risk, collateralization, and product-specific pricing beyond pure funding costs. As a result, loan spreads over both policy and LRM rates widen noticeably through the 2021–23 tightening episode and then compress only gradually during the recent easing cycle, suggesting that transmission to lending conditions is more state-dependent and persistent than for funding rates.

Figure 4. Policy Rate versus LRM, and Deposit and Lending Rates by Tenor

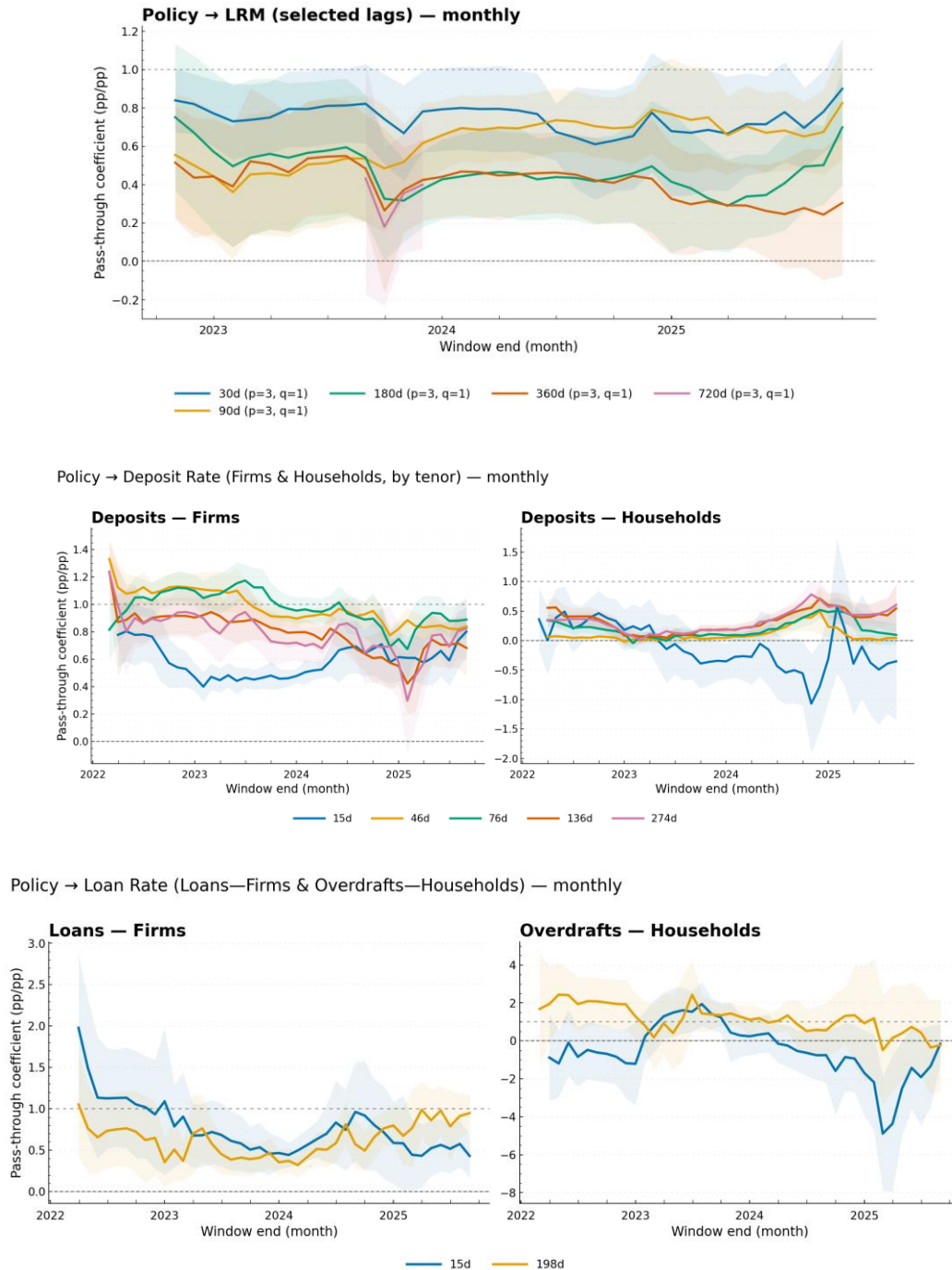


Source: IMF staff calculation using BCU data.

Notes: Each panel shows, for a given LRM reference tenor (30, 90, 180 and 360 days, respectively), the monthly evolution of four rates in pesos: (i) the blue line is the volume-weighted cut-off yield on BCU's peso LRMs from the auction database; (ii) the black line is the TPM, averaged over the month; (iii) the purple line is the time-deposit rate from the "Pasivas MN – Apertura por plazos" table, using the standard maturity buckets "Plazo < 30 días", "Plazo ≥ 30 y < 61 días", "Plazo ≥ 61 y < 91 días", "Plazo ≥ 91 y < 181 días" and "Plazo ≥ 181 y < 367 días", which we convert to representative tenors of 15, 46, 76, 136 and 274 days and then match to the nearest bucket in each panel (so that, for example, the 30-day LRM panel is paired with the <30-day deposit bucket, the 90-day panel with the 61–90-day bucket, the 180-day panel with the 91–180-day bucket, and the 360-day panel with the 181–366-day bucket); and (iv) the orange line is the corporate lending rate in pesos from the "Activas MN" table, product "Loans", where the only available tenor buckets are a short-term bucket around 15 days ("Plazo < 30 días") and a longer bucket around 6–7 months, so the short-term corporate loan rate is used in the 30- and 90-day panels while the longer-tenor corporate loan rate is used in the 180- and 360-day panels; all series are converted to a common monthly frequency and expressed in annualized percentage terms to allow a direct visual comparison between LRM pricing, bank funding costs, lending rates, and the policy rate at matched horizons.

- 19. While the visual analysis provides an overview of how market rates co-move with the policy rate, it does not quantify the extent to which a given policy move is passed through to each market rate.** The RMSE metrics used in the previous section measure how closely a market rate aligns with the policy rate in terms of levels, which is appropriate for assessing operational control. For term rates and retail prices, however, the key question is different: when the TPM changes, by how many basis points do LRM yields, deposit rates, and lending rates move, and over what horizon? To answer this, a pass-through model that captures dynamic responses is employed.
- 20. The short-run pass-through model is estimated using a standard autoregressive distributed-lag (ARDL) structure (Pesaran, Shin, and Smith, 2001).** The model is estimated for each tenor and in rolling time windows, allowing for the estimation of time-varying pass-through coefficients. Each regression relates monthly changes in a given market rate to current and lagged changes in the policy rate, while allowing for inertia in the market rate itself. The resulting pass-through coefficient summarizes how much of a one-percentage-point policy increase is transmitted to market rates over the short run, tenor by tenor and over time. The estimated coefficients for LRMs, funding, and lending rates are summarized in Figure 5.
- 21. The short-end LRM pass-through is high and has strengthened since 2025, while the 360-day node remains the weakest and has decreased.** Estimated pass-through to 30-, 90-, and 180-day LRM cut-offs now lies broadly in the ~0.7–0.9 range and is statistically significant across most windows, indicating that a 100 bp policy change is typically associated with a 70–90 bp move in these maturities. By contrast, the 360-day coefficient is smaller and trending downward. This can reflect the greater role of expectations, term premia, and limited market depth beyond six months, as well as the fact that, at longer tenors, the BCU often behaves more as a price taker in auctions to support market development rather than fully enforcing its policy view. Taken together, these results point to strong operational anchoring at the short end, while longer-dated yields are influenced more by market forces and risk premia than by one-to-one policy pass-through.
- 22. Deposit pass-through is substantial—especially for firm time deposits—while loan pricing adjusts more at longer tenors and less at very short tenors.** For firms, deposit pass-throughs generally exceed 0.6 and are statistically significant, with the ~46- and ~76-day buckets showing the highest responsiveness. For households, very short deposits (~15 days) are often not statistically different from zero. In contrast, longer buckets (~136 and ~274 days) are significant, averaging around 0.6. On credit pricing, firm loan rates exhibit moderate pass-throughs. In contrast, household overdraft rates are volatile and frequently indistinguishable from zero—consistent with their revolving nature and the greater weight of borrower-specific risk and utilization of fees in pricing.

Figure 5. Policy Rate Pass-Through to Market Rates



Source: IMF staff calculation using BCU data.

Notes: This chart shows the pass-through coefficient to market rates for different tenors. It depicts how much a policy rate change is transmitted to LRM auction cut-off yields (top panel), deposit rates for firms and households (middle panel), and lending rates for firms and households (bottom panel). In specific:

- LRM: auction maturities exactly as issued by BCU (30d, 90d, 180d, 360d, and 720d when present).

- Deposits (MN): time deposits for Firms and Households at five maturities: < 30 days; ≥ 30 & < 61 days; ≥ 61 & < 91 days; ≥ 91 & < 181 days; ≥ 181 & < 367 days
- Lending (MN): Firms at < 30 days and ≥ 30 & < 367 days; Overdrafts — Households at < 30 days and ≥ 30 & < 367 days.

Values near 1.0 indicate that a 100 bp policy change is associated with ~100 bp change in market rates. The band represents a 90 percent confidence interval. For each tenor d , we estimate an ARDL model as follows:

$$\Delta r_t^{(d)} = \alpha^{(d)} + \sum_{i=0}^p \beta_t^{(d)} \Delta \text{Policy}_{t-i} + \sum_{j=1}^q \gamma_t^{(d)} \Delta r_{t-j}^{(d)} + \varepsilon_t^{(d)},$$

Where $\Delta r_t^{(d)}$ is the percentage point change in the market rate (LRM auction cut-off yields, deposit and lending rates) for tenor d at year-month t ; ΔPolicy_t is the policy rate percentage point change from $t - 1$ to t ; $\alpha^{(d)}$ is the intercept; and $\varepsilon_t^{(d)}$ is the error term. The maximum lags (p, q) are selected per tenor and dependent variable by a global grid search $p \in [0, 6]$, $q \in [0, 6]$ with the BIC metric on the OLS fit and the model's complexity (number of parameters). The chosen (p, q) parameters are then held fixed while we estimate the above equations using fixed-length rolling windows of 36 months (with a minimum window length of 24 months) for each dependent variable and tenor. The plotted line is the cumulative short-term pass-through $\sum_{i=0}^p \beta_t^{(d)}$. The band represents a 90 percent confidence interval computed using HAC (Newey–West) standard errors.

23. Monetary transmission beyond the overnight segment is effective but slower and more heterogeneous across instruments and tenors. Our estimates show strong short-run pass-through from the TPM to short-end LRM yields and to key peso deposit buckets, but weaker and more variable effects at longer maturities and in some retail segments. This pattern is consistent with survey responses: banks report that their peso funding costs and transfer prices are closely linked to the sovereign peso yield curve—particularly the sovereign normative yield curve (ITLUP) and LRM nodes—and that these references are adjusted following policy moves, with the pace and magnitude conditioned by competition and balance-sheet structure.¹

24. Banks also highlight structural features that show both common patterns and institution-specific idiosyncrasies in explaining the attenuated peso transmission in funding and lending rates. Among the common patterns, respondents emphasize the high share of sight and very short-term deposits in the peso funding base, as well as the higher reserve requirements applied to these liabilities compared to longer-term deposits. This configuration increases the effective cost of funding associated with overnight and demand balances, implying that the average marginal funding cost in pesos adjusts primarily as maturing term deposits are repriced. Banks also report that reserve requirements and their remuneration are explicitly incorporated into internal transfer prices and funding-cost metrics, which in turn feed into loan and deposit rate setting. In contrast, idiosyncrasies arise in how frequently and aggressively prices are revised: most institutions describe regular (often monthly) ALM and pricing cycles that react to movements in policy, yield curves, and competitor rates, while others emphasize more gradual adjustments shaped by customer behavior and a preference to avoid frequent changes in posted retail rates.

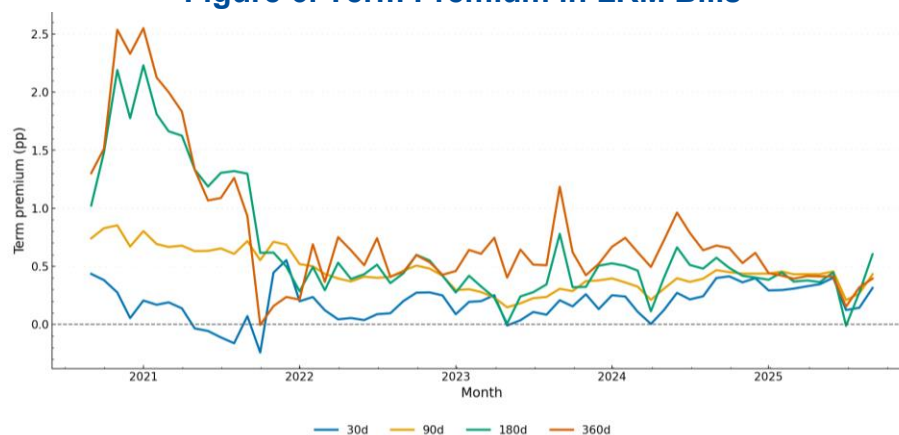
¹ The ITLUP (*Indicador de Tasas de Letras en Unidades de Peso*) and LRM are closely related but distinct components of Uruguay's sovereign peso yield curve. LRMs are actual zero-coupon securities issued by the BCU to absorb structural liquidity and anchor short-term interest rates. In contrast, ITLUP is a synthetic yield curve that provides a continuous reference for peso interest rates across a broader range of maturities. While the short end of ITLUP (up to one year) is based almost entirely on observed LRM auction yields, the longer end incorporates pricing from government bonds and other market instruments to extend the curve beyond the LRM horizon. As such, ITLUP offers a smoothed and interpolated term structure that supports internal transfer pricing, risk management, and product pricing across the financial system. Importantly, at the short end—where our analysis is focused—LRM yields and ITLUP rates convey essentially the same informational content, making LRM-based estimates a reliable proxy for short-term monetary transmission dynamics.

- 25. Taken together, the quantitative estimates and survey evidence suggest a peso transmission mechanism that is well-anchored but operates with market frictions.** Strong pass-through to short-end LRMs and core peso deposits is consistent with tight control of the overnight operational target and the central role of ITLUP- and LRM-based references in banks' pricing frameworks. At the same time, the prominence of short-maturity deposits subject to higher reserve requirements, the limited depth of the long end of the peso curve, and product-level rigidities in retail pricing slow and unevenly distribute the impact of policy changes across tenors and customer segments. These features do not undermine the basic effectiveness of the transmission mechanism, but they do reinforce the case for further deepening term peso markets, refining the design and role of reserve requirements, and strengthening the informational content of the peso yield curve so that changes in the TPM translate more smoothly and uniformly into banks' overall marginal cost of funding in local currency.
- 26. While the proposed operating framework strengthens the policy-rate anchor for money market pricing, the pass-through to retail lending rates is not determined by liquidity instruments alone.** In Uruguay's concentrated and highly dollarized system, the degree of competition in peso lending and deposit markets, banks' risk appetite, capital positions, and excess liquidity all influence how changes in banks' marginal peso funding cost translate into offered deposit and lending rates. The proposed reforms mainly operate by improving the risk-free peso reference curve and the predictability of marginal funding conditions, reinforcing pricing signals from the TPM along the curve. Nonetheless, the completeness of pass-through to credit conditions will continue to depend on competitive conditions and borrower risks.

D. Term Premium Decomposition

- 27. Uruguay's term premia are near zero at one month and moderate—but time-varying—at 6–12 months, peaking during the 2020–21 COVID-19 uncertainty and compressing thereafter (Figure 6).** The decomposition shows that LRM closely tracks the expected average policy rate, with a negligible term premium at 30 days and a higher term premium at 180–360 days. Overall, the term premium is lower than 10 percent. This wedge widened during the COVID-19 period and has narrowed as uncertainty and medium-term expectations stabilized (Figure 7). For implementation, tracking term premia by tenor helps interpret market moves without conflating them with changes in the expected policy path.

Figure 6. Term Premium in LRM Bills

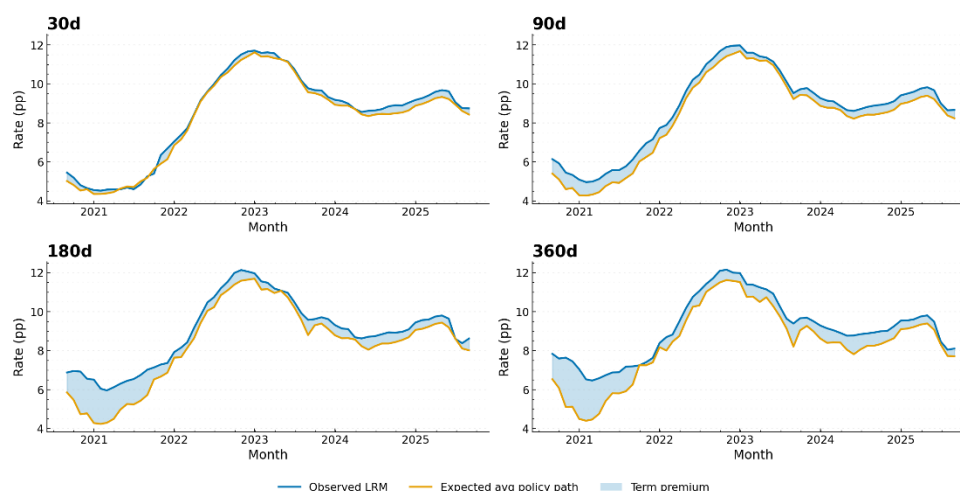


Source: IMF staff calculation using BCU data.

Notes: See Annex I. Conceptual Framework for Liquidity Management for the methodology used to estimate the term premium. Monthly term premia for selected LRM bill tenors (30d, 90d, 180d, 360d), expressed in percentage points. For each tenor n , the term premium is defined as the observed LRM yield minus the model-implied average path of the policy rate over the next n months. The expected path is obtained from a vector autoregression (VAR) estimated on the monthly policy rate and LRM spreads (each tenor's LRM yield minus the policy rate). A single full-sample VAR is employed, and the BIC is used to select the lag length. The horizontal dashed line marks zero premium; values above (below) zero indicate LRM yields above (below) what is justified by the expected path of short rates.

28. Country risk and medium-term inflation expectations are the dominant drivers of peso term premia at 6–12 months. The USD sovereign yield—a proxy for Uruguay's credit/risk pricing in hard currency—shows the strongest positive association with 90–360-day LRM premia, indicating that local-currency bills embed a credit component that co-moves with external spreads. When the USD curve widens, investors require more compensation on peso-denominated paper beyond what the expected path of short rates would explain. Medium-term inflation expectations also raise premia, and their influence increases with tenor: as maturity lengthens, exposure to inflation uncertainty rises, and the priced inflation-risk premium becomes a larger share of nominal yields.

Figure 7. LRM Decomposition by Tenor: Observed Yield versus Expected Policy Path



Source: IMF staff calculation using BCU data.

Notes: Each panel shows, for a given tenor, the observed LRM bill yield (blue), the model-implied expected average policy rate over the corresponding horizon (orange), and the shaded difference (blue minus orange), which is the term premium in percentage points. The expected path is obtained from a VAR estimated on the monthly policy rate and LRM spreads (each tenor's LRM yield minus the policy rate). When the blue line lies above the orange line, the term premium is positive; when it lies below, the premium is negative.

29. Anchoring inflation expectations materially reduces the term premium, supporting monetary policy transmission. Uruguay's inflation expectations, as measured by monthly surveys, have shifted toward the 3–6 percent objective range after a prolonged period of elevated expectations. In this configuration, the inflation-risk component of 6–12-month yields is smaller, allowing policy rate changes to transmit more cleanly into market rates. Keeping 24-month expectations inside the band is therefore not only a credibility signal; it directly lowers the compensation required on LRMs beyond the very short end.

30. Exchange-rate fluctuations do not explain changes in LRM term premium when risk and expectations are accounted for. With the USD sovereign yield (country-risk channel) and the

24-month survey (inflation-risk channel) included explicitly, monthly foreign exchange (FX) changes do not show an independent, systematic effect on premia.

31. The average term premia are negligible at short maturities, but material at six to twelve months. The statistically insignificant intercept at 30 days and statistically significant positive intercepts at 6–12 months indicate that, conditional on the controls, average premia are economically small at one month but present and meaningfully larger at 180–360 days. This tenor pattern—minimal compensation at very short maturities, rising compensation as horizon lengthens—is consistent with inflation- and credit-risk pricing, and is the segment where monitoring and communication can most improve the clarity of the policy signal.

Table 2. Uruguay: Determinants of LRM Peso Term Premia by Tenor

	z(Term premium)			
	30d	90d	180d	360d
	(1)	(2)	(3)	(4)
z(Policy rate)	-0.606 (0.377)	-0.862*** (0.167)	-0.872*** (0.189)	-1.044*** (0.218)
z(SOFR)	-1.000** (0.456)	-0.392* (0.217)	0.604** (0.230)	0.787*** (0.279)
z(UST 10y)	-0.793 (1.240)	-1.531*** (0.546)	-3.427*** (0.561)	-3.797*** (0.729)
z(US slope 10y–2y)	-1.346** (0.553)	-0.024 (0.258)	0.567** (0.230)	0.304 (0.238)
z(FX return UYU/USD)	0.250 (0.194)	0.096 (0.073)	-0.028 (0.083)	-0.073 (0.139)
z(Uruguay USD sovereign yield)	1.265 (1.421)	1.914*** (0.594)	3.575*** (0.563)	3.949*** (0.743)
z(Inflation exp. 24m, UY)	-0.212 (0.387)	0.527** (0.200)	1.056*** (0.199)	1.361*** (0.224)
z(Montevideo stock index return)	0.230* (0.128)	0.251*** (0.058)	0.151** (0.069)	0.050 (0.098)
Intercept	-0.446 (0.495)	0.811*** (0.272)	1.597*** (0.227)	1.734*** (0.265)
Observations	61	61	61	61
S.E. type	by: month_id	by: month_id	by: month_id	by: month_id
R ²	0.239	0.849	0.847	0.748
Adj. R ²	0.122	0.826	0.824	0.709

Source: IMF staff calculation using BCU data.

Notes: See Annex I for the methodology used to estimate the term premium. The dependent variable is the term premium on LRM yields at each tenor (30, 90, 180, and 360 days), standardized within each tenor to have a zero mean and unit variance. Positive values indicate wider premia relative to the tenor's historical average. The term premium is explained using the following covariates (all standardized as well): policy rate (monthly mean policy rate); SOFR (monthly mean overnight SOFR); UST 10y (the U.S. 10-year Treasury yield, level); U.S. slope (U.S. 10y minus 2y); Uruguay USD sovereign yield (USD sovereign yield, a country-risk proxy); FX return (percentage change of UYU/USD; positive = peso depreciation); Inflation expectations (Uruguay's survey mean for next 24 months); and Montevideo stock index return (monthly percentage change in the BVMBG index). External series are converted to a monthly frequency by simple averages where daily data are available. All regressors are standardized to permit magnitude comparisons across variables and tenors; a coefficient of 1.0 indicates that a one-standard-deviation increase in the factor is associated with a one-standard-deviation change in the term premium for that tenor, holding other controls constant. Standard errors are clustered at the month level, with statistical significance denoted by *, **, and *** for p-values of 10 percent, 5 percent, and 1 percent, respectively. Coefficients are associations, not causal effects.

II. Calibration of Open Market Operations

- 32. In an ideal operating framework, precise liquidity forecasts and a well-functioning interbank market would allow the BCU to control the marginal cost of funding with a single OMO each period.** If the central bank can accurately anticipate the net liquidity position of the banking system and banks can confidently trade surplus and deficit balances among themselves, it only needs to offset the system's net liquidity need. In that environment, surplus funds flow smoothly from banks with excess liquidity to those with shortfalls, the overnight rate converges to the policy rate, and monetary policy implementation requires minimal, predictable intervention.
- 33. In practice, forecast errors and market friction mean that the BCU must calibrate both the quantity of liquidity it absorbs or supplies and the mix of instruments it uses.** When the money market functions reasonably well, banks maintain small, stable excess reserve buffers and redistribute liquidity among themselves, making aggregate demand for central bank money more predictable. When the market is less developed or segmented, however, differences in banks' access to funding and willingness to trade lead to heterogeneous and unstable demand for excess reserves—some institutions hold sizable precautionary balances while others remain liquidity-constrained. In such conditions, the central bank must respond to both the average liquidity need and this dispersion, and its interventions become larger, more frequent, and more instrument-intensive.
- 34. Two pillars underpin effective calibration: liquidity forecasting and market functioning.** Liquidity forecasting determines the aggregate supply–demand balance for central bank money by combining projections of autonomous factors (such as CiC, government balances, and FX operations) with the banking system's demand for required and excess reserves. In an interest-rate-based framework, this forecast guides the amount of liquidity that should be absorbed or injected to keep the quantity of central bank money consistent with the policy rate, thereby limiting unintentional surpluses or shortages and the associated volatility in short-term rates. Market functioning, in turn, determines how this aggregate position translates into operational choices: where interbank activity is deeper and pricing more reliable, a given forecast can be implemented with fewer, more streamlined operations; where development is limited or frictions are high, the central bank must rely more heavily on its own balance sheet and a broader set of instruments to achieve the same policy stance.

A. Liquidity Forecasting

Current Liquidity Forecasting Framework and Operational Use

- 35. The BCU has a distinct liquidity forecasting unit that regularly produces autonomous factor forecasts across various horizons.** The main forecast is conducted towards the end of the month to predict autonomous factor movements for each business day of the following month, with day-by-day adjustments as deviations from the forecast arise. Each Friday, forecasts for the next two weeks are produced to refine the initial monthly forecasts. Additionally, the forecasting unit produces a medium-term forecast, anticipating the levels of autonomous factors over several months. The forecasting process delivers usable point forecasts for operations but currently relies on complex, Excel-based procedures, tacit knowledge, and incomplete information from the Treasury, and does not systematically quantify and use uncertainty.

- 36. The liquidity forecast informs LRM issuance and day-to-day operations.** The forecasting team proposes a daily issuance path for the next two to four weeks; the monetary policy department contributes tenor and volume views based on counterparty outreach, and decisions are reconciled at the senior level. LRM auction calendars are fixed two weeks in advance, setting a sharp deadline for the two-week forecasts on each week's Fridays. The objective of this projection is to estimate the evolution of system-wide liquidity to identify mismatches that may require action by the BCU and to translate these into a consistent plan for LRM issuance and the use of fine-tuning instruments (ISF).
- 37. Since LRM auction dates are fixed for each tenor, any adjustments to the issuance plan regarding the distribution of LRM by tenor have a direct impact on liquidity conditions and increase deviations from forecasted liquidity on top of forecast errors.** Deviations from plan due to LRM demand considerations or fiscal surprises are offset with fine-tuning operations to stabilize money-market conditions. The operational objective at the start of the period is near-zero excess reserves; in practice, a small surplus often remains. Detailed implementation or rate setting for the daily OMO/FTO is outside the remit of the forecasting unit.
- 38. In parallel, the monetary policy department embeds these forecasts in a cash-flow-based projection by broad institutional blocks.** Using daily spreadsheets that combine historical and projected balances, staff first estimate the liquidity position and investment capacity of non-bank investors (notably pension funds and other institutional investors), whose LRM placements tend to flow back into the banking system through deposit certificates within pre-defined limits. In a second step, they analyze the banking system using the same daily framework: historical days record actual reserve holdings and are used to infer a target reserve level for the remainder of the month, while autonomous factors projections are received from the liquidity forecasting unit. On this basis, the BCU chooses the mix of LRM issuance and fine-tuning operations so that, by month-end, system reserves are consistent with the estimated target (within a tolerance band reflecting the volatility of minimum and voluntary reserves) and the overall liquidity balance remains positive and in line with historical practice, with ISF operations used as a residual timing-adjustment tool.
- 39. The principal autonomous factors driving domestic liquidity are CiC and government deposits (GovD).** Other autonomous items, such as the net foreign asset (NFA) position, are not forecasted, reflecting the central bank's minimal participation in the FX market in recent years; larger NFA swings were mainly observed before 2021, when the BCU purchased FX. More details on the BCU's balance sheet can be found in BCU's Balance Sheet Annex IV. Liquidity Management Deposits by non-bank financial institutions (NBFIs), including pension funds, are considered autonomous factors when material, but they are currently not a significant source of liquidity variation and are not forecast. Government cash flows, as noted, are the largest and most volatile driver of liquidity and form the most challenging component of the forecast.
- 40. The available evidence suggests that BCU's CiC forecasts are broadly accurate, whereas GovD projections are more mixed.** This is a common outcome in many jurisdictions, given higher volatility and the idiosyncratic nature of fiscal flows. A comprehensive assessment of the BCU's current forecast performance is not entirely possible in the absence of preserved, unadjusted vintage forecasts.

Key Recommendations

- 41. In an interest-rate-based operating framework, the operational object of the forecast is the net liquidity position of the banking system in central bank reserves, not broad monetary aggregates.** For day-to-day implementation, liquidity needs are best organized in a standard

liquidity table that starts from the current stock of reserves, adds the projected impact of autonomous factors (such as CiC, government deposits, and NFA), and incorporates planned OMOs and standing facility use. The result is a forecast of end-of-day reserves relative to the minimum reserve requirement and a small target buffer. This framing makes the link between autonomous factor forecasts and operational calibration explicit and avoids the legacy terminology of “money supply” and “money demand”, which is no longer appropriate for an interest-rate-focused implementation framework.

- 42. Within this setup, the minimum reserve requirement is treated as a regulatory constraint and accounting item, not as an independent forecast object.** The central bank does not need to anticipate the detailed monthly reserve-fulfilment path of different groups of banks. Instead, it should estimate and monitor the typical system-wide buffer of reserves held above the requirement and calibrate its operations so that forecast reserves lie within a narrow range around “requirement + buffer”, allowing banks to use the averaging mechanism and the interbank market to manage idiosyncratic and intramonth fluctuations.

Recommendation 1. Reframe liquidity forecasts around a standard liquidity table focused on reserves, avoiding references to “money supply” or “money demand”, and treat the reserve requirement as a constraint rather than a forecast object.

- 43. The BCU should formalize liquidity forecasts in a simple liquidity table.** Such a table: (i) projects autonomous factors and their impact on system reserves; (ii) incorporates planned LRM issuance, other OMOs, and standing facility use; and (iii) compares the resulting reserve position to the minimum reserve requirement plus a small target buffer. Under this approach, minimum reserves enter as a known regulatory parameter derived from deposit projections. In contrast, banks’ demand for excess reserves is captured through a calibrated system-wide buffer informed by observed fulfilment ratios. The central bank should avoid framing these projections as “money supply” or “money demand” forecasts and should not attempt to anticipate detailed monthly fulfilment paths by bank or sector, which would add complexity without materially improving operational calibration.

Recommendation 2. Distinguish forecasting horizons and purposes (short-term, one-month-ahead, and medium-term) and preserve immutable forecast vintages to improve operational use and separate statistical forecasts from judgment.

- 44. The BCU should clearly separate short-term, two-week-ahead forecasts, and medium-term forecasts, each with a specific operational purpose, and preserve immutable forecast vintages.** At a minimum, the setup should maintain an Excel (or equivalent) file that records, for each forecast, the production date, target date, point forecast, and variance, with a clear separation between the statistical forecast and expert judgment. Short-term intra-month forecasts covering only a few days should be stored and compared with previous forecasts for the same target date, rather than overwritten. Medium-term forecasts spanning several months should be produced as monthly averages using temporal hierarchies (as in the IMF toolkit), rather than generating detailed day-by-day paths that are not necessary for structural operations. These improvements are crucial to avoid confounding short-term fine-tuning operations with medium-term and structural liquidity absorption. The proposed R-based toolkit operationalizes this principle by saving immutable forecast vintages with production date, target date, model set, and interval parameters, enabling ex-post evaluation and transparent change control.

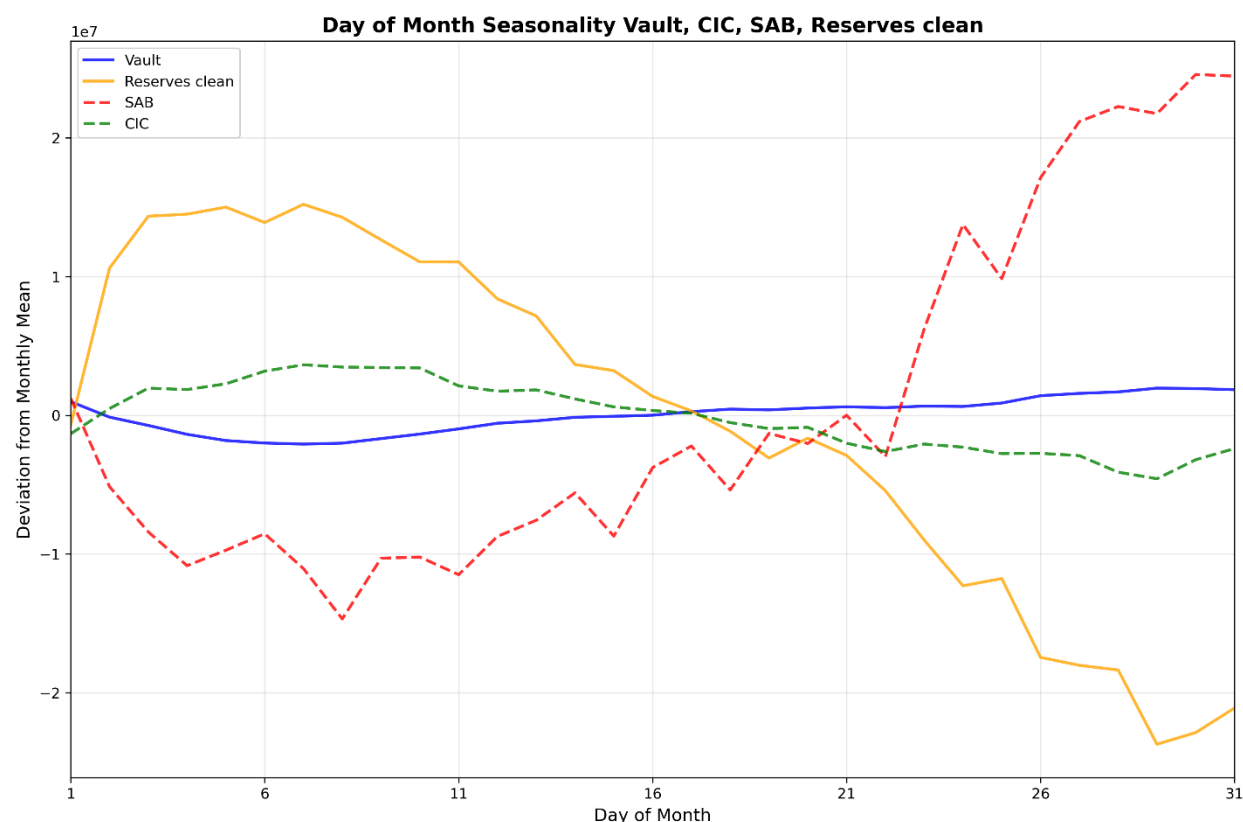
- 45. Forecasts should be used in a way that is consistent with both their information content and the operational framework.** As long as internal processes require monthly planning exercises, the BCU should continue to produce a full-month baseline and adjust it systematically

with higher-frequency (weekly) forecast updates. This should add valuable information to the calibration of operations, recognizing that LRM auction volumes are not pre-announced for the entire month and are, in practice, recalibrated in light of incoming information. Looking ahead, if the BCU decides to move forward with more frequent (weekly) calibration of liquidity-absorbing operations, the main operational forecast should also be produced weekly. A monthly or multi-month forecast can then be used to focus on the medium-term profile of structural liquidity and the sizing of LRM, which should be the primary instrument for structural absorption.

Recommendation 3. Increase the robustness and frequency of forecasts once the new R-based toolkit is in place and calibrated to improve the responsiveness of operations to evolving liquidity conditions during the MP.

- 46. The forecasting unit should produce forecasts at weekly frequencies once the new R-based toolkit has been calibrated and embedded in routine operations.** Even under current procedures, where LRM issuance plans are set biweekly or monthly, they are often adjusted or complemented with fine-tuning operations in practice. The primary constraint against more frequent forecasts has been the workload for a small team. Once the toolkit automates data ingestion, estimation, evaluation, and reporting, forecasts can be generated automatically, significantly reducing the operational burden and enabling more frequent and accurate updates. More frequent forecasts would improve the calibration of liquidity-absorbing operations and the alignment between structural issuance and short-term fine-tuning, especially when unexpected fiscal or market developments occur.
- 47. The cross-sectional distribution and intramonth path of reserve fulfilment across banks should inform the calibration of aggregate liquidity buffers.** Evidence from November 2024 onward shows that most institutions hold fulfilment ratios below 110 percent of their monthly requirements, and the vast majority of bank-month observations lie below 120 percent. In other words, typical excess reserves are in the order of only 0–10 percent above the minimum, with very few cases of materially larger precautionary balances.
- 48. Intramonth fulfilment paths confirm that banks make active use of averaging:** cumulative positions often deviate by more than ± 30 percent from the eventual requirement during the period, and many banks move into a cumulative deficit relative to the final requirement after around day 25 as uncertainty about the remaining deposit base narrows and buffers are deliberately run down. This pattern is consistent with the BCU's current operational practice of supplying a modest liquidity buffer early in the maintenance period and gradually withdrawing it later. In such an environment, where banks treat required reserves as a tight constraint rather than a comfortable liquidity buffer, small system-wide excess-reserve cushions imply that either forecasts must be very precise or operations must be adjusted frequently. Relying on a single forecast for the entire upcoming month, combined with a front-loaded buffer that can only be run down later, tends to concentrate liquidity realignment toward the end of the period, reinforcing the case for more frequent forecast updates and explicit use of forecast uncertainty when calibrating operation sizes (see Figure 8 and Annex V. Current Instruments).

Figure 8. Day-of-Month Seasonality of Reserves and Autonomous Factors



Source: BCU and IMF calculations.

Notes: Reserves clean indicates reserve balances that do not include reserves held to meet a 100 percent MRR on government accounts. Other series in the chart are banks' cash holdings (Vault), state account balances (SAB), and CiC with the public.

Recommendation 4. Systematically produce and use forecast uncertainty (prediction intervals) as an explicit operational input for calibrating liquidity buffers and operation sizes to improve the risk-based calibration of structural and fine-tuning operations.

49. The BCU should explicitly generate and report forecast uncertainty alongside point forecasts and use it as a core input when calibrating liquidity-absorbing operations and buffers. The R toolkit already provides measures of forecast variance and prediction intervals, which can be used to align the size of LRM issuance and fine-tuning operations with the range of plausible outcomes, particularly around periods of higher volatility. Uncertainty is treated as an operational deliverable, not an afterthought. Each forecast can be accompanied by prediction intervals (for example, 80 and 95 percent) that widen with horizon and reflect model-specific forecast-error variance. Coverage diagnostics should be monitored routinely to confirm that realized outcomes fall within stated bands at the expected frequencies; persistent under-coverage should trigger a review of model variance estimates or event design, while over-coverage signals scope to sharpen the bands. Interval communication is especially critical around month-end, where larger swings are typical and liquidity-buffer calibration depends on credible range estimates. In the routine product set, fan charts can appear alongside point paths, and interval widths can be tabulated by horizon to aid issuance planning and fine-tuning buffers.

Recommendation 5. Evaluate forecast errors regularly and transparently, including structured reviews before new monthly forecasts and periodic model re-evaluation to detect structural changes in liquidity drivers early on.

- 50. Forecast errors should be reviewed at regular intervals in a structured and transparent manner. Before producing new monthly forecasts, the team should hold a brief discussion and record written comments on the primary sources of recent forecast errors.** If statistical forecast performance deteriorates, or at least every six months, model performance should be systematically evaluated against alternative specifications. This routine evaluation would help detect bias, structural breaks, or model fatigue early, supporting timely re-specification. Model evaluation in the IMF framework is fully out-of-sample using an expanding rolling-origin scheme: for each origin, models are re-estimated using all information available at that point, H-step forecasts are produced for fixed horizons (e.g., 5, 10, 20 business days), and errors are collected before advancing the origin.
- 51. This cross-validation protocol yields horizon-specific performance profiles and reduces sensitivity to any individual episode.** Summary tables rank models by RMSE and related metrics at horizons relevant for operations, while figures show realized paths versus forecast bands for visual validation. Fixed-horizon evaluation is emphasized to avoid mixing inherently different prediction problems, and the test window is sized to include multiple month-end cycles. Accuracy and bias metrics are reported in a compact suite: Mean Error (ME) tracks bias, while MAE and RMSE summarize absolute accuracy at each horizon. When predictive distributions are compared, interval-oriented scores (e.g., mean interval score) and empirical coverage rates assess calibration. Headline tables show statistical-forecast performance, with an adjacent column for any judgment-adjusted forecast to separate the effects of overlays.
- 52. At present, forecasts are prepared at regular intervals and forecast errors are acknowledged in internal reporting, but without any systematic quantitative review of previous forecast errors.** Since forecasts are sometimes updated and overwritten mid-month, ex-post error evaluation is not possible. Formalizing the above evaluation practices would address this gap.

Recommendation 6. Strengthen information sharing with the Treasury through a formal MoU that provides fiscal reports disaggregated by currency for better GovD forecast.

- 53. Information sharing from the Ministry of Economy and Treasury regarding fiscal flows is currently incomplete.** A particular challenge is obtaining spending and revenue breakdowns by currency, as current reports include flows that combine local and foreign currency. Due to the high level of dollarization, this information cannot be directly incorporated into a forecast of domestic liquidity conditions without a systematic currency split. The BCU should therefore enhance data sharing with the Ministry of Economy and Treasury through a formal Memorandum of Understanding that clarifies the need to report on fiscal flows in both foreign and domestic currency. Such disaggregation is essential in a highly dollarized economy. It would allow fiscal information to be incorporated as expert judgment on top of the statistical forecast, improving the quality of government deposit projections and overall liquidity forecasts.
- 54. Government cash flows are the largest source of liquidity volatility, and forecast quality is reported to vary over time.** Spending and most tax collection are reflected in the government's account at BROU, while debt issuance, redemptions, and interest are settled in the government account at the BCU. The daily fiscal result at BROU—i.e., net spending and revenue flows—is first projected with a statistical model; expert judgment then layers calendar effects for wages,

pensions, tax deadlines, and the June/December extra-salary payments. Separately, the schedule of issuance, maturities, and interest at the BCU is incorporated to form the path for the overall government cash position. In addition, BCU↔BROU transfers undertaken by the government are modeled to ensure sufficient BROU balances to execute payments; these transfers are reserve-neutral because government deposits at BROU are subject to a 100 percent reserve requirement. As a practical anchor, the forecast is reconciled to the typical end-of-month BROU balance. For policy analysis, the team focuses on the “restricted monetary base,” excluding the government’s BROU balance to capture liquidity available to the private sector.

- 55. Another source of uncertainty is the liquidity effect of government bond auctions.** First, the government may deviate from planned auction amounts depending on rates and demand, without sharing that information with BCU in a timely manner. Second, a feature that allows LRM holders to pay with them in government bond auctions creates uncertainty regarding the immediate liquidity impact. While this feature is beneficial for market development, a side effect is that the immediate impact on government bond reserves from a government bond auction is unknown. Rightfully, the authorities view GovD as a much larger source of uncertainty regarding liquidity developments than CiC.
- 56. The decomposition of the time series of government deposits shows a strong intramonth pattern:** deposits begin to rise 8 business days before the month-end and sharply decline on the first day of the month. This poses a challenge for common time-series models that incorporate seasonal patterns, as each month has a different number of business days; the relevant factor explaining the level of government deposits at BROU is the distance to the month-end, while weekday, quarterly, or yearly patterns are not present.

Forecasting Methods and Governance

- 57. The IMF team has designed a modern, lean forecasting framework for autonomous factors that can be tailored to meet various forecasting needs, depending on the operational framework, data availability, and evolving liquidity-management infrastructure.** The forecasting approach follows common time-series forecasting practice: it estimates a compact, transparent set of time-series models for each target and horizon, then either selects the top-performing model or combines several strong alternatives. The model menu encompasses simple benchmarks (Naïve and seasonal-Naïve) and standard statistical families, such as ETS and ARIMA/SARIMA, with optional regressors and targeted intervention terms to capture end-of-month and start-of-month effects. Other candidate models include supervised machine-learning-based methods (Random Forests).
- 58. Random Forests (RFs) are well-suited to financial time series with complex, nonlinear patterns and rich calendar effects.** RFs are ensemble models that combine many simple decision trees into a single predictor without imposing strong distributional form assumptions. They naturally capture interactions between calendar variables, lagged values, spike indicators, and trend measures. In the current setup, one specification forecasts a monthly mean and daily deviation around that monthly mean. The other setup focuses directly on day-to-day changes anchored to the latest observations, so that level and pattern information are both exploited. These models use a broad set of engineered features, including day of week and month, business days to month end, quarter end flags, lagged levels and changes, moving averages and indicators for spike windows. This allows the algorithm to learn different seasonal profiles across months and adapt when seasonal strength or event effects evolve. Model complexity is controlled through the number and depth of trees and minimum node size, which helps avoid overfitting even in the presence of volatile observations. Prediction intervals are derived from the empirical distribution of past forecast errors at each horizon.

59. Calendar structure and seasonality are explicitly incorporated into the model specification.

For both CiC and GovD the main seasonal components are monthly. These features can be handled through regressors (end-/start-of-month and business-day counters), moving-holiday flags, and short-memory dynamics to manage fast reversion. Sparse trigonometric (Fourier) terms for longer cycles can be configured where appropriate. To reduce overfitting, candidate calendar terms may be pre-screened. Reports include seasonal diagnostics and event-day overlays, linking them to observed data characteristics and allowing the forecasting team to verify that salary payments, tax deadlines, and other events are correctly captured.

60. Outputs can be produced at the frequency needed for operations: daily paths at 7- and 30-day horizons and monthly averages at a four-month horizon.

For multi-month forecasts, where different horizons or aggregations coexist, forecasts are made coherent by construction so that daily paths align with monthly averages. The toolchain also generates standard deliverables (tables, fan charts, exception logs) and cleanly separates the statistical forecast from any judgmental overlay that may incorporate one-off fiscal or cash-management information. This approach mirrors the core tasks of a modern liquidity-forecasting build, including model suite selection, out-of-sample evaluation, reconciliation, interval estimation, and production deployment.

61. Coherence across horizons is enforced through reconciliation in the case of long-term forecasts.

After producing component-wise forecasts for CiC (and other factors), the system ensures that daily trajectories aggregate exactly to the corresponding monthly means. Several reconciliation schemes are available and can be calibrated on a rolling validation window. A simple “bottom-up” variant adjusts the aggregate to match the sum of components; more formal approaches (e.g., regression-based weights or MinT) minimize forecast-error covariance to improve overall accuracy. In practice, bottom-up and MinT tend to outperform naïve base forecasts and yield similar gains at short horizons, allowing the choice to be guided by stability and ease of maintenance. Reconciliation results are reported alongside unreconciled metrics to document value-add and avoid over-fitting to a single period. This step is part of the standard forecasting workflow and helps align daily operational views with monthly planning requirements.

62. Model evaluation and accuracy assessment follow the principles described under Recommendation 5.

The expanding rolling-origin scheme yields horizon-specific performance profiles and reduces sensitivity to individual episodes, while fixed-horizon evaluation avoids mixing different prediction problems. Accuracy and bias metrics—ME, MAE, RMSE—are reported alongside interval-based scores and empirical coverage rates. Event-conditioned diagnostics for month-end and first-business-day episodes ensure that the framework performs well when volatility is highest. This structure produces stable, comparable accuracy estimates across model families and supports data-driven selection or combination without relying on in-sample fit.

63. Forecast uncertainty, as emphasized under Recommendation 4, is systematically integrated into the toolkit.

Prediction intervals (for example, 80 and 95 percent) are generated for all horizons, and coverage diagnostics are tracked over time. Fan charts and tables of interval widths by horizon form part of the standard output package, providing an immediate view of the range of plausible liquidity outcomes. When coverage systematically deviates from target, this triggers a review of variance estimation or event design, reinforcing the link between model diagnostics and operational decision-making.

64. Implementation and governance are automated through the R toolkit.

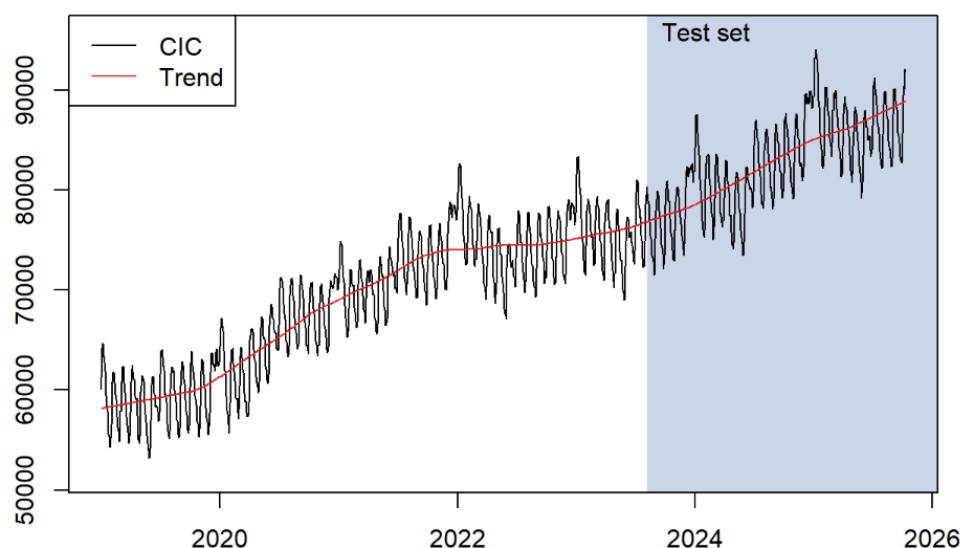
The pipeline ingests source data from an Excel file, runs estimation and rolling evaluation, performs selection/combination and reconciliation, and exports standardized outputs (data tables, HTML reports, and a machine-readable “exception” log). Immutable forecast vintages are saved with

production date, target date, model set, and interval parameters, enabling ex-post evaluation and transparent change control. A brief user guide and parameter catalog are maintained in Annex IV. Liquidity Management, while the primary text used by decision-makers focuses on the key elements needed for operations—namely, point forecasts, prediction intervals, and concise accuracy diagnostics. This setup directly addresses the current operational risks associated with manual, Excel-based processes relying on tacit knowledge and visual checks.

Main Autonomous Factor Forecasts

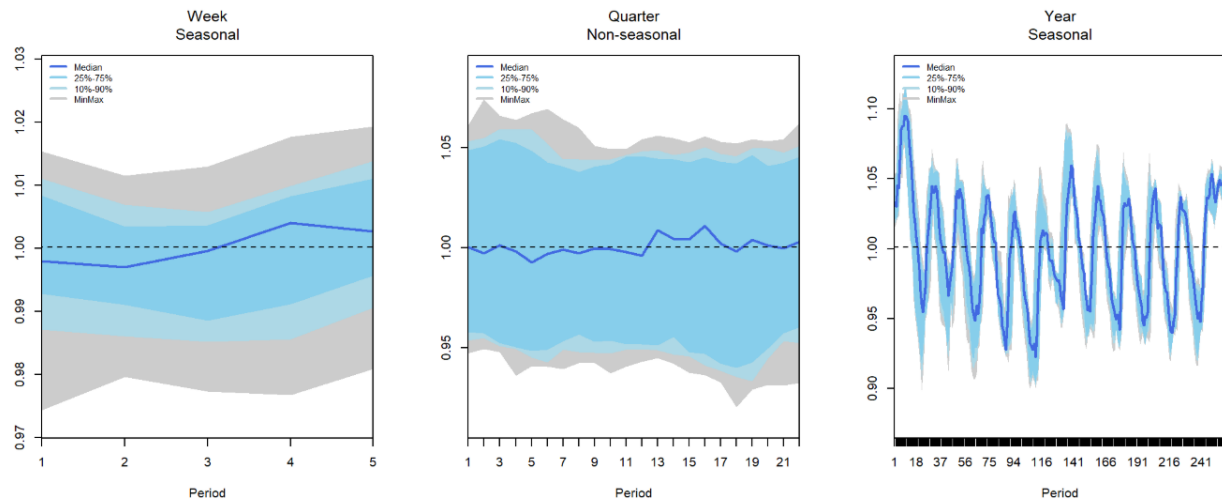
65. CiC exhibits a stable intramonth profile and a stable upward-moving trend (Figure 9 and Figure 10). For the past two years, a stable increasing trend component has been present in the CiC series, accompanied by a minor weekday effect, with slightly higher CiC values observed on Thursdays and Fridays. There is a salary-related peak at the turn of the month followed by a gradual decline of roughly 10 percent towards the month-end as cash is spent and redeposited. Dollarization is reported to be a minor factor in CiC modeling, as there is no significant stock of USD banknotes circulating domestically. Payment habits shape the profile: card acceptance is uneven across certain parts of the country, while cash remains prevalent in sectors such as household services, and some households prefer to hold cash balances rather than deposits. CiC was previously a direct driver for liquidity-absorbing issuance; since vault cash counts toward minimum reserve requirements (MRR), day-to-day CiC swings now have smaller implications for short-term sterilization, and the operational lens is CiC held by the public rather than total notes outstanding.

Figure 9. Currency in Circulation Over Time and Trend



Source: BCU and IMF calculations.
Notes: Y-axis in mn of peso (UYU).

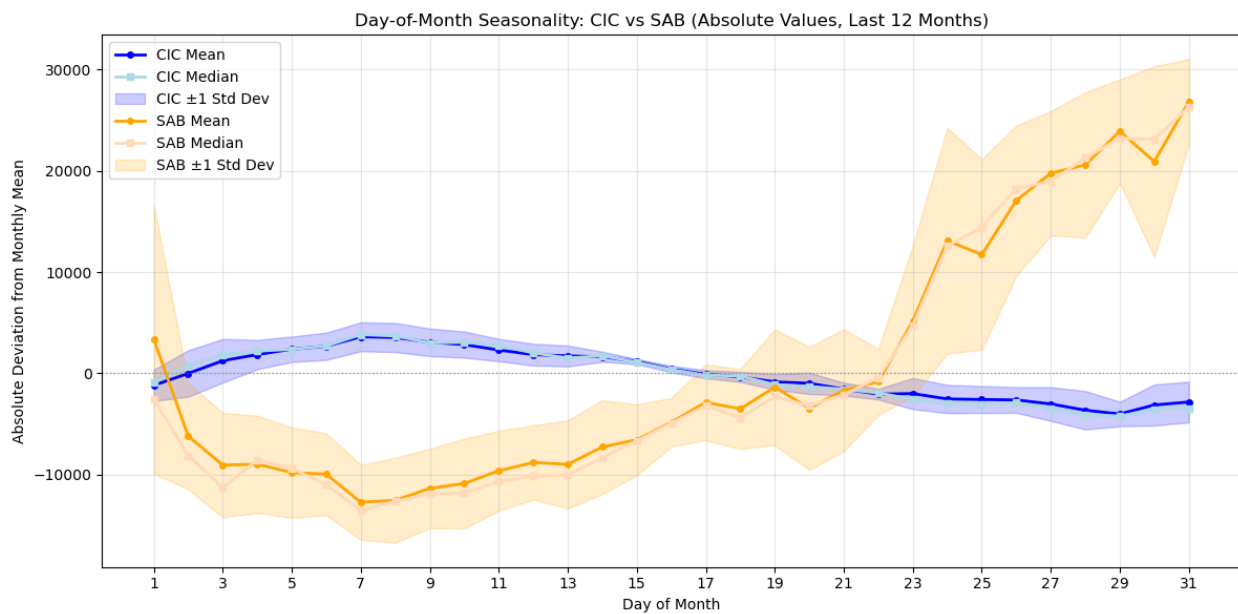
Figure 10. Seasonal Factors in Currency in Circulation



Source: BCU and IMF calculations.

Notes: Y-axis is the CiC time series de-trended.

Figure 11. CiC and GovD by Day of the Month

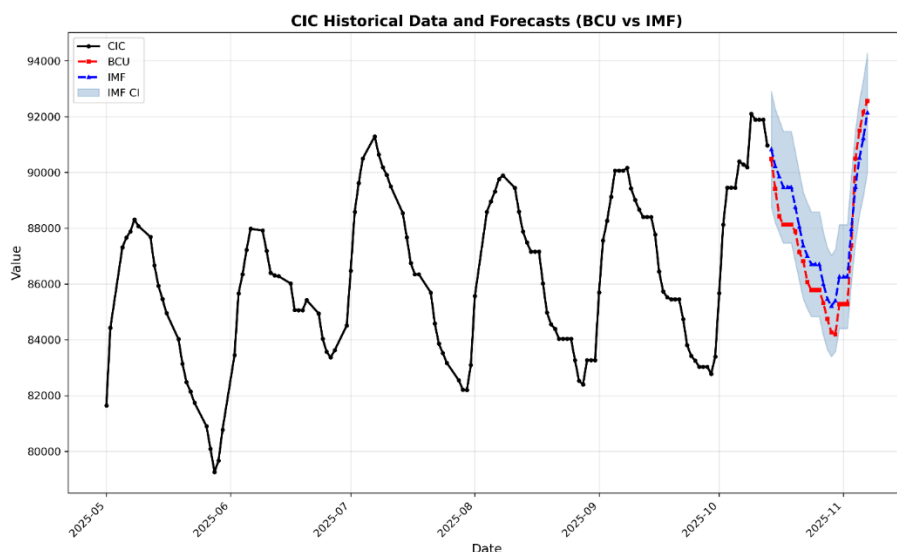


Source: BCU and IMF calculations.

Notes: Y-axis displays deviation from monthly average in mn UYU. The orange line displays the GovD pattern, with the intervals highlighting a much larger deviation of GovD patterns compared to CiC, which is increasing forecast errors.

66. The BCU's current modeling approach for CiC estimates monthly averages using an ARIMA model and applies day-of-month factors that have been back-tested over multiple years. The BCU tested alternative specifications with additional regressors but did not find any material improvement in performance. Since vintage forecasts are adjusted on an ongoing basis by the forecasting unit at BCU, it is not possible to precisely benchmark the performance of the IMF's recommended models against existing models on a historical basis. However, forecast performance is reported to be sufficiently accurate for operational calibration, and the IMF finds the day-of-month factors to be well calibrated, as shown in Figure 12. Extra salary payments in June and December are addressed based on expert judgment. The latest forecast provided by the BCU and the IMF's forecast over the same 40-day horizon show a close overlap.

Figure 12. CiC Observed and Forecast



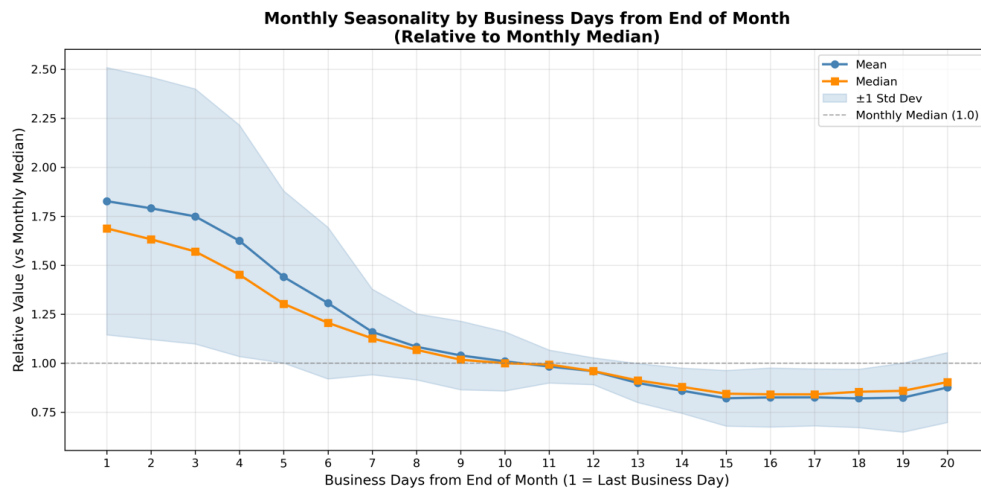
Source: BCU and IMF calculations.

Notes: Forecast cut-off date was October 13, 2025.

67. Figure 13 shows that government deposits exhibit a pronounced intramonth pattern. The rise in deposits is closely linked to the distance to month-end, with deposits rising ahead of month-end and dropping sharply on the first day of the month. More importantly, the variance and exact timing of the month-end spike are major sources of uncertainty over time. This can only be partially addressed through statistical models and is the most significant driver of forecast errors at BCU. Feedback from market participants suggests that this is also seen as a substantial source of uncertainty by banks. As a result, banks hold large reserve buffers throughout most of the month and are strongly focused on frontloading the fulfillment of reserve requirements.

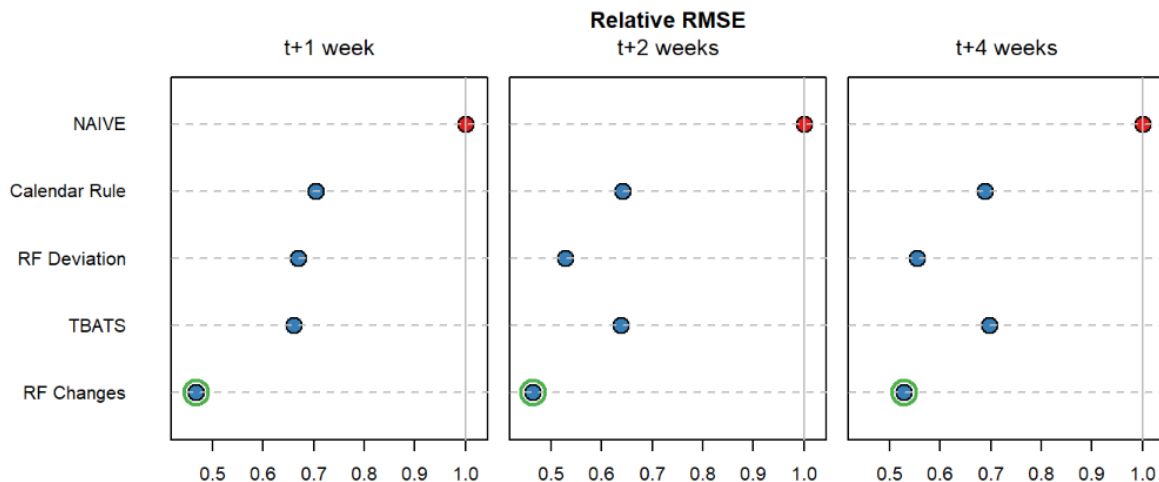
68. The second chart in Figure 13 shows that a RF specification that includes the distance to the month-end as a feature in the model performs better than time series models. Due to the varying number of business days per month and the sharp spikes in the data, seasonal components in time-series models and regularization aimed at avoiding overfitting make these models unsuitable for forecasting government deposits at BCU. But even if the IMF toolkit can improve statistical forecasts, the greatest potential to improve forecasts lies in closer information exchange with the government.

Figure 13. GovD Monthly Seasonality



Source: BCU and IMF calculations.

Notes: The chart displays the average (as well as median and standard deviation) across time for each business day of the month in terms of relative deviation from the monthly mean.



Source: IMF toolkit.

Notes: The model performance according to RMSE by forecast week is plotted, comparing the best performing candidate models. The best forecast is highlighted with a green circle. The y-axis displays the errors relative to the Naïve forecast. The RF models perform best.

B. Market Functioning

69. While the peso money market in Uruguay is generally functional and serves as a mechanism for banks to manage short-term liquidity, its depth and activity beyond overnight maturities remain limited. This shallow interbank market, coupled with banks' preference to hoard liquidity and rely on central bank fine-tuning operations and the reserve requirement averaging, means that the BCU's frequent interventions are necessary to ensure smooth liquidity redistribution. The BCU acts as a dominant counterparty in the majority of peso-

guaranteed transactions and performs daily fine-tuning through its ISF operations to absorb short-term liquidity shocks. These persistent central bank interventions highlight the market's current reliance on the BCU to maintain stability and functioning, underscoring the need for ongoing policy support while deeper and more active market mechanisms gradually develop.

Market Depth

70. **The peso money market is generally functional, and the banks' first line of defense for short-term daily liquidity management, although it remains heavily supported by BCU operations.** Interbank transactions and wholesale CDs are used to fine-tune reserve positions within a maintenance period, with most activity concentrated at overnight to one-week maturities. By November 2025, total turnover in overnight "Call pesos garantizado" operations reached UYU 626 billion, of which approximately 41 percent originated from BCU fine-tuning operations. The Call pesos garantizado is a short-term secured instrument, mainly collateralized by Treasury and BCU-issued securities. The activity of this segment is constrained by tight interbank credit lines and internal risk limits, which cap exposures even though the PG call transactions are effectively secured through a collateral. Unsecured call operations accounted for roughly 3 percent of total turnover, while term unsecured trades beyond overnight were negligible.
71. **The interbank peso market for maturities longer than overnight remains shallow, which constrains price discovery and broader money market development.** Banks have limited incentives to trade liquidity bilaterally beyond overnight maturity, when the central bank routinely intermediates at rates near the policy rate. Thus, the trading activity reflects the influence of BCU's operations rather than decentralized trading. Pricing references for the medium term are often screen prices, without any tradable market depth.
72. **Survey evidence indicates the peso money market's functioning for most maturities still relies on the BCU's active footprint, revealing shallow interbank depth and gaps that prevent self-clearing.** Participants surveyed perceive that depth is "usually guaranteed" when the BCU is active and describe the market as "not deep," with liquidity concentrated within the week and thinning markedly beyond one month, and the wholesale peso investor base is narrow. Several banks also tend to hoard liquidity for much of the month and are reluctant to lend in the interbank market, knowing that any surplus can always be placed in LRM auctions or fine-tuning operations at rates close to the policy rate, which further weakens incentives to trade bilaterally. These features make routine redistribution reliant on central bank operations rather than bilateral trading. A practical development agenda follows from these perceptions: deepen call garantizado or repo activity beyond overnight, broaden the peso investor base, and strengthen short-end reference points so banks can plan and clear liquidity on a market basis—complemented by use of daily-average reserve-requirement flexibility for intramonth smoothing.
73. **Trading activity in both primary and secondary markets for locally issued securities is concentrated in a very narrow set of instruments, underscoring the shallow and segmented nature of Uruguay's capital market.** On the primary side, almost all issuance is split between private-sector CDs and LRMs (about 96 percent of volumes), while in the secondary market, trading is overwhelmingly in LRMs (nearly 90 percent), with only marginal activity in Treasury notes, international issuances, and other securities—and effectively no trading in private CDs. This configuration suggests that investors treat private CDs largely as buy-and-hold instruments, with price discovery and liquidity concentrated in public LRM paper and very limited scope for active portfolio rebalancing or risk transfer in other asset classes.

Table 3. Market Share by Instruments in Primary and Secondary Markets in 12 Months

Instrument	Primary market share (percent)	Secondary market share (percent)
LRMs	45.1	88.5
Treasury notes	2.5	3.9
Private sector (CDs)	50.6	0.0
International issuances	0.0	7.0
Other securities	1.9	0.6

Source: BCU's Financial Stability Report, Q2 2025.

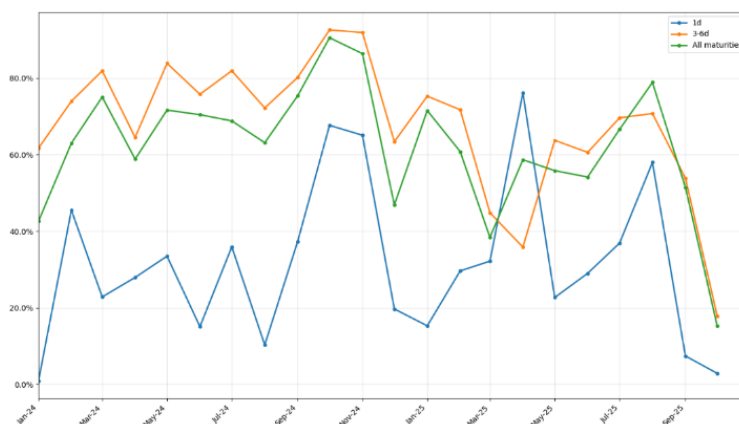
Table 4. Turnover by Issuer Sector and Trading Venue in 12 months (UYU mi)

Sector	Segment	BVM	BEVSA	UFEX	OTC	Total
Public Sector	Total	20.334	783.236	-	1.207.696	2.011.266
Public Sector	Primary Market	-	8.249	-	1.207.696	1.215.944
	BCU LRM				1.145.158	1.145.158
	Treasury Notes				62.537	62.537
	Other (*)		8.249			8.249
Public Sector	Secondary Market	20.334	774.987	-	-	795.322
	BCU LRM	2.152	705.043			707.194
	Treasury Notes	2.259	29.229			31.487
	International issuances	15.826	40.533			56.359
	Other (*)	97	184			281
Private Sector	Total	4.569	1.320.536	561	802	1.326.469
Private Sector	Primary Market	3.084	1.320.296	561	802	1.324.743
	CDs		1.284.733			1.284.733
	Derivative (**)		25.965			25.965
	Other (*)	3.084	9.599	561	802	14.046
Private Sector	Secondary Market (***)	1.485	240	-	-	1.725
Private Sector	International issuances	1.171	1.405	-	-	2.577
Total	All segments	26.075	2.105.178	561	1.208.497	3.340.312

Source: BCU's Financial Stability Report, Q2 2025. (*) Financial Trusts (Fideicomisos Financieros, regulated by Law No. 17,703), Negotiable Obligations (Obligaciones Negociables, governed by Law No. 18,627 / 19,820), Mortgage Credit Notes (Notas de Crédito Hipotecario, governed by Law No. 18,574), and other instruments traded over-the-counter. (**) Derivative forward contracts traded on BEVSA. (***) Financial Trusts, Negotiable Obligations and Multilateral Notes, which are debt instruments issued or arranged with multilateral organizations.

- 74. Despite sizeable overall issuance, secondary market activity remains shallow, especially for private securities.** Total market operations amounted to approximately 3.3 trillion pesos from July 2024 to June 2025. However, roughly three-quarters of this volume (approximately 2.5 trillion pesos) reflects primary issuance, with only about one-quarter (around 0.8 trillion pesos) occurring in secondary trading. For private sector instruments, the imbalance is particularly stark: secondary market trades account for only about 0.1 percent of total private-sector volumes (1.7 billion out of 1.3 trillion pesos), implying a secondary-to-primary ratio close to zero. Even in the public sector segment, where secondary activity is somewhat higher, secondary operations represent only about 40 percent of total public sector volumes, with primary placements still dominating.
- 75. Such low turnover points to a buy-and-hold structure that limits price discovery and market liquidity.** Using simple depth indicators—such as the share of secondary trading in total volumes and the ratio of secondary to primary transactions—the Uruguayan markets appear thin by international standards, particularly for private securities where turnover is effectively negligible. This suggests that investors hold instruments to maturity and transact infrequently, which hampers the formation of reliable market prices, constrains participants' ability to adjust portfolios, and reduces the usefulness of securities as collateral in secured funding markets. In turn, shallow secondary markets can weaken monetary transmission through asset prices and yields, and may make it more difficult for issuers to rely on domestic capital markets as a flexible, market-based source of finance.
- 76. Outside the overnight segment, the BCU is the counterparty in around 60–80 percent of all peso PG transactions across most maturities and over long periods.** Figure 14 indicates that the market does not routinely clear on a purely interbank basis. Only the overnight tenor exhibits some degree of depth without continuous BCU presence, which is positive given its role in computing the reference rate. Periods in which the BCU's share is temporarily lower can largely be attributed to more flexible use of LRM auction calendars, which reduces the need for frequent fine-tuning operations rather than reflecting a structural increase in private interbank activity. The preconditions for a more developed, secure money market exist in the form of a sound market infrastructure provided by the electronic exchange BEVSA. But overall, such a dominant central-bank footprint suggests a system that remains reliant on the BCU for redistribution and is not yet a deep, liquid peso money market in its own right.

Figure 14. BCU Share of Call Peso Garantizado Volume by Maturity



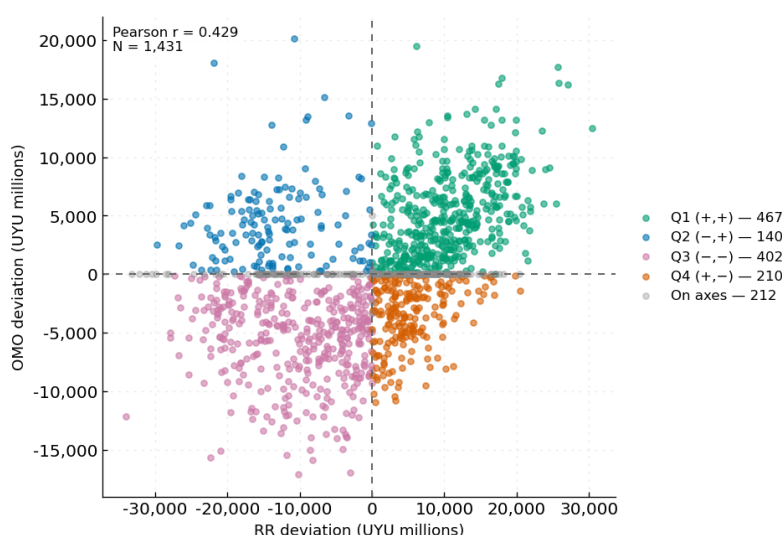
Source: BCU.

Notes: The chart displays the share of aggregate monthly volume conducted with the BCU as counterparty for a specific maturity band to the overall market volume for each maturity band.

Reserve Averaging and ISF Operations

77. Daily ISF fine-tuning, rather than reserve averaging and market trading, currently does most of the work in absorbing short-term liquidity shocks. Although banks comply with reserve requirements on a monthly-average basis—an arrangement that should, in principle, allow them to smooth within-month shocks using their reserve buffers and the interbank market—the data show that the BCU is frequently adjusting ISF stocks in ways that offset, rather than complement, banks' use of the averaging mechanism. This weakens incentives for active liquidity management by banks and makes the overnight rate heavily dependent on the central bank's day-to-day operations. It also underscores the case for moving toward a framework in which a regular weekly main operation, combined with reserve averaging, absorbs most predictable shocks, leaving ISF windows as a genuine backstop rather than the primary adjustment tool.

Figure 15. Required Reserves versus ISF—Daily Deviations from Monthly Mean



Source: IMF staff calculation using BCU data.

Notes. Each dot is a day. The x-axis is the RR deviation, computed as the day's required-reserve balance minus that month's average balance; the y-axis is the OMO (ISF) deviation, the day's ISF stock minus that month's average stock (both in UYU millions). Because reserve-requirement compliance is based on the monthly average, these deviations indicate the path banks take within the month to meet the average—a positive RR deviation means banks held/deposited more reserves than their monthly average for that day. In contrast, a negative value means they had less. For OMO, a positive deviation means a larger-than-usual ISF stock (more absorption) and a negative deviation means smaller-than-usual absorption. Dashed lines at $x=0$ and $y=0$ divide the plane into quadrants: Q4 (+,-) and Q2 (-,+) indicate offsetting behavior (RR above average paired with below-average OMO, or vice-versa), while Q1 (+,+) and Q3 (-,-) indicate same-direction co-movement (both above or both below their monthly averages). The Pearson correlation index r is printed.

78. Figure 15 explains this interaction by plotting, for each day, the deviation of reserve balances and outstanding ISF stocks from their respective monthly averages. The horizontal axis shows whether banks are above or below their average reserve balance for that month, while the vertical axis shows whether ISF absorption is above or below its monthly average. When both deviations are positive (upper-right quadrant), banks are holding more reserves than usual and the BCU is absorbing more than usual; when both are negative (lower-

left quadrant), banks are running reserves below average and the BCU is also absorbing less or injecting on net. By contrast, the upper-left quadrant corresponds to days when banks are running reserves below average while ISF absorption is above average, and the lower-right quadrant captures the opposite case—reserves above average paired with below-average ISF absorption. In a setup where reserve averaging and interbank trading carry most of the adjustment, we would expect most observations to lie either near the axes (small deviations in both variables) or in the same-direction quadrants: when aggregate reserves are above the monthly average, a central bank aiming to stabilize conditions would normally absorb somewhat more; when reserves are below average, it would usually absorb less or inject.

- 79. The actual pattern is different: a sizeable share of observations falls in the “offsetting” quadrants where banks’ use of the averaging window and the BCU’s ISF actions move in opposite directions.** On many days, banks are already running their reserves below the monthly mean, while ISF operations simultaneously absorb more liquidity than usual. On others, banks hold reserves above average, while the BCU absorbs less or injects. This indicates that short-term imbalances are being managed primarily through frequent ISF fine-tuning rather than through reserve averaging and interbank trading. In practice, the system behaves as if daily OMOs were the first line of defense, with averaging used only residually. A shift toward a weekly 7-day Fixed Rate Full Allotment (FRFA) operation as the primary tool—calibrated with short-term liquidity forecasts and supported by the existing averaging mechanism—would help reverse this logic, promote more active liquidity management by banks, and allow the standing facilities and ISF tenders to play a genuinely marginal, backstop role.

III. Proposed Instruments

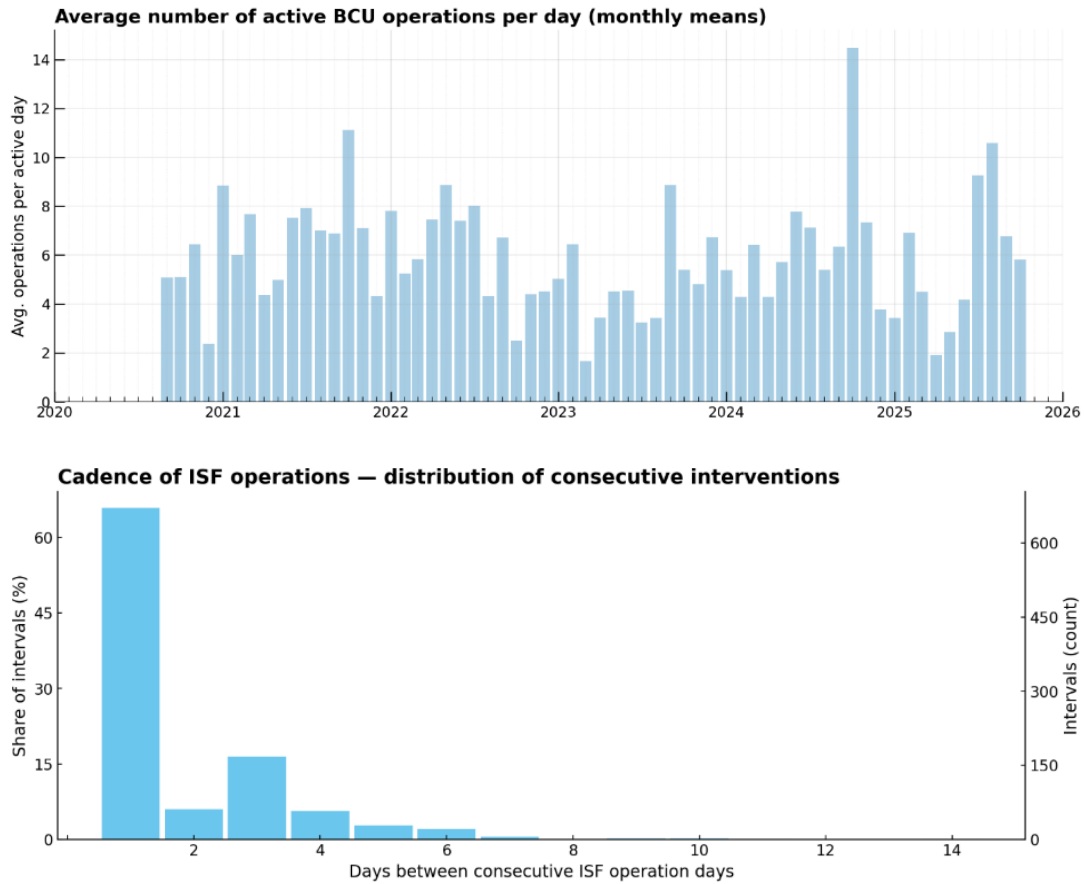
- 80. Since forecasts and markets are not perfect, the BCU requires a well-calibrated set of instruments to compensate for these imperfections and maintain the marginal cost of funding in alignment with the policy stance.** In Uruguay’s current framework, three tools are central for day-to-day implementation: (i) short-term OMOs, including frequent fine-tuning operations (ISF); (ii) reserve requirements; and (iii) a wide standing-facility corridor that serves as a formal backstop but is overshadowed mainly by daily OMO interventions. A comprehensive review of the current monetary policy instruments is given in Annex V. Current Instruments. This section focuses on recommendations to enhance the toolkit, tailored to reduce the central bank’s footprint and promote market development.
- 81. The recommended operating framework reinforces monetary policy transmission primarily by strengthening the link between the policy rate and banks’ marginal cost of peso intermediation over horizons relevant for pricing decisions.** As the BCU already achieves a close alignment between the policy rate and money market rates, the case for reform is to strengthen the market mechanism through which the policy signal is propagated beyond the overnight segment. A predictable weekly 7-day FRFA operation supported by a functional corridor, encourages banks to plan liquidity over the maintenance period, to redistribute idiosyncratic shocks through the market, and to internalize the opportunity cost of liquidity between operations. This supports the formation of clearer short-term reference rates and benchmarks that are used in internal transfer pricing, term deposit pricing, and the pricing of variable-rate credit products. In parallel, a cleaner separation between structural absorption (through LRMs) and short-term liquidity management makes the policy signal easier for market participants to interpret. At the same time, pass-through from the policy rate to longer-term lending rates is shaped by structural features that are outside the scope of the operating framework.

A. Main Operation

Recommendation 1. Introduce a weekly fixed-rate, full-allotment 7-day main operation at the policy rate as the core liquidity-management tool to reinforce transmission and simplify allocation.

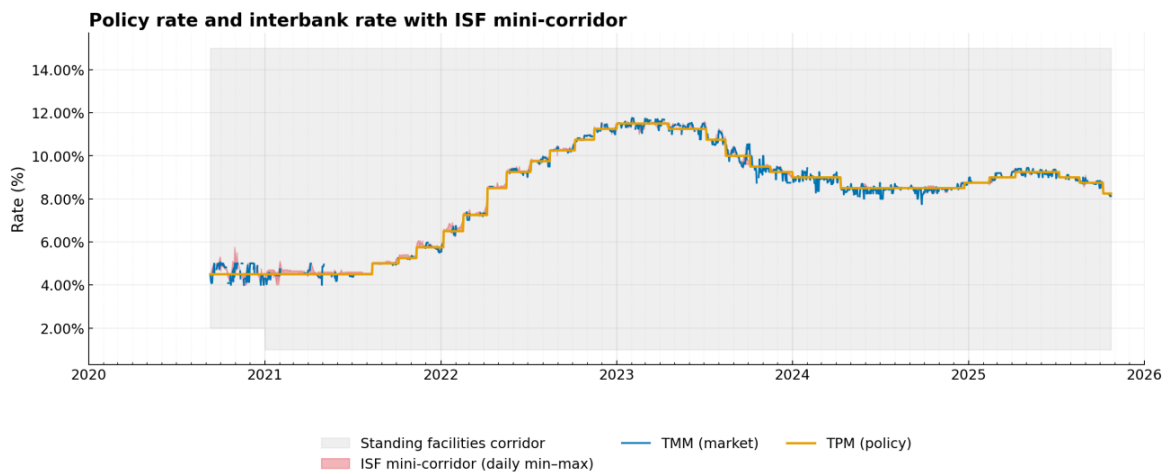
- 82. A weekly 7-day FRFA operation at the policy rate would help to preserve Uruguay's excellent short-term rate control, while replacing near-daily micromanagement with a predictable and straightforward operating routine.** Under the current framework, the overnight T1D rate is maintained within just a few basis points of the TPM. RMSE measures, which show daily alignment between the overnight rate and policy rate, indicate that Uruguay compares favorably with peer inflation targeters. This tight alignment, however, is achieved through frequent, short-term OMOs (ISF/PG-Call), rather than being market-driven. In practice, the BCU has established a de facto "mini-corridor" around the TPM through daily fine-tuning, despite the formal corridor defined by standing facilities being very wide (currently 1–15 percent).
- 83. The combination of a wide formal corridor, structural liquidity surplus, and no remunerated floor close to the policy rate makes frequent ISF operations almost unavoidable if the BCU wants to keep the overnight rate tightly near TPM.** With a structurally long system and a floor far below the policy rate, any residual surplus not sterilized by LRMs or OMOs would naturally push the overnight rate toward the standing deposit rate. At the same time, shortfalls would trigger spikes toward the ceiling. Because there is no remunerated floor close to TPM to anchor the market, the BCU must actively absorb residual surpluses and cover temporary shortfalls via OMOs at rates near the policy rate. Otherwise, short-term rates would be more volatile and could drift toward the corridor's edges. The current pattern of ISF operations is therefore an endogenous response to this configuration: it substitutes daily discretionary operations for a closer, remunerated floor.
- 84. Market data confirm the intensive, irregular central bank footprint in the overnight segment.** Figure 16 shows that, from 2020 to mid-2025, the BCU conducted 2,380 ISF interventions across 1,019 days—on average 38 operations per month, spread over 16 ISF days—with frequent streaks of consecutive intervention days. Figure 17 illustrates that these operations have generated a narrow band of a few basis points around the TPM (the mini-corridor width averaged 7.3 bp, with a median 5 bp and P90 of 20 bp, narrowing over time from 16.3 bp in 2020 to 3.3 bp in 2025), inside a very wide 1–15 percent formal corridor.

Figure 16. Cadence and Number of ISF Operations



Source: IMF staff calculation using BCU data.

Figure 17. The Mini-Corridor Promoted by Frequent ISF Operations



Source: IMF staff calculation using BCU data.

85. Evidence from the interaction between ISF operations and reserve averaging points supports this direction. A scatter plot of daily deviations of reserve balances from their monthly average against deviations in outstanding ISF stocks shows a sizeable number of days in which the BCU absorbs more liquidity precisely when banks are already running reserves below their average, and, conversely, days in which the central bank absorbs less or injects when reserves are already above average (Figure 15). In a framework where reserve averaging and the interbank market carry most of the adjustment, one would instead expect these variables to move broadly in the same direction or remain close to their monthly means. While part of this pattern may reflect heterogeneous liquidity conditions across institutions, at the aggregate level, it suggests that day-to-day shocks are still being managed primarily “against the central bank” through frequent fine-tuning, rather than through active liquidity management and trading among banks. This reinforces the case for shifting to a predictable weekly main operation, so that reserve averaging and the standing-facility corridor—not daily ISF—become the primary shock absorbers.

86. Moving to a weekly main operation is specifically designed to rebalance these incentives and promote more active liquidity management by institutions. Under a predictable weekly 7-day FRFA at the TPM, banks are aware that the central bank will set the aggregate liquidity condition once a week, not daily. Within the maintenance period, they must then decide how much liquidity to hold, borrow, or lend across days, using the averaging rule, internal buffers, and the interbank market to smooth idiosyncratic shocks. A bank expecting a payment outflow on a specific weekday cannot simply wait for a daily ISF operation. Instead, it has an incentive to trade with peers or manage reserves proactively between the weekly tenders. Over time, this encourages:

- More interbank trading, as institutions with surplus liquidity find it profitable to lend to those with temporary shortfalls rather than relying on the BCU as the marginal counterparty;
- Better internal liquidity forecasting and planning, because the cost of misjudging the weekly position is borne first within the bank's own balance sheet and only secondarily via recourse to the corridor; and
- More effective use of reserve averaging, since banks will naturally exploit the flexibility of the maintenance period to minimize unnecessary use of standing facilities.
- Better transmission between the policy rate and banks' marginal peso funding costs as the information content of short-end reference rates used in internal transfer pricing is more closely linked to market liquidity conditions.

87. Survey responses are consistent with this picture of a framework that delivers strong rate control but relies heavily on the central bank's presence. Participants report that peso liquidity is “usually guaranteed” when the BCU is active, and they describe ISF operations at or near the policy rate as a key channel for parking or obtaining short-term liquidity. They also note that volumes are not systematically pre-sigaled, and that a transparent rule does not govern the timing of interventions. This makes it more challenging to plan liquidity over longer horizons within the maintenance period and encourages day-to-day management in response to central bank actions, rather than the proactive use of reserve averaging or interbank trades.

88. The mission, therefore, recommends consolidating the current pattern of frequent short-term OMOs into a single weekly main operation, conducted at a fixed rate equal to the TPM with full allotment. In practical terms, the BCU would hold a weekly 7-day FRFA operation—e.g., every Tuesday—at a fixed rate equal to the policy rate, against eligible collateral, with full

allotment for all eligible counterparties. This operation would become the primary instrument for steering the overnight segment. At the same time, LRMs would remain the main tool for structural sterilization and for shaping the short end of the yield curve. Between weekly operations, banks would be expected to use reserve averaging, interbank trades, and the standing facilities to manage day-to-day fluctuations.

- 89. To keep the operational framework simple and predictable, policy rate changes could become effective at the next scheduled seven-day FRFA operation date.** This removes the need for additional shorter maturity operations in normal circumstances and reinforces the weekly main operation as the key instrument for implementing the policy stance. The start and end dates of reserve maintenance periods could similarly be aligned with the weekly operation schedule to support communication and operational consistency. If extraordinary short-term liquidity fluctuations that cannot be fully managed through the seven-day main operation may require executing a supplementary operation with a shorter maturity. These fluctuations, if left unaddressed, could compromise the anchoring of short-term interest rates and disrupt market functioning. The need for such an operation should be assessed based on short-term liquidity forecasts. Once a liquidity shock is identified—considering its magnitude and expected duration—implementing a supplementary operation can help mitigate temporary imbalances and ensure the smooth functioning of the interbank market. The analysis should also consider the capacity of the interest rate corridor to absorb and accommodate such liquidity fluctuations.
- 90. Fine-tuning operations should remain in the toolkit but be explicitly re-positioned as exceptional instruments rather than the default daily tool.** Under the recommended framework, ISF/PG-Call would be reserved for clearly defined exceptional circumstances, such as large unforeseen fiscal or cash-flow shocks, technical problems in settlement systems, or other events that create temporary deviations that cannot reasonably be left until the next weekly tender. This re-positioning would also clarify the hierarchy of instruments: the weekly 7-day FRFA becomes the primary tool, LRMs absorb structural surplus, standing facilities provide the corridor, and fine-tuning is used only at the margin when circumstances genuinely warrant it.
- 91. Staff calibrated an indicative steady-state split of the structural peso liquidity surplus across reserve requirements, the weekly 7-day FRFA main operation, and LRMs.** Using historical data on autonomous factors and the reserve-requirement base as of September 2025, the effective structural surplus implied by the BCU balance sheet is absorbed by about UYU 29,398 million of required reserves, around UYU 73,155 million in outstanding 7-day operations, and the remaining surplus through LRMs. In this configuration, reserve requirements continue to cover idiosyncratic day-to-day volatility, the weekly operation is sized so that typical week-to-week shocks in autonomous factors require only moderate percentage adjustments in allotment volumes, and LRMs perform their role as the main structural sterilization instrument and short-end benchmark for peso pricing. See Annex II. Sizing the Main Operation for a detailed discussion on the calibration of the OMO sizing and the next section for the sizing of reserve requirements.
- 92. Simulations in Annex III. Simulation of Fixed Weekly Operations show that a weekly tender framework can deliver similar liquidity control with a smaller operational “fingerprint.”** It reconstructs the historical liquidity position under the current regime and compares it to three counterfactual and illustrative weekly rules that differ only in how the 7-day operation size is calibrated (mopping up to zero, to the minimum projected liquidity, or to the average projected liquidity over the week). The simulations indicate that the total volume of short-term OMOs would be lower than under the current regime.

- 93. For the BCU, the gain is a simpler, more rules-based operating routine; for banks, the gain is a clearer anchor around which to plan liquidity management.** The weekly operation would effectively “reset” system liquidity once per week at the policy rate, while the combination of reserve averaging and the corridor would absorb day-to-day noise. The overnight rate can remain closely aligned to the TPM as in the current framework, but with far fewer transactions and a clearer division of labor between instruments.

B. Reserve Requirements

Reserve-Averaging Profile

- 94. The empirical fulfillment profile of reserve requirements in Uruguay is broadly consistent with the intended use of the averaging mechanism but reveals scope for better integrating it with the calibration of OMOs.** Banks tend to start the maintenance period with reserve balances about 30 percent above the required minimum, gradually running them down toward the end of the month. This pattern reflects both the predictable intramonth profile of government deposits—rising ahead of month-end and dropping sharply at the start of the month—and internal risk-management preferences. However, the fulfillment ratio shows substantial heterogeneity across institutions and over the maintenance period, confirming that banks flexibly absorb idiosyncratic shocks and do not seek to track a smooth path day by day. Towards the end of the period, especially after around Day 25, an increasing share of banks moves into a cumulative deficit relative to the final requirement, as uncertainty about the remaining deposit base and required average diminishes and institutions deliberately run down buffers. This behavior is consistent with the BCU’s operational pattern of supplying a modest liquidity buffer early in the period and gradually withdrawing it later on, with banks relying on averaging and central-bank operations to realign their positions with the requirement by the end of the maintenance period. At the same time, the scatter plot of daily deviations in reserve balances and ISF stocks (Figure 15) shows that the BCU often adjusts fine-tuning operations in a way that offsets, rather than complements, banks’ use of averaging: on many days, reserves are below the monthly average precisely when ISF absorption is above average, and vice versa.
- 95. The banks surveyed report that they actively manage their BCU account balances against the required monthly average.** Most banks typically targeting only a small positive buffer (often around one day of required reserves) to avoid compliance risk while minimizing the opportunity cost of holding low-remunerated excess reserves. Volatility in large corporate sight balances leads some institutions to hold a technical reserve buffer above the minimum, but excess balances beyond this operational cushion are usually redeployed into money-market instruments, underscoring that demand for excess reserves in pesos is limited and driven mainly by operational, not precautionary, motives.

Reserve Requirement Remuneration

Recommendation 2. Remunerate peso reserve requirements at the policy rate to improve transmission.

- 96. Reserve requirements are a central pillar of the BCU’s operating framework.** Uruguay’s reserve requirement framework differentiates between peso, inflation-indexed (UI), and foreign-currency deposits because these liabilities serve different policy objectives. Peso reserve requirements are primarily a monetary policy and liquidity management tool, allowing the BCU to influence system liquidity and short-term rates in the domestic currency. UI reserve requirements help preserve the real value of prudential buffers on inflation-linked liabilities, making them an

adequate safeguard in real terms rather than a nominal liquidity tool. Foreign-currency reserve requirements are mainly macroprudential, aiming to contain currency-induced credit risk and to ensure that banks maintain liquid FX buffers to withstand funding and deposit shocks—hence their central role in financial stability. In Uruguay, reserve balances at the BCU account for around 9–10 percent of the country's GDP. Compliance is measured on a monthly-average basis (*“período de cómputo”*), giving banks flexibility to smooth day-to-day shocks within the maintenance period. Vault cash held in pesos contributes to the peso reserve base, further strengthening the role of the averaging mechanism.

97. Currently, the required reserves in pesos are remunerated at 60 percent of the TPM. The wedge between the policy rate and the required reserve's remuneration implies that a considerable share of banks' marginal funding is subject to an implicit tax: the return on the required portion of peso deposits is structurally below the policy rate, even though the policy rate itself is the anchor for the marginal cost of liquidity in the overnight market. Survey responses confirm that banks explicitly incorporate reserve requirements and their remuneration rules into internal transfer-pricing frameworks. Treasurers describe the reserve requirement in pesos as a non-negligible wedge between the marginal market rate and the effective average cost of funding, particularly for short-maturity peso deposits that carry higher reserve requirements.

98. From a monetary implementation perspective, this wedge matters for two reasons:

- First, it raises funding costs relative to the policy rate, with the burden ultimately passed to depositors (via lower deposit rates) and borrowers (via higher lending rates). Required reserves remunerated at a rate below the policy rate effectively operate as a tax on financial intermediation (e.g., Friedman, 1960; Gray, 2011). When the wedge is significant, it can weaken competition, hamper the development of term peso funding, and dampen the clean pass-through of the policy stance into banks' marginal cost of funds.
- Second, it blurs the link between the policy rate and the pricing of benchmarks that banks actually use. As banks internalize the lower remuneration on reserve requirements, their internal transfer rates and retail pricing may adjust less than one-for-one to policy moves, especially segments with high reserve ratios. This is consistent with our empirical findings that deposit pass-through is high for certain tenors but weaker and more heterogeneous in others, and that loan spreads over policy and LRM rates tend to widen in tightening episodes and compress only slowly during easing cycles.

99. International practice suggests remunerating required reserves at or near the policy rate in interest-rate-based frameworks, particularly when reserve requirements primarily serve as a structural liquidity drain and are part of the implementation toolkit. Woodford (2005) and Bindseil (2014) emphasize that, in such regimes, unremunerated or under-remunerated required reserves introduce an unnecessary distortion between the policy stance and banks' marginal funding conditions. Modern inflation-targeting central banks that rely on reserve averaging and a short-term policy rate—such as the ECB, Bank of England, and several advanced inflation targeters—either fully remunerate required reserves at the policy rate or maintain very low reserve ratios, minimizing the tax element.

100. Given the BCU's objectives and Uruguay's structure, the mission recommends raising the remuneration on peso reserve requirements to the policy rate (or a narrow spread below it) over a clearly communicated transition path. This would:

- Eliminate the reserve requirement tax on peso intermediation, aligning the return on required reserves with the price at which liquidity is supplied at the margin via the weekly main operation.
- Tighten the link between the policy rate and banks' transfer prices, reinforcing the role of the TPM as the unique anchor for the marginal cost of funds in local currency.
- Support the development of the peso yield curve by making it more attractive for banks to fund themselves in local currency without facing an additional structural wedge on short-maturity deposits.

- 101. During the mission, BCU issued Circular No. 2491, published on November 27, 2025, which updates the framework for remunerating required reserves on deposits in both local and foreign currency.** Under the new rules, effective March 1, 2026, the remuneration of reserve requirements will be as follows: required reserves in local currency will earn interest equal to 100 percent of the policy rate, up from the previous 60 percent ratio, while excess balances in local currency will be remunerated at the policy rate minus 2 percentage points (with a zero-floor rate). Floors and nominal cutoffs imply that the incentive effects are not linear in the policy rate. Particularly, as during future interest rate cycles the policy rate declines toward these thresholds, the effective remuneration gap can widen mechanically and alter banks' average funding costs in ways that are not intended. Thus, in redesigning reserve remuneration, the mission recommends minimizing the use of absolute cutoffs and instead anchor remuneration to the policy rate.
- 102. For foreign currency reserves, required reserves on euro- and dollar-denominated deposits with maturities under 30 days will earn the policy rate minus 1 percentage point, while other required reserves will earn the policy rate minus 0.5 percentage point (never below zero).** Excess balances in foreign currency accounts will be remunerated at the policy rate minus 1 percentage point, also with a zero floor. For foreign currency, the applicable policy rate is that of the currency issuing authority; if no target rate exists, the one-day market reference rate applies, and in the case of a band, the upper limit is used. Reserve requirements in foreign currency primarily serve prudential and liquidity risk management objectives, such as FX liquidity shocks. Thus, they are calibrated under a different policy rationale. Any changes to FX reserve requirements levels would need to be assessed in coordination with prudential authorities, taking into account banks' FX liquidity profiles, the availability of high-quality liquid FX assets, and the incentives for dollar deposit intermediation.
- 103. At this stage, as a general rule, it would be preferable for the BCU not to remunerate excess balances in pesos, to encourage the allocation of available funds in money market operations.** Nonetheless, considering the current mini-corridor around the policy rate, defined by fine-tuning operations ranging approximately ± 20 basis points around the policy rate, it is expected that the incentives for banks to allocate their excess balances in market operations will be stronger than leaving them deposited at the central bank (which will earn the policy rate minus 2 percentage points). Furthermore, once the new corridor with a width of ± 50 basis points is implemented, accessing the deposit facility will also become more advantageous than holding excess balances in pesos in BCU reserve accounts. In addition, as part of the strategy to gradually reduce dollarization, the remuneration of excess balances in foreign currency should also be subject to regular reassessment.

Reserve Requirement Ratios

Recommendation 3. Unify reserve requirement ratios in pesos across tenors to better align liquidity management incentives with the operating framework, reduce distortion, and simplify the application of the requirement.

- 104. BCU applies differentiated reserve requirements by currency and maturity, in which requirements are higher in foreign currency than in pesos/UI and decline with deposit tenor to support monetary control in the domestic currency and macroprudential buffers in FX.** In pesos and UI, reserve requirements step down from 15 percent for demand and time deposits with maturities of less than 30 days, to 3 percent for maturities of 30–90 days, 2 percent for maturities of 91–180 days, 1 percent for maturities of 181–366 days, and 0 percent for deposits with maturities exceeding one year. In foreign currency, reserve requirements are set at 28 percent for deposits with maturities of up to 180 days and 20 percent for deposits with maturities exceeding 180 days. A 28 percent ratio applies to non-resident FX liabilities net of eligible FX assets. This structure is intended to: (i) support peso liquidity management and interest-rate control; (ii) preserve the real prudential buffer on indexed (UI) liabilities; and (iii) provide strong FX liquidity buffers against funding and rollover shocks.
- 105. The mission understands that the sharp differentiation of reserve requirement ratios by tenor has become less aligned with actual market behavior and with the structure of the operating framework, due to the following reasons:**
- First, the effective reserve requirement ratio has remained stable at about 13 percent since 2022, even after significant cuts for longer maturities. This reflects the deposit composition: more than 80 percent of the reserve requirement base consists of deposits with a maturity of less than 30 days, and the share of longer-term deposits increased only modestly (from 11 to 18 percent) following the reductions. In practice, large differentials in reserve ratios have not led to a significant shift toward longer-term peso funding.
 - Second, a maturity-differentiated schedule interacts awkwardly with the monthly averaging rule and the recommended weekly main operation. The operating framework primarily concerns itself with the aggregate demand for reserves over the maintenance period, rather than the original maturity of the deposits that fund those reserves. When most of the base is concentrated in short buckets, additional complexity in the reserve structure adds little to monetary control but complicates calibration and communication.
 - Third, survey responses indicate that banks manage liquidity and interest-rate risk mainly through internal ALM limits, wholesale funding plans, and the use of LRMs and government securities, rather than through fine-tuning deposit maturities to exploit reserve requirement differentials. The differentiated schedule is reflected in internal transfer prices but is not considered the primary driver of funding-term decisions; product design, client preferences, and relative pricing along the sovereign and LRM curve are more significant.
- 106. Given these factors, the mission recommends simplifying the peso reserve-requirement structure by moving toward a uniform ratio across tenors, while preserving a clear differentiation between peso and FX reserve requirements and retaining the monthly-average fulfillment rule to encourage day-to-day smoothing and active liquidity management by banks.** This prescription is consistent with the textbook treatment of reserve requirements in modern operating frameworks (e.g., Bindseil, 2014; Borio and Disyatat, 2010).

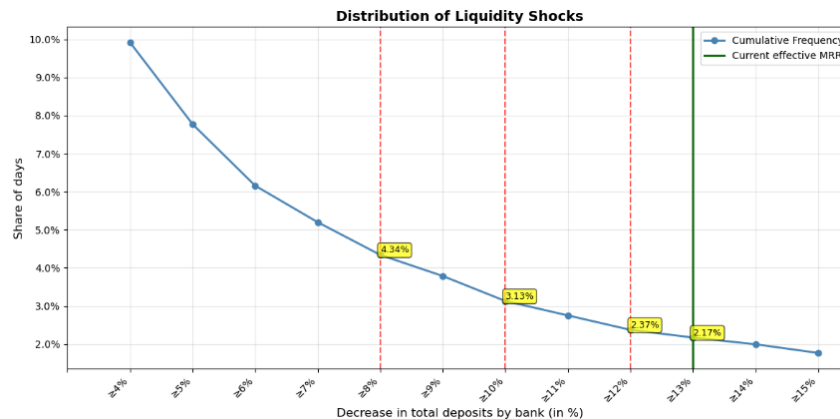
This would preserve the overall structural drain and the role of reserve requirements in the liquidity-management framework, while:

- Simplifying calibration and communication—a single ratio is easier to incorporate into liquidity-forecasting models and weekly tender calibration, and easier for market participants to understand and price;
- Aligning incentives with the operating framework, which already relies on LRMs and the weekly main operation to shape the term structure and funding conditions. Under a uniform reserve requirement, decisions about deposit maturities would be driven by risk management, client demand, and yield-curve signals, rather than by regulatory cliffs in reserve ratios; and
- Reducing scope for unintended distortions across products and tenors, which can arise when regulatory incentives are strong but market depth for longer-term deposits remains limited.

Recommendation 4. Lower the effective reserve requirement ratios in pesos to reduce liquidity parked in non-marketable assets.

- 107. Bank-level data on daily flows in the reserve-requirement base suggest that the current effective MRR of about 12.5–13 percent is high relative to typical deposit volatility.** It could be reduced without weakening banks' liquidity resilience. Across all banks and business days in the sample, a day-to-day fall in the RR base in excess of 12 percent occurs in only about 2.4 percent of observations, and declines exceeding 10 percent in about 3.1 percent (Figure 18). Changes larger than 8 percent are observed on roughly 4.3 percent of days, and are concentrated in a small number of institutions with idiosyncratically volatile deposit bases. For the bulk of the system, daily swings are much smaller and are managed through routine use of averaging and access to money-market and BCU facilities.
- 108. Reducing the effective MRR from its current level by several percentage points would still comfortably cover the tail of observed daily outflows for most banks.** Table 5 shows that even a reduction of the effective requirement ratio by 5 percentage points, would only increase the number of days with a fall in the RR base above MRR by 2 percentage points. At the same time such a reduction in the MRR would free structural liquidity and support the development of market-based liquidity redistribution. Moreover, as displayed in the IMF handbook [Reserve Requirements](#) (Della Valle, 2022), an effective reserve requirement ratio of above 12 percent puts the BCU far above international means. Most inflation-targeting central banks set reserve requirement ratios below 7 percent.

Figure 18. Deposit Volatility



Source: IMF staff calculation using BCU data.

Notes: The chart is based on the universe of daily percentage changes in the peso reserve-requirement base for all banks in the system (bank-day observations). For each threshold on the horizontal axis (from 4 to 15 percent), the vertical axis shows the cumulative share of observations in which the RR base declines by more than that percentage from one day to the next. For example, the points at 8, 10 and 12 percent indicate that day-to-day declines larger than 8, 10 and 12 percent occur in about 4.34, 3.13 and 2.37 percent of bank-day observations, respectively. The upper tail of the distribution is influenced by a small number of smaller banks with unusually high deposit volatility; for most institutions, daily changes fall well below these thresholds.

Table 5. Reserve Requirement Ratio and Deposit Volatility

Decrease in the effective reserve requirement ratio in percentage points	Increase in the share of bank-day observations with deposit outflow exceeding requirement ratio
1	0.20
2	0.58
3	0.96
4	1.62
5	2.17
6	3.03
7	3.99
8	5.6

Source: IMF staff calculation using BCU data.

Notes: The table applies the same calculation as the chart above and assumes as a starting point an effective reserve requirement ratio of 13 percent.

Recommendation 5. Move MRR from contemporaneous averaging to a backward-looking calibration to reduce operational complexity.

109. Under the current framework, reserve requirements are defined on a contemporaneous monthly average of the deposit base, so banks only know their exact requirement with certainty at the end of the maintenance period. This forces institutions to manage a moving target, relying on late-period fine-tuning and recourse to BCU operations to reduce buffers once the expected average stabilizes. Bank-level data since November 2024 indicate that the monthly average deposit base is relatively stable, and that using a lagged—backward-looking—measure (last month's average RR base) would deliver a required reserve level very close to the ex-post

contemporaneous requirement for most institutions. Moving to a backward-looking calibration would fix the target at the start of the maintenance period, simplifying liquidity planning and reducing the need for last-minute adjustments, while preserving the effective absorption capacity of the requirement at the system level. Backward-looking reserve accounting is widely used internationally, including in the Eurosystem, the Bank of Japan, and Brazil.

C. Interest Rate Corridor

Recommendation 6. Calibrate the width of the corridor for deposit and lending standing facilities to at least ± 50 bps around the policy rate, ensuring it remains wider than typical market transaction costs to avoid excessive use of the facility and encourage market transactions.

- 110. The current standing-facility corridor is very wide and plays only a residual role in day-to-day liquidity management, with near-daily fine-tuning operations effectively replacing it with a much narrower “mini-corridor” around the policy rate.** The overnight deposit and credit facilities are currently set at 1 and 15 percent, while the TPM has fluctuated within a much narrower range, consistent with the de facto mini-corridor created by frequent ISF operations. This configuration delivers excellent short-term rate control but at the cost of a heavy central-bank footprint and with limited guidance from the formal corridor itself.
- 111. Survey evidence confirms that banks perceive standing facilities as backstops rather than meaningful reference points for routine liquidity management.** Institutions describe the deposit and lending windows as “last resort” tools, with negligible recourse under normal conditions and pricing that is too distant from market rates to be relevant for day-to-day funding decisions. By contrast, they report that ISF/PG-Call operations at (or near) the TPM are the de facto channel for parking or obtaining short-term liquidity.
- 112. In modern inflation-targeting frameworks, the interest-rate corridor is designed to be an integral part of implementation, not merely a remote liquidity safety net.** The textbook role of the corridor is threefold: (i) provide hard bounds for the overnight rate; (ii) create an incentive for interbank trading by ensuring that the spread between the lending and deposit facilities is wider than typical all-in transaction costs; and (iii) support the operational target (here, the TMM/T1D) by making it unattractive to rely systematically on the facilities. In most peer inflation targeters, corridors are measured in tens—not thousands—of basis points around the policy rate, with standing-facility rates close enough to market conditions that banks will arbitrage toward them only when genuine liquidity imbalances arise. Against this benchmark, the BCU’s 1–15 percent corridor is unusually wide and disconnected from money-market pricing, which helps explain why banks focus instead on fine-tuning operations priced near the TPM.
- 113. Across central banks, the width of the corridor ranges from approximately 50 basis points to over 200 basis points, and some central bank practitioners view corridors of around 200 basis points as striking a reasonable balance between rate control and market development.** In Latin America and elsewhere, corridor widths differ widely, reflecting heterogeneous market structures and policy preferences.

Table 6 below summarizes corridor widths for a large group of countries. The distribution is concentrated between 50 and 200 basis points, with many inflation targeters operating in the 50–150 basis point range, and a smaller group utilizing very wide corridors of 200 basis points or more. This international evidence reinforces the case for re-aligning the BCU corridor with ranges that are sufficiently wide to foster market discipline, but not so wide as to render the corridor irrelevant for day-to-day pricing.

Table 6. Interest Rate Corridor Widths in Selected Countries

Corridor width	2013	2018
50 bps and less	Australia, Canada, Chile, Colombia, Czech Republic, Israel, Kazakhstan, Malaysia, New Zealand	Albania, Australia, Brazil, Canada, Chile, Israel, Jordan, Malaysia, New Zealand, Saudi Arabia, United Kingdom
75 bps	Jordan, United Kingdom	Denmark, European Central Bank
100–149 bps	Afghanistan, Egypt, Fiji, Norway, Thailand, Tunisia	Czech Republic, Egypt, Fiji, Hungary, Norway, Paraguay, Philippines, Sri Lanka, Thailand
150–199 bps	Euro Area, Sweden, Peru	Indonesia, Peru, Sweden
200 bps	Colombia, DRC, Costa Rica, Dominican Republic, Guatemala, Hungary, Indonesia, Korea, Morocco, South Africa	Colombia, Costa Rica, Georgia, Guatemala, Iceland, Kazakhstan, Korea, Morocco, Pakistan, Poland, Romania, Russian Federation, South Africa, Tunisia
200 bps and more	Albania, Bhutan, Croatia, Honduras, Iraq, Mauritius, Moldova, Mongolia, Mozambique, Nigeria, Romania, Rwanda, Serbia	Afghanistan, Algeria, Argentina, Armenia, Belarus, Croatia, Dominican Republic, Honduras, Jamaica, Kyrgyz Republic, Moldova, Nigeria, Qatar, Republic of North Macedonia, Serbia, Seychelles, Tajikistan, Turkey, Ukraine

Source: Cross-country evidence based on IMF ISIMP (2013) and Monetary Operations and Instruments Database – MOID (2018).

115. A narrower corridor, combined with the recommended weekly 7-day main operation, would restore the corridor's role as a genuine pricing band rather than a remote ceiling and floor.

In the first phase of the reform, the mission recommends resetting the lending and deposit facility rates to a narrow, symmetric band around the TPM that broadly mimics the current effective mini corridor as perceived by the market, but at slightly wider spreads than those implied by typical ISF operations. In practice, this means choosing facility rates far closer to the TPM than the current 1–15 percent bounds, yet still at a spread large enough that banks are not indifferent between using the facilities and trading in the market. Because the initial configuration would approximate the corridor that banks already face through ISF operations (albeit formalized and marginally higher), the immediate impact on their funding structures would be limited. A corridor of at least 50 basis points around the policy rate can be a pragmatic starting point, with scope to adjust over time as market conditions evolve. An even narrower corridor risks disincentivizing the already limited interbank trading.

116. Currently, fine-tuning operations are the main tool applied by the BCU to align the short-term interest rate with the policy rate. These operations take place through bilateral transactions on the BEVSA trading platform, where the BCU can either accept or propose deals within the trading blind system. Although these interventions have managed to keep overnight rates close to the policy rate, they offer limited predictability for market participants regarding the interest rates applied, the financial volumes accepted, the maturities involved, and whether short-term liquidity shocks will be fully absorbed by the BCU's operations.

- 117. Gradually replacing the current fine-tuning operations with a functional standard interest rate corridor would deliver significant benefits in terms of predictability, transparency, and effectiveness in anchoring short-term market rates.** A corridor framework enhances predictability by predefining and publicly disclosing key parameters such as the maturity of the operations (overnight), the interest rates applied for liquidity provision and absorption, and by reinforcing confidence in the instrument's capacity to offset short-term liquidity shocks. This is achieved by ensuring that the facility can inject or absorb liquidity at a predefined rate, in amounts up to the collateral available to eligible institutions, thereby with broad capacity to restore equilibrium of the liquidity conditions.
- 118. Fine-tuning operations may remain available; however, their use should be progressively reduced.** This can be achieved by gradually widening the spread between the rates applied in liquidity provision or absorption operations at the fine-tuning operations. At a certain point, the rates offered in fine-tuning operations will become less attractive than those available within the corridor, at which time the corridor is expected to assume the role of guiding market rates
- 119. Over time, as short-term liquidity forecasts become more reliable and banks adapt to the weekly 7-day FRFA operation at the policy rate, the corridor should be widened to foster more active liquidity management.** The exact width of the corridor remains a policy choice, but the BCU could over time place greater weight on market intermediation as the calibration of the weekly 7-day main operation is refined using the upgraded short-term liquidity forecasting framework. Within that structure, a gradually wider corridor around the TPM can allow the overnight rate to fluctuate more freely in response to temporary imbalances, with banks choosing whether to hold extra reserves, trade in the interbank market, or occasionally use the standing facilities. Each widening step should be contingent on observable progress, including the stable anchoring of the overnight rate around the TPM under the weekly framework, improved forecast performance, and evidence from surveys and market data that interbank volumes and the use of reserve averaging are increasing.
- 120. Communication with market participants will be critical to implement the proposed operational changes smoothly.** The BCU should accompany reforms with a dedicated communication covering the objectives, operational mechanics, timeline, and expected market impact, supported by targeted technical sessions with market participants. The mission refers to the companion technical assistance report "Uruguay TAR Modernizing Central Bank Communication" (December 2025), which provides detailed guidance and templates that can be adapted for communicating reforms to monetary operations and liquidity management.

Recommendation 7. Ensure that standing facilities are accessible to all eligible counterparties that meet collateral and risk management requirements.

- 121. Current regulations impose time and usage limits on the standing lending facility (for example, by capping consecutive use to a limited number of business days), which diminishes its role as a true "always-available" backstop.** When banks are aware that access is subject to such caps, they cannot rely on the facility as a stable safety valve for day-to-day liquidity management and are more likely to engage in alternative funding with rates even higher than those of the lending facility.
- 122. The mission recommends removing time-based caps and similar quantitative restrictions on the use of standing facilities, while keeping robust safeguards through eligibility and collateral requirements.** In practice, this means that any institution that: (i) is an eligible monetary policy counterparty; and (ii) has sufficient eligible collateral should be able to access the

deposit and lending facilities on any business day, without constraints on the number of days in a maintenance period. Risk management would continue to be enforced through haircuts, eligibility criteria, and related factors.

- 123. Streamlining access in this way would align the BCU's framework with the standard practice in modern inflation-targeting regimes, where standing facilities are designed to be non-discretionary instruments that any qualifying eligible financial institution can use when needed.** A genuinely automatic facility makes the corridor operational: banks can confidently treat the deposit rate as a floor and the lending rate as a ceiling, knowing that access will be granted if they meet the standard conditions.

Recommendation 8. De-stigmatize the standing lending facility by clearly separating it from ELA.

- 124. In the current framework, survey respondents perceive the standing lending facility as akin to an emergency tool, closer in spirit to ELA than to a routine monetary policy instrument.** When banks fear that drawing on the lending facility will be interpreted as a sign of distress, they may prefer to pay above-facility rates in the market or rely on informal arrangements, increasing volatility and undermining the corridor's effectiveness as a stabilizing mechanism.
- 125. The mission recommends explicitly positioning the standing lending facility as a normal component of the monetary policy framework, distinct from discretionary emergency support.** ELA is, by design, an exceptional, discretionary intervention: it is granted at the central bank's judgment to solvent but illiquid institutions facing acute stress, typically under stricter conditions (enhanced monitoring, specific collateral arrangements, and potentially higher penalty rates) and subject to a separate legal and governance framework. By contrast, standing facilities are rule-based: if a bank is an eligible counterparty and can post sufficient eligible collateral, it should be able to access the lending facility at the pre-announced rate, without case-by-case discretionary approval.
- 126. To de-stigmatize the standing facility, the BCU should explicitly state in its regulations and public communication that the standing lending facility is available on demand to all eligible counterparties that can post sufficient eligible collateral and meet the central bank's risk-management requirements (including haircuts and other safeguards).** This principle should be clearly reflected in the operating framework (rulebook, circulars, and website), emphasizing that drawing on the lending facility within these parameters is a normal component of day-to-day liquidity management, not a sign of distress. Internal and external documents should consistently distinguish references to standing facilities from ELA policies, which remain exceptional and discretionary. Experience from peers, such as the Reserve Bank of Australia—where the website explicitly notes that counterparties may obtain overnight funding at the standing facility rate against eligible collateral—illustrates how clear rules and communication can normalize facility use and encourage banks to arbitrage market rates back toward the corridor ceiling. Over time, this repositioning would help ensure that banks are willing to use the standing facility when appropriate, thereby containing short-term interest rate volatility and supporting smooth transmission of the policy rate.

D. BCU Organizational Structure for Monetary Operations

Recommendation 9. Strengthen the organizational capacity of the monetary policy operations area to reinforce sound liquidity management practices.

127. Although significant progress has been achieved in implementing monetary policy through an interest rate targeting framework, the BCU's organizational structure still retains elements of the previous regime focused on monetary aggregate management (see Annex VII). This legacy is reflected in: (i) limited resource allocation to monetary operations and supporting functions, even five years after the adoption of the interest rate targeting approach; (ii) fragmented governance arrangements for market operations related activities, with liquidity forecasting and settlement processes dispersed across different management areas; and (iii) operational practices that continue to incorporate aspects of the former framework, such as defining LRM issuance volumes based on projections of monetary aggregates. These factors underscore the need for a more integrated and policy-oriented operational framework that aligns instruments, procedures, and governance with the objectives of liquidity management and effective interest rate control.

128. The BCU is governed by a Board of Directors composed of three members—the President, Vice President, and Director—appointed by the President of Uruguay. The Board is responsible for the overall governance of the institution, including monetary policy formulation and administrative oversight. According to the BCU Administrative Regulations (December 23, 2024), several managerial units report directly to the Board. These include:

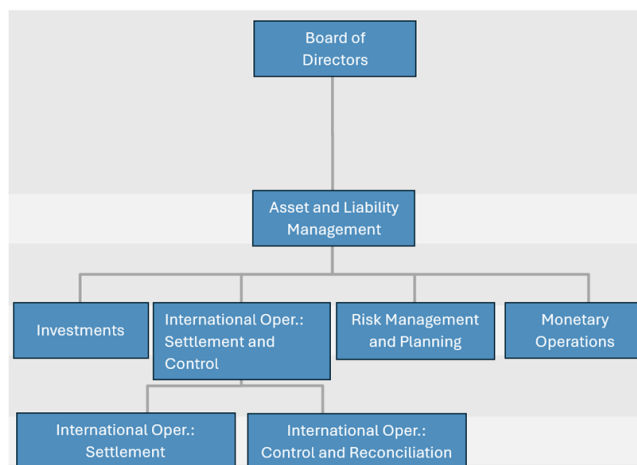
- **General Secretariat**, which provides support to the Board and President, manages public services, cultural and sustainable finance initiatives, and communication.
- **Economic Policy and Markets Management**, responsible for monetary policy implementation and asset-liability management.
- **Superintendency of Financial Services**, overseeing financial entity supervision, regulation, and the Financial Intelligence Unit.
- **Institutional Services Management**, covering human resources, technology, and material assets.
- **Legal Advisory**, providing legal counsel, defense, and compliance inspections.
- **Economic Advisory**, delivering independent economic analysis.
- **Internal Audit**, focused on risk management and governance evaluation.
- **Planning and Strategic Management**, handling strategic planning, innovation, organizational development, and risk management.
- **Payments System Management**, responsible for regulation, oversight, and operation of the national payments system and the central securities depository.

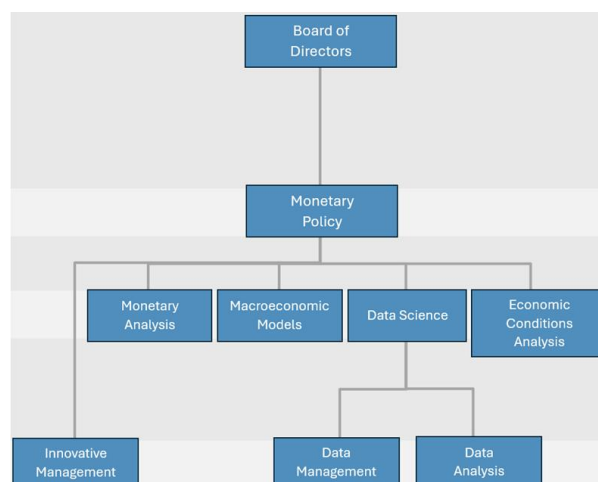
129. Recently, based on information provided by BCU staff, the former Economic Policy and Markets Management was reorganized into two distinct managerial units: Monetary Policy Management and Asset and Liability Management. Under this new structure, the execution of money market operations—including fine-tuning operations and LRM issuance—is assigned to Asset and Liability Management, specifically within the Monetary Operations Division (Figure 19). In parallel, activities related to monitoring monetary aggregates and liquidity forecasting remain under Monetary Policy Management, within the Monetary Analysis area. Decision-making regarding the volume of LRM issuances and the auction calendar rests with the head of Asset and Liability Management, who relies on liquidity forecasts and analytical inputs provided by both the Monetary Policy Management/Monetary Analysis Division and the Monetary Operations

Division. Meanwhile, the settlement of monetary operations is carried out by subunits within the Payment System Management.

130. **The limited staffing of the Monetary Operations Division within the Asset and Liability Management underscores the need to significantly strengthen its capacity in both core and supporting functions.** Currently, the Monetary Operations Division comprises one manager and three staff members responsible for executing fine-tuning operations and issuing LRMs. Expanding this area is critical to ensure timely and efficient implementation of monetary operations, maintain alignment with monetary policy objectives, and mitigate operational risks associated with liquidity management and interest rate control.
131. **Additionally, it is advisable to establish specialized teams dedicated to supporting and strengthening the market operations area.** This should include a small, dedicated Liquidity Forecasting Unit, equipped with specialized expertise to ensure accurate and timely short-term liquidity projections. Its work must be tailored appropriately to support the planning and execution of monetary operations, enabling effective policy decisions. This unit should integrate liquidity projections provided by the Monetary Analysis area into comprehensive reports and actionable insights for implementing monetary policy operations. In addition, a Market Analysis and Intelligence Unit should be established to monitor domestic asset price dynamics and deliver strategic insights for monetary policy formulation and the selection of operational instruments. Leveraging its direct engagement with dealers and market participants, this unit would gather and analyze market intelligence, providing actionable information to optimize the design of monetary operations and guide policy decisions.
132. **Considering the government’s strategic plan to reduce dollarization and strengthen domestic markets, it would be highly advisable for the BCU to leverage the synergies within the area to incorporate market development initiatives into the division’s mandate.** This could include assessing measures aimed at improving local market infrastructure as well as adopting actions to enhance the functioning of the interbank money market or the secondary market for LRM. Such efforts would not only support monetary policy implementation but also foster deeper and more efficient local financial markets, improving the price discovery process for the local yield curve.

Figure 19. BCU Organizational Chart—Asset and Liability Management (with the Monetary Operations Division) and Monetary Policy Management (with the Monetary Analysis Division)





Source: IMF staff calculation using BCU data.

133. The mandate of a dedicated Monetary Operations unit at the BCU is intended to reinforce the operational framework for implementing monetary policy and to support the development of local markets. It is recommended that this unit be ideally organized into specialized subareas, such as:

- **Monetary Operations Execution Unit.** This unit is responsible for conducting all monetary operations, including the main monetary operation, issuance of LRM, fine-tuning operations, and managing standard facilities and the interest rate corridor.
- **Short-Term Liquidity Forecasting Unit.** This unit is responsible for monitoring and delivering accurate short-term liquidity projections to support timely and effective decisions on monetary policy instruments. To strengthen its analytical capacity, the unit should make use of the liquidity projections provided by the Monetary Analysis area, integrating these inputs into comprehensive reports and actionable insights. These outputs will serve as a critical foundation for decision-making in monetary operations, ensuring consistency with broader policy objectives.
- **Market Analysis and Intelligence Unit.** Focused on evaluating domestic asset price dynamics and generating insights for monetary policy decisions and monetary instrument selection.
- **Market Development Unit.** Dedicated to assessing initiatives for improving local market functioning, including interbank and LRM markets, and monitoring the performance of operational tools and the interest rate corridor.
- **Back-Office Operations Unit.** Responsible for settlement, reconciliation, and operational risk management related to monetary transactions.

134. In the process of strengthening the monetary operations framework, institutional capacity building is essential. This involves comprehensive staff training in market operations and related areas, the establishment of robust internal governance mechanisms to support effective decision-making, and the promotion of transparency through clear disclosure of operational procedures to the Board of Directors. Furthermore, strong coordination between the monetary policy department and the monetary operations area must be ensured, particularly through the systematic sharing of liquidity projections and analytical insights from both areas. These

measures will foster operational efficiency, improve policy implementation, and enhance institutional credibility.

- 135. Regarding the governance of monetary operations area, the priority should be to ensure that the operational framework is fully aligned with the monetary policy objective.** This requires calibrating instruments such as OMOs, standing facilities, and reserve requirements to maintain short-term interest rates close to the policy target. Achieving this alignment involves defining clear operating procedures and ensuring that the liquidity management strategy is coherent with the interest rate target objective. The selection of instruments and the amounts involved should be guided by monetary policy objectives, rather than by investment decisions typically associated with asset and liability management areas. Accordingly, any limits on the size of monetary instruments should align with the overarching goal of policy implementation, prioritizing effectiveness and consistency over investment-oriented considerations. The core mandate of this area is to maintain the overnight interest rate close to the target and ensure sound liquidity management.
- 136. The mission suggests naming the area as Monetary Operations and Market Development.** The execution of monetary operations by the Central Bank acts as a catalyst for developing the local market, ensuring liquidity, depth, and efficiency. In this sense, the monetary operations function inherently plays an active role in strengthening and developing the domestic financial market. Moreover, market development is crucial for the effectiveness of monetary policy, as it reinforces price discovery, yield curve formation, and transmission mechanism. The proposed name signals to market participants and stakeholders that the BCU is committed not only to relying on market operations but also to fostering improvements in the local market.
- 137. The new structure for the Monetary Operations and Market Development unit should initially remain under the Asset and Liability Management area, while ensuring governance arrangements remain focused on achieving monetary policy objectives.** Once the unit achieves operational maturity and demonstrates measurable performance improvements—reinforcing its strategic role within the organization—its placement in the organizational structure should be revisited to enable greater integration and capture synergies with other operational areas.

IV. Market Development and Managing Liquidity Surplus

A. LRMs

- 138. LRMs play a dual role in Uruguay's framework—supporting monetary policy implementation and contributing to money-market development.** The BCU operates with a large structural liquidity surplus: given an effective reserve requirement ratio of around 13 percent, excess reserves amounted to 431 billion pesos in November 2025 (approximately 12 percent of GDP). From a narrow implementation perspective, the entire surplus could in principle be absorbed through a 7-day operation. However, doing so would require frequent rollovers of very large amounts, concentrating rollover and execution risk at the short end of the curve. From a market-development perspective, there is therefore merit in issuing central-bank securities with maturities beyond one week that can be traded on the secondary market and provide reference interest rates for money-market tenors. In line with international practice, the central bank's

responsibility should remain focused on the short segment of the curve, while longer-dated benchmarks are left to government issuance—commonly referred to as “splitting the yield curve”.

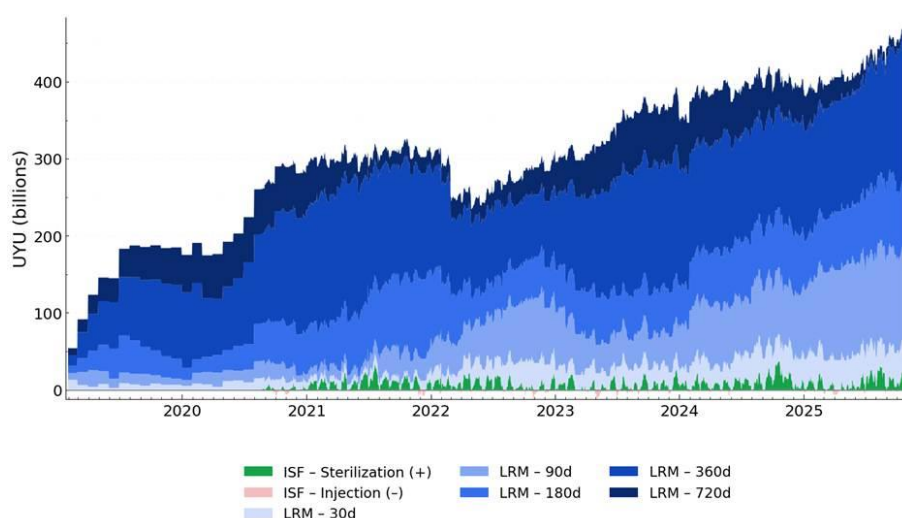
LRM Maturities

Recommendation 1. Concentrate LRM issuance in three standardized tenors—3 months, 6 months and 12 months—to deepen liquidity, support secondary-market trading, and strengthen the reference-rate role of LRMs.

- 139. From a liquidity-management perspective, LRMs should absorb most of the structural surplus, with the 3-month LRM serving primarily as a monetary policy implementation tool, while the 6-month and 12-month LRMs act as benchmarks for market development.** In a surplus-liquidity regime, banks’ balances at the BCU can be decomposed into required reserves, a voluntary liquidity buffer, and an involuntary structural surplus arising from autonomous factors, such as FX reserve accumulation and government cash balances. A 3-month LRM is well-suited to park most of the structural surplus that still lies within the near-term policy horizon, transforming unwanted excess reserves into a short-term tradable claim closely linked to the policy stance. By contrast, the 6- and 12-month LRMs operate at horizons where expectations and term premia play a greater role, and are therefore designed to support market development by providing a benchmark for investors’ portfolio decisions and term-risk pricing. The weekly 7-day FRFA operation then plays a residual role. At the policy rate, the BCU stands ready to absorb or provide whatever liquidity remains after structural LRM issuance and banks’ voluntary holdings, so that institutions can “sell” their remaining involuntary excess reserves into the operation rather than hold them passively on their settlement accounts.
- 140. There is therefore a clear difference in purpose between the 7-day operation, the 3-month LRM, and the 6- and 12-month LRM.** The 7-day operation is the main instrument for keeping the marginal cost of funding close to the BCU’s policy rate, anchoring the very short end of the yield curve; in this segment, the central bank acts as a *price maker*, flexibly adjusting allotments to keep the overnight interbank rate aligned with the target. The 3-month LRM extends this implementation horizon, providing a short-term reference rate that remains closely linked to the expected path of the policy/interbank rate and is used by banks for internal transfer pricing and loan pricing. The 6- and 12-month LRM, in turn, primarily function as market-development instruments as their maturity lengthens. At these tenors, the central bank’s objective is not to fix a particular yield but to provide a liquid benchmark around which investors can price term- and risk-premia. As a result, while some operational influence remains at three months, the BCU’s price-taker role should be most prominent at 6 and 12 months, issuing stable amounts and allowing market demand and risk assessments to play a greater role in setting yields, in line with practices in advanced and emerging central banks that rely on short bills for implementation and longer bills for market development.
- 141. LRMs are the BCU’s main sterilization instrument and the short-end benchmark for peso pricing.** Issued as zero-coupon bills—typically at 30, 90, 180, and 360 days (the BCU can issue up to 24 months, though longer tenors have not been used since November 2023)—their stock rose from about UYU 333 billion at end-2023 (~10 percent of GDP) to UYU 425 billion in November 2025 (~12 percent of GDP), larger than the monetary base. The 30-, 90-, 180-, and 360-day LRMs account for about 7, 27, 23, and 43 percent of the outstanding stock, respectively, with the 720-day line negligible (Figure 20). Surveyed participants report that internal funds-transfer pricing is closely aligned with the policy rate / overnight interbank market rate and the sovereign/LRM curve, confirming LRMs’ role as the primary reference for marginal funding and

lending costs. Institutional investors emphasize LRMs as their main outlet for short-term liquidity, with a marked preference for the 6–12-month segment, where they tend to buy and hold.

Figure 20. LRM Stock and ISF Fine-Tuning Operations



Source: IMF staff calculation using BCU data.

Notes: This figure juxtaposes structural liquidity absorption via LRM bills (central bank bills) with operational fine-tuning via ISF. The stacked blue area represents the stock of LRMs by tenor (shorter to longer maturities from lighter to darker blue). The green areas above zero are sterilization of ISF flows (same-day absorption), while the red area below zero indicates ISF injections (same-day liquidity provision).

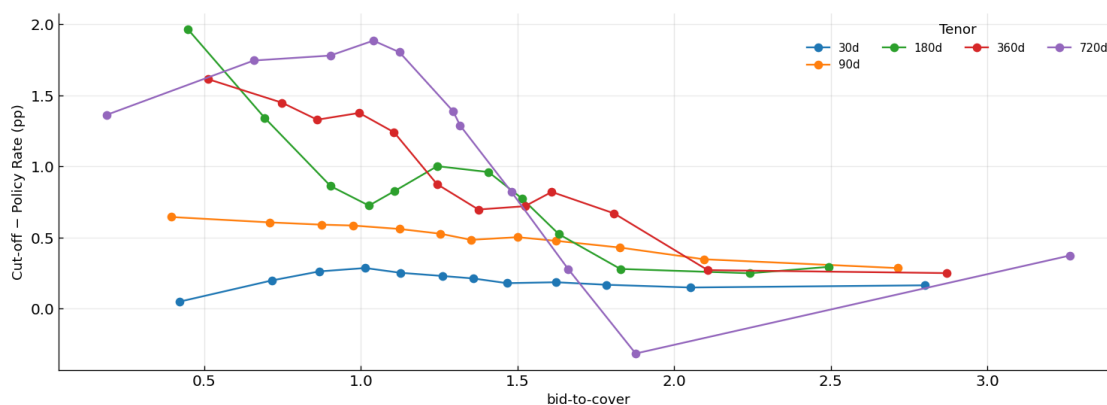
142. The mission therefore recommends discontinuing the 30-day LRMs and consolidating issuance at 3-, 6- and 12-month maturities. From a design perspective, the 30-day LRM would be discontinued to avoid fragmenting liquidity across short tenors, while issuance of 90-, 180-, and 360-day instruments would be maintained to ensure effective structural liquidity management and provide clear benchmarks for market depth. This change would help concentrate demand, thereby increasing competition in auctions for the remaining maturities and improving price discovery. In general, each additional tenor fragments issuance and liquidity, dispersing trading interest across a wider set of instruments. This is desirable only when market depth and investor demand are strong enough for a new maturity to become a genuine benchmark in its own right—for instance, when it corresponds to a widely used funding or hedging horizon and is supported by sufficient turnover. When these conditions are not met, extra maturities tend to fragment already limited demand, reduce secondary-market liquidity in each line, and weaken the informational content of yields. By concentrating issuance at 3-, 6-, and 12-month maturities and discontinuing the 30-day maturity, the BCU would: (i) build deeper and more liquid LRM lines, increasing the likelihood of secondary market trading; (ii) provide three well-defined benchmark points—one closely aligned with the policy stance and the others reflecting term premia; and (iii) ensure that these instruments are sufficiently long to remain attractive as collateral in repo transactions and for institutional investors' liquidity management.

143. Empirical evidence from Uruguay's LRM market supports treating the 3-month LRM primarily as an implementation tool and the 6- and 12-month LRM as market-development instruments. Pass-through estimates by tenor (Figure 5) show that short-dated LRMs—30, 90, and 180 days—have historically exhibited high and statistically significant pass-through coefficients (typically 0.7–0.9), meaning that a 100-basis-point change in the policy rate/overnight

interbank market rate (implemented through the 7-day operation, if adopted) is associated with a 70–90-basis-point move in these yields over the short run. At the same time, the 30-day yield largely replicates the information embedded in the short-term operational target. By contrast, the 360-day node exhibits weaker and more time-varying pass-through, consistent with a growing role of expectations and term and risk premia at this horizon. These findings are consistent with the general principle—reflected in IMF and BIS work on operating frameworks—that instruments with maturities of up to about three months behave primarily as monetary-implementation tools, while longer tenor instruments increasingly reflect broader macro-financial risks and investors’ portfolio choices. Concentrating issuance at 3, 6, and 12 months therefore preserves strong transmission at the front end of the curve through the 3-month LRM, while enabling the 6- and 12-month LRMs to play a market-development and term-premium role — and avoids introducing additional tenors that would fragment a finite pool of demand without adding commensurate informational value.

144. Auction microstructure further reinforces this functional distinction. The bid-to-cover versus premium curves (Figure 21) are almost flat and low for short-dated LRMs, indicating that at these horizons the cut-off yield remains tightly anchored to the policy/interbank rate and that additional competition does little to move the cut-off rate premium. This finding is consistent with a price-maker role for the central bank at the horizon of monetary policy implementation. At longer tenors, curves become more downward-sloping: higher bid-to-cover ratios are associated with smaller premia over the policy rate, pointing to a greater role for market forces and a more clearly price-taking behavior by the central bank at the 6- and 12-month points. Consolidating issuance at 3, 6 and 12 months, and committing to a preannounced calendar of fixed issuance amounts, would align instrument design with these observed patterns—allowing the 3-month LRM to remain closely policy-anchored, while giving the 6- and 12-month LRM sufficient room to reflect demand, expectations, and risk premia, as is standard in state-of-the-art operating frameworks that clearly distinguish between short-horizon implementation tools and longer benchmark bills.

Figure 21. “LRM Cut-off Rate—Policy Rate” vs Bid-to-Cover by Tenor



Source: IMF staff calculation using BCU data.

Notes: This chart shows the relationship between auction demand/competition (in competitive tranches), measured in terms of bid-to-coverage ratio (horizontal axis), and the deviation from the LRM cut-off rate from the policy rate (vertical axis). We subtract the LRM cut-off rate from the policy rate to account for the different monetary environment over time. For each standardized tenor (30d, 90d, 180d, 360d, 720d), auction observations are grouped into quantile bins of coverage; within each bin, we take the median price gap and then apply a local smoothing to form the tenor-specific curve. Rates are expressed in percentage points.

Recommendation 2. Standardize LRM auction design and cut-off conventions, and pre-announce fixed issuance amounts to support transparent price discovery.

- 145. The mission recommends that the BCU adopt and communicate a clear, rule-based set of auction procedures, including a pre-announced calendar with fixed LRM issuance amounts.** Even though to a lesser extent recently, survey feedback reveals that several participants are uncertain whether auctions are “cut by rate” or “cut by volume” in particular instances, and report that conventions have occasionally changed without prior notice. This uncertainty complicates bidding strategies, can discourage price discovery, and may weaken confidence in LRM yields as unbiased references. A transparent rulebook—defining the auction format, the treatment of competitive and non-competitive bids, and the principle that the BCU will behave predominantly as a price taker in LRMs auctions while adhering to a pre-announced calendar of fixed-amount auctions—would reduce perceived discretion and strengthen the informational content of LRM yields.
- 146. A transparent and rule-based auction framework is critical for ensuring fairness, predictability, and efficient price formation process.** These procedures govern how bids are submitted, prioritized, and allocated, with particular emphasis on cut-off determination, the treatment of competitive and non-competitive bids, and compliance with volume limits for each security.
- 147. The cut-off yield or price is the point where the auction clears, determined by ranking competitive bids from the most favorable (lowest yield or highest price) to the least favorable until the total amount offered equals the auction size.** Bids at or better than the cut-off are accepted, while those beyond it are rejected. This rule-based approach ensures allocation reflects market conditions and minimizes discretionary intervention, reinforcing credibility, and price discovery.
- 148. Regarding the allotment rule, the adherence to the financial volume offered for each security should be reinforced.** Issuance volumes are announced in advance and should be strictly observed. Deviating from these limits could create market distortions, undermine investor confidence, and complicate the price discovery.

Recommendation 3. Adopt LRM maturity concentration and reduce auction frequency to enhance market liquidity and improve price formation.

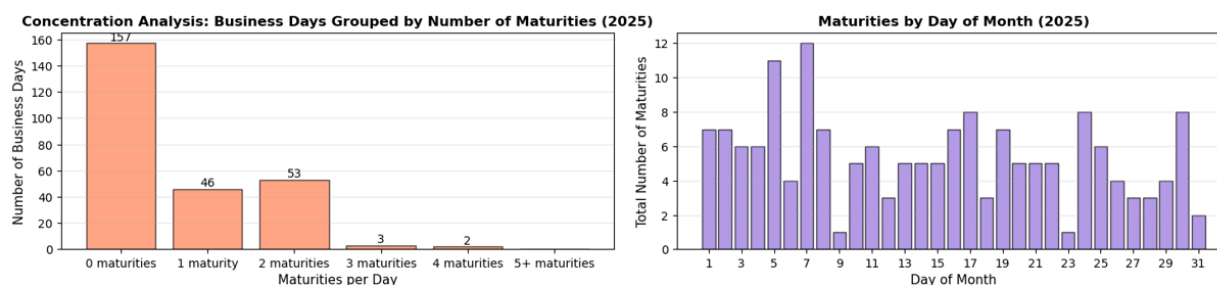
- 149. Concentrating LRM maturities within specific time frames and reducing auction frequency can play a strategic role in improving market liquidity and supporting efficient price formation.** By clustering maturities and lowering the number of auctions, issuers and policymakers create predictable points of cash flow and reinvestment, which can stimulate trading activity and deepen secondary markets.
- 150. From a liquidity perspective, concentrated maturities generate larger volumes of securities, reaching redemption simultaneously.** This dynamic encourages institutional investors to rebalance portfolios and reinvest proceeds, increasing demand for new issuances and existing instruments. The resulting turnover enhances market depth, reduces bid-ask spreads, and fosters a more competitive environment for pricing.
- 151. In terms of price formation, concentrated maturities contribute to benchmark development.** When significant volumes of debt mature at similar intervals, yield curves become more robust, as market participants have clearer reference points for pricing risk across different tenors. This transparency improves valuation accuracy and facilitates the pricing of derivative

instruments, structured products, and other financial contracts linked to interest rates. Stronger peso benchmarks and improved secondary market functioning can support market dedollarization by expanding hedging and investment opportunities in local currency. Over time, this can facilitate peso instruments for collateral and shift price conventions toward peso reference rates.

152. In the case of Uruguay, as a first step, each LRM issuance should be adapted to allow the maturity concentration on a single day of each month. Instead of having LRM mature at several weeks into the same month, the redemptions could be rescheduled to occur on a single day of the month (first workday, for example).

153. Currently, the LRM maturity profile is highly fragmented. As shown in Figure 22, LRMs are scheduled to mature on roughly 100 different business days, with about half of those days seeing two or more individual maturities. Moreover, maturities are dispersed across all days of the calendar month, with no systematic clustering around specific dates. While these redemption dates are known in advance, such a dispersed pattern increases the likelihood that sizeable redemptions on idiosyncratic days generate temporary swings in liquidity conditions and short-term rates, especially if not fully rolled over.

Figure 22. Distribution of LRM Maturities



Source BCU and IMF calculations.

Notes: The chart on the left shows how many business days in 2025 saw how many different LRMs maturing. The chart on the right shows the number of maturing LRMs by day of the month in 2025.

154. It is also recommended to strategically rationalize auction schedules, including reducing the frequency of primary auctions, fostering a deeper and more liquid secondary market for LRMs, and improving the price formation process. By concentrating issuance into fewer, larger auctions, authorities can enhance market depth and create stronger benchmark securities. From a cost-efficiency and market impact perspective, fewer auctions reduce administrative burdens and allow market participants to concentrate liquidity around key issuance dates. This approach increases order book depth, narrows bid-ask spreads, and strengthens price discovery.

155. The evidence presented in Error! Reference source not found. underscores the importance of developing mechanisms to foster greater participation and competitive bidding in LRM auctions, particularly for longer maturities. While cut-off rates for longer-term LRMs generally carry higher risk premiums than shorter-term LRMs, the analysis indicates that an increase in the bid-to-cover ratio can exert significant downward pressure on these rates. Under conditions of heightened competition, cut-off rates for longer-term LRMs may converge toward levels observed in short-term auctions, which typically reflect lower risk premiums.

156. However, this strategy requires careful calibration. Excessive concentration of maturities can create liquidity clusters, making it more challenging for the Central Bank to manage fluctuations in aggregate liquidity. To ensure effective liquidity management, the BCU should be prepared to use

its monetary policy instruments to minimize undesirable volatility in liquidity conditions, which could otherwise exert pressure on overnight interest rates. This risk can be mitigated by enabling the BCU to deploy appropriate monetary policy instruments to smooth liquidity conditions and maintain stability in short-term rates.

B. Coordination with the Debt Management Office

Recommendation 1. Maintain, in the short term, a split-curve arrangement—BCU LRMs up to 12 months and Treasury securities beyond—while strengthening cash- and debt-management coordination with the Ministry of Economy and Finance and assessing, over the medium term, the merits of a transition toward a single-instrument (Treasury-only) model for structural liquidity absorption.

- 157. In a large and persistent surplus-liquidity environment, structural operations are needed to complement short-term instruments and keep regular operations within an optimal range for transmission.** Short-term tools—such as 7-day operations and fine-tuning repos—are best suited to steering the overnight/interbank rate and absorbing day-to-day forecast errors. When excess reserves are very large relative to banks’ balance sheets, however, relying solely on short-term operations would require very high outstanding volumes and frequent rollovers. In that context, *structural* liquidity-absorbing operations—conducted via reserve-requirement calibration and/or the issuance of securities—are needed to park a significant portion of the surplus at longer maturities and stabilize the size of regular short-term operations. These structural operations can be implemented either through central bank bills or through government securities issued explicitly for monetary-policy purposes, with proceeds held in a segregated account at the central bank. From a consolidated official-sector perspective, the two arrangements are broadly equivalent in terms of economic cost, but they differ in their distributional effects, market-development implications, and consequences for perceived central bank independence and the clarity of monetary-policy communication.
- 158. One option is a “split-curve” model in which both the central bank and the Treasury issue securities, with clear segmentation of maturities.** In this approach, the BCU issues its own paper (LRMs) at the short end—here, up to 12 months—to absorb structural liquidity and anchor the front of the yield curve, while the Treasury is the primary issuer at longer maturities for fiscal-funding and broader market-development purposes. The main advantages are: (i) strong operational autonomy for the central bank, which is not constrained by Treasury issuance volumes and can adjust its bill stock as needed for monetary-policy reasons; (ii) the ability to provide easily marketable assets tailored to implementation needs even when the government’s short-term issuance is irregular; and (iii) a clear institutional separation between fiscal funding and monetary operations based on different instruments. The drawbacks are that having two large issuers in overlapping segments risks fragmenting demand, reducing the liquidity of each individual line and complicating the construction of a single benchmark curve. In addition, the financial cost of sterilization appears explicitly on the central bank’s balance sheet, which may lead to sustained central bank losses and create pressures around recapitalization or profit transfers. The maturity segmentation is not meant to preclude issuance of short term Treasury bills for cash management purposes when needed, but to avoid overlapping benchmark issuance.
- 159. A second option is a “single-instrument” Treasury-securities model, in which structural absorption is carried out only with government paper, supported by a robust coordination framework.** Under this arrangement, the central bank does **not** issue its own bills; instead, the Treasury issues T-bills or bonds that serve both funding and liquidity-management objectives,

with the portion used for monetary policy sterilization placed in a blocked account at the central bank that cannot be drawn for budgetary purposes. This concentrates liquidity and benchmark status in one class of instruments, supports the development of a deep, unified government-securities market, and avoids the fragmentation associated with parallel central bank bills. It can also be more transparent from a public-debt perspective, as there is a single issuer of tradable sovereign liabilities. However, it requires: (i) a strong legal and operational framework—typically a detailed MoU—to ensure that monetary-policy needs are accommodated in issuance plans without undermining central bank independence; (ii) careful communication so that markets understand that changes in issuance volumes may reflect monetary-policy motives rather than shifts in fiscal financing needs; and (iii) mutual trust, given that the central bank’s ability to conduct structural operations depends on the Treasury’s willingness and capacity to issue additional securities when required.

- 160. For Uruguay, the mission sees merit in a sequenced approach: maintain a split-curve model in the short term, while keeping open the option of transitioning toward greater use of Treasury securities for structural absorption over the medium term.** In the near term, continuing to rely on BCU LRMs up to 12 months—combined with strong issuance coordination and clear maturity segmentation—would be easier to implement within the existing legal and operational framework and would preserve full operational control over structural sterilization. Over the medium term, as coordination practices, cash-flow forecasting, and communication frameworks with the Ministry of Economy and Finance are further strengthened, Uruguay could consider gradually increasing the role of Treasury bills for long-dated absorption, moving toward a single-instrument model if the authorities judge that the benefits in terms of market depth, benchmark consolidation, and transparency outweigh the coordination and governance challenges. The choice and pace of this transition should be guided by three criteria: (i) safeguarding monetary-policy transmission and operational independence; (ii) supporting the development of a liquid, well-structured domestic debt market; and (iii) ensuring a sustainable and transparent allocation of costs between the BCU and the sovereign.
- 161. Survey evidence supports a clearer functional split between short-dated LRMs and longer-term sovereign securities.** Market participants indicated that bills with maturities beyond three months should progressively migrate to the Ministry of Economy and Finance, noting that this “rightly separates monetary policy instruments (shorter-term LRMs for liquidity management) from sovereign debt management (longer-term government bills for fiscal financing), contributing to greater clarity and efficiency in both domains.” Institutional investors also noted that LRMs are often used operationally to manage liquidity ahead of government issuance—effectively acting as a staging instrument to pay for Treasury paper when it is issued. Codifying this separation by limiting LRMs to 3, 6 and 12 months, and relying on the sovereign for longer maturities, would align the framework with how participants already perceive and use the two sets of instruments.
- 162. From a governance perspective, the mission recommends revisiting and strengthening the mandate of the existing Public Debt Coordination Committee (Comité de Coordinación de Deuda Pública) to operationalize a more structured coordination model between the BCU and the Ministry of Economy and Finance (MEF).** The revised framework could be formalized through an updated Memorandum of Understanding (MoU) and include regular meetings (e.g., monthly) to: (i) review the short- and medium-term liquidity forecast; (ii) agree on auction calendars and indicative ranges for LRM and Treasury issuance by tenor, consistent with the agreed split-curve arrangement between short-term monetary-policy instruments and longer-term government funding; (iii) plan the use of Treasury securities in central bank operations where appropriate, including any add-on issuance for monetary purposes and, over time, any shift toward greater reliance on Treasury bills for structural absorption; and (iv) discuss forthcoming

fiscal operations that could materially affect system liquidity. The MoU would define respective mandates, data-sharing arrangements, confidentiality safeguards, and a dispute-resolution mechanism. It should also clarify principles for cost-sharing and the treatment of blocked accounts, thereby preserving the BCU's operational independence for monetary policy implementation and the Treasury's primary responsibility for public-debt management, while ensuring that joint decisions on issuance and cash management support both monetary implementation and debt-management objectives under either a split-curve or a single-instrument configuration.

- 163. Any move from LRMs toward Treasury securities would reallocate sterilization liabilities from the BCU to the sovereign issuer and should be assessed explicitly against the relevant debt perimeter used by the authorities in published statistics.** The baseline approach would be to allow LRMs to run off at maturity while the Treasury increases issuance in the relevant tenor, with auction proceeds held as government deposits at the BCU in a sterilization account. Reserves would be drained in a manner equivalent to central bank paper. Greater Treasury issuance for monetary purposes would raise reported gross central-government debt, even if consolidated public-sector liabilities are unchanged once the BCU position is included. The MoU should include a communication approach for reporting the transition.

V. Future TA Needs

- 164. Operationalizing the proposed recommendations will likely require follow-up technical assistance and additional capacity building for BCU staff in key areas, including leveraging advanced AI tools to enhance productivity and quality, as well as improving statistical liquidity forecasting and strengthening monetary policy frameworks.**
- 165. Capacitation of BCU staff is crucial, and their active participation in seminars and training programs on various topics related to central bank operations is highly advisable to build expertise and keep abreast of best practices.**
- 166. The BCU is encouraged to seek Fund assistance for the implementation of other advanced quantitative modeling tools on monetary policy implementation provided by the IMF, for instance on reserve demand estimation.**
- 167. Uruguay could further benefit from leveraging the Fund's expertise in local market development, particularly in areas related to communication strategies and the design of domestic financial instruments, thereby supporting the deepening of domestic financial markets.** This initiative would complement ongoing efforts to reduce dollarization and enhance the effectiveness of monetary policy transmission.
- 168. In addition, providing adequate support for the development of a robust ELA framework is strongly advisable, as it plays a critical role in safeguarding financial stability and reinforcing the credibility of the central bank's lender-of-last-resort function.**
- 169. Finally, a dedicated support mission should focus on building institutional capacity to strengthen the interest rate targeting framework within the inflation-targeting regime, while also improving the organizational structure to ensure full alignment with strategic monetary policy objectives.** Enhancing these capabilities will reinforce the effectiveness of policy implementation, improve operational efficiency, and bolster credibility, bringing practices closer to international standard.

Annex I. Conceptual Framework for Liquidity Management

The LRM yield can be decomposed into the expected policy path and the term premium. Formally, for tenor n ($\approx h(n)$ months), the observed yield satisfies $y_t^{(n)} = \frac{1}{h(n)} \sum_{k=1}^{h(n)} E_t[r_{t+k}] + \text{Term Premium}_t^{(n)}$. The first term is the market's expectations—given current information—of the average policy rate over the LRM's life. The residual $\text{Term Premium}_t^{(n)}$ captures risk compensation, liquidity/auction effects, convenience value, and other technical wedges. This identity is the short-horizon expression of the expectations hypothesis and provides the organizing frame for interpreting LRM movements.

Distinguishing these two components is helpful for policy diagnosis. If the LRM curve moves because the expected path rises, markets are repricing COPOM's future stance, which is directly related to monetary policy transmission. If instead the term premium widens with a stable expected path, the underlying story is likely operational, such as heightened uncertainty or liquidity frictions. Reading the curve through this lens avoids treating liquidity stress as “tightening” or reading guidance drift where there is none.

The short-term premium is a direct and actionable barometer that BCU can influence. Persistently elevated premia may suggest balance-sheet intermediation constraints, auction segmentation, or calendar/tenor mismatches. BCU could respond by rebalancing LRM supply across tenors, smoothing calendars, adjusting repo pricing and collateral eligibility, or deploying switches/buybacks. The compression of the $\text{Term Premium}_t^{(n)}$ would indicate the effectiveness of these measures, potentially with little change in the expected path.

We estimate the expected policy-rate path with a small VAR on the policy rate and short-bill spreads, because spreads summarize curve slope information and behave more stationarily than levels. Define the spread for tenor n as $s_t^{(n)} \equiv y_t^{(n)} - r_t$. The state vector stacks the policy rate and a set of spreads:

$$x_t \equiv [r_t, s_t^{(30)}, s_t^{(60)}, s_t^{(180)}, s_t^{(360)}]$$

We estimate the reduced-form VAR(p) in levels with intercept by least squares,

$$x_t = c + A_1 x_{t-1} + \dots + A_p x_{t-p} + u_t,$$

where the maximum lag p is chosen by the Schwarz (Bayesian) information criterion to balance parsimony and short-horizon out-of-sample forecast performance.

We turn VAR forecasts into an expectations-consistent, real-time decomposition of each LRM yield at 30, 60, 180, and 360 days, using only information available at the evaluation month. At month t we re-estimate an expanding-window VAR on data from the start of the sample through t , then generate a policy-rate forecast path $\{\hat{r}_{t+1|t}, \hat{r}_{t+2|t}, \dots\}$. The expectations component is the discrete average of that path over the bill's life: for 30 days, $E_t[\bar{r}] = \hat{r}_{t+1|t}$. For 60 days, $E_t[\bar{r}] = \frac{1}{2}[\hat{r}_{t+1|t} + \hat{r}_{t+2|t}]$. For 180 days, $E_t[\bar{r}] = \frac{1}{6} \sum_{k=1}^6 \hat{r}_{t+k|t}$. Finally, for 360 days, $E_t[\bar{r}] = \frac{1}{12} \sum_{k=1}^{12} \hat{r}_{t+k|t}$. The term premium at each tenor is the residual that reconciles the observed LRM yield with this model-implied expectation, e.g.

$$\text{Term Premium}_t^{(30)} = y_t^{(30)} - \hat{r}_{t+1|t},$$

$$\text{Term Premium}_t^{(60)} = y_t^{(60)} - \frac{1}{2}[\hat{r}_{t+1|t} + \hat{r}_{t+2|t}],$$

$$\text{Term Premium}_t^{(180)} = y_t^{(180)} - \frac{1}{6} \sum_{k=1}^6 \hat{r}_{t+k|t},$$

$$\text{Term Premium}_t^{(360)} = y_t^{(360)} - \frac{1}{12} \sum_{k=1}^{12} \hat{r}_{t+k|t}.$$

We then advance one month and repeat, stopping at the sample end minus the necessary forecast horizon to avoid look-ahead. After computing $E_t[\bar{r}]$ and Term Premium_t at month t , we move to $t + 1$, expand the estimation window to include month $t + 1$, re-estimate the VAR, and recompute the averages and premia. This monthly recursion continues up to the last available time point for each tenor. This empirical approach is free of look-ahead bias and mimics the available data at the time of each estimation.

Annex II. Sizing the Main Operation

This annex suggests an empirical method for the calibration of the split between Reserve Requirements, Main Weekly Operations, and LRMs.

BCU's analytical balance sheet shows a persistent structural liquidity surplus stemming mainly from stable net foreign assets, with required reserves and LRMs providing the main structural drain. Building on this, the calibration in this annex translates the structural surplus into a steady-state split between three instruments in the reformed framework:

1. Required reserves
2. The outstanding stock of a weekly 7-day main operation
3. LRMs

The analysis is based on monthly balance-sheet data and daily series of autonomous factors (CiC, government deposits and related items). Suggested values are anchored in the September 2025 configuration of the balance sheet, interpreted as a representative point for steady-state liquidity conditions.

The calibration proceeds in four steps:

1. Identifying the structural surplus from the analytical balance sheet
2. Determining the portion absorbed through required reserves, using the effective MRR discussed in the main text
3. Sizing the weekly 7-day operation from the distribution of weekly net liquidity shocks driven by autonomous factors
4. Assigning the remaining surplus to LRMs and constructing a time-series decomposition.

The starting point is the analytical balance sheet in which the banking system's reserve balances and LRMs jointly sterilize the liquidity created by net foreign assets and other autonomous factors. For each month, the structural peso liquidity surplus is measured as the level of banks' reserves plus the outstanding stock of LRMs, minus currency in circulation and other non-policy liabilities that absorb liquidity on a stable basis.

The second step determines how much of the structural surplus should be absorbed through required reserves.

As discussed in the main text, bank-level evidence on daily percentage changes in the peso reserve-requirement base shows that an effective reserve requirement ratio of 7 percent still covers roughly 95 percent of observed daily deposit outflows, while ratios above this level mainly insure against rare, idiosyncratic events. Against this backdrop, an effective peso reserve ratio of 7 percent is taken as a reasonable implementation benchmark.

Applying this 7 percent effective ratio to the peso reserve-requirement base as of September 2025 yields an implied structural absorption via required reserves of UYU 29,398 million. This represents the MRR component of the structural surplus in the reformed framework. Conceptually, it provides a non-tradable

buffer that allows banks to use the monthly averaging rule to internalize most day-to-day deposit volatility without continuous central-bank intervention.

The third step sizes the steady-state stock of the weekly 7-day main operation so that it can absorb typical weekly net liquidity shocks driven by autonomous factors, while avoiding very large week-to-week swings in allotment volumes, Figure .

Daily net liquidity flows from autonomous factors are aggregated over a five-day (business-week) horizon to approximate the main operation's maturity. The absolute value measures the size of the net liquidity shock over a one-week horizon attributable to autonomous factors.

The calibration then applies a simple design rule: a 90th-percentile weekly shock in the absolute value should correspond to at most a fraction of the outstanding 7-day operation. With α set to 0.3, this implies that a typical large weekly shock requires an adjustment of at most about one-third of the operation's volume.

Using the historical distribution of weekly autonomous-factor shocks and the September 2025 balance-sheet configuration, this rule yields a recommended stock of weekly 7-day OMO absorption: UYU 73,155 million.

In other words, under the reformed framework the BCU would aim for an outstanding stock of 7-day operations of around UYU 73,155 million, adjusting weekly allotments around this level so that typical weekly shocks correspond to moderate percentage changes in operation size rather than very large swings.

The remainder of the structural surplus is assigned to LRMs. At the September 2025 calibration point, this residual equals the portion of the structural surplus that should be parked in LRMs rather than in reserves or the weekly operation. This is consistent with the balance-sheet evidence that LRMs already carry the primary burden of structural sterilization, see Figure .

To illustrate how this decomposition evolves over time, the same logic is applied to the full monthly series:

For each month , the structural surplus is computed from the analytical balance sheet as described in Step 1.

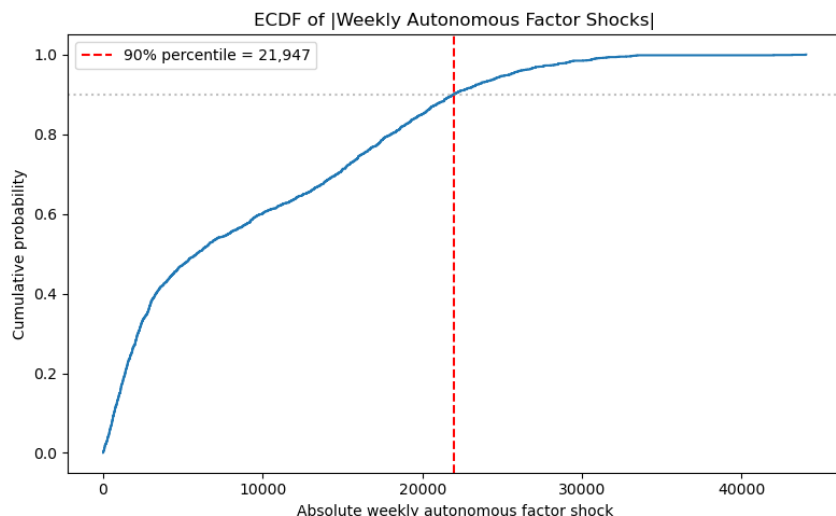
The MRR component is obtained by applying the 7 percent effective ratio to the peso reserve-requirement base in month.

The 7-day OMO component is taken as the calibrated steady-state stock million pesos, treated as constant over the sample for illustration.

The LRM component is then determined residually.

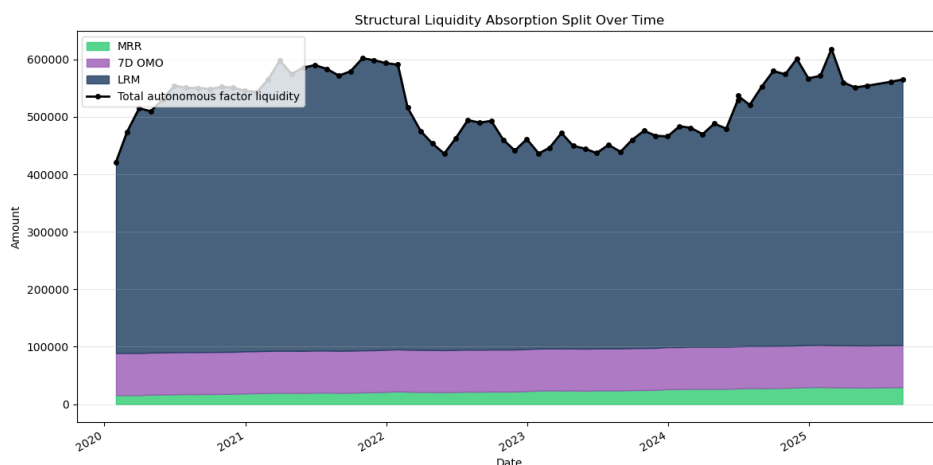
This yields a time-series decomposition in which reserve requirements provide a relatively stable structural drain tied to the deposit base, the weekly operation maintains a steady implementation stock sized to typical weekly shocks, and LRMs absorb the residual structural surplus.

Figure 1. ECDF of Absolute Weekly Autonomous-Factor Shocks and Calibration Point



Notes: This figure presents the empirical cumulative distribution function of the absolute value of five-day net liquidity shocks from autonomous factors. For each value on the horizontal axis, the vertical axis reports the share of observations with an absolute shock less than or equal to that value. The vertical dashed line marks the 90th percentile used in the calibration of the weekly 7-day operation. Combined with the design parameter, this percentile implies a recommended steady-state 7-day operation stock of UYU 73,155 million, such that typical weekly shocks require adjustments of no more than about one-third of the outstanding operation.

Figure 2. Structural Liquidity Absorption by Instrument Over Time



Notes: This figure depicts the decomposition of the structural peso liquidity surplus into three components under the recommended calibration: required reserves, the outstanding stock of the weekly 7-day main operation, and LRMs. The solid line shows the total structural surplus. The stacked areas represent, for each month, the portion absorbed by required reserves (computed using a 7 percent effective ratio), the calibrated weekly main operation (held constant at UYU 73,155 million), and the residual absorbed by LRMs. The chart illustrates that, under the proposed configuration, LRMs continue to absorb the bulk of the structural surplus, while the weekly operation and reserve requirements cover, respectively, medium-frequency variability in autonomous factors and the idiosyncratic daily volatility of the reserve-requirement base.

Annex III. Simulation of Fixed Weekly Operations

This annex evaluates how moving to a fixed weekly tender framework—while respecting the existing within-month reserve-averaging mechanism—would affect short-term liquidity management in Uruguay. The simulations replace the current pattern of frequent, irregular open market operations with mechanically generated weekly tenders and quantify the amount of intervention volume required under different calibration rules. The focus is on implementation efficiency: whether a predictable rule-based framework can deliver similar liquidity control with fewer interventions and more systematic use of averaging provisions.

A regular weekly calendar is attractive from both an operational and a transmission perspective. It reduces the need for ad hoc fine-tuning, clarifies the timing of central bank actions, and provides banks with a stable reference for planning their own liquidity. When combined with the averaging of required reserves over the maintenance period, such a framework allows the central bank to smooth short-term shocks with fewer transactions while keeping overnight rates anchored to the policy rate.

A. Measuring the Liquidity Position

The BCU currently manages short-term liquidity through fine-tuning operations (PG-Call) conducted at irregular intervals and in varying amounts. These operations, together with standing facilities, enable banks to meet their monthly reserve requirements on an average basis rather than on a day-by-day basis. For the simulations, it is therefore essential to reconstruct the liquidity position in a manner consistent with this averaging mechanism.

- 1. Baseline liquidity need:** The historical stock of outstanding short-term OMOs is reconstructed daily, using each operation's issuance date, maturity date, and amount. For any given day, all active operations are summed to obtain the stock of short-term OMOs outstanding. This stock measures the liquidity absorbed from the banking system through short-term sterilization instruments, in addition to the outstanding LRMs.
- 2. Required reserves and averaging:** Daily required reserves are taken from the BCU's reserve-requirement database and averaged within each maintenance month. Conceptually, banks are assumed to manage their current-account balances over this maintenance period so that the average balance equals the required level. In the simulations, the short-term OMOs and standing facilities provide an adjustment margin around this averaged path, accommodating daily shocks so that the system can satisfy the reserve requirement over the month rather than on each day.
- 3. Isolating the role of short-term OMOs:** Long-term securities (LRMs), government deposits, and other autonomous balance-sheet factors are held at their observed levels. This ensures that differences between the baseline and the counterfactual scenarios arise only from the frequency and calibration of short-term OMOs and the implied recourse to standing facilities, not from changes in the broader balance sheet or in the reserve-requirement regime itself.

While analytically clean, the approach abstracts from behavioral and second-round effects. In practice, introducing a fixed tender calendar could influence banks' liquidity demand and planning, thereby enhancing predictability and communication. These potential benefits are intentionally excluded to isolate the mechanical impact of operational frequency. As a result, the estimates should be viewed as conservative: any real-world gains from predictability or reduced uncertainty would strengthen the case for modernization.

B. Empirical Strategy and Simulation Scenarios

Baseline: Actual Operations with Reserve Averaging

The baseline series reflects the liquidity conditions that actually prevailed under the current operational framework. Short-term OMOs are conducted at irregular intervals, with amounts chosen on a case-by-case basis. Together with standing facilities and the averaging of required reserves, these operations determine the daily liquidity position of the system. The baseline provides the benchmark for both the volatility of liquidity and the total volume of interventions required to support the existing framework.

Counterfactual Weekly Tender Framework

The counterfactual scenarios investigate how liquidity conditions would evolve if the BCU conducted short-term operations on a regular weekly basis, while keeping the same reserve-averaging rule. All scenarios assume:

- a single weekly tender every Tuesday,
- a fixed seven-day maturity (rolled week to week), and
- the same policy rate as in the baseline.

Thus, each operation expires exactly when the next operation is issued. Reserve requirements continue to be met on an average monthly basis; what changes is how the system achieves this—through one weekly operation plus the standing facilities, rather than multiple discretionary interventions.

The three calibration rules differ only in the size of the weekly tender, not in its timing or maturity. In specific:

- **Scenario 1—Mop-up to zero on the intervention day.** On each Tuesday, the BCU sets the weekly tender equal to the observed liquidity deviation on that day. In other words, the operation fully “mops up” the deviation and brings the system’s liquidity position to zero at the start of the week. Subsequent shocks during the week—stemming from autonomous factors or from reserve-averaging dynamics—are absorbed entirely through the standing facilities. This corresponds to a strictly reactive style: the weekly operation neutralizes conditions once a week, and within-week variability is evident in the alternating use of the deposit and lending facilities.
- **Scenario 2—Mop-up of the minimum projected liquidity in the week.** In the second scenario, the weekly tender is calibrated to the minimum liquidity level expected between Tuesday and the following Monday. This ensures that the system remains structurally long over the week: they never need to borrow from the standing lending facility. Residual liquidity is parked in the deposit facility. Operationally, this is a cautious design consistent with an early transition phase, where banks are still building confidence in the new weekly calendar and prefer to maintain precautionary buffers while fulfilling reserve requirements regularly.
- **Scenario 3—Mop-up of the average projected liquidity in the week.** The third scenario sets the weekly tender equal to the average liquidity need projected for the week ahead, considering expected autonomous-factor movements and reserve-averaging behavior. This rule aims to align the size of the weekly operation with the typical liquidity condition over the maintenance week, so that residual daily shocks are small and standing-facility usage is

symmetric. Conceptually, this corresponds to a more mature state of the framework, where the central bank uses reliable short-term liquidity forecasts to calibrate operations proactively. This allows the interbank rate to fluctuate symmetrically around the policy rate, while banks meet their reserve requirements smoothly over the month.

Measuring Intervention Volume

To assess whether the weekly tender framework achieves the same level of liquidity control with a lower fingerprint, a volume-based metric is adopted.

- For the baseline, monthly intervention volume is defined as the sum of the absolute ISF operations over the month,

$$\text{Baseline volume}_m = \sum_{\text{days in } m} |\text{ISF}_t|.$$

These changes capture how much the central bank intervened via fine-tune operations during the month, irrespective of the sign of the flow.

- For each scenario, monthly intervention volume is defined as the sum of the absolute weekly operation sizes (the simulated 7-day operations, $op_{k,d}$) in that month:

$$\text{Scenario volume}_m = \sum_{\text{weeks in } m} |op_{k,d}|.$$

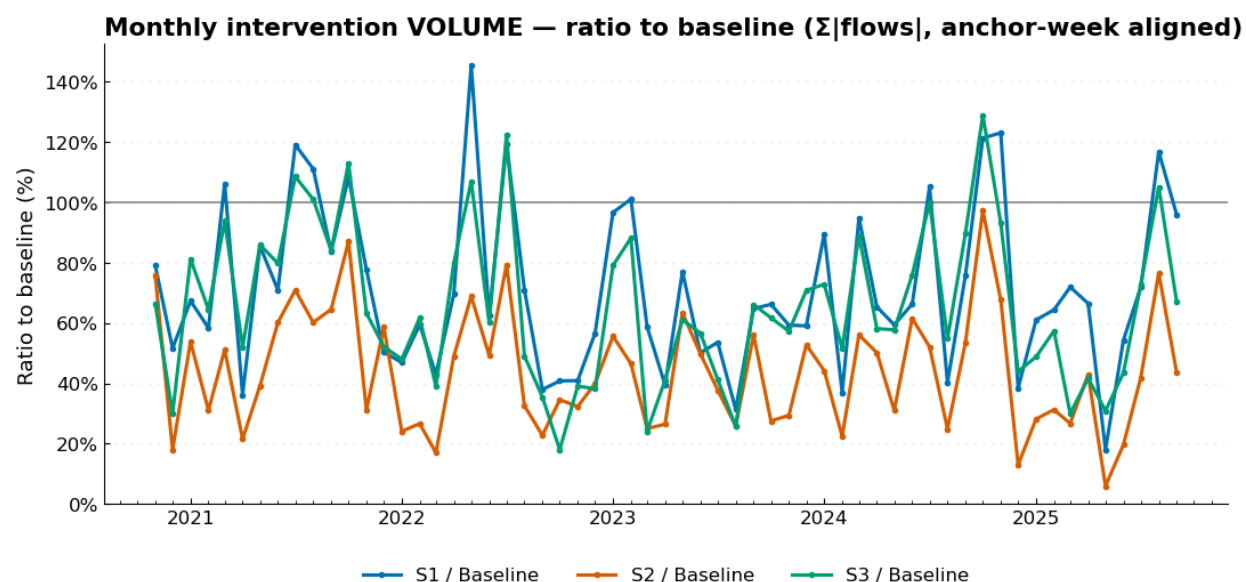
To make the comparison robust and consistent with the weekly structure, both series are aligned to “anchor weeks” running from Tuesday to Monday. Volumes are first summed within each anchor week and then aggregated to calendar months. This ensures that a week’s operation is always compared to the corresponding week’s re-tendering pattern in the baseline.

The key metric is the ratio of monthly intervention volume in each scenario to the baseline:

$$\text{Ratio}_m^{(s)} = 100 \times \frac{\text{Scenario volume}_m^{(s)}}{\text{Baseline volume}_m^{(s)}}$$

where $s \in \{1,2,3\}$ represents the three scenarios. Values below 100 percent indicate that the scenario requires less intervention volume than the current framework in that month (fewer fingerprints). Values above 100 percent indicate more. Figure plots these ratios over time.

Figure 3. Monthly Intervention Volume Ratios

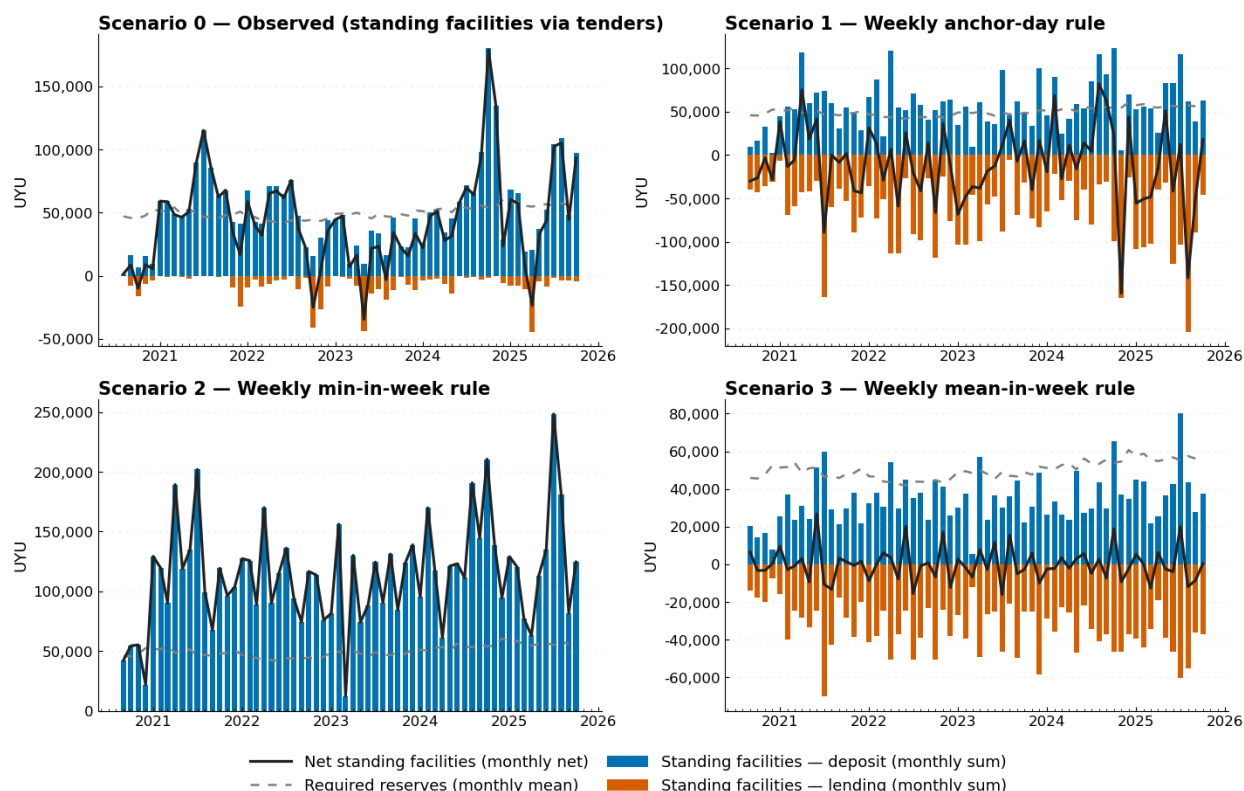


Overall, there is a reduction in the volume of ISF operations in the three alternative scenarios, especially in the second one, where the central bank absorbs the minimum projected liquidity in the next week. From a policy standpoint, this metric directly addresses the efficiency objective: how much balance-sheet activity is required to steer the short-term rate under each rule, compared to today's fine-tuning regime. Any scenario that keeps the ratio persistently below 100 percent achieves the same degree of liquidity control with less intervention volume, freeing up operational capacity and reducing transaction costs for both the BCU and banks.

Standing Facilities and Reserve Averaging: Comparing Outcomes

Under the weekly-tender framework, most of the within-month liquidity shocks are no longer absorbed by new tenders but by the standing facilities. The weekly 7-day operation sets the starting position each Tuesday. As autonomous factors and reserve-averaging behavior move the system away from that point, banks either place surplus funds in the deposit facility or borrow through the lending facility. To check whether the current reserve-averaging regime is sufficient to buffer these shocks, we focus on the net standing-facility position (the black line in Figure) and compare it with the monthly average level of required reserves (dashed grey line). In the code, required reserves are first averaged over the days of each calendar month, while daily standing-facility positions are summed to create monthly deposit, lending, and net totals, ensuring both are expressed on a comparable monthly scale.

Figure 4. Standing Facilities and Reserve Averaging under Alternative Weekly Operations



Note: The four panels compare hypothetical monthly use of the standing facilities with the monthly reserve requirement under the observed framework (Scenario 0) and three simulated weekly-tender rules (Scenarios 1–3). In all panels, blue bars show the sum of daily deposit-facility positions in the month, orange bars show the sum of daily lending-facility positions, and the bold black line is the net standing-facility position (deposits minus lending). The dashed grey line is the monthly reserve requirement, proxied by the average of daily reserve balances, as excess liquidity is not material. Importantly, the standing-facility amounts are computed as if reserve averaging were not used to smooth shocks—that is, all day-to-day residuals after the weekly main operations are assumed to go through the deposit and lending facilities. Overlaying the reserve requirement then provides a simple check: if the black line is small or close to the grey line, it is plausible that, in practice, banks could rely much more on reserve averaging and much less on the standing facilities under that configuration. Scenario 0 (top-left) is constructed from actual ISF fine-tuning tenders, not from daily standing-facility stocks. Positive and negative tender amounts are treated as “deposit” and “lending” flows, respectively, and their monthly net is plotted against the reserve requirement. This panel serves as a benchmark, showing that in the current regime, most adjustment is carried out through short-term OMOs rather than by fully exploiting reserve averaging. In the simulated weekly frameworks (Scenarios 1–3), the net standing-facility line is large and persistent in Scenarios 1 and 2, indicating that, under those rules, banks would still need substantial corridor use even if reserve averaging were available. By contrast, in Scenario 3, the net line is relatively modest and close to the reserve-requirement path, with more balanced two-way use of deposits and lending. This suggests that a mean-in-week calibration of the weekly tender is the design most consistent with the existing reserve-averaging arrangement: reserve requirements could realistically absorb most typical shocks, leaving the standing facilities as a residual buffer rather than the primary adjustment tool.

The key question is whether, once weekly tenders are in place, the existing reserve requirement would be able to absorb typical liquidity fluctuations without systematic recourse to the facilities. Suppose the black line is small or close to the reserve-requirement path. In that case, the averaging mechanism should effectively shoulder most of the adjustment: banks manage their balances within the maintenance period and only use the facilities at the margin. By contrast, large and persistent net

positions in the facilities indicate that the reserve requirement, as currently calibrated, is not sufficient to buffer the shocks generated by that particular weekly main operation rule, forcing banks to rely heavily on the corridor.

The simulations indicate that only in Scenario 3 would banks realistically be able to accommodate most liquidity shocks over the month through reserve averaging, with limited reliance on the standing facilities. In Scenarios 1 and 2, the net standing-facility line shows sizeable and persistent monthly positions relative to the reserve requirement—either because the system is reset to zero each week and then pushed into heavy facility use (Scenario 1) or because it is kept structurally long and excess liquidity is systematically parked in the deposit facility (Scenario 2). In both cases, the current reserve-averaging parameter would not be sufficient to internalize the typical liquidity shocks implied by the weekly tenders, so banks would still depend materially on the corridor. By contrast, in Scenario 3, the net standing-facility line is much closer to the reserve-requirement path and remains relatively modest over time. This is consistent with a rule that calibrates the weekly tender to the average projected liquidity need: the operation is aligned with the same “average over the maintenance period” concept that underpins reserve averaging, so most shocks can be absorbed by the combination of the weekly tender and reserve averaging, with standing facilities used mainly at the margin.

Moving From a Narrow to a Wider Corridor—Effective Costs for Institutions

A fixed weekly main operation paired with a narrow interest-rate corridor preserves today’s effective control of short-term rates while removing the need for continuous fine-tuning. In practice, the current fine-tuning operations already behave like a “mini-corridor”: within each day, the weighted-average rates of those trades typically sit within a tight band, with the max–min spread clustering around a few tens of basis points (≈ 15 bps in our sample). This tight band effectively mutes the very wide formal corridor (1–15 percent) because most liquidity is priced near the center. Based on our recommendation, the central bank would replace frequent discretionary fine-tuning with a single weekly operation, allowing the formal corridor—not daily ad hoc operations—to provide the residual buffer. To ease the transition, the formal corridor should initially be narrow (close to the mini-corridor that markets already face) and then be widened gradually as liquidity forecasting and interbank trading deepen. This approach simplifies the operating routine for both the BCU and banks, clarifies the price of liquidity, and encourages more interbank rebalancing because the central bank is not in the market every day.

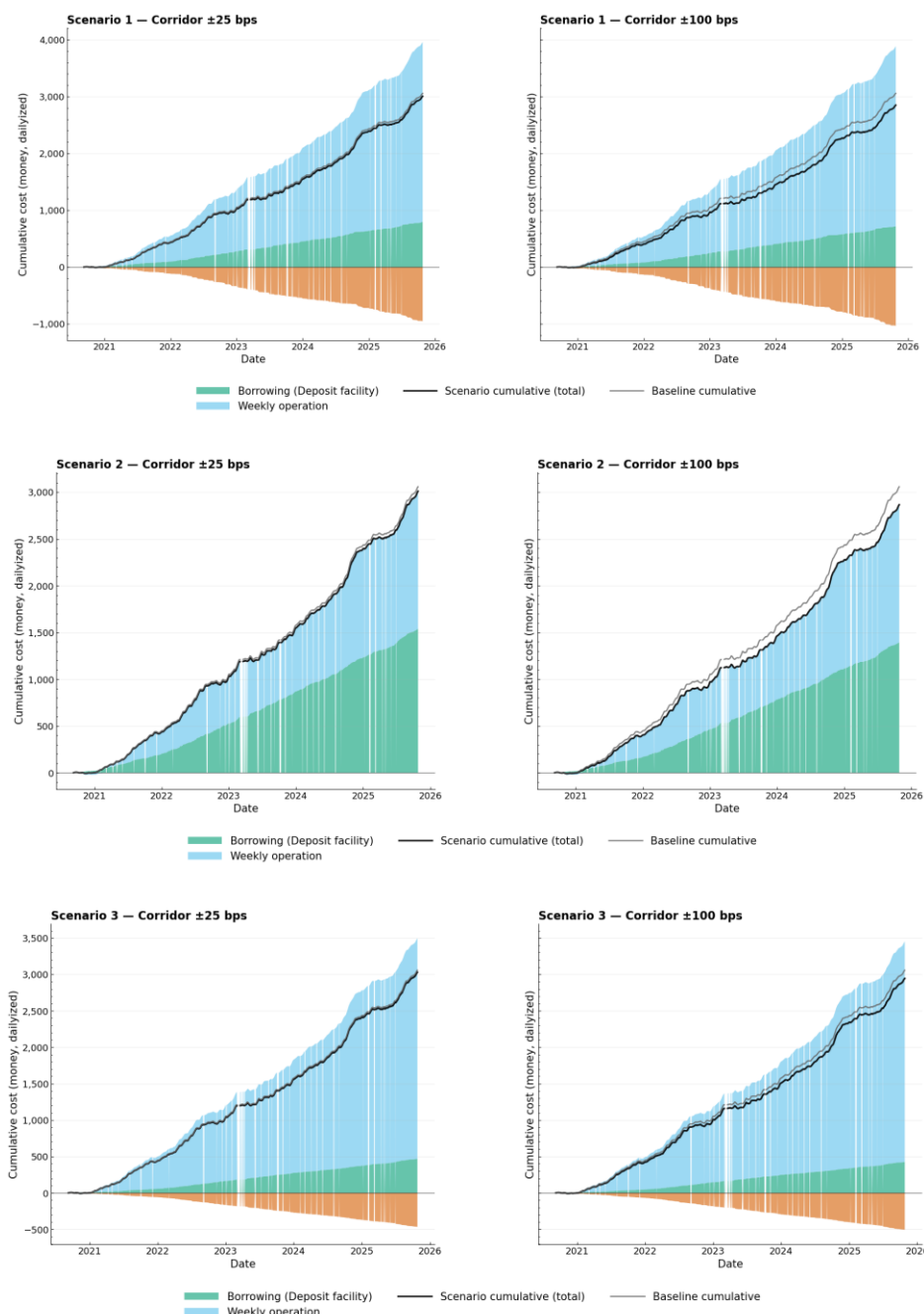
The cost analysis quantifies how different corridor widths affect the relative balance-sheet costs of liquidity management under the proposed weekly-tender framework. The exercise is not meant to measure the central bank’s monetary policy implementation cost (since benefits are transmitted to the entire economy). Instead, it focuses on the relative costs faced by market participants under alternative corridor designs. The objective is to evaluate whether moving to a simpler weekly operation framework—combined with different corridor settings—would materially alter incentives or liquidity costs for financial institutions.

Each simulation assumes that the weekly 7-day allotment is priced at the observed policy rate. At the same time, recourse to the standing facilities is remunerated at the policy rate plus or minus the corridor radius—that is, at the ceiling and floor of the policy corridor. When liquidity is in surplus, institutions place funds in the deposit facility at the policy rate minus the corridor radius; when in deficit, they borrow through the lending facility at the policy rate plus the corridor radius. From the central bank’s perspective, these flows represent mirror-image costs and incomes: paying interest on deposits is an expense, while charging interest on lending generates income.

Moving from a narrow corridor (± 25 bps) to a wider one (± 100 bps) raises the role of standing facilities. Figure plots cumulative implementation costs for each scenario, decomposed into weekly operations (blue), deposit-facility costs (green), and lending-facility income (orange; negative values). As

the corridor widens, irrespective of the scenario, the cost change from the viewpoint of financial institutions increases. This is why the mission recommends starting with a very narrow corridor and then amplifying as the market develops.

Figure 5. Impact on Liquidity Costs for Financial Institutions under Different Scenarios



Notes: The figures illustrate the cumulative liquidity-management costs of the proposed weekly-tender framework under two alternative corridor widths (± 25 and ± 100 basis points) and three calibration rules for the 7-day operations (“Scenarios 1–3”). Each panel decomposes total cumulative costs—shown by the black line—into contributions from weekly operations (blue area), deposit-facility remuneration (green area), and lending-facility income (orange area,

negative by convention). The grey line shows the baseline cumulative cost under the current operational framework with irregular fine-tuning operations. All costs are shown from the central bank's perspective: positive values represent outlays (interest paid to banks), while negative values denote income (interest earned on credit to banks). The weekly allotment rate equals the policy rate, and standing facilities are priced at the policy rate plus or minus the corridor radius. Thus, widening the corridor increases the remuneration gap between facilities and the policy rate.

Annex IV. Liquidity Management

This annex complements the liquidity forecasting section. First, it describes the current state and evolution of the BCU's balance sheet. Understanding the broader trends in liquidity providing and absorbing factors, as well as understanding their size relative to other assets and liabilities, is crucial to successfully embed forecasting results in the operational framework. Second, multi-month forecasts to calibrate structural operations are highlighted. Lastly, the annex provides additional details on the forecasting results and measures for forecast evaluation. These serve as complement to the toolkit for the BCU to adjust, calibrate, and evaluate forecasts to different operational demands and data characteristics in the future.

A. BCU's Balance Sheet

BCU's balance sheet is dominated by foreign reserve assets, with central bank securities and banks' reserve balances constituting its main liabilities. At the end of 2024, total assets were approximately one-third of Uruguay's GDP; foreign reserve assets constituted the largest share of the asset side. On the liability side, outstanding Letras de Regulación Monetaria (LRM) and banks' reserve balances are the most relevant items. Currency in circulation corresponds to 3.6 percent of GDP, below its regional peers. Capital strengthened in 2024, lifting equity to around 2 percent of GDP and improving buffers.

Table 1. Banco Central del Uruguay—Analytical Balance Sheet (31 Dec 2024)

Assets			Liabilities		
Net Foreign Assets	783883	24.2%	Base Money	154951	4.8 %
			Currency in circulation	109418	3.4 %
Net Domestic Credit	-207784	-6.4 %	Banks' reserves	43544	1.3 %
Net Claims on Central Government	126554	3.9 %	Other deposits	1989	0.1 %
Net Claims on financial sector	-332253	-10.3 %			
Net Claims on non-financial sector	1154	0 %	CB Bills	396270	12.2%
OIN	-3239	-0.1 %			
			Equity	24879	0.8 %
Total Assets	576100	17.8 %	Total Liabilities	576100	17.8%

Notes: As of end of October 2025 and in mn UYU and in percent of GDP.

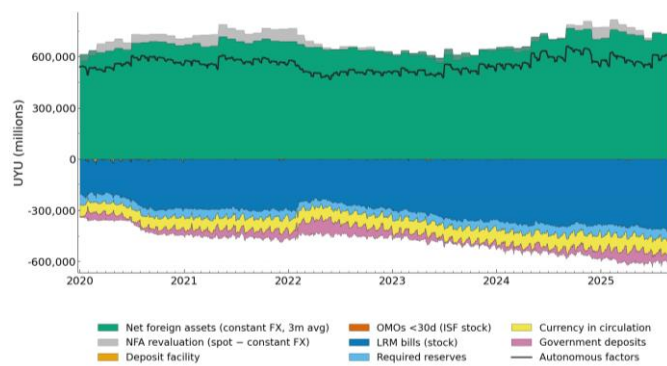
A forward-looking assessment of the BCU balance sheet is necessary to evaluate policy solvency, especially given the potential for increased monetary policy implementation costs. Although a full assessment is outside the scope of this technical assistance mission, a preliminary review shows that the BCU's balance sheet structure may not allow increased costs of liquidity absorption. Foreign reserves comprise a significant portion of assets, and seigniorage represents small proportion of liabilities.

Following a substantial expansion of the balance sheet—driven by the accumulation of international reserves that resulted in a system-wide liquidity surplus—the stable stock of net foreign assets (NFA) is being sterilized through the issuance of LRMs. Required reserves provide a stable drain under the monthly-averaging rule, while the deposit facility and 30-day OMOs are used mainly for fine-tuning. Because the BCU has refrained from FX interventions since 2021—and because NFA here is shown at constant FX with a three-month average—month-to-month NFA movements are small. Therefore, most short-term oscillations in the autonomous factors originate from seasonality in the circulation of currency and fluctuations in government deposits.

The increase in outstanding LRMs during 2024–25 reflects the ongoing requirement to absorb a persistent liquidity surplus in the financial system. As mentioned above, the BCU is prioritizing the use of 90-days , 180-days and 360-days LRMs. While the use of medium-term instruments such as these LRMs reduces rollover risks commonly associated with short-term absorption and supports banks in maintaining high levels of liquid assets, the maintenance of large outstanding stocks of these instruments can constrain the BCU's ability to respond swiftly to significant liquidity shocks. In addition, these LRMs can also affect the demand for government securities.

ISF volumes are small and episodic relative to LRMs, so LRMs—not ISF—carry the weight of sterilization of higher amounts and play the primary role in interest rate transmission for different tenors. (Figure). LRMs are the main instrument for absorbing structural liquidity surpluses and serve as the primary reference for the short end of the yield curve, while ISF operations function at the margin to smooth day-to-day imbalances on the short-term liquidity and to keep the interest rate close to the policy rate.

Figure 1. Liquidity Drivers—Sources (↑) and Drains (↓) with Autonomous Factors



Notes. The chart breaks down the BCU liquidity drivers in terms of sources (positive, liquidity expansion, BCU's assets) and drains (negative, liquidity reduction, BCU's liabilities). On the asset side, the Net Foreign Assets are shown at a constant FX rate (last available 3-month average), with a gray band indicating the revaluation component (spot minus the last available 3-month average FX). This decomposition allows us to understand better how the factor evolves while abstracting away from revaluation effects. On the liability side, it shows the Deposit facility balances, 30-day OMOs (ISF) outstanding, LRM bills (stock), Required reserves (stocks held under the monthly averaging rule), Currency in circulation, and Government deposits. The black line plots Autonomous factors, defined here as constant-FX NFA minus (currency in circulation + government deposits).

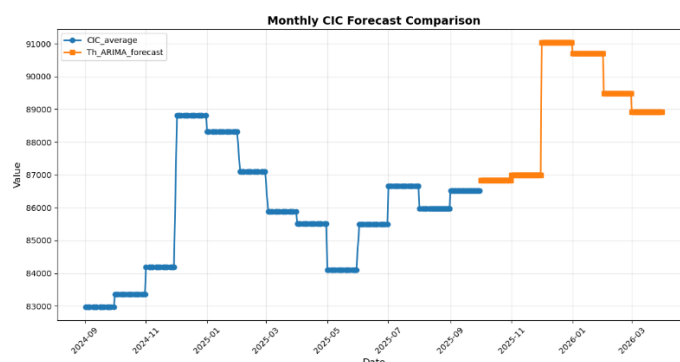
B. Monthly forecasts

This part of the annex explains the expansion of the forecast toolkit for medium-term horizons.

Multi-horizon forecasts are embedded in the provided toolkit to support both short-term operations and medium-term planning. For each autonomous factor, the system produces: (i) short-term daily forecasts over a 7–30 day horizon used to calibrate regular and fine-tuning operations; and (ii) multi-month forecasts used to gauge the likely evolution of structural liquidity and reserve demand. The same model suite is used across horizons, but parameters for model selection, reconciliation, and interval construction are calibrated specifically to the operational needs at each horizon. Forecast vintages are stored with their production date and target horizon to enable ex-post evaluation of performance and to distinguish statistical outputs from subsequent judgmental overlays. The underlying R scripts implementing these features, together with examples of rolling-origin back-testing, are described in the accompanying handout.

Multi-month forecasts play a specific role in calibrating the medium-term demand for reserves. For CiC, where a stable upward trend and well-behaved seasonal pattern dominate, the multi-month forecast effectively provides a baseline trajectory for the expansion of non-interest-bearing liabilities. This baseline can be combined with assumptions on structural components of reserve demand (for example, the average precautionary buffer held by banks) to infer the path of structural liquidity over the coming quarters. The monthly CiC projections from the new toolkit can be directly combined with the BCU's existing day-of-month factors, which are already calibrated on multi-year data: the toolkit first produces a monthly average for each forecast month, and the existing day-of-month profile is then applied to derive an internally consistent daily path. For government deposits, by contrast, the large and irregular swings, and the absence of a clear structural trend in levels, limit the usefulness of purely statistical multi-month projections. Medium-term GovD forecasts are therefore used more as scenario inputs built around the fiscal program, known policy measures, and planned debt-management operations than as stand-alone projections. They are updated when new budget information, financing plans, or cash-management strategies become available.

Figure 2. CiC Monthly Forecast



Notes: Data source is BCU and IMF calculations, the blue line indicates the monthly median CiC evolution over time and the orange line indicates the IMF's forecast.

C. Forecast Models and Evaluation

This part of the annex summarizes additional recommendations for the medium-term operational use of the forecasts and the technical design of the proposed liquidity-forecasting framework. The annex clarifies how institutional processes and statistical tools interact and provides additional detail on

the multi-horizon and multi-month forecasts used to support both day-to-day operations and the calibration of medium-term reserve demand.

Recommendation Annex 1. Publish liquidity forecasts after internal validation, including measures of forecast uncertainty, once internal performance is robust to increase market transparency and support more active liquidity management by banks.

Following regular internal evaluation and once internal performance is robust, the BCU should publish short-term liquidity forecasts. This should include explicit measures of forecast uncertainty, with a clear operational link to the planned weekly seven-day fixed rate full allotment (FRFA) operation at the policy rate. For each tender, banks need a view of the expected net liquidity position of the system and the range of plausible outcomes to decide how much to bid. Publishing a central forecast together with prediction intervals would allow them to benchmark their own projections against the central bank baseline, assess whether aggregate conditions are likely to be in surplus or deficit over the maintenance period, and incorporate the probability of forecast errors directly in their bid strategies at the seven-day FRFA. This recommendation should be implemented only after the seven-day FRFA has been adopted as the main operation and the new forecasting framework has been thoroughly tested internally and demonstrated to deliver robust performance across several maintenance periods.

At present, liquidity forecasts are used only internally, without systematic publication of point projections, forecast bands, or performance indicators. Communication practices remain internal, and evaluation is inconsistent: forecasts are prepared without a structured review of past forecast errors, and interim updates tend to overwrite previous vintages, which makes ex post error evaluation impossible. Forecasts can be extended several months ahead when required, but the primary purpose remains issuing daily forecasts for the upcoming LRM issuance calendar.

Forecasts are not published, confidence intervals are not presented, and routine external reporting of forecast errors is not conducted. While the BCU already consults banks' own liquidity plans when adjusting LRM issuance, only a central bank forecast can provide a comprehensive system-wide picture that supports consistent bidding and stronger market discipline in the main operation. The IMF toolkit produces a full set of standard deliverables, including tables, fan charts, simple coverage diagnostics, and exception logs, that could form the basis of a regular publication once internal processes and forecast quality have been validated. Over time, transparent communication of both the central path and the uncertainty around it would encourage banks to improve their own liquidity management, deepen the domestic money market, and reduce the need for frequent discretionary fine-tuning.

Recommendation Annex 2. Develop a dedicated, structured database integrating liquidity data, balance sheet information, and forecast vintages to replace multiple Excel files and enhance analytical capabilities during the forecast process.

Over the long term, the BCU should adopt a structured database that integrates liquidity data, balance sheet information, and forecast vintages, replacing the current reliance on numerous Excel files. This would strengthen data governance, allow traceable changes to inputs and outputs over time, and support cleaner data pipelines and ex-post evaluation of forecasts. A centralized, well-documented database would also make the forecasting process more robust to staff turnover. At present, the forecasting process, while delivering good point forecasts, carries high operational risk due to complex processes without well-documented consistency checks. Production relies on tacit knowledge, manual steps, and repeated data validation across numerous Excel sheets, with partial documentation and without version control. The workflow is labor-intensive, difficult to scale, and not easily transferable across staff. Errors in the production process are challenging to reconcile as they occur during data

processing in Excel and are only identified at the end of the process through a visual inspection of the forecast results by experienced staff.

The proposed forecasting framework is operationalized as a comprehensive package in the R programming language, offering numerous advantages over the current infrastructure. The R code provides a robust data pipeline that transforms input data into standardized output through well-documented models and intermediary steps, avoids transferring values into different Excel sheets, separates the statistical forecast from adjustments made by expert judgment, and allows the comparison of forecast accuracy across models and over time. Since this solution is based on R, it relies solely on free, open-source software, thereby avoiding costly license fees. The BCU already has proficient R programmers, and teams are using R to generate analytical reports on market conditions, which can be leveraged for implementation.

A separate technical handout has been provided to the authorities, containing detailed model specifications, validation protocols, and fully documented R code for the forecasting toolkit. The present annex focuses on the higher-level design and its role in the operational framework.

From an institutional perspective, the framework emphasize clear allocation of responsibilities, robust information flows, and a structured governance process for forecasts. The liquidity-forecasting unit is responsible for producing and maintaining forecast vintages for autonomous factors and reserve demand; the monetary-operations area uses these forecasts to calibrate the size and timing of open market operations; and the back office and accounting units provide timely, high-quality source data. Coordination with the Treasury and other key stakeholders follows a predictable calendar, with agreed deadlines for transmitting cash-flow information and reconciling outstanding balances. Internal procedures specify the sequence from data extraction to forecast production, including documentation of judgmental adjustments and escalation rules when large forecast errors or data anomalies are detected. This institutional setup supports the technical framework by ensuring that all relevant information is available, that roles are understood, and that forecasts can be routinely produced and challenged within a transparent governance structure.

On the statistical side, the framework follows recent IMF technical assistance by organizing the forecast around a small set of well-specified models for each liquidity factor and horizon. For each autonomous factor, candidate models typically include naïve and seasonal-naïve benchmarks, exponential-smoothing (ETS) variants, and ARIMA/SARIMA models with optional regressors capturing calendar effects, tax dates, salary payments, and other relevant events. Forecasts are generated at fixed horizons (for example, 7 and 30 calendar days for operational purposes and several months for planning) and evaluated out-of-sample using a rolling-origin procedure. Performance is assessed using bias (Mean Error), accuracy metrics (MAE, RMSE), and interval scores and coverage rates for predictive distributions. Model selection and combination are based on these multi-horizon statistics rather than in-sample fit. Where multiple frequencies are relevant, hierarchical or reconciled forecasts ensure that daily paths aggregate exactly to the target monthly averages. The separate technical handout sets out the full list of candidate models, estimation settings, and evaluation scripts used to implement this approach.

The framework explicitly recognizes that different liquidity factors have very different predictability properties. Currency in circulation (CiC) typically exhibits a stable trend with strong and relatively persistent seasonal patterns, whereas government deposits (GovD) often display larger swings driven by idiosyncratic fiscal events. For CiC, parsimonious time-series models with calendar regressors and occasional intervention dummies are usually sufficient to achieve high accuracy at daily and multi-month horizons. For GovD, by contrast, the main gains come from combining statistical models with structured institutional information such as issuance calendars, large one-off operations, and detailed cash-flow projections from the Treasury rather than from increasingly complex statistical specifications.

Annex V. Current Instruments

This annex describes the main instruments used to implement the BCU's interest-rate-based operational framework. It first outlines the structure of reserve requirements and the associated averaging mechanism, then turns to the interest-rate corridor and standing facilities, and fine-tuning operations. Finally, it highlights the role of LRM as principal sterilization and benchmark instrument in pesos. The focus is descriptive, setting out the design features as background for the assessment and recommendations in the main report.

While the inflation-targeting framework entered into force in 2005, it was in 2020 that the BCU adopted the short-term interest rate as its operational target. Since September 2020, the BCU has been operating an interest-rate-based framework with the overnight interbank peso rate (TMM) aligned to the policy rate-Tasa de Política Monetaria (TPM) set by the Monetary Policy Committee (COPOM). The shift from monetary-aggregate targeting to a short-term rate operational target was intended to strengthen transmission by providing a clearer signal to markets. The COPOM is composed of three members of the Board of Directors of the BCU and three senior officials appointed by the Board in accordance with their specific responsibilities, with input from the Ministry of Finance via the Macroeconomic Coordination Committee. The COPOM meets roughly every 6-8 weeks to review monetary conditions and set the policy rate TPM, with about 8 scheduled meetings per year (see Figure 1).

A. Reserve Requirements

Reserve requirements are a key component of the BCU's monetary framework, absorbing excess liquidity and reinforcing financial stability. The tiered structure incentivizes longer-term peso funding and discourages excessive reliance on short-term FX liabilities. The high FX reserve requirement ratios (28 percent and 20 percent) are among the highest in the region, also reflecting Uruguay's cautious stance toward dollarization risks.

Reserve requirements vary according to the currency and the original maturity of deposits, fulfilling both liquidity management and prudential objectives. (Table). In pesos (and in *unidades indexadas*, UI), very short-term deposits carry the highest reserve requirements, which decline with term. In foreign currency, requirements are materially higher, reflecting dollarization-related liquidity risk. This structure withdraws structural liquidity from the banking system and allows the creation of buffers against deposit volatility.

Table 1. Reserve Requirement (Encaje) Ratios

Deposit category	Reserve Requirement Ratio
Domestic currency (UYU) and UI	
Demand & <30-day time	15 %
30–90 days	3 %
91–180 days	2 %
181–366 days	1 %
>1 year	0 %

Deposit category	Reserve Requirement Ratio
Foreign currency (FX, residents)	
≤180 days	28 %
>180 days	20 %
FX, non-residents (net of eligible FX assets)	28 %

In practice, reserve requirements immobilize a sizable share of system funding, with partial remuneration tempering the effective tax on intermediation. Higher FX reserve requirement ratios (28 percent and 20 percent) create an incentive for local currency deposits and support efforts to dedollarize the economy. At the same time, the declining reserve requirement schedule for pesos encourages longer-term local-currency funding and supports open market operations in guiding short-term rates toward long-term rates. As of the end of 2024, banks' balances at the BCU combining USD and UYU totaled approximately 10–11 percent of GDP, consistent with the reserve requirement structure and deposit composition.

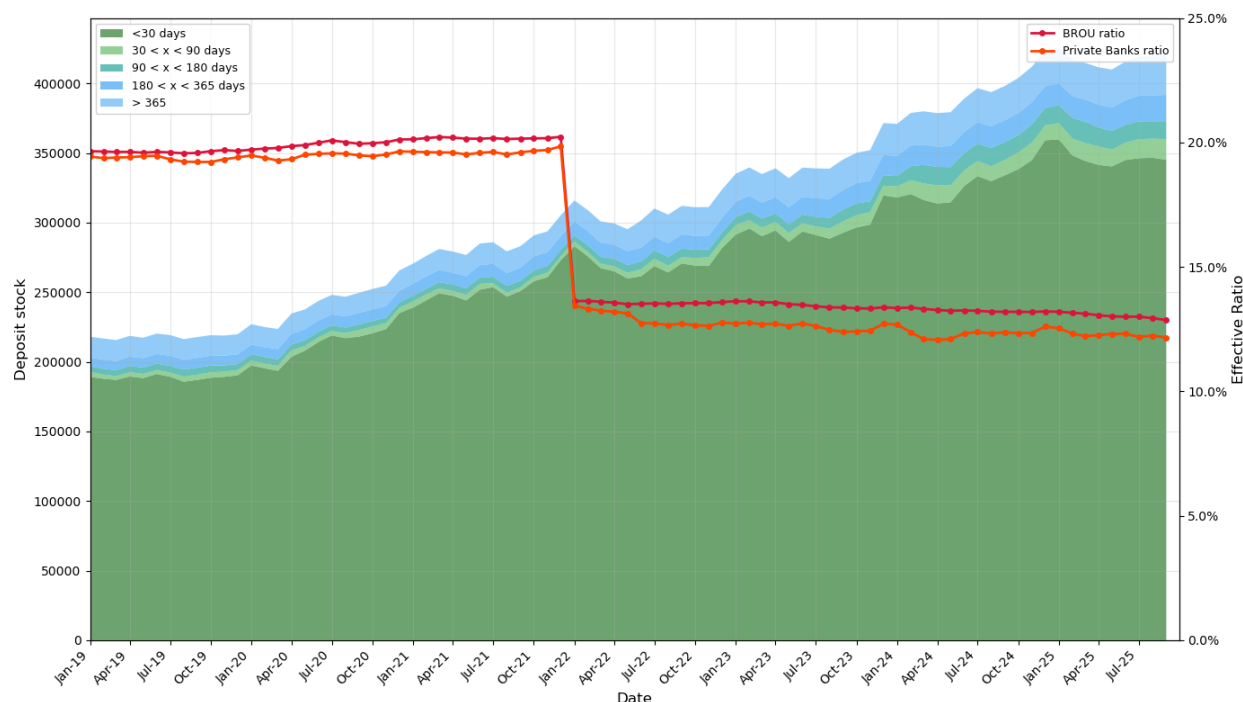
Required reserves are remunerated in local and foreign currencies (Table 2). Peso reserve requirements earn interest at 60 percent of the monetary policy rate (TPM) on the remunerable base (net of average vault cash). FX reserve requirements (USD) earn the midpoint of the U.S. federal funds target range minus 0.50 percent. Reserve requirements in UI are not interest-bearing but receive the indexation adjustment of the UI for the maintenance month. BCU circulars and communications set up these parameters.

Table 2. Reserve Requirement (Encaje) Remuneration

Currency	Remuneration rule	Notes
Pesos (UYU)	60% × TPM	Base net of average vault cash for the month.
US dollars (FX)	Fed funds midpoint – 0.50%	Applies to reserve requirements for USD-denominated liabilities.
UI (indexed pesos)	No interest; UI indexation for the month	Adjustment equals the UI change over the maintenance month.

The reserve requirement ratio weighted by deposit amounts has remained stable since 2022. The effective reserve requirement ratio has remained steady between 12.5 percent and 13.0 percent since January 2022. Prior to 2022, the effective ratio was close to 20 percent, largely due to much higher ratios applied to longer term deposits. However, COVID-19-relief measures exempted some of the deposit growth after 2020 from the reserve requirement ratio. Overall, deposits with a maturity below 30 days make up over 80 percent of the entire deposit base that is subject to MRR. Even after the large cut of the reserve requirement ratio applied to longer-term deposits, the share of deposits with maturity above 30 days only increased from 11 percent to 18 percent.

Figure 1. Effective Reserve Requirement Ratio (percent, RHS) and Banks' Deposits in Local Currency by maturity (in mn UYU)

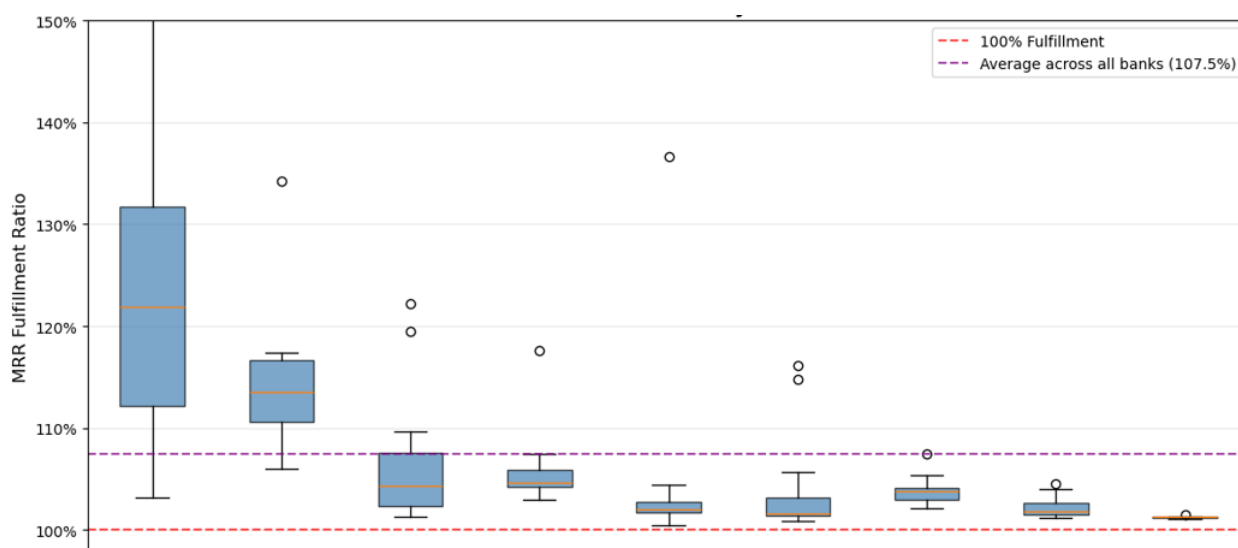


Notes: Data source is BCU and IMF calculations, the effective reserve requirement ratio is calculated by multiplying each deposit tenor volume with the respective requirement ratio.

Compliance is calculated on a monthly average (“período de cómputo”), providing within-month day-to-day flexibility. Banks may hold daily balances above or below the requirement as long as the monthly average meets the mandated ratio; cash in vault in pesos counts toward the peso reserve requirement base. This averaging framework reduces unnecessary money-market volatility while keeping the reserve requirement a structural—not fine-tuning—instrument in Uruguay’s operating regime.

The distribution of monthly fulfilment ratios confirms that banks treat required reserves as a tight constraint rather than as a comfortable liquidity buffer. Using data from November 2024 onward, the vast majority of bank-month observations lie below 120 percent of the required level, and for most banks fulfilment ratios are consistently below 110 percent. In other words, typical excess reserves are in the order of only 0–10 percent above the minimum requirement, with very few cases where institutions hold materially larger precautionary balances. This pattern is consistent with banks actively minimizing holdings of low-yield excess reserves and relying on averaging, money-market instruments and BCU operations.

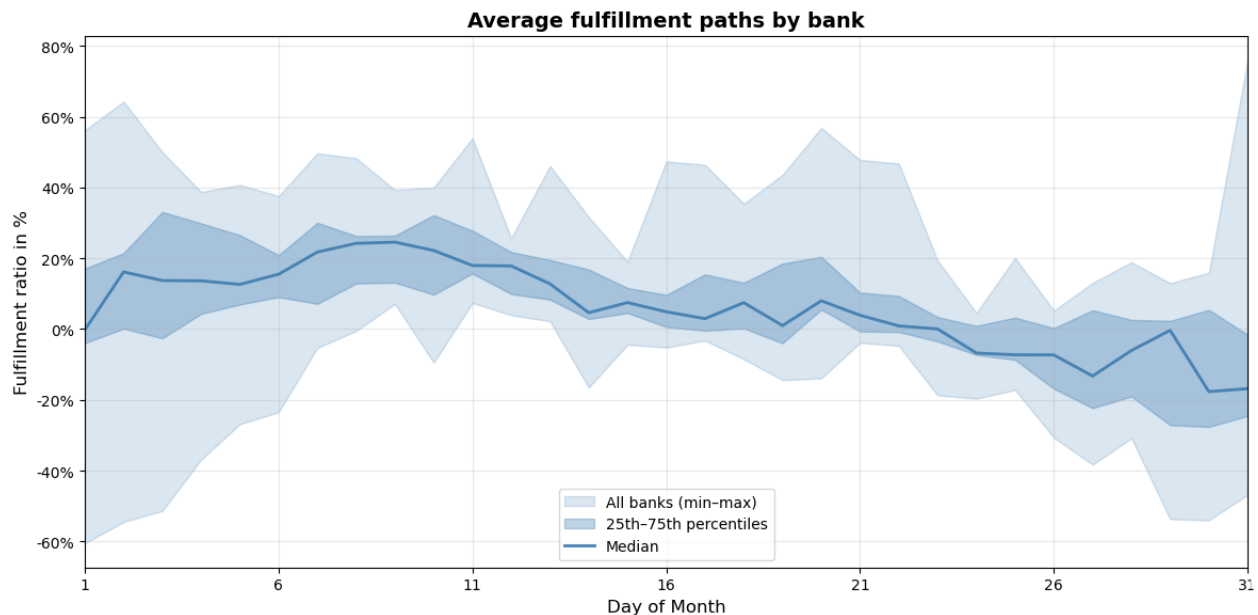
Figure 2. MRR Fulfilment Ratio by Financial Institution



Notes: Data source is BCU and IMF calculations. Each boxplot summarizes, for one bank, the distribution over time (November 2024–October 2025) of its monthly fulfilment ratio, defined as the average reserve balance at the BCU during the maintenance period divided by the corresponding required reserve level. The figure is restricted to banks that together account for the bulk of system deposits; a few smaller institutions with idiosyncratically very high fulfilment ratios were excluded to keep the scale readable. For most banks, the interquartile range of the fulfilment ratio lies only slightly above 100 percent and remains below 110 percent, indicating that banks maintain only small buffers over the minimum requirement.

The intramonth fulfilment paths further illustrate how banks make active use of averaging. Using data from November 2024 to October 2025, the running fulfilment ratio—computed as cumulative average reserves divided by the final monthly requirement—shows substantial heterogeneity across institutions and over the maintenance period. Many banks allow their cumulative position to deviate by more than ± 30 percent from the eventual requirement at various points in the month, confirming that they flexibly absorb idiosyncratic shocks and do not seek to track a smooth path day by day. Towards the end of the period, especially after around day 25, an increasing share of banks move into a cumulative deficit relative to the final requirement, as uncertainty about the remaining deposit base and required average diminishes and institutions deliberately run down buffers. This behavior is consistent with the BCU's operational pattern of supplying a modest liquidity buffer early in the period and gradually withdrawing it later on, with banks relying on averaging and central-bank operations to realign their positions with the requirement by the end of the maintenance period.

Figure 3. Average Monthly Fulfillment Pattern of MRR



Notes: Data source is BCU and IMF calculations. The figure plots, for each bank, the average intramonth fulfillment ratio over the period November 2024–October 2025. The fulfillment ratio is defined as the cumulative average reserve balance up to each day of the maintenance period divided by the final required reserve level for that month, expressed in percent on the vertical axis. Each line represents one bank's average path across all maintenance periods in the sample. The chart is restricted to banks that account for the bulk of system deposits; a few smaller institutions with idiosyncratically very high fulfillment ratios were excluded to keep the scale readable.

Non-compliance with reserve requirements is subject to penalties set by BCU regulation. These typically involve a financial charge on the shortfall amount, calculated at a punitive rate (e.g., 1.5× the transaction price for pesos or Fed + 2 percent for FX), and may include reputational consequences or supervisory follow-up. In practice, banks maintain close adherence to requirements. The BCU monitors compliance monthly and does not allow carryover of excess or deficit into subsequent periods.

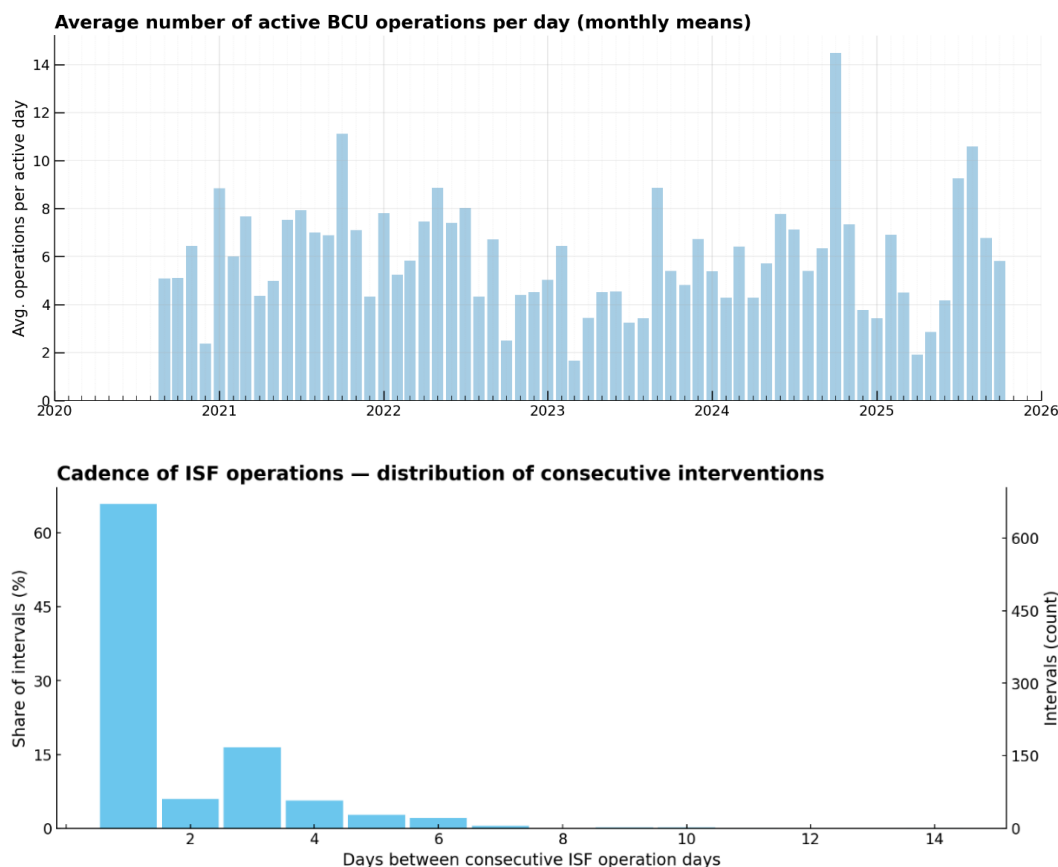
B. Interest Rate Corridor

The formal interest-rate corridor is wide and rarely binds, while frequent operations create a de facto narrow trading band around the policy rate. Standing lending and deposit facilities define a broad 1–15 percent corridor, but limited usage reflects the central bank's daily presence at rates near TPM. In practice, interbank rates trade within a tight ± 15 -basis-point band around the target, muting the corridor's guidance role and limiting banks' incentives to arbitrage toward standing-facility rates.

BCU's standing deposit and credit facilities define a deliberately wide overnight corridor that functions as a backstop—not a day-to-day tool. The overnight deposit window is set at a low, fixed rate, and the overnight credit window at a high, penalty rate (e.g., 1 percent and 15 percent as of November 10, 2025), placing both far from the policy rate, making routine use uneconomical. In practice, the effective operating band around the policy rate is delivered through a narrow "mini-corridor" generated by frequent ISF fine-tuning operations, while the standing facility windows remain largely dormant under normal conditions. Survey responses are consistent with this framing, describing the facilities as "last resort" with negligible recourse in ordinary liquidity management.

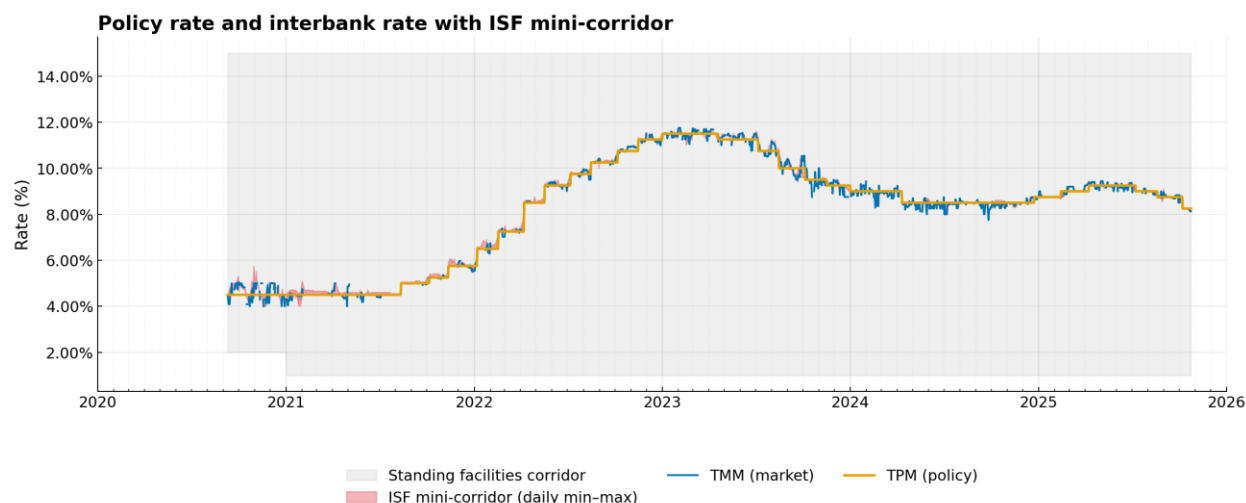
The cadence of ISF operations is characterized by high frequency and irregularity, reflecting the BCU's near-daily market presence—despite uneven spacing and intensity of interventions (Figure 4). From January 2020 to mid-2025, there were 2,380 ISF interventions across 1,019 distinct days. The gap between consecutive ISF days averaged 1.9 days (median = 1), with 66 percent of gaps equal to one day and a 90th percentile of 4 days (maximum of 14 days). Streaks of consecutive ISF days are common (246 streaks of length ≥ 2 ; median length = 4; P90 = 5), and ISF days are spread evenly across weekdays (approximately 20 percent each). Monthly activity averages 38 interventions (in 16 ISF days), but the average number of operations per active day shows month-to-month variability.

Figure 4. Cadence and Number of ISF Operations



Near-daily ISF operations have created a de facto “mini-corridor” that keeps the overnight rate within a few basis points of the policy rate—far tighter than the wide formal 1–15 percent standing facilities corridor (Figure). Using the daily min–max range of ISF operations, the mini-corridor averages 7.3 bp (median 5 bp; P90 20 bp), narrowing over time from 16.3 bp in 2020 to 2.9–3.3 bp in 2024–2025. By contrast, the formal corridor, delineated by the standing facilities, spans approximately 1,400 bp. As shown in the figure, the TMM tracks the TPM inside this narrow band while the formal bounds remain largely inactive. The consequence is a highly predictable close that limits incentives for active bilateral liquidity management and price discovery at the very short end, with market participants increasingly conditioning their intraday positioning on the expectation of central bank presence rather than interbank trading.

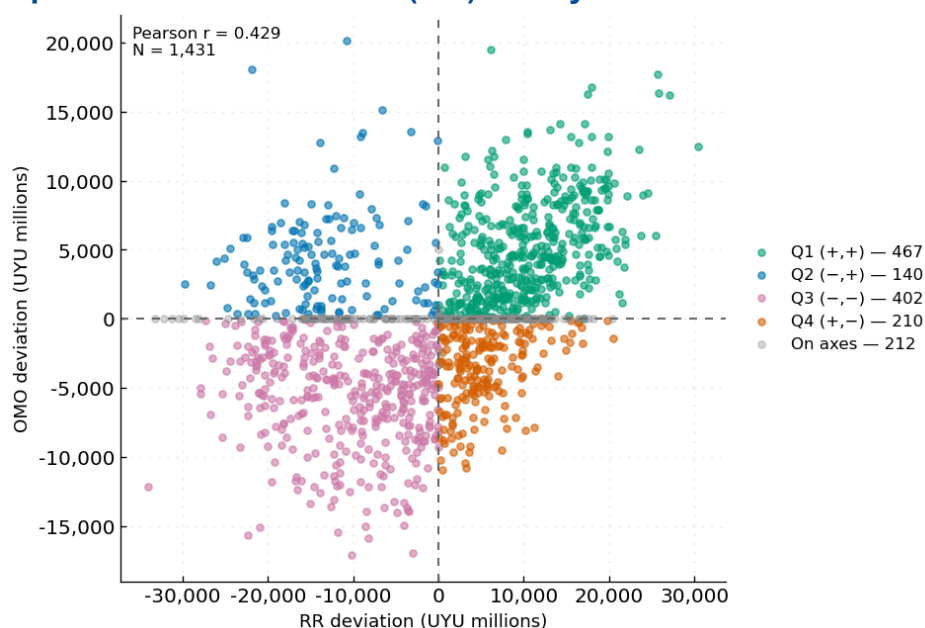
Figure 5. The Mini-Corridor Promoted by Frequent ISF Operations



Survey responses are consistent with this “mini-corridor” operating pattern and point to a reliance on the central bank’s footprint as a channel to park or borrow liquidity in the short end. Participants note that peso liquidity is “usually guaranteed” when the BCU is active, with money-market operations commonly seen at (or very near) the policy rate and tenors of 2–3 days. However, they also emphasize that volumes are not systematically pre-signaled, which complicates day-to-day positioning and is consistent with the irregular intervention cadence.

The high frequency of ISF operations, even in periods when banks’ reserve balances fluctuate around the required reserve average, suggests that the spreads applied in ISF operations may not provide sufficient incentives for banks to actively utilize the reserve requirement averaging mechanism (Figure). Rather than incentivizing banks to smooth their liquidity positions over the maintenance period, the current ISF pricing structure appears to encourage frequent reliance on central bank operations for day-to-day liquidity management. This dependence on ISF, instead of leveraging the reserve requirement averaging mechanism, may undermine the intended flexibility and efficiency of the reserve requirement framework and could hinder the development of banks’ own liquidity management practices within the banking sector. As illustrated in Figure 6, most observations are concentrated in quadrants 1 and 3, as well as along the axes—signaling that banks’ deviations in required reserves and OMO (ISF) balances typically move together or remain close to their monthly averages. However, nearly 24 percent of data points are found in quadrants 2 and 4, indicating that, in a significant number of cases, banks are neither engaging in interbank transactions to manage liquidity nor making more effective use of reserve averaging. The notable share of (1 observations in these quadrants suggests that the current ISF pricing mechanism may require revision to better support the intended policy objectives.

Figure 6. Required Reserves vs OMO (ISF)—Daily Deviations from Monthly Mean



Notes: Each dot is a day. The x-axis is the RR deviation, computed as the day's required-reserve balance minus that month's average balance; the y-axis is the OMO (ISF) deviation, the day's ISF stock minus that month's average stock (both in UYU millions). Because reserve-requirement compliance is based on the monthly average, these deviations indicate the path banks take within the month to meet the average—a positive RR deviation means banks held/deposited more reserves than their monthly average for that day. In contrast, a negative value means they had less. For OMO, a positive deviation means a larger-than-usual ISF stock (more absorption) and a negative deviation means smaller-than-usual absorption. Dashed lines at $x=0$ and $y=0$ divide the plane into quadrants: Q4 (+,-) and Q2 (-,+) indicate offsetting behavior (RR above average paired with below-average OMO, or vice-versa), while Q1 (+,+) and Q3 (-,-) indicate same-direction co-movement (both above or both below their monthly averages). The Pearson correlation index r is printed.

The timing of fine-tuning operations relative to banks' reserve positions also sheds light on how the corridor is implemented in practice. A bank-day scatterplot of net OMO use (liquidity provision vs absorption) against the same-day deviation of reserves from the contemporaneous reserve requirement, color-coded by day of the maintenance period, shows no simple one-to-one mapping between individual reserve "gaps" and the direction of OMOs. Liquidity provision to banks that are formally above their same-day requirement is rare and, when it occurs, is concentrated early in the maintenance period. By contrast, liquidity-providing operations to banks that appear below their same-day requirement are more frequent and distributed throughout the month, reflecting the smoothing of idiosyncratic shocks for institutions that run lean positions. Overall, liquidity absorption dominates, especially in the last week of the period and particularly at banks that, on a same-day basis, sit below the contemporaneous requirement. This pattern is explained by reserve averaging: many banks front-load their reserve holdings and secure compliance early in the period, then deliberately run-down cumulative surpluses. As a result, late-month reserve balances can fall below the contemporaneous requirement on individual days without jeopardizing ex post fulfilment of the monthly average, while the BCU continues to mop up the residual structural surplus at the system level to keep overnight rates aligned with the policy stance.

Figure 7. OMO Volume and Reserve Position



Notes: Data source is BCU and IMF calculations. Each point represents one bank-day between November 2024 and October 2025. The horizontal axis shows the bank's same-day reserve position relative to the contemporaneous reserve requirement (reserve balance minus that day's requirement, as a percent of the bank's peso reserve-requirement base). The vertical axis shows net use of BCU fine-tuning operations in pesos on that day, with positive values indicating net liquidity withdrawal by the BCU and negative values net liquidity provision. In the right chart points are color-coded by the day of the maintenance period (early, middle and final segments of the month). The figure is restricted to banks that account for the bulk of system deposits; a few smaller institutions with idiosyncratically very large positions are excluded to keep the scale readable. The same-day reserve position is a simple proxy and does not capture the full running fulfilment path under a contemporaneous-base system, so negative values late in the period do not necessarily imply expected non-compliance with the monthly average.

C. Standing Facilities

Access to standing windows is limited to institutions that perform financial intermediation (IIF) with current accounts at the BCU—principally licensed banks and other supervised financial intermediaries (e.g., *casas financieras* and *cooperativas de intermediación financiera*). By regulation, many entities may hold BCU accounts (AFAPs, insurers, payment institutions, public bodies, exchanges, CCPs, etc.), but they are not eligible counterparties for the standing credit window.

Two distinct standing lending windows provide secured overnight credit at a penalty rate, while the standing deposit window allows unlimited overnight placements at the posted floor rate. The *Facilidad Permanente de Liquidez (FPL)* is requested during operating hours as an overnight repo against eligible public securities; the *Facilidad de Crédito a tasa de penalización* opens after market close to resolve end-of-day shortfalls or regularize unpaid intraday credit. The first acts as a proactive daytime backstop, whereas the second as reactive end-of-day regularization tool. Both lending facilities share the same key terms: pricing at a published penalty rate, collateral in eligible public securities, usage capped at 30 percent of the institution's average minimum reserve requirement from the second prior month, and access on up to three business days per month. Principal and interest are due the next business day. If unpaid, the BCU may sell or retain the pledged collateral. These features make the standing windows secured, penalized, and time-bounded backstops rather than routine funding sources.

An intraday liquidity facility supports payment settlement and converts to penalized overnight credit if not repaid by the close of the day. Eligible participants may obtain same-day, non-

remunerated credit against pre-registered collateral to bridge timing gaps in payment flows; any unpaid balance at the end of the day is automatically regularized as an overnight repo at the standing penal rate (through the end-of-day facility), preserving incentives to manage positions before the close.

Operationally, the wide-corridor/active-operations configuration keeps the overnight rate anchored but increases day-to-day operational demands on the central bank. Because there is no remunerated floor close to the policy rate, the BCU must actively absorb residual surpluses and cover temporary shortfalls via OMOs and ISF near the policy rate; otherwise, rates could drift toward the standing floor or tighten toward the ceiling. Survey feedback aligns with this picture: institutions plan around OMOs/ISF and treat the standing windows as backstops, with some noting that a corridor closer to market conditions would make the system more self-correcting.

D. LRM

Monetary Regulation Bills (LRMs) are peso-denominated, zero-coupon securities issued by the BCU as its main structural sterilization instrument. LRMs are typically issued at standard maturities of 30, 90, 180 and 360 days, with the legal framework allowing issuance at longer tenors (up to 24 months), although maturities beyond one year have not been used in recent periods. LRMs are placed at a discount and redeemed at par, with both principal and implicit interest paid at maturity. In addition to nominal peso LRMs, the BCU also maintains LRMs in inflation-indexed units (unidades indexadas, UI) at longer tenors in its toolbox, but has not made use of that in recent periods as well. LRMs are treated by market participants as free of credit risk. Their yields are closely linked to the monetary policy rate and expectations of its future path, so that LRM cut-offs and the corresponding secondary-market curve form the main reference for short-term risk-free peso rates.

LRMs are placed via regular auctions on the BCU's electronic platform. Auctions follow a uniform-price (Dutch) mechanism in which participants submit sealed bids specifying amount and yield and bids are ranked from the lowest yield upwards and the BCU accepts bids up to the cut-off volume. All successful bidders are awarded at the single cut-off yield corresponding to the highest accepted rate. The BCU may allot less than the initially announced amount if the rates offered are deemed too high and can also allocate more than the tender amount when market conditions and liquidity-management needs so warrant. Some market participants see these adjustments at BCU discretion as lacking transparency. The BCU considers market demand gained through counterparty outreach when calibrating its operational calendar and cut-off amounts for different maturities.

The BCU operates a primary-dealer system in which a small group of designated dealers participates in the competitive tranche by submitting bids in amount and yield up to the auction volume. A non-competitive tranche amounting to roughly 20 percent of the competitive amount is then opened to a broader set of banks and institutional investors at the weighted-average auction yield. This two-tier structure keeps cut-off yields market-determined while broadening access to the instrument. Auction calendars and indicative issuance amounts by tenor are announced in advance, and post-auction results like cut-off yields and allotted volumes are published ex post.

Survey responses confirm that banks and other intermediaries treat LRM yields, together with the policy rate, as the primary reference for internal funds-transfer pricing and for pricing wholesale deposits and loans in pesos. Internal short-term curves are typically aligned to the LRM term structure, and auction outcomes are used as a real-time signal of the marginal cost of peso funding and market expectations for the policy rate. Institutions report using LRM yields as the main operational curve for pricing and positioning in pesos.

Surveyed banks report that LRMs are a cornerstone of their peso liquidity and investment strategies. LRMs are described as the main outlet for placing excess peso liquidity in a secure, low-risk instrument and as a convenient way to manage short-term interest-rate risk. Holdings are actively laddered across standard maturities up to one year, with maturity profiles designed to match expected cash outflows, the timing of large client withdrawals, and business seasonality.

Financial stability report data on the broader public-securities universe shows that pension fund managers are the largest investor group. This confirms that LRMs are embedded in portfolios of large institutional investors and are important for asset allocation, duration management, and liquidity management across the system. Retail participation takes place mainly through mutual funds and via banks that package LRMs in short-term investment products marketed to households.

Capital-market activity in Uruguay is highly concentrated in a narrow set of instruments, with LRMs at the core of both issuance and trading. Over July 2024–June 2025, total securities operations amounted to about UYU 3.3 trillion, equivalent to roughly 99 percent of GDP. Approximately three-quarters of this volume corresponds to primary issuance and only one-quarter to secondary trading, indicating a strong buy-and-hold orientation overall.

On the primary market side, LRMs and private-sector certificates of deposit (CDs) dominate issuance volumes. FSR data show that LRMs account for about 45 percent of all primary-market issuance, while private CDs represent over 50 percent. Meanwhile, Treasury notes and other securities together account for less than 5 percent. In total, LRMs plus private CDs thus constitute over 95 percent of primary issuance by volume, confirming their central role in local fixed-income activity.

On the secondary market side, LRMs are even more dominant as they represent close to 90 percent of all secondary trading in domestic securities. This compares with about 7 percent for international issues, 3.9 percent for Treasury notes, and only 0.6 percent for other securities. Private CDs, despite their large primary volume, are effectively not traded and secondary operations in private-sector instruments amount to only about 0.1 percent of total private-sector volumes (around UYU 1.7 billion out of roughly UYU 1.3 trillion), implying a secondary-to-primary ratio close to zero. Over the same period, public-sector securities (including LRMs) show somewhat higher, but still modest, secondary activity.

Survey respondents generally view the BCU's auction calendar and post-auction disclosure as transparent, but point to some residual uncertainty around auction procedures. Several banks note that it is not always clear ex ante whether the BCU will “cut by rate” or “cut by volume,” and refer to changes in cut-off conventions during 2024–25—especially in certain 90-day auctions. These factors complicated bidding strategies and sometimes led to unexpected shifts in market rates.

Because LRMs concentrate on both issuance and trading activity, their yields effectively define the short-end peso benchmark curve. Surveyed banks report that, for very short maturities, the LRM curve and related money-market rates provide a reasonable approximation to their marginal cost of peso funding and serve as the main reference for pricing client deposits and loans. At the same time, the broader market remains shallow and segmented. Secondary trading outside LRMs is very limited, published yields at longer tenors often do not correspond to executable prices in meaningful size, and many institutional investors operate a near buy-and-hold strategy in both public and private instruments. As a result, LRMs bear a disproportionate burden in terms of price discovery and liquidity provision for short-term peso instruments, while the propagation of policy signals along the yield curve and across asset classes is constrained by thin trading elsewhere.

LRMs are the BCU's main sterilization instrument and the short-end benchmark for peso pricing (see Figure 20). Issued as zero-coupon bills—typically at 30, 90, 180, and 360 days (the BCU can issue up to 24 months, not issued since November 2023)—their stock rose from about UYU 333 billion at end-2023 (~10 percent of GDP) to roughly UYU 425 billion in November 2025 (~12 percent of GDP), larger than the monetary base. The 30-, 90-, 180-, and 360-day LRMs account for 7 percent, 27 percent, 23 percent, and 43 percent of the total outstanding stock, respectively. Participants surveyed report that internal funds-transfer pricing is closely aligned with the policy rate and the sovereign/LRM curve, confirming LRMs' role as the primary reference for marginal funding and lending costs. Meanwhile, institutional investors emphasize LRMs as their primary outlet for short-term liquidity, with a clear preference for 180–365-day paper.

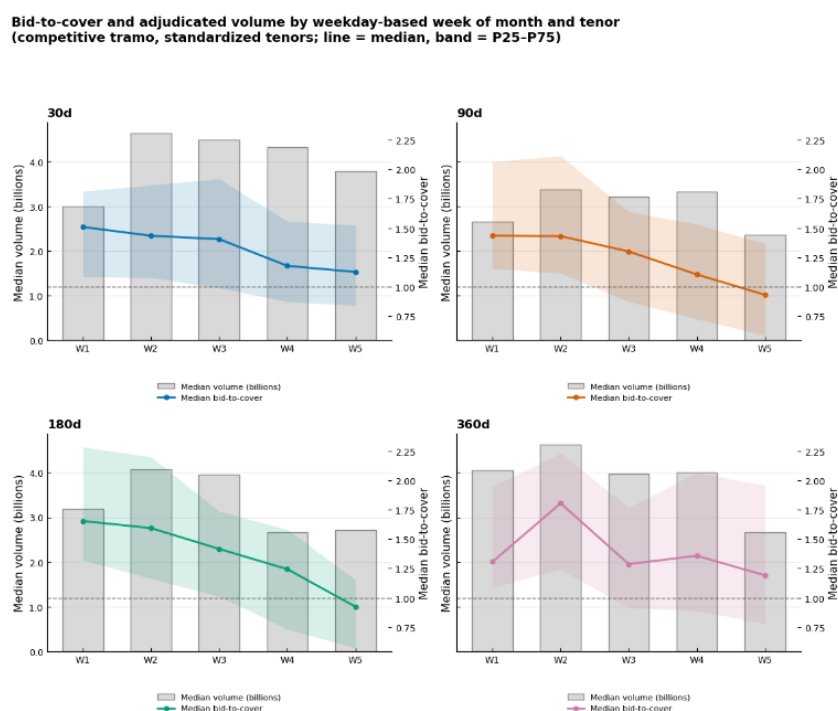
- I. **Price discovery is concentrated in a competitive tranche among six primary dealers, while a non-competitive window broadens access.** In the competitive tranche, only designated primary dealers submit bids by amount and yield up to the announced volume or the cut-off; the non-competitive tranche—typically about 20 percent of the competitive allotment—then allows other banks and investors to take paper at the weighted-average rate. This two-tier structure keeps the clearing yield market-driven while ensuring participation beyond the dealer core.
 - II. **Market participants seek stable, explicit cut-off conventions to reduce discretion and avoid curve surprises.** Respondents note variability between “cutting by rate” and “cutting by volume,” with criteria not always stated ex-ante, and ask the BCU to pre-announce the rule (including tie-breaks) and apply it consistently; several cite 90-day auctions where successive procedural changes shifted the stop-out relative to prior auctions, and some propose moving from a Dutch-style to an English-style format to reinforce price discovery at the cut-off.
170. **Auction outcomes keep short-end LRM yields tightly aligned with the policy rate, anchoring a benchmark curve used across the system, while market depth thins beyond 6–12 months (Figure 3).** In practice, 30–180-day cut-offs cluster near the TPM, rollovers are orderly, and issuance size/frequency are broadly adequate; banks and investors use these nodes as the operational curve for pricing and positioning. Survey responses stress that references are most reliable at the short end, with thinner liquidity and scarcer pricing anchors at longer maturities—hence the value of a predictable auction grid at core nodes.
171. **Beyond the short end, market pricing often anticipates policy changes, with longer tenors drifting ahead of turning points (Figure 3).** Ahead of the 2022 hiking cycle, LRM cut-offs—especially those between 90 and 360 days—rose gradually before the first TPM increases; a similar pre-tightening firming is visible in early 2025, consistent with expectations that channels react to data and guidance. Two brief departures punctuate this pattern: (i) a late-2023 rebound in LRM yields during an ongoing easing cycle, after which rates quickly re-aligned with the TPM; and (ii) at the start of the mid-2025 easing, the 30-day bucket showed little pre-cut softening (limited anticipation) while longer tenors eased only mildly. In both cases, cut-offs were promptly re-anchored once the information was clarified, thereby reinforcing the smooth transmission and credibility of the central bank.
- III. **LRM auctions with short maturity display little sensitivity of the cut-off premium to bid-to-cover, whereas longer maturities show a clear downward relation—evidence consistent with anchored pricing at the short end and more market-driven price discovery further out (Figure 21).** In competitive auctions, higher coverage serves as a proxy for stronger demand; if competition sets prices everywhere, the premium over the policy rate would fall uniformly with coverage. Instead, the 30–90d curves are flat and low

across bins, while the 180–720d curves slope down, indicating that competition compresses premia mainly at longer tenors. Survey responses align with this split: participants describe the peso curve as a reliable reference in the short segment, with central-bank signals clearer there, but thinner liquidity and weaker references at longer maturities, making prices more sensitive to demand.

A tightly scheduled, transparent LRM auction program anchors liquidity absorption and short-end price discovery. The BCU operates a regular weekly calendar—typically with 1-month bills early in the week, 3-month bills mid-week, and alternating 6- and 12-month bills later—with T+0 settlement for short tenors and T+1 for 12-month bills to ensure prompt liquidity impact. Results (amounts offered and awarded, stop-out, bid-to-cover) are released immediately, and participants surveyed perceive that the published calendar and disclosures “significantly enhance the clarity of the operational environment,” which they embed directly into liquidity planning.

Figure illustrates the median adjudicated volume (bars) and bid-to-cover ratios (lines) at competitive auctions for standardized LRM tenors—30, 90, 180, and 360 days—across weekday-based weeks of the month (W1–W5). For shorter tenors (30d and 90d), both volume and bid-to-cover ratios show a gradual decline from W1 to W5, suggesting reduced demand and participation later in the month. The 180d tenor exhibits a similar downward trend, with a sharper drop in bid-to-cover ratios, indicating tighter liquidity conditions for medium-term instruments. Conversely, the 360d tenor displays more variability, with a peak in W2 followed by a decline, reflecting intermittent investor interest in longer maturities. Shaded bands (P25–P75) highlight dispersion, which is relatively narrow for short tenors but wider for 360d, signaling higher uncertainty in long-term auctions. Overall, the data suggests front-loaded demand and stronger competition early in the month, tapering off toward month-end, particularly for shorter maturities.

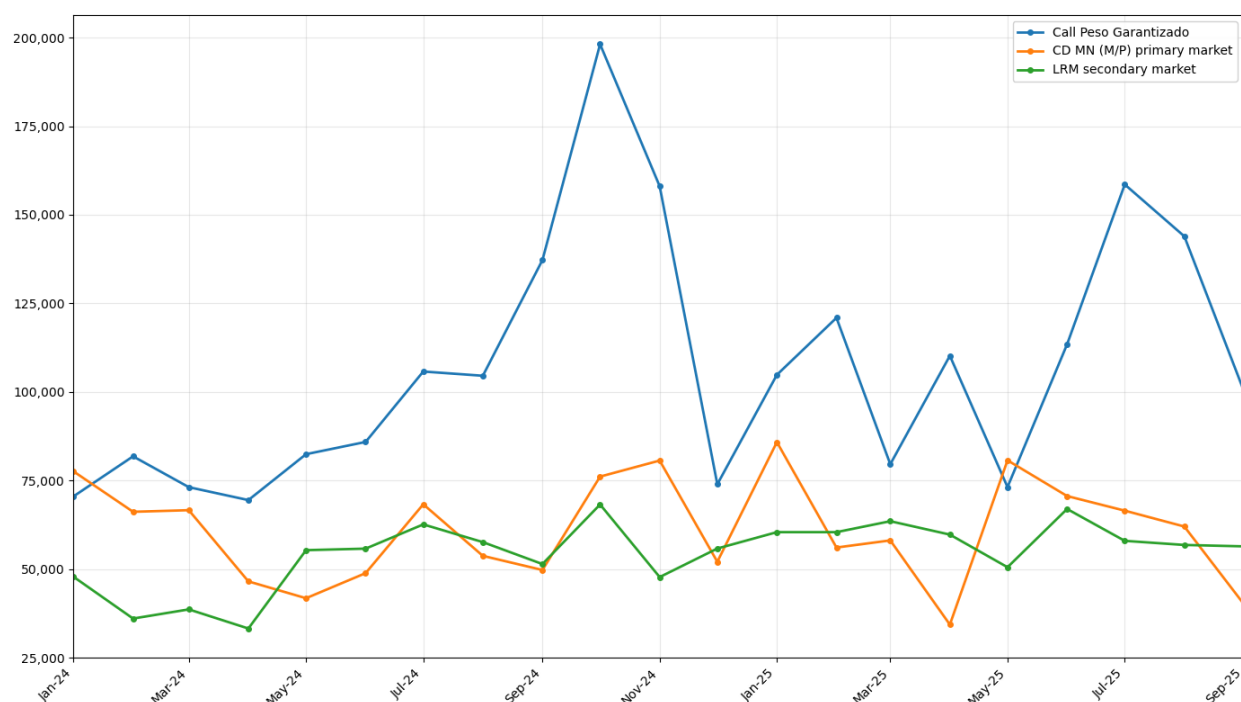
Figure 8. Bid-to-Cover by Week of the Month



Annex VI. Money Market Overview

In the current framework, the BCU plays an active role in the money market through daily fine-tuning operations aimed at keeping the overnight interbank rate close to the TPM. The central bank routinely absorbs or injects liquidity, accommodating short-term shocks to banks' reserve positions; fine-tuning instruments are remunerated within a narrow corridor around the policy rate (± 20 basis points), which effectively pins the overnight rate close to the TPM. Short-term operations are concentrated in the peso "call garantizado" segment, where most volumes are transacted at maturities between two days and one week. Across these short maturities, the BCU accounts for an estimated 50–70 percent of turnover, highest in the 3–6 day bucket, with the remainder reflecting bilateral trades between banks (Figure). While this supports a tight alignment between the target rate and market conditions, survey evidence suggests that the strong central bank footprint also reduces incentives for banks to manage their own liquidity more actively or to trade reserves among themselves. Excess liquidity is usually placed in fine-tuning deposits rather than redistributed via the interbank market, which may limit the development of deeper unsecured and secured money markets over time.

Figure 1. Monthly Market Volume by Segment (in mn UYU)



Notes: Data source is BEVSA, the chart only displays the largest market segments and serves to put the money market volume into context.

Figure 2. Call Peso Garantizado Volume Share by Maturity Band

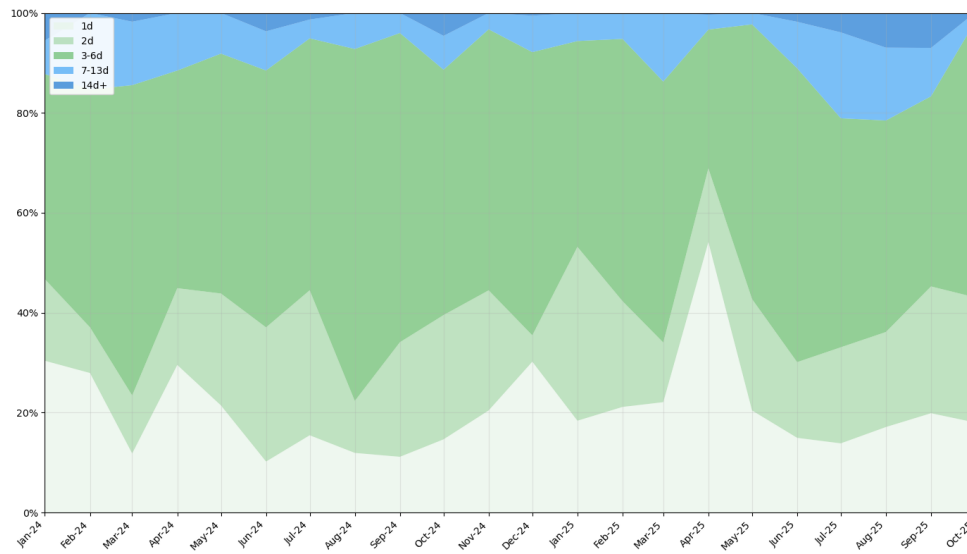


Figure 3. CD Primary Market Volume Share by Maturity Band

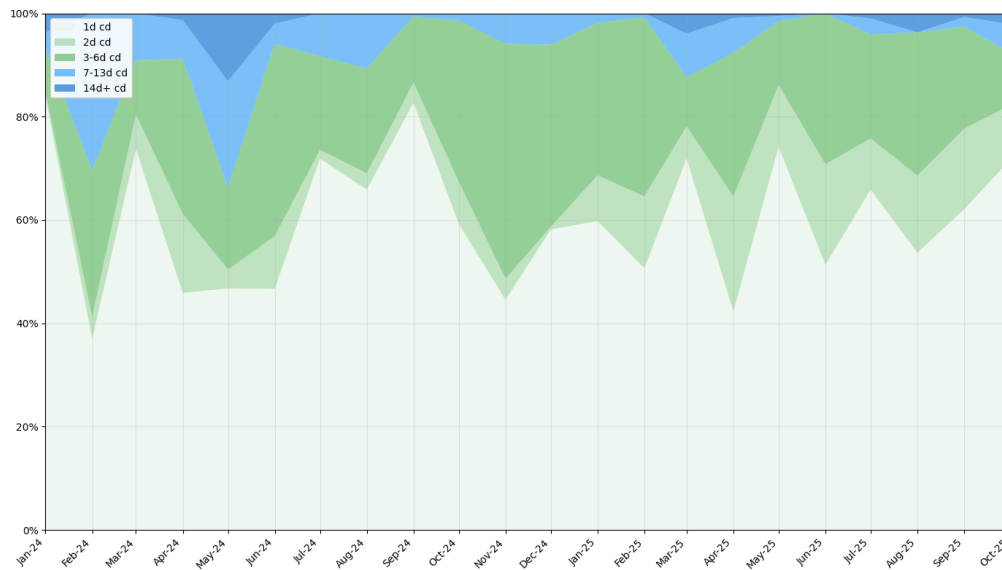
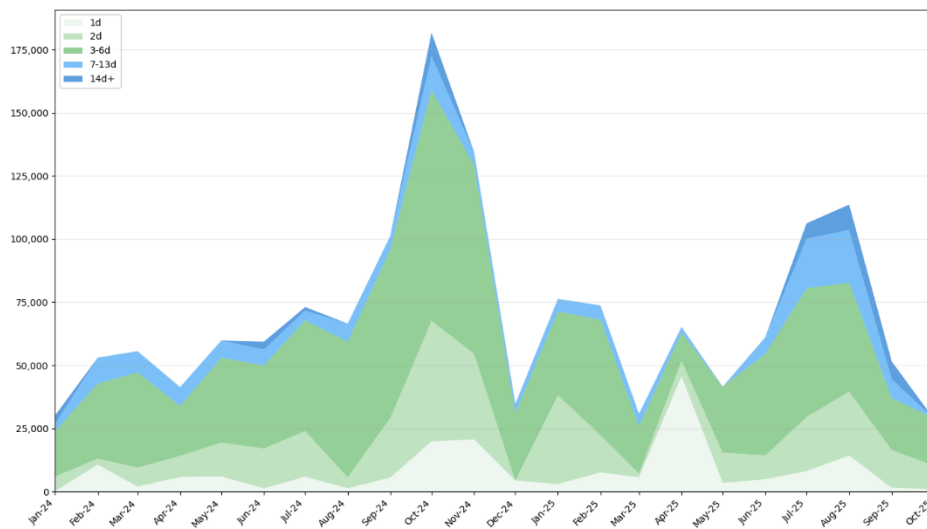


Figure 4. BCU Peso Garantizado Volume by Maturity (in mn UYU)

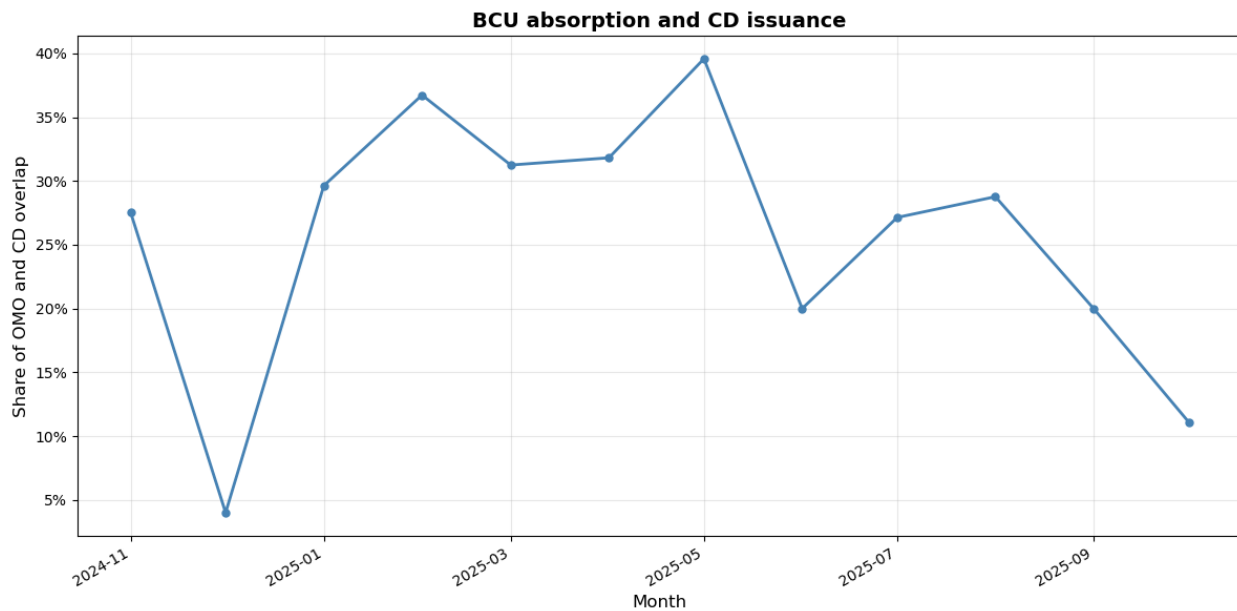


Notes: Data source is BCU, same grouping of maturities into bands applied to keep evolution comparable to overall money market activity by band.

Bank level data on peso certificates of deposit and fine-tuning operations suggest that private wholesale funding and central bank intermediation are often used side by side in the very short segment. Peso CDs are overwhelmingly issued at very short maturities, mostly overnight or within a few days and sold to pension funds, so they are well suited to managing immediate funding needs but do not materially lengthen the maturity profile of peso liabilities or provide a structural buffer for meeting reserve requirements. At the same time, the analysis in Figure shows that in many months roughly 30 percent of instances in which banks place surplus liquidity with the BCU through fine-tuning operations coincide with new peso CD issuance by the same institutions on the same day. On those days banks earn a spread over the policy related rate to raise very short term pesos from investors while simultaneously depositing cash at the central bank, rather than allowing surplus and deficit positions to be matched through the interbank market. This pattern suggests that nominal peso CDs are used primarily as a tactical wholesale funding instrument and that the BCU continues to intermediate a significant share of short term peso liquidity coming from institutional investors.

It is important to note that this evidence relates only to nominal peso CDs and does not capture the full structure of the CD market. A major long term funding source for banks consists of inflation indexed UI CDs that are placed mainly with pension funds and used to refinance mortgage portfolios. These linked CDs are liquid and in high demand among institutional investors, often with maturities of around five years and in some cases close to ten years, and therefore play a central role in providing stable term funding and in supporting the development of the indexed yield curve.

Figure 5. BCU Operations and CD Issuance



Notes: The line shows, for each month, the share of fine-tuning operations (FTOs) in pesos where a bank places cash at the BCU on a day when it also issues new peso certificates of deposit. The denominator is the total number of bank-day observations in the month with net liquidity-absorbing FTOs in pesos; the numerator is the subset of those bank-days on which new peso CDs are issued by the same bank. The sample includes banks that account for the bulk of system deposits; a few smaller institutions with idiosyncratically large positions are excluded to keep the scale readable.

Annex VII. Building Institutional Capacity for Transition to an Interest Rate Targeting Framework

When a Central Bank shifts from a monetary aggregate targeting regime to an interest rate targeting model, it requires substantial institutional and operational adjustments to maintain policy effectiveness. Under the monetary aggregates approach, the focus is on controlling the growth of money supply (such as M1 or M2) to influence inflation indirectly. This method assumes a stable relationship between money supply and economic activity, which can often be less predictable in modern economies.

In contrast, interest rate targeting relies on the short-term policy rate as the primary instrument for influencing inflation and economic activity. Transitioning to this framework requires a more sophisticated analytical approach, including models that link interest rates to inflation expectations and output gaps. Technical capacity needs to expand to incorporate real-time data analysis, advanced forecasting systems, and robust econometric modeling. Operational capabilities in market operations must also be strengthened to ensure the overnight interbank rate remains close to the policy target through effective open market operations. Communication strategies must become increasingly forward-looking, emphasizing transparency and clear guidance on future policy paths. Table 9 summarizes key institutional and operational adjustments required.

Table 1. Monetary Aggregates Targeting versus Interest Rate Targeting

Aspect	Monetary Aggregates Targeting	Interest Rate Targeting
Policy Objective	Control growth of money supply (M1, M2) to influence inflation indirectly.	Use short-term interest rate as the main instrument to achieve inflation stability.
Operational Focus	Frequent monitoring of monetary aggregates and reserve requirements.	Continuous adjustment of policy rate (e.g., overnight rate) to steer market expectations.
Analytical Framework	Relies on stable money demand functions and quantity theory of money.	Requires forecasting models linking interest rates to inflation and output gaps.
Institutional Structure	Departments focused on liquidity management and aggregate monitoring.	Strengthened Monetary Policy Committee (MPC) for rate decisions, enhanced research and modeling units.
Communication Strategy	Limited transparency; reports on monetary aggregates and reserve positions.	Forward guidance and clear communication of interest rate path and inflation outlook.

Technical Capabilities	Basic statistical tools for tracking aggregates.	Advanced econometric models, real-time data analysis, and market operations expertise.
Market Operations	Heavy reliance on reserve requirements and direct controls.	Open market operations and standing facilities to maintain target interest rate.
Flexibility	Rigid, less responsive to shocks due to fixed aggregate targets.	More flexible, allows quick response to demand and supply shocks through rate changes.

A strong emphasis should be placed on transitioning operational practices from managing monetary aggregates to focusing on interest rate management. The Central Bank should emphasize building the analytical tools and technical infrastructure for effective interest rate management. It is encouraged to gradually reduce reliance only on reserve requirements and direct controls while expanding open market operations and liquidity management tools. Implementing tools designed to support forward-looking monetary policy formulation based on economic data and analysis is critical.

The Central Bank's credibility and expectation management are central to the success of interest rate targeting. The Central Bank should enhance its communication strategy to provide clear guidance on the expected monetary policy stance. Transparency measures, such as releasing MPC meeting minutes and voting records, as well as publishing regular Inflation Reports reinforce accountability. Engagement with stakeholders—including financial markets, government institutions, and the public—through seminars and press briefings allow strengthen trust in the new framework.

The Central Bank should also conduct a thorough evaluation of the inflation-targeting framework to ensure its effectiveness. This assessment should cover key dimensions such as the accuracy of forecasting models, the clarity and impact of communication strategies, and the operational capacity to implement policy decisions. Based on these findings, continuous improvement mechanisms must be established to refine processes, strengthen institutional credibility, and enhance the ability to achieve monetary policy objectives over time.

Annex VIII. Template for the Memorandum of Understanding (MoU) between the Central Bank and the Ministry of Finance

Section Name	Description of Section	Suggested Guidance
A. Purpose	This section outlines the objectives and scope of the MoU.	i. This MoU sets out the terms for cooperation between the [Central Bank name] and the [Ministry of Finance name, hereafter, the Treasury] in sharing information and data, and joint procedures to support the implementation of monetary policy by the [Central Bank name]. ii. By signing this memorandum, the parties agree to cooperate on information sharing and recognize the responsibilities set forth in this document and all related appendices.
B. Preamble	This sections sets up the legal context for the respective agencies to operate, and agree to the MOU.	iii. The MoU sets the technical and operational framework governing the issuance of Government Securities for liquidity management purposes, encompassing critical components such as: (i) the delineation of specific actions to be undertaken by each participating entity, namely the Central Bank and the Ministry; (ii) stipulations regarding the minimum and maximum terms to maturity for the securities; (iii) identification of the authorized counterparties eligible to engage in auction processes; and (iv) the establishment of the remuneration structure applicable to the associated deposit accounts.
C. Issuance Provisions	Specifies the standards to be considered in the issuance of Government Securities to support monetary operations	iv. The government securities issued by the BCU and MoF shall adhere to the identical characteristics as those instruments employed in the financing of government operations, specifically including, but not limited to, the face value, coupon rates, and standardized maturity dates, thereby ensuring uniformity and consistency across the financial instruments utilized for governmental funding purposes. v. The instruments issued by the (BCU) shall have a minimum maturity period of no less than thirty (30) days.
D. Deposit Provisions	Specifies the characteristics of the deposits	vi. The maximum maturity period for the instruments shall be established at XX months.

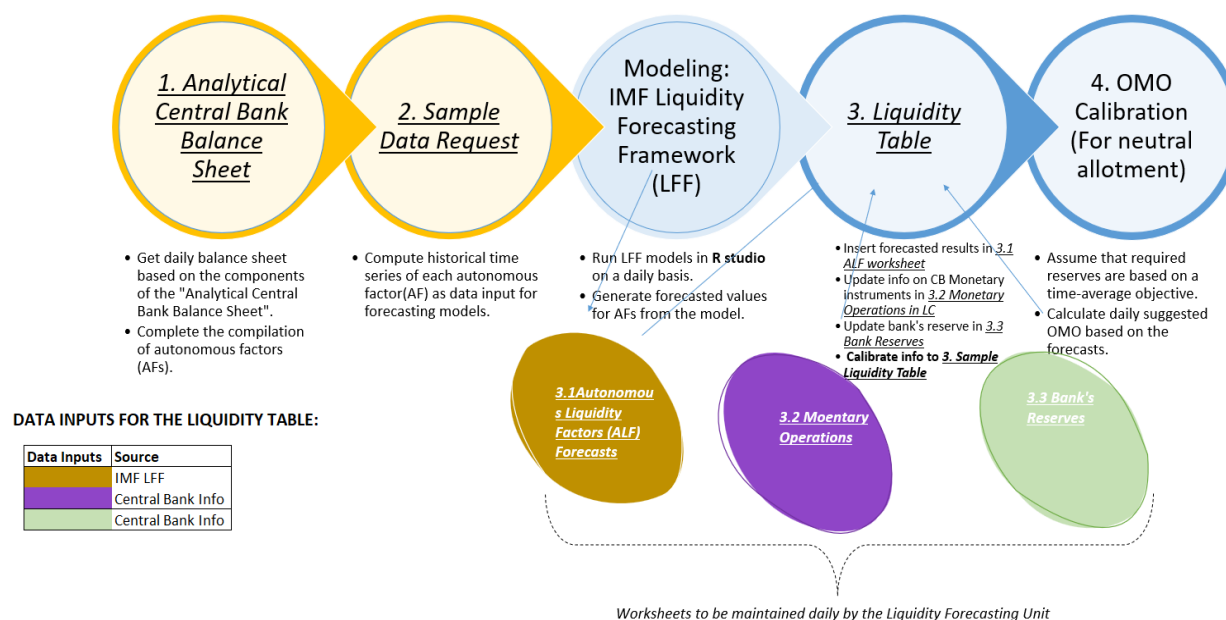
		vii. No issuance of government securities shall occur concurrently with the maturities of instruments issued by BCU), thereby ensuring that such issuances are distinctly separated in time. viii. All offerings of instruments issued for the purpose of monetary regulation shall adhere to the identical procedures established by the Ministry for its regular offerings. Such procedures shall encompass, but are not limited to, public announcement, offering format, and the subsequent announcement of results. Furthermore, these instruments shall be offered in the same marketplace utilized by the Ministry, ensuring consistency and transparency in the offering process. ix. The BCU has the discretion to establish counterparties eligible to participate in the auctions. x. The Central Bank of [Country] (BCU) is mandated to deposit the proceeds from the sale of government securities utilized for monetary policy operations into a segregated government deposit account. The government shall have no access to the balances maintained within such accounts until the maturity of the respective securities, thereby ensuring that these funds are preserved exclusively for their intended monetary policy purposes. xi. These cash deposits shall be required to match the same size and term as the securities involved in the corresponding issuance operation. xii. The Central Bank of [Country] (BCU) shall be responsible for the remuneration of these deposits, which shall be established at XX percent of the remuneration associated with the corresponding operation. xiii. The BCU shall maintain and share with MoF appropriate records of the amounts deposited in these segregated accounts. xiv. On a yearly basis and based on the BCU income statements, parties can review the remuneration of those deposits.
E. Procedure in the Event of a Disaster	Steps to follow in case of a disaster affecting data reporting.	xv. In exceptional circumstances, the parties may agree to a temporary reduction in reporting and data deadlines and may use an alternative electronic platform. Contact details for disaster recovery are listed in the technical annex.
F. Confidentiality	Rules for maintaining the confidentiality of	xvi. The central bank is prohibited from publishing data (in terms of forecast) or realized data received from the Treasury, or any of its departments, from which data originates. The

	shared information, are applicable, as the parties will follow non-disclosure rules and use non-public information only internally.	central bank can however publish aggregated liquidity forecasts and data on its liquidity management activities, or as derived from its balance sheet which could include aggregate government liabilities and assets. The reverse is equally true, as any information (forecast or realized) on monetary policy operations and implementation to be published is the sole responsibility of the central bank. xvii. All non-public and unpublished data must be accorded the highest level of confidentiality by the receiving party.
G. Amendment Procedure	Processes for making amendments to the MoU.	xviii. There are two procedures: a general amendment procedure requiring mutual consent of the parties or their alternates, and a simplified amendment procedure for specific paragraphs, which can be amended by mutual consent of local management. Lists of authorized signatories for each amendment procedure are maintained and exchanged.
H. Periodic Review and Revisions	Guidelines for reviewing and revising the MoU periodically.	xix. The parties will review the MoU every five years and conduct general amendments, as necessary.
I. Termination	Conditions under which the MoU can be terminated.	xx. Either party may terminate the MoU with six months' notice. The MoU enters into force one month after the day of its signature.
J. Signatures	Section for the signatures of the parties involved, and should be agreed at the highest level for the respective parties.	xxi. Insert the date and the names of the representatives from the respective institutions to sign the MOU.

Annex IX. Liquidity Forecasting Framework: Workflow and Liquidity Table

Liquidity Forecasting Workflow:

DEVELOPING THE LIQUIDITY TABLE AND CALIBRATING MONETARY OPERATIONS:



	Forecast Source	T (Actual) - Stock	T+1 (Forecasted Flows)	Realized flows @ t+1
1 Autonomous Liquidity Factors (ALF) Forecasts	IMF LFF Reconciliation			
1.1 Currency in Circulation (CIC)	IMF LFF			
1.2 Net Foreign Assets (NFA)	IMF LFF			
1.3 Net Claims on the Government (NCG)	IMF LFF			
1.4 Net Claims on Other Sectors (NCO)	IMF LFF			
1.5 Other Items Net (OIN)	IMF LFF			
2 Monetary operations				
2.1 Net Claims on Banks (NCB)	Central bank info- maturing OMOs, new operations.			
LRM				
- New Contracts				
- Maturing Contracts (including interest payment due)				
Net 7d Operation				
Net Fine Tuning Operations				
3 Banks' reserves	Net Reserve Position (with CB)			
Mandatory Reserve Requirement				
Average RR Balances				
Required Reserve (RR) Balances				
Account Balances (Free Reserves)	Central bank's objective/estimate of precautionary minimum reserves			
4 Suggested Open Market Operations (1+2-3):				
+ve:- sterilization OMO				
-ve:- refinancing OMO				

Annex X. Comparative Table of Central Bank Liquidity Forecasting & Operations

Central Bank (Country)	Publishes Forecasts?	Forecast Horizon	Forecast Frequency	Forecast Errors Published?	Coordination with Fiscal Authority	Main Operations & Framework	Notable Practices / Innovations	Sources
Banco Central del Uruguay (Uruguay)	No public bulletin (internal daily planning)	Short-term (daily/few days)	Daily (internal)	No	Limited formal mechanisms (Treasury cash still matters)	Sterilization mostly via LRM bills and daily OMO toolset	LRM is the workhorse for structural absorption	BCU “Instrumentos emitidos”; “Instrumentos del BCU y GC”
Banco Central de la República Argentina (Argentina)	No public liquidity forecast	Immediate (day-to-day)	Daily	No	Informal/operational coordination	LELIQ auctions; repos/FX swaps as needed	Framework changes have been frequent	BCRA — Policy rate; Monetary Policy Report
Banco Central do Brasil (Brazil)	No public liquidity forecast (transparency via reports/calendars)	Up to weeks/months (internal)	Daily	No	Strong info-sharing with Treasury	Repos, reverse-repos; standing facilities; Selic system	Clear corridor implementation; robust comms/reporting	BCB — Monetary Policy Report portal; Selic/operations docs
Banco de México (Mexico)	Partial — policy/operations info; no explicit daily forecast bulletin confirmed	Short-term (daily operations)	Daily	No	Legal info-sharing framework	Repos, deposits, FX swaps; standing facilities	Transparent announcements & releases	Banxico — Monetary policy & OMOs hub
Banco Central de Chile (Chile)	No standalone public liquidity forecast	Maintenance-period focus	—	—	Coordinated calendars with Treasury	Fixed-rate/full-allotment-style MROs; BCCh bills; repos	Detailed legal/operational circulars publicly posted	BCCh — Policy area; Compendio/circulars
Banco de la República (Colombia)	No dedicated forecast bulletin	1–2 weeks (main ops)	Weekly main; daily monitoring	No	Treasury flows incorporated	Full-allotment repos; CB bills	Clear operations rulebook	BanRep — Operations/glossary
Česká národní banka (Czech Republic)	Yes — public daily liquidity page	Daily (forecast & outturn)	Daily	Yes — discloses forecast error	MoF flows included	Fixed-rate, full-allotment absorption	Unusual transparency: daily forecast + error	CNB — Daily Liquidity; Explanatory notes; Instruments

						(American auction)		
Danmarks Nationalbank (Denmark)	Yes — publishes cash-flow effects/ops info	Short-term structural (weeks)	Weekly ops	No	Strong — gov't deposits central to liquidity	Fixed-rate, full-allotment weekly operations; unlimited current accounts	Classic peg implementation with transparent ops	Nationalbanken — Policy/operations pages
European Central Bank (Eurozone)	Yes — weekly liquidity analysis	Maintenance period (~6 weeks)	Weekly	No	NCBs share gov't cash-flow data	Fixed-rate, full-allotment; reserve averaging; fine-tuning	Publishes daily liquidity conditions & weekly analysis	ECB — “Liquidity analysis” hub
Federal Reserve (USA)	No public liquidity forecast (ample-reserves regime)	Up to ~1y (internal scenarios)	Daily	No	Yes — info-sharing on Treasury TGA	Ample-reserves floor system; minimal active OMOs; SRF backstop	Implementation notes after each FOMC set tools	Federal Reserve — Policy implementation notes
Bank of England (UK)	No public liquidity forecast	~10-day horizon (internal)	Daily	No	Coordinated with UK DMO	Sterling Monetary Framework; weekly FRFA repo	Red Book parameters & facilities	BoE — Market Operations Guide / SMF
Bank of Canada (Canada)	Yes — posts daily settlement balance target	Next day	Daily	No	Strong integration with gov't cash	Corridor (or floor when needed); morning OMOs	Transparent daily targets	BoC — Framework for market operations
Monetary Authority of Singapore (Singapore)	No public “forecast” doc (FX-targeting; publishes OMO schedules/practices)	Daily assessment; semiannual FX stance	Daily	—	Close MoF links; gov't balances key	Daily OMOs, repos/swaps, MAS Bills; standing facility	Clear documentation of daily 9:45 sessions	MAS — Money-market operations; MPS/FAQs
Bank of Japan (Japan)	Partial — publishes daily operations summaries (not forward-looking)	Next-day reserves; monthly averages	Daily	No	Tight MoF coordination	Fixed-rate, full-allotment funds-supplying; JGB purchase ops	Standing facilities cap volatility under ample reserves	BoJ — Policy & market-operations outlines

Reserve Bank of Australia (Australia)	No public liquidity forecast (framework & OMO details published)	Weekly ops cycle	Weekly	No	Strong (Cash Coordination Committee)	2025 ample-reserves framework; FRFA repos; unlimited ES balances	Clear path from corridor → floor	RBA — OMO Guidelines; Future MPI System (2025)
Reserve Bank of New Zealand (New Zealand)	No public daily forecast	Maintenance period & medium-term	—	No	With NZ Debt Management	Full-allotment floor; unlimited Settlement Cash balances	Detailed handbook & implementation notes	RBNZ — Implementation/Handbook
Sveriges Riksbank (Sweden)	No public liquidity forecast	Weekly cycles	Weekly	No	With Debt Office	Certificates (7-day); ±10bp corridor; no reserve requirements	Publishes policy-rate path (separate from liquidity)	Riksbank — Certificates; Implementation pages
Central Bank of Nigeria (Nigeria)	No public bulletin (internal)	Short-term (daily/few days)	Daily (internal updates)	No	Yes — TSA flows and other autonomous factors incorporated	Regular OMOs (CBN bills) to absorb; reverse repos to inject; standing facilities with wide corridor; high CRR used actively	Notable use of CRR as quasi-OMO; sterilization to offset FX interventions	CBN — Liquidity management overview
Central Bank of Kenya (Kenya)	No public bulletin (internal)	Short-term (daily monitoring; weekly planning)	Daily (internal); weekly review	No	Yes — Treasury Single Account flows shared	OMOs via 7-day Repos/Reverse Repos; Term Auction Deposits; standing facilities; no reserve averaging	2023 corridor reform; DhowCSD collateralized interbank platform; frequent fine-tuning	CBK — Monetary operations releases; Corridor reform PR
Bank of Ghana (Ghana)	No public bulletin (internal)	Short-term (weekly–monthly horizon)	Daily monitoring; weekly main ops	No	Informal/operational coordination with MoF	Two-tier corridor: normal ±100bp; late window ±500bp; weekly BoG bills (14d/56d); repos/term deposits; unremunerated RR	Late-window penalty range incentivizes early squaring; active sterilization amid high inflation	BoG — Market operations framework pages
Central Bank of Egypt (Egypt)	No explicit public forecast	Short-term (1-week main)	Weekly (main OMO)	No	Strong — TSA flows & issuance	Corridor system (≈100bp); weekly fixed-	Large-scale absorption with full-allotment tenders; variable-rate	CBE — Open market operations / Auctions overview

	(announces volumes)	operation; longer tenors as needed)	Tuesday)		calendars coordinated	rate, full-allotment deposit auctions; longer-tenor corridor-linked deposits; reverse repos if in deficit; standing facilities; RR adjustments	deposit tenders for longer maturities	
Bank Al-Maghrib (Morocco)	No public bulletin (weekly conditions reported)	Short-term (weekly main ops; fine-tuning <7 days)	Weekly main auction (Tuesday) + as needed	No	High — TSA & issuance calendars integrated	Weekly fixed-rate repos at policy rate; occasional fine-tuning; longer-term repos/FX swaps; standing facilities; unremunerated RR	Weekly publication of system liquidity need; sustained tight alignment of o/n to policy	BAM — Operations overview; Weekly indicators
Bank of Russia (Russia)	Partial — daily liquidity data; structural outlook notes	Short-term (1-week ahead) & structural (months)	Daily monitoring; weekly auction cycle	No	Very close — fiscal rule FX ops & MinFin flows integrated	In surplus: weekly deposit auctions (FRFA at key rate); OBR issuance for medium-term absorption; fine-tuning deposits/repos/FX swaps; standing facilities; reserve averaging	Regular issuance of central-bank bonds (OBR) for sterilization; detailed daily liquidity factors	Bank of Russia — Monetary policy instruments & operations
Central Bank of the Republic of Türkiye (Turkey)	No public bulletin (internal indicators)	Short-term (day-to-day; some structural)	Daily (frequent adjustments)	No	Partial — operational info-sharing; coordination on FX-protected deposits	Mix of 1-week repos (when needed), RR changes, targeted bond sales; FX swaps; standing facilities;	Recent shift back toward orthodoxy; emphasis on simplification and transparency in operations	CBRT — Open market operations & implementation notes

						evolving corridor use		
Bank Negara Malaysia (Malaysia)	Yes — intraday liquidity updates (FAST platform)	Immediate (intraday) & short-term (few days)	Multiple times daily	No	Strong — Cash Coordination Committee; daily MoF flow sharing	Daily tenders (absorb/inject) across maturities; BNMN (own bills) for term sterilization; FX swaps; Islamic operations in parallel; RR (SRR) flexible	High-frequency transparency; dual conventional-Islamic framework; automated tenders	BNM — Money-market operations; Framework overview
Bank Indonesia (Indonesia)	Yes — daily “Liquidity Projection” table	Short-term (daily & near-term)	Daily (morning + mid-day updates)	No	Formal — SKB with MoF; TSA at BI; primary dealer coordination	Corridor framework; RR repos to inject; BI securities/term deposits to absorb; FX swaps; Islamic OMOs; RR with partial averaging	DNDF & SRBI instruments; transparency via daily projection (including Islamic segment)	BI — Monetary operations; Daily liquidity projection
Bank of Israel (Israel)	No public bulletin (relies on data; publishes ops/data)	Short-term (current day/week); structural view months ahead	Daily (internal); monthly Makam issuance	No	Moderate — consults MoF on T-bill vs Makam volumes	Monthly Makam bills to absorb liquidity; repos to supply; standing facilities; unremunerated RR	Makam-based structural sterilization; slight structural deficit to anchor o/n	BoI — Makam information; Monetary operations notes

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