

PEMPAL Treasury Community of Practice (TCOP)

Joint Meeting of TCOP Cash Management and IT Working Groups

**Role of Interagency Coordination and IT in
Strengthening Cash Management & Other Treasury
Functions**



EVENT REPORT

Bucharest, Romania

February 17-19, 2026



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Introduction & Opening

On February 17-19, 2026, PEMPAL Treasury Community of Practice (TCOP) held a Joint Meeting of Cash Management and IT Working Groups in Bucharest, Romania. The main objective of the meeting was to discuss how interagency coordination between the Treasury and other public institutions, including the Central Bank, and the use of modern IT help to strengthen cash management and other treasury functions.

The event was hosted by the Ministry of Finance of Romania. It was held in a hybrid format and was attended by over 100 participants, including over 90 practitioners from 18 TCOP member countries.¹ Representatives of the South African National Treasury joined the meeting as guest speakers remotely. The meeting was facilitated by the World Bank team.²

The meeting was opened by **Florin-Alexandru Zaharia, Secretary of State, Ministry of Finance of Romania**. He welcomed the participants in Bucharest and highlighted the important role of the treasury in executing budgets, attracting liquidity, and ensuring PFM transparency. He pointed out that Romania was interested in exploring the potential of emerging technologies, such as AI, in treasury operations, and welcomed the opportunity of this event to exchange best practices, experiences, and new ideas on developing treasury operations.

Fabian Seiderer, Practice Manager, Institutions, ECA West, World Bank, thanked the Ministry of Finance of Romania for hosting the event and highlighted the invaluable role of peer-to-peer learning in supporting countries during the times of uncertainty. He noted the significant progress achieved by PEMPAL countries in many PFM areas, including implementing a TSA, accrual accounting, and digitalization of public finance, and pointed out the critical role of developing relevant skills to support further digital transformation and to



¹ Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Moldova, Montenegro, North Macedonia, Romania, Serbia, Tajikistan, Türkiye, Turkmenistan, and Uzbekistan.

² The team comprised Fabian Seiderer (Practice Manager, Institutions, ECA West), Fabienne Mroczka (TCOP Resource Team Leader), Galina Kuznetsova (TCOP Resource Team member), Roman Kachur (Sr. Public Sector Specialist, Global Unit), Mike Williams (TCOP Thematic Advisor) and Elena Dobrolyubova (TCOP Resource Team member). Anneliese Viorela Voine, Financial Management Specialist, joined the event in Bucharest. Mark Silins (TCOP Thematic Advisor) joined the meeting remotely. Mingul Seitkazieva and Mikaela Stepanyan (PEMPAL Secretariat) provided logistical support to the event.



strengthen cash forecasting practices. Fabian mentioned several recent World Bank products relevant to the agenda³ of the meeting and wished everyone fruitful discussions.

Fabienne Mroczka, TCOP Resource Team Leader, World Bank, congratulated the State Treasury of Romania on its 34th anniversary and invited **Erekle Gvaladze, Georgia**, the newly elected TCOP ExCom Chair, to welcome the participants. **Erekle** pointed out, that during the digital era, TCOP has been playing a critical role in supporting national treasuries in moving PFM reforms forward and leveraging the potential of emerging digital technologies. He noted the impressive progress in PFM digitalization in Uzbekistan and the interesting experience in piloting digital currencies in Kazakhstan, as presented at the recent TCOP events; and he emphasized the importance of sharing peer experience and knowledge.

Fabienne introduced the agenda of the meeting and encouraged everyone to use this opportunity for networking and developing actionable ideas on further treasury development.

1 Developing Treasury Operations in Romania

During the first day of the event, the discussions focused on the experience of Romania in modernizing treasury operations. **Attila György, Undersecretary of State, Ministry of Finance of Romania**, presented an overview of the evolution of the state treasury in the country. In Romania, the State Treasury includes two General Directorates of the Ministry of Finance (GD for Public Debt Management and Treasury Flows and GD for Treasury and Public Accounting) at the central government level and 202 territorial units serving millions of clients (Fig. 1). Interestingly, private companies that are government vendors are mandated to hold their accounts in the treasury to receive payments for goods and services. Treasury is also active in attracting private funds (investments in public securities and deposits for children to which the government also contributes).

Fig. 1 – State Treasury in Romania



Treasury staff:

178 positions in the Ministry of Finance
4168 positions in 202 territorial units

Treasury clients

13.500 public institutions
167.100 companies
4.052.500 taxpayers (legal persons, physical persons, other entities)
199.200 citizens holders of government bonds
159.700 children whose parents made deposits

Source: presentation by A. György

³ Including the [digital competency framework developed for Romania](#), the data governance framework developed in Bulgaria, and the work on [system interoperability](#).



IFMIS in Romania comprises several integrated systems, including BudgetNG (used for budget preparation), TREZOR (used for processing payments by the treasury), and FOREXEBUG (used for commitment control, accounting and reporting). Digitalization of treasury operations has enabled Romania to streamline paperwork and reduce the number of forms used. Further digitalization, including implementing the new eTREZOR system and diversifying the types of payments available to treasury clients, is underway.

Attila's presentation prompted an active discussion. **Lusine Ayvazyan, Armenia**, noted that in her country, all local treasury offices were closed. She inquired whether similar reforms were planned in Romania and asked for some details on co-financing deposits for children. A question on possible office consolidation was also raised by **András Réz, Hungary**. **Attila** clarified that the MoF territorial units included both tax administration and treasury staff. Thus, the treasury depended on the tax administration in its decisions on office consolidation. He added that the high interest rates for children's deposits (50 percent) were limited to EUR240 per participant per year and aimed at supporting long-term private investments. These funds cannot be used before the child reaches 18 years old. Currently, no notifications are issued to children on the availability of deposits in the treasury. **Jelena Fišćan, Serbia**, asked about the treasury coverage of public institutions, such as utility companies. **Attila** explained that such institutions had accounts in the treasury and were, for instance, obliged to return unused amounts of subsidies at the end of the year. **Sapa Kepbanov, Turkmenistan**, inquired if the treasury in Romania controlled the spending of allocated funds. **Attila** noted that the treasury did not have such functions; however, an early warning system aimed to assist public institutions in correct transaction recording was being implemented.⁴

Stefan Nanu, General Manager, General Directorate for Management of Public Debt and Cash Flows of Treasury, presented an overview of the treasury coverage, TSA forecasting, and cash management practices. In Romania, all public institutions, regardless of the financing and subordination system, collect their revenues and process their expenditures through the TSA, held at the National Bank of Romania (the only exception is related to revenues in foreign currency). Since 2005, the treasury of Romania has been a participant in the electronic payment system (comprising RTGS, automated clearing house for smaller transactions, and state securities settlement system). The TSA forecast is made for one month using an Excel-based tool and includes a daily distribution of payments and receipts based on the historical information provided by the electronic payment system. Daily cash forecast information is shared with the National Bank of Romania. Also, to ensure stronger coordination of cash management, debt management, and monetary policy, monthly meetings of the Commission for planning the financial flows of the state treasury (comprising the representatives of Treasury and Public Debt Department, Budget Department, Revenue Department, National Fiscal Administration Agency, and National Bank of Romania) are organized to discuss budget execution, trends in budget revenues and expenses, budget deficit financing and refinancing public debt, as well as TSA forecast and cash management operations.

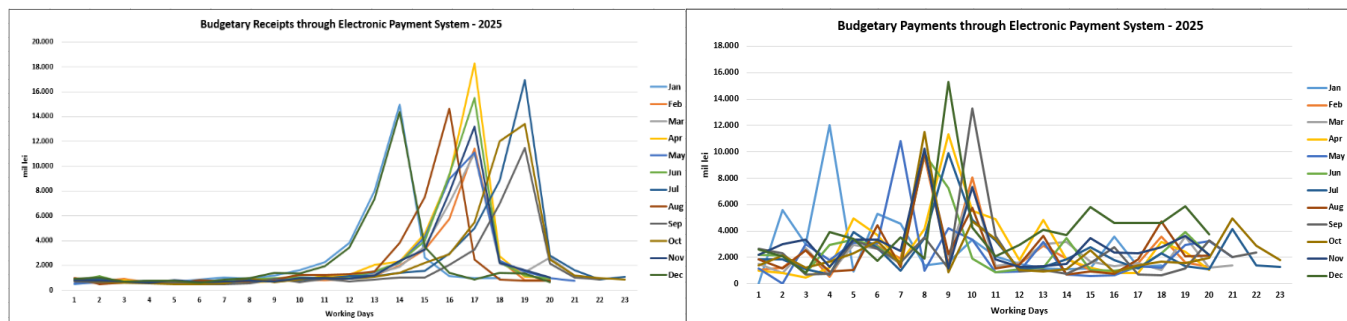
The temporal mismatch of inflows and outflows from the TSA (Fig. 2) requires the use of active cash management instruments to cover the financing gaps. The main instruments used include bilateral or multilateral deposits with commercial banks and/or foreign currency exchange operations. To ensure smooth

⁴ The Romanian approach to developing an Early Warning System aimed at preventing transaction errors was presented at the TCOP Plenary meeting in Tashkent, Uzbekistan (available at: <https://www.pempal.org/index.php/events/pempal-tcop-plenary-meeting-2025>).



budget execution and cover debt repayments, the treasury maintains a cash buffer in foreign currency, covering up to 4 months of gross financing needs.

Fig. 2: Daily Budgetary Receipts and Payments in Romania



Source: presentation by S. Nanu

Stefan's presentation was followed by an active question-and-answer session. **Barış Can, Türkiye**, inquired if the National Bank of Romania placed any threshold on the TSA surplus; and he asked whether cash management operations had any influence on debt policy, and what procedures were applied to active cash management decisions. **Stefan** explained that active cash management decisions were taken by the DMO and did not require the Minister's clearance. He commented that the borrowing program was used as an input for cash management, and noted that keeping the TSA balance in the National Bank could support monetary policy. **András** inquired if there were any plans to align the time schedules of payments and receipts. **Stefan** agreed that better alignment of receipt and payment dates would have been beneficial; however, there important limitations related to the dates of salary and tax payments. **Marija Uljarević, Montenegro**, asked about the reasons why borrowing from commercial banks was a preferable cash management instrument and if this practice had an impact on short-term interest rates. **Stefan** explained that T-bills were also issued from time to time, but their issuance depended on the attractiveness of the instrument for the market. To evaluate the demand, monthly market consultations with primary dealers and pension funds were held. Stefan also noted that the borrowing rates from the commercial banks were usually very close to the National Bank's Repo rate.

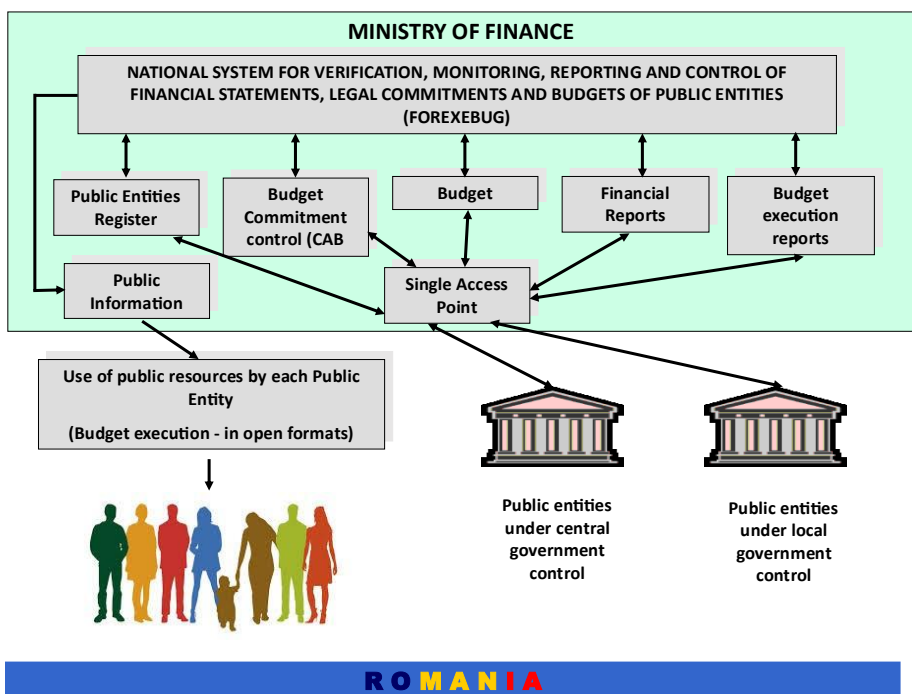
To share the experience in treasury digitalization, the Ministry of Finance of Romania presented two modules of the FOREXEBUG system. **Mihai Roșca, Expert, General Directorate of Treasury and Public Accounting**, demonstrated the national FOREXEBUG reporting system, which comprises commitment control with financial accounting and budget reporting (Fig. 3). The system has resulted in improved data accuracy and financial discipline and prevented the accumulation of arrears by public institutions. It provides information on revenue performance and expenditure outturn, helps to control commitments based on the available budget, and allows for electronic approval and signing of reported data. Introduction of FOREXEBUG has helped reduce workload for the preparation and submission of financial statements and to increase PFM transparency (both for public institutions and the public at large).

Several questions were raised following the presentation. **Anvar Muzafarov, Turkmenistan**, inquired whether FOREXEBUG checked the validity of the data in the report and whether there was a need for manual checks. **Mihai** explained that the reporting data was checked automatically against the data in the treasury payment



system, so no manual checks were performed. However, the public institutions still needed to produce reporting from the accounting point of view. **Talant Keldibekov, Kyrgyz Republic**, asked whether secret expenditures were also included in FOREXEBUG. **Mihai** noted that such expenditures were also covered but were published only in aggregated form.

Fig. 3 – National FOREXEBUG Reporting System in Romania



Source: presentation by M. Roşca

Petre Crişan, Head of Service, General Directorate of Treasury and Public Accounting, shared the approach to processing financial statements in the FOREXEBUG IT system. The public accounting reform started in Romania in 2002, and in 2006 elements of accrual accounting were implemented. As a result of FOREXEBUG implementation, all financial statements, except for revenues and expenses of the budget execution account, are generated automatically. The SAI (Court of Account) has direct access to FOREXEBUG for executing monitoring and oversight of budget execution. The current system supports some reconciliation functions, but further improvements are planned in this area. Prospects for the future include the support of EPSAS development and implementation, and improvements in accrual accounting.

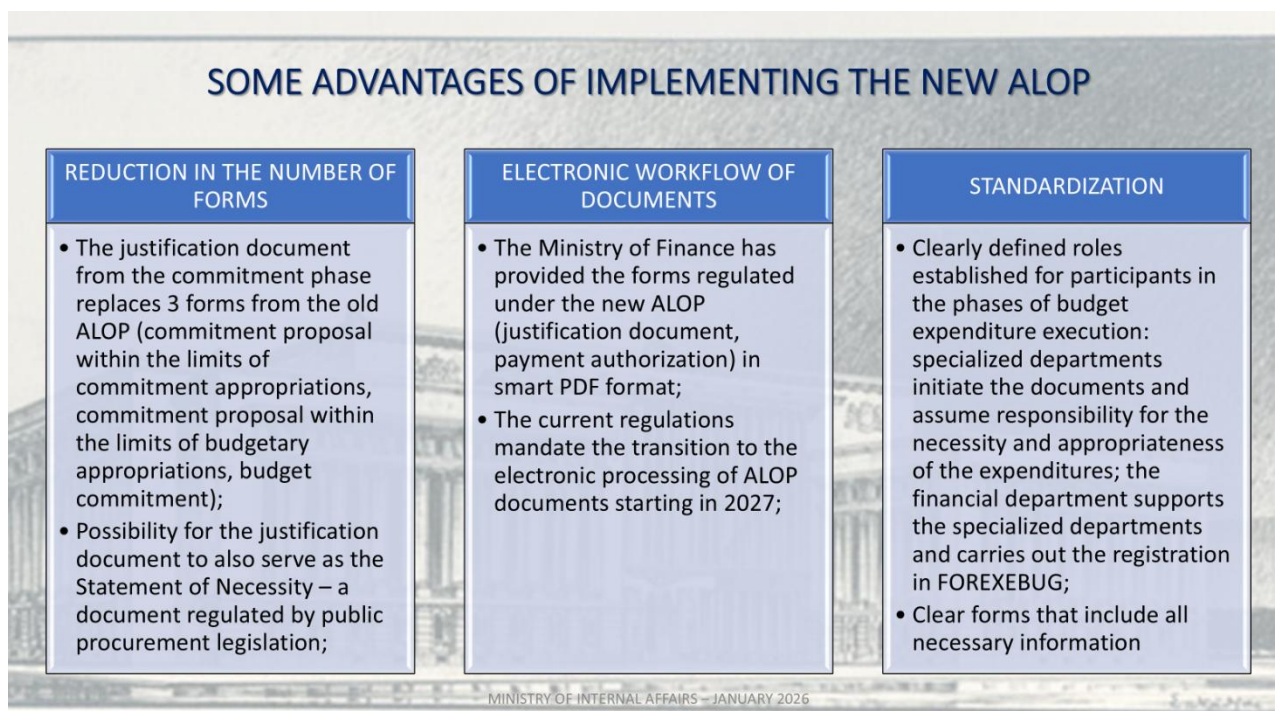
Several issues were clarified during the subsequent discussion. **Galina Kuznetsova, TCOP Team member**, inquired if FOREXEBUG was integrated with the procurement system. **Petre** confirmed that the integration was in place, and it was impossible to initiate procurement if the budget was not available. **Mimoza Pilkati, Albania**, brought up the issue of arrears and asked about any specific legislation in place for the approval of late payments. **Petre** confirmed that institutions had to report all late payments and, furthermore, could not process other payments before the overdue payments had been made. **Marija** inquired how Romania managed to implement the accrual accounting reform in such a short timeframe. **Petre** agreed that the reform



had been challenging, and Romania had to adopt a new Chart of Accounts for all public institutions. The reform also called for a significant skills upgrade and mentality change.

During the final presentation for the day, **Andrei-Lucian Cretu, Deputy General Manager, General Directorate for Financial Affairs, Ministry of Internal Affairs, Romania**, shared the client perspective on treasury operations in Romania. He explained that the Ministry of Internal Affairs (MoIA) was a pilot entity for several digitalization projects initiated by the Ministry of Finance, including implementing the FOREXEBUG system, the new system for commitment, clearance, authorization, and payment of budgetary expenditures (ALOP system), and updating and modernizing the IT system for the development and management of the national budget. The implementation of FOREXEBUG has been gradual: while in 2018, the system generated only 1 annex to the financial statements, by 2020 half the annexes were automatically generated annexes, and now all annexes to financial statements are generated by the system. This automation has resulted in a 20% reduction in the time required for verifications carried out at the level of the MoIA, as the line ministry overseeing subordinate public institutions. Thus, more time is available for analysis, monitoring, and decision-making. The ALOP system has in turn simplified the procedure for commitment and expenditure clearance by reducing the number of forms, supporting e-document turnover and standardization (Fig. 4). Cooperation with the State Treasury also supported improvements in the revenue collection processes in MoIA.

Fig. 4 – Advantages of Automating Commitment and Expenditure Controls from the Client Perspective



Source: presentation by A.-L. Cretu

Following the presentation, **Galina** pointed out the reduction of forms as evidence of the business process restructuring during the automation process. **Andrei-Lucian** confirmed that the number of forms needed to justify the commitments was reduced from 3 to 1, and this has resulted in significant efficiency savings. The



transfer to fully electronic document turnover starting 2027 is expected to yield further benefits. **Attila** used the opportunity to thank the Ministry of Internal Affairs for its active cooperation.

The presentations were followed by table discussions on the experience of Romania in modernizing treasury operations. The participants from other TCOP member countries thanked Romanian colleagues for sharing their achievements and plans, noted the areas of the Romanian experience that were of specific interest and relevance to their countries' contexts, and formulated recommendations for the future reforms (Table 1).

Table 1: Romanian Experience in Treasury Modernization: Key Highlights and Recommendations for the Future

Areas of Experience Noted as the Most Interesting/ Relevant	Recommendations for the Future
<ul style="list-style-type: none"> • Large TSA coverage • Clear mechanisms for interaction between the line ministries and subordinate spending units during the budget planning, execution, and reporting • Execution of all operations on the same day • Coordination of cash management and debt management, delegation of authority for cash management decision-making • High-level liquidity management, including short-term borrowing practice • New system (FOREXEBUG) that allows for monitoring budget execution and analytics • Commitment controls in FOREXEBUG system • Arrears preventing practice (limiting payments until arrears are paid) • Children deposits program • Highly developed accounting software • Highly automated financial reporting practices and automatic consolidation of financial statements • High level of fiscal data transparency 	<ul style="list-style-type: none"> • Transferring real-time data in FOREXEBUG (currently, there is one day delay) • Stronger integration with the public procurement system (implementing controls of appropriations) • Extending the cash forecast horizon to one year • Further digital transformation, automating the remaining manual processes, • Improving PFM data portals, including data visualization • Exploring the possibility of using AI for data analytics and for treasury authorization of transactions (e.g., the 'Green Corridor' system in Georgia) • Exploring the possibility of reducing the number of cash transactions (moving to cashless payments, considering the transfer of cash operations to post offices) • Strengthening the control of multi-year contracts • Conducting regular assessments of the impact of cash management operations on the markets.

Source: compiled based on the reports from table discussions.

Attila thanked all participants for sharing their perspectives and new ideas. He noted that many reforms in the state treasury were constrained by staff shortages resulting from uncompetitive salaries in the public sector, especially for the IT staff, and invited TCOP members to share their experiences in overcoming this challenge over further discussions during the meeting. **Mike Williams, TCOP Thematic Advisor**, thanked the hosts and summarized the key takeaways from the first day of the discussions:

- Romania follows the best international practice in cash management decision-making and integrating cash and debt management functions.
- For the past years, significant investment in IT in Romania has supported other important PFM reforms, with substantial progress made in public accounting and financial reporting. The presentation by the MoIA highlighted that these reforms have resulted in tangible benefits for treasury clients.
- Significant emphasis has been placed on improving fiscal transparency. This approach has ensured significant benefits, including the reduced interest rate spreads for government borrowing.

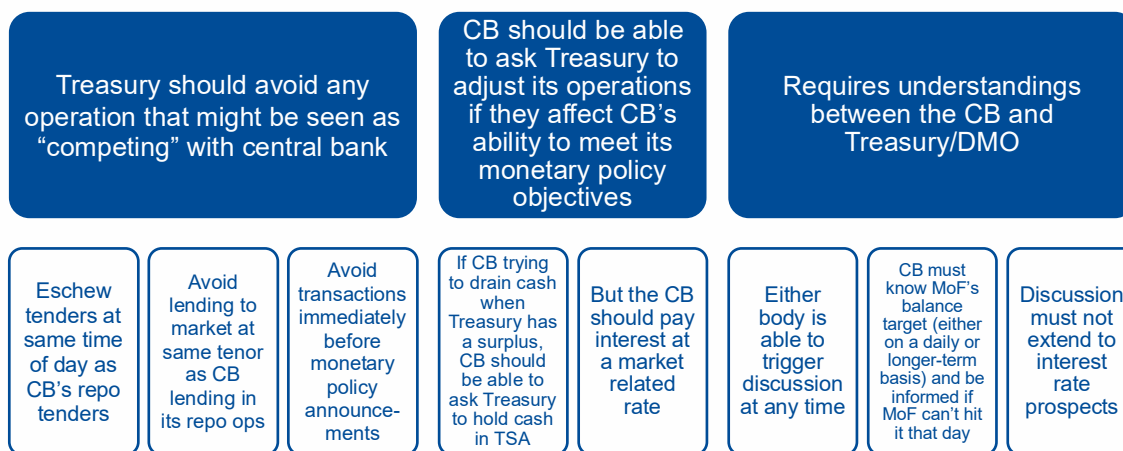


2 Coordinating Cash Management and Monetary Policy

The first major theme on Day 2 of the event concerned coordinating cash management and monetary policy. Introducing this theme, **Elena Dobrolyubova, TCOP Resource Group member**, noted that as PEMPAL countries expand their TSAs and move to more active cash management, coordination between national treasuries and central banks becomes more important, as treasury operations may have a tangible impact on bank liquidity and interest rates.

Mike made an expert presentation on the interaction of monetary policy and government cash management. He pointed out that, although central banks and ministries of finance had different policy objectives and operational requirements, they also shared some common interests, such as efficient debt, cash and monetary policy operations, development of the financial market, especially the money market, and avoiding market disruption or confusion. Moreover, more active cash management aimed at reducing the fluctuations of the TSA balance, takes pressure off monetary policy operations and thus supports monetary policy objectives. To avoid tensions with monetary policy, stronger coordination between cash management and monetary policy is required: for example, national treasuries should avoid cash management operations negatively affecting the central banks' ability to meet their monetary policy objectives whereas central banks should adequately remunerate TSA balances (Fig. 5).

Fig. 5 – Avoiding Tensions between Cash Management Operations & Monetary Policy



Source: presentation by M. Williams

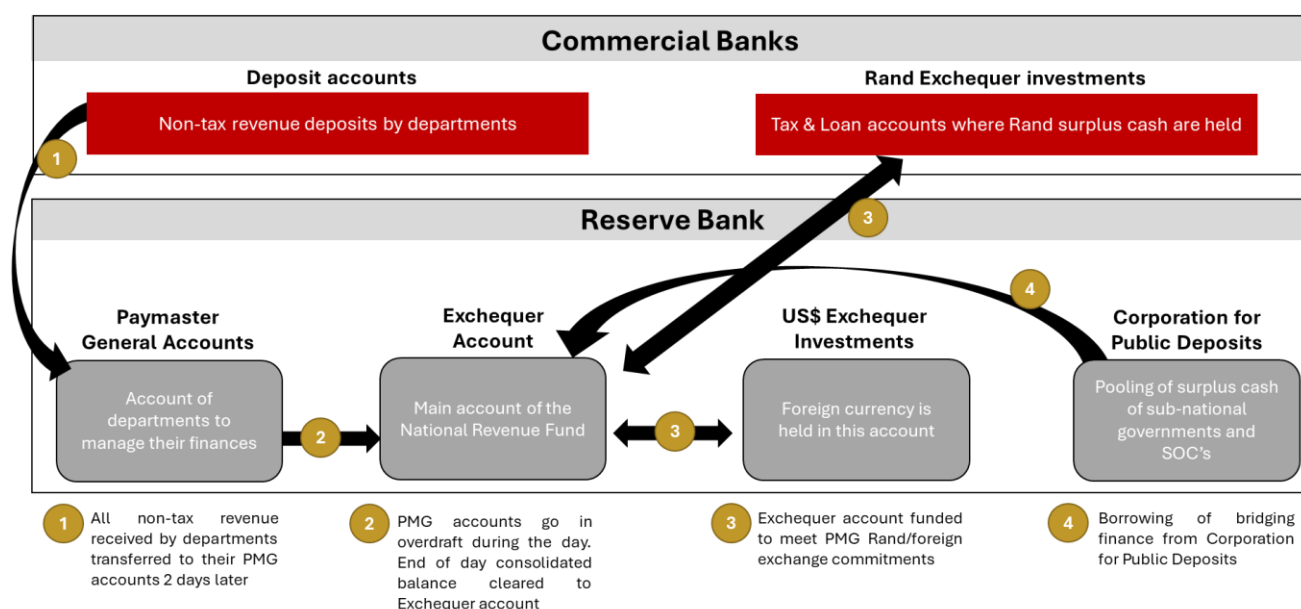
Fabioh Busby, Senior Financial Analyst: Cash Management, National Treasury of South Africa, joined the meeting remotely and shared the South African approach to cash management and its coordination with monetary policy. In South Africa, cash and debt management are performed by the same division of the National Treasury, whereas the South African Reserve Bank (SARB) acts as a government’s banker, coordinates and processes domestic and foreign currency government payments, manages foreign deposits and reserves (including USD holdings), and administers T-bills and domestic bond auctions on behalf of the National Treasury. The TSA comprises a system of accounts held in commercial banks and in SARB (Fig. 6).

The National Treasury in South Africa uses a broad range of short-term cash management instruments, including T-bills (with 12-month maturity and shorter), utilizing surplus cash of wider Government (Provinces



and State-Owned Companies) through a CPD facility, foreign currency conversions, intra-day roll up of tax revenue collections, and rescheduling of large payments. To ensure effective coordination between the SARB and National Treasury, three standing committees on macroeconomic, banking and financial markets, and financial and regulatory issues have been established. This coordination has resulted in predictable and coordinated government cash and borrowing operations, early identification of macroeconomic and financial market risks, and clear separation of fiscal decision-making and monetary policy implementation. Thus, the South African experience illustrates how active cash management and effective monetary policy are mutually reinforcing.

Fig. 6 – TSA Structure in South Africa



Source: presentation by F. Bursby

The presentations were followed by an active discussion. **András** inquired if the change in monetary policy should also trigger changes in cash management operations. **Mike** noted that this was not necessarily the case, but there was a need to ensure coordination between the ministries of finance and the central banks. **András** also asked whether the third objective of monetary policy related to long-term debt was always relevant, and what the best approach was for the treasury to exchange incoming foreign currency into domestic currency. **Mike** agreed that the central bank's focus on long-term interest rates was related to the 2008 financial crisis but it was also relevant in other contexts. This policy could revert if higher liquidity levels are achieved. He also noted that the preferred model was to exchange all inflowing FX into domestic currency. This approach helps reduce the excess balances kept on the TSA (and reduce the cost of carry) and strengthen the delineation between the treasury and the central bank roles. However, this model calls for a liquid FX market, and sometimes there are good arguments for holding foreign currency on the TSA to be sure of meeting FX obligations.

Another question was raised on the experience of South Africa related to the reasons for daily withdrawals of funds from the banking system to the central bank. **Fabioh** explained that the funds are kept on the loan and tax accounts in the banking system, and daily withdrawals are limited to the amounts needed to finance the



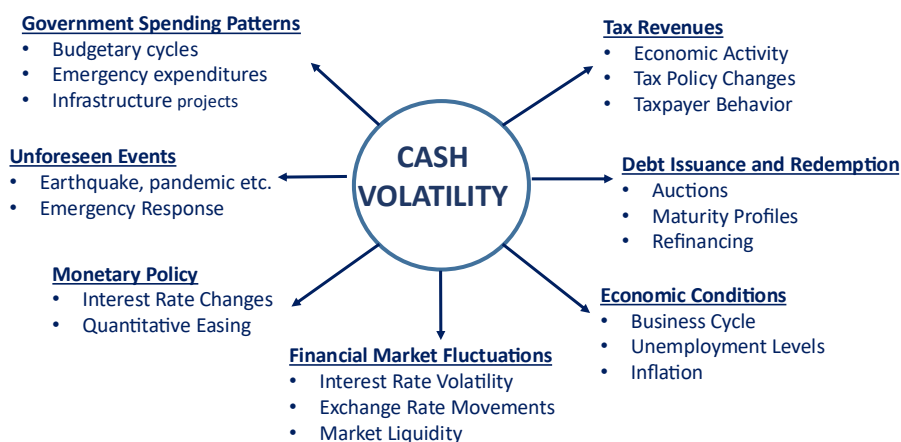
government expenditures, so these accounts are not zero-balanced every day. **Mike** added that the South African approach to using tax and loan accounts was in economic terms similar to investing idle amounts in commercial banks. This model is close to the one used by the USA before 2012, but in the case of South Africa, tax and loan accounts were not collateralized. **Barış** inquired why short-term borrowing instruments (T-bills) were seen as a preferred option compared to the Corporation of Public Deposits (CPD) facility, as the costs of borrowing might be higher, and whether any CPD borrowing limits were in place. He noted that Türkiye, in contrast, preferred to use extended TSA (i.e. to borrow from institutions at zero cost), rather than issue T-bills. **Fabioh** responded that in the past, there had been several accounting issues with the CPD, but in the future CPD borrowing might well increase. The CPD borrowing limits are decided in consultation with the central bank. **Gavaza Mabundza, Director on Cash Management, National Treasury of South Africa**, further clarified that the choice of the appropriate cash management instrument was guided by the nature of the cash shortfall and the availability of different instruments, and the cost of borrowing was among the factors considered. **Lusine** noted that in Armenia, the TSA included only one account in local currency, but the issue of opening accounts in FX had been subject to frequent discussions. She inquired if opening an FX account could bring about additional challenges. **Mike** confirmed the preference for keeping the TSA balance in local currency and noted that a separate FX account would require a higher amount of idle cash to be kept on the TSA to manage the FX exchange risk. Also, with the FX account, additional operational requirements related to SWAPs emerge. Thus, unless there is a pressing need to ensure FX liabilities are met in the context of low FX market liquidity, it is better to keep the TSA in domestic currency. **Marine Melikyan, Armenia**, pointed out that if the TSA were kept only in domestic currency, the treasury would have to bear the costs of the exchange rate spreads when it received FX and needed to pay FX obligations on the same day. **Mike** agreed that there was a need to ensure fair treatment of the treasury on the part of the central bank, and stronger interagency coordination could be helpful in resolving the exchange rate spread issue. **Elena** inquired if the treasury operations could affect equal access to liquidity by commercial banks. **Mike** noted that such an impact could be an issue when the interbank market was thin and suggested using a broad panel of commercial banks for treasury operations to reduce the risk of such distortions, and to achieve higher competition and better interest rates for idle cash. Another question was related to limiting the provision of liquidity to primary dealers. **Mike** noted that some countries, such as Slovakia, established specific arrangements to support only primary dealers. However, limiting all treasury operations to primary dealers may reduce the opportunities for the treasury. **András** commented that previously, Hungary worked only with primary dealers, but later it had to broaden the collaboration to include other banks, since the demand from the primary dealers was not sufficient.

In the second part of the session, the approaches to coordinating cash management and monetary policy in two PEMPAL countries were discussed. **Barış Can, Deputy Director General, Ministry of Treasury and Finance of Türkiye**, shared the Turkish approach to using various strategies for supporting central bank liquidity management by cash management operations. Treasury operations are autonomous factors impacting the daily funding needs of the banking system. Several factors, such as fluctuations in tax revenue and government spending flows, debt issuance and redemption, financial market fluctuations, monetary policy, unforeseen events, and economic conditions, impact government cash flow volatility (Fig. 7). This volatility can affect monetary policy by affecting the ability of the central bank to control overnight interest rates, eroding the credibility of government policy, and increasing sterilization costs. To lessen the impact of government cash flow volatility on liquidity management, the treasury could employ a number of measures (Table 2). Smoothing treasury flows transforms the government from a source of market volatility into a stabilizer,



significantly reducing the operational burden of daily open market operations. Enhanced forecasting and coordination minimize 'autonomous factor' shocks, directly lowering fiscal costs while supporting the effective transmission of monetary policy.

Fig. 7 – Factors of Government Cash Flow Volatility



Source: presentation by B. Can

Table 2: Measures to Reduce Government Cash Flows Volatility

Measure	Description
Develop cash forecasting and programming	<ul style="list-style-type: none"> Adopt a long-term horizon in cash forecasting Improve data quality and consistency Set KPIs and regularly measure cash forecasting accuracy
Set target TSA balance	<ul style="list-style-type: none"> Use upper and lower TSA balance limits that trigger cash management decisions
Actively manage cash flows	<ul style="list-style-type: none"> Invest surplus cash Utilize cash buffer and extended TSA (i.e., idle balances of institutions) effectively Use short-term borrowing instruments Align treasury operations to support the central bank's liquidity management
Share information	<ul style="list-style-type: none"> Employ formal and informal arrangements to share data on actual cash flows, cash flow projections, cash reserves, financial, economic, and monetary policy developments, market liquidity

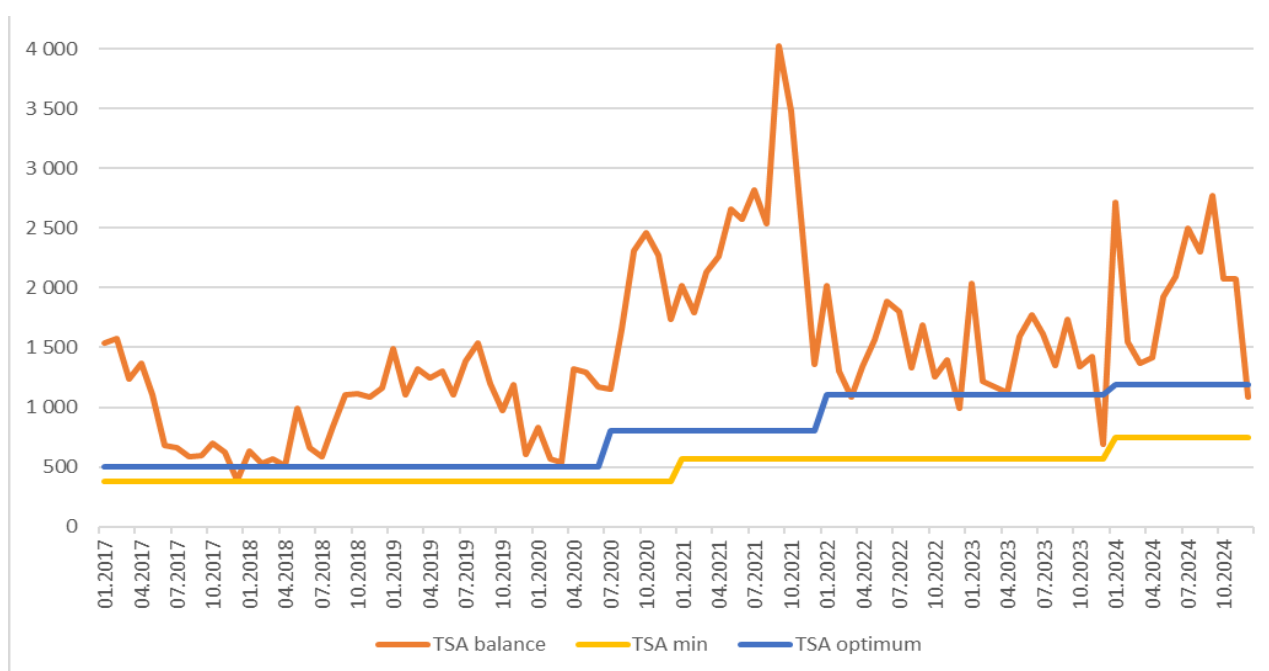
Source: presentation by B. Can

Several details were further discussed during the question-and-answer session. The Romanian delegation inquired how the recent earthquake affected cash management and liquidity in Türkiye. **Barış** explained that the treasury actively used surplus funds of institutions to finance the emergency needs. Furthermore, the coordination with the central bank intensified, with information exchanged between the institutions 2-3 times a day. **Mario Glibić, Bosnia and Herzegovina**, asked about the process of decision-making on the upper and lower limits for the dynamic corridor for the TSA balance. **Barış** noted that the thresholds were estimated by the treasury based on the financing needs (i.e., the lower limit is based on expected salary expenses and 50 percent of debt service financing needs) with an aim to equalize the average cost of borrowing and the carry cost. **Galina** inquired about the consequences if KPIs were not met. **Barış** commented that introducing KPIs helped reduce the deviations in revenue and expenditure forecasting.



András Réz, Advisor to Vice-President, Hungarian State Treasury, presented the approach of Hungary to coordinating cash management and monetary policy. In Hungary, the main short-term liquidity instruments include repos and reverse repos (1 day and 1 week), FX swaps using FX deposits (1 day or longer), and T-bills. These instruments may directly affect monetary policy, including interest rates in the money market (repos), exchange rates (FX swaps), and CB interest rates (due to the link to T-bill yields). To minimize possible adverse impact, all exchanges between HUF and FX currencies by the state are executed only with the central bank. Other risks are mitigated by coordination between the Hungarian State Treasury, Debt Agency, and the central bank and by reducing fluctuations in the TSA balance. However, since the TSA balance is remunerated by the central bank at a rate close to the market rate, the Debt Agency is not forced to place surplus funds on the money market. Thus, the TSA balance volatility has reduced, although by less than expected (Fig. 8).

Fig. 8 – TSA Balance at the End of Month, HUF billion



Source: presentation by A. Réz

During the follow-up question-and-answer session, several issues were discussed. **Mimoza Pilkati, Albania**, asked if an arrangement of sharing profits and losses between the Central Bank and the government was in place in Hungary. **András** explained that at present Hungary did not have such an arrangement, as it would imply significant budget risk. He added that recently, not only the central bank in Hungary, but also central banks in other EU countries, had negative capital. **Elena** inquired how the amount of FX on the TSA was estimated (since the interest rate on FX is lower than on HUF, keeping large FX amounts may result in lower interest revenues). **András** noted that FX was used as a reserve and a way for the government to manage the exchange rate risk. However, no exact rules on estimating the amount of FX on the TSA have been adopted. **Attila** inquired if Hungary also had a separate FX account used as a buffer. **András** clarified that the FX balance of the TSA was managed by the treasury, whereas the Debt Agency used its FX account primarily for debt management. TSA buffer estimation is based on the TSA cash flows, and the buffer is denominated in national currency.



During the table discussions, the meeting participants summarized the ways treasury operations may positively and negatively affect monetary policy, shared their experiences in coordination with central banks, and outlined recommendations for future consideration (Table 3).

Table 3: Coordinating Cash Management & Monetary Policy: Key Impacts, Current Practices & Prospects

Impacts of treasury operations on monetary policy	Current coordination arrangements	Recommendations for the future
<p>Positive:</p> <ul style="list-style-type: none"> - active cash management reduces TSA balance fluctuations and increases predictability in interest rates <p>Negative:</p> <ul style="list-style-type: none"> - unexpected expenditure and other outflows may result in temporary liquidity issues - significant TSA cash flow fluctuations may affect the ability of CB to achieve monetary policy targets - use of FX funds/ FX swaps may affect the exchange rate 	<ul style="list-style-type: none"> - daily TSA cash flow projections provided to CB (Türkiye, Romania) - monthly coordination meetings - regular consultation with primary dealers - regular consultations with CB by the Debt Agency (BiH) - institutionalized CCCs (8 PEMPAL countries) - keeping TSA balance in CB (sterilizing excessive liquidity) - keeping all govt FX in CB (Hungary) 	<p>Legal & policy measures</p> <ul style="list-style-type: none"> - establish clear legal framework for using the TSA balance - develop a common liquidity management strategy - adopt a dynamic corridor approach for targeting TSA balance - achieve fair treatment of MoF/treasury (TSA remuneration & other issues). <p>Institutional & technical measures</p> <ul style="list-style-type: none"> - formalize coordination between MoF/treasury and CB through an MoU - consider establishing a coordination committee with monthly meetings/ expanding the existing CCC to include other actors/ establishing technical level coordination structures to coordinate operational decisions - place functions for cash and debt management in one institution/unit - use new technologies to exchange information.

Source: reports from table discussions.



3 Cash Management Practices in PEMPAL Countries

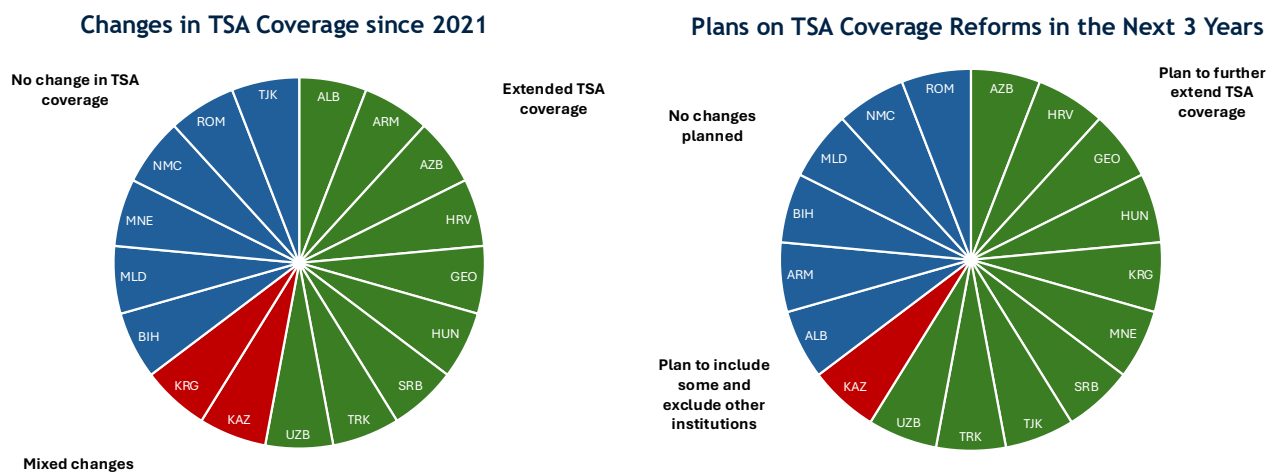
During the afternoon session, participants discussed several broader issues related to cash management practices in PEMPAL countries. **Elena Dobrolyubova** presented the results of the recent survey on TSA coverage in the region.⁵ In most PEMPAL countries, there is significant cash consolidation, but the fungibility of cash balances still depends on the fund source and remains an issue for some PEMPAL members. Most

⁵ Available at: <https://www.pempal.org/index.php/treasury-single-account-coverage-pempal-countries-2025-thematic-survey-results>



countries plan to continue consolidation efforts (Fig. 9), but future TSA reforms are challenging, as further integration involves either new funding sources (such as donor funds) or new institutions (such as EBFs or SOEs) that are currently outside the TSA and may have other service and accounting requirements, as well as investment priorities. In the case of SOEs, sectorization (classification of SOEs between the general government and the broader public sector) is needed.

Fig. 9 – TSA Coverage in PEMPAL Countries: Completed and Planned Reforms



Source: presentation by E. Dobrolyubova

In his expert comment, **Roman Kachur, Sr. Governance Specialist, World Bank**, noted that, in terms of cash consolidation, PEMPAL countries aligned with OECD and advanced emerging economies. However, the TSA consolidation for SOEs needs to be selective and risk based. For SOEs, international practice calls for strengthening visibility (ensuring government access to information on SOE cash and debt positions), imposing guardrails (i.e., clear rules on minimum and maximum balances, dividend policies, and short-term borrowing), and introducing incentives for SOEs to place idle cash in government or central bank facilities. The next generation of TSA reforms will aim at introducing robust IT systems and real-time data collection, developing cash-flow forecasting and commitment control, and strengthening coordination with liquidity, debt management and monetary policy.

Marine Melikyan, Acting Head of Public Debt Management Department, Ministry of Finance of Armenia, presented the Armenian experience in cash flow management. The objective of cash management in Armenia is to ensure the availability of sufficient funds to meet the government's financial obligations and manage cash surpluses in a safe and cost-effective manner. The Ministry of Finance of Armenia uses a stabilization account, which is a subaccount of the TSA aimed at (1) supporting the implementation of fiscal and debt management policies and (2) smoothing the flows of the state budget. The target balance on the stabilization account is between 1 and 2 percent of GDP, whereas a formal TSA cash buffer target accounts for 0.1 percent of GDP. Cash management instruments include short-term deposits in the CB with a minimum of 7-day maturity (the TSA balance is kept in the CB but is not remunerated) and short-term T-bills. Cash management challenges include irregular submission of applications for funding by some government agencies and frequent changes in state budget expenditure execution.



During the discussions, **Attila** noted that, in Romania, December was a problematic month in terms of revenues and inquired about the reasons for revenue growth in December in Armenia. **Marine** explained that export duties were one of the sources for the revenue increase in December. **Erekle** asked if the deposits in Armenia were collateralized. **Marine** noted that there was no need for collateral as the deposits were in the CB, but added that Armenia would like to explore the possibility of investing surplus cash in the commercial banks as well. **Mike** inquired if the stabilization account could be considered a TSA buffer. **Marine** clarified that the account played the role of a long-term buffer and was established to manage the fluctuations in case there are large outflows from the state budget (i.e., debt repayments). **Fabienne** noted that in Armenia IFI funds were integrated into the TSA. **Marine** explained that special arrangements were made with the IFIs to integrate these funds into the TSA. The accounts are denominated in local currency and help manage the exchange rate risks.

4 Leveraging IT and Data Supporting Cash Management and Forecasting

During the group discussions, the meeting participants shared their experiences in cash forecasting, and prospects for using data to support cash management and cash forecasting. **Mario Glibić, Assistant Minister for Treasury, Federation of BiH Ministry of Finance, Bosnia and Herzegovina Viktorija Hristovska Dimovska, Head of unit for Regional Treasury Offices, Ministry of Finance of North Macedonia, and Tural Abbasov, Head of Department on Execution and Accounting of Cash Operations, State Treasury of Azerbaijan,** summarized the outcomes of discussions in each group.

As the discussions demonstrate, current cash forecasting practices vary among PEMPAL countries. Thus, while most PEMPAL countries focus on the forecast of the TSA balance, revenues, and expenditures, some countries, such as Armenia, Croatia, and Serbia, also forecast the fiscal deficit. Some countries focus the cash forecast on the national budget indicators (Kazakhstan, Kyrgyz Republic). Most countries prepare highly granular forecasts (daily), but some limit the granularity to monthly data (BiH, Kyrgyz Republic) or weekly data (Georgia, Montenegro). The frequency of forecast updates depends on the forecast granularity (Table 4).

Table 4: Current Approach to Cash Forecasting in PEMPAL Countries

Country	Bottom line & coverage	Main aggregates	Granularity	Update/rollover frequency
Albania	TSA: inflows, outflows, balance	receipts, payments, financing flows (incl. major inflows/outflows types)	Year, Month, Week, Day	Rolling daily, weekly, monthly updates
Armenia	TSA, deficit and EBFs	Revenue, expenditures, outlays	Year, Quarter, Month, Week, Day	Monthly
Azerbaijan	TSA balance	Revenue, expenditure, TSA balance	Quarter, Month, Day	Weekly
BiH	TSA	Revenue, expenditures, outlays	Month	Quarterly (plans made monthly)
Croatia	TSA, deficit	Revenue receipts and expenditure and outlays, EU funds receipts	Month, Day	Monthly
Georgia	TSA balance	Receivables (taxes, loans, grants, interests, fees, penalties, etc.) and payables	Year, Month, Week	Weekly



Country	Bottom line & coverage	Main aggregates	Granularity	Update/rollover frequency
		(payrolls, social payments, capex, loans, interests, etc.)		
Hungary	Budget revenues and expenditures, other cash flows related to the TSA and debt and cash management operations	Main types of revenue (VAT, PIT, revenues from EU, etc.) and expenditure (family allowances, EU-related, etc.), financing flows (debt maturities, issuances, etc.)	3 months, Day	Daily (for daily data) and biweekly (for longer-term forecast)
Kazakhstan	Republican budget liquidity	Revenues, expenditures, budget credits, deficit, loans, receipts	Year, Quarter, Month, Day	Daily
Kyrgyz Republic	TSA balance	Republican budget resources	Month	As needed
Moldova	Revenues, expenditure, financing sources, TSA balance	TSA balance, for national budget: tax and non-tax revenues, cash expenditure, financing sources	Year, Month, Week, Day	Monthly (for annual forecast), daily (for monthly forecast)
Montenegro	Revenues and expenditures	Revenues and expenditures	Year, Month, Week	Weekly, monthly
North Macedonia	Central Government Budget, Social security funds budget	tax revenues, social security contributions, other revenues, expenditures	Month, Week, Day	Monthly, weekly, daily
Romania	TSA balance	Receipts, payments, public debt service, state security issuance, cash management operations	Month, Day	Daily, monthly
Serbia	TSA and deficit	Revenues, expenditures and outlays, receipts from domestic and foreign borrowing	Year, Quarter, Month, Day (for some data)	Monthly
Türkiye	Receipts, payments, financing flows	Aggregate revenues and expenditures, cash-based primary balance, cash position, financing needs / surplus	Year, Month, Day	Daily
Turkmenistan	TSA balance	TSA balance, tax revenue, planned expenditure, executed payments	Quarter, Month, Week/2 Weeks, Day	Daily
Uzbekistan	Liquidity cash flows	Revenues, expenditures (salaries, construction, misc.) and outlays, repayment of loans	Year, Quarter, Month, Week, Day (at the FY beginning)	Monthly

Source: reports from group discussions, country presentations

Most countries use treasury management systems / FMIS data for cash forecasting, as well as some other government systems, and the data received from public institutions. Most countries also reported the need for data cleaning/adjustments for cash forecasting purposes. Despite the significant attention to treasury digitalization, most national treasuries in PEMPAL countries use Excel-based models for cash forecasting. The exceptions include Albania (using CFAT and AGFIS cash forecasting module), Bosnia and Herzegovina (using



CFAT forecasting tool for historical trends), and Turkmenistan (where the treasury management system has a separate cash forecasting module).

Most countries use forecasting models that are based on historical trends and use one modeling approach. Türkiye is a notable exception, as it reported using Excel-based forecasting, AI-based forecasting (in progress), and a custom forecasting formula for each institution. Georgia combines historical data, operational information, and main macroeconomic parameters. Azerbaijan uses a deterministic cash-estimate model, and Turkmenistan utilizes regression models.

Based on the analysis of the current practices, the participants formulated several areas for further improvements in cash forecasting practices and noted the key related challenges concerning data, technical, legal and staff capacity issues (Table 5).

Table 5: Cash Forecasting in PEMPAL Countries: Areas for Improvements & Key Challenges

Areas for Improvement	Key Challenges
<ul style="list-style-type: none"> - Using additional data from other sources to improve forecasting accuracy - Improving data quality and timeliness - Enhancing automation of data collection and consolidation - Developing forecasting models, implementing specific software for cash forecasting, utilizing AI - Improving forecast accuracy - Integrating FMIS with other government systems - Improving interagency coordination - Better visualization of data, developing KPI-driven liquidity dashboards 	<p>Data-related issues</p> <ul style="list-style-type: none"> - Security and safety of data - Data fragmentation across different institutions - Data quality, completeness, and timeliness issues - Excessive expenditure requests by budget users - Uncertainty about the time and scope of financing from external and internal lenders <p>Technical issues</p> <ul style="list-style-type: none"> - Limited use of automated risk-based approaches, lack of early warning systems, overreliance on traditional tools (Excel) - Lack of alternative forecasting scenarios - Integrating bottom-up and top-down approaches to cash forecasting - IFMIS legacy (older IT systems reaching their limits) and difficulties in integration with other systems <p>Staff capacity issues</p> <ul style="list-style-type: none"> - Staff capacity and skills, incl. AI and advanced analytics <p>Legal issues</p> <ul style="list-style-type: none"> - Need to amend or create new regulation for the introduction of AI

Source: group discussion reports, country presentations

Overall, the discussion demonstrated that leveraging data and IT for supporting cash forecasting was a relevant theme for most PEMPAL members. The ongoing TCOP Data for Cash Forecasting survey and the planned knowledge product in this area will support these efforts.

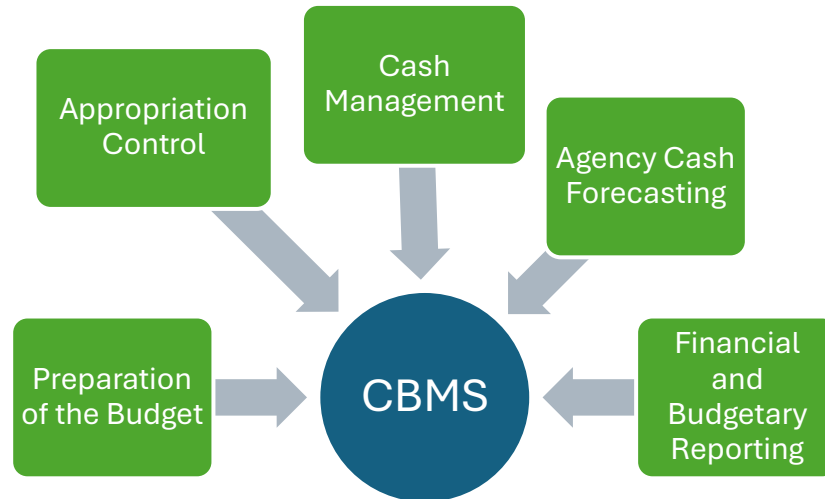
5 Integrated FMIS: Potential for Strengthening Cash Management & Other Treasury Functions

During the last thematic session, the participants discussed two cases demonstrating how integration of FMIS with other systems strengthens cash management and other treasury functions. **Mark Silins, TCOP thematic advisor**, joined the meeting remotely and presented the Central Budget Management System (CBMS) in Australia. The first PFM system in Australia was developed back in the 1970s, and the current CBMS is the 5th generation of the PFM system. CBMS was designed to ensure the major functions of the Department of Finance (DoF) are supported in a more integrated manner (Fig. 10). It also addresses the reality that all



processing of transactions and decisions in Australia are fully decentralized and made in agencies, but DoF must still control appropriations, cash drawdowns and accounting data submitted for consolidated reporting. CBMS is integrated with departmental FMISs, procurement, and HR management systems.

Fig. 10 – Central Budget Management System Coverage



Source: presentation by M. Silins

Though a COTS system was selected for CBMS, it required significant modification, which resulted in cost overruns and delays. Thus, the Australian case demonstrates the need for careful consideration of the best approach for developing an IFMIS in a modern ICT environment. Also, the example of Australia shows that even in highly decentralized public administrations, PFM information flows should be centralized to support the decision-making process.

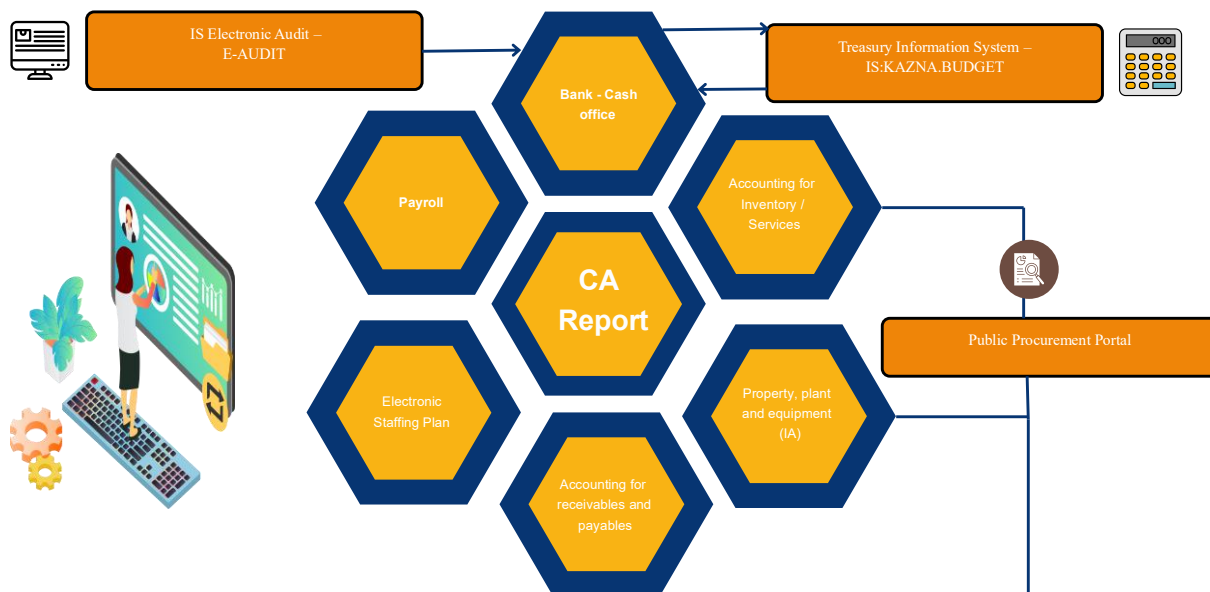
During the discussion, several questions were clarified. **Attila** asked about the approach to budget preparation. **Mark** clarified that accrual budgeting was used and both cash and accrual reporting were supported by CBMS. **Barış** inquired about the experience of using AI models in the context of a decentralized system. **Mark** pointed out that centralization of transactional data provides a useful basis for further analytics, though decision-making can remain decentralized. **Elena** noted that Australia was among the world's pioneers in implementing performance-based budgeting and asked if performance information was also included in CBMS. **Mark** explained that performance data was not included in CBMS, but a separate central repository reflecting performance information was used.

Talant Keldibekov, Deputy Director of the Central Treasury, Ministry of Finance of the Kyrgyz Republic, shared the progress in implementing a Centralized Accounting System. The objective of the system is to establish a unified government digital platform that ensures centralized, automated, and transparent accounting for the financial and business activities of all budgetary institutions of the Kyrgyz Republic. The system provides support for various accounting functions, including inventory, payroll management, accounting for receivables and payables, revenue and expenditure accounting, and asset management. The system is integrated with the Treasury Information System, public procurement portal, and e-audit system (Fig. 11). Currently, the system is being rolled out, and over half budget entities have switched to the new system completely. Additional adjustments are being made to allow for the transition of health and



educational institutions. It is expected that the system will be fully implemented by 2027, and starting 2028, IPSAS standards will be introduced into the system.

Fig. 11 – Integration of Centralized Accounting System with Other Government Systems



Source: presentation by T. Keldibekov

The presentation spurred an active discussion. **Marine** inquired if there was a plan to develop a balance for the entire public sector. **Talant** explained that currently, the system was used to consolidate the balance of all budget organizations. **Lusine** noted that Armenia was also planning to centralize accounting. She inquired whether centralization of accounting in the Kyrgyz Republic had impacted the way budget organizations interacted with the treasury (i.e., using local offices or the central office). **Talant** noted that local treasury units were in charge of this coordination and consolidation of accounting at the subnational level. **Maxim Ciobanu, Moldova**, pointed out that accounting centralization was also on the agenda in his country. He asked what platform was used for the system. **Talant** responded that a cloud-based web solution was implemented. **Elena** inquired how the implementation was supported, especially in distant and rural areas. **Talant** explained that training sessions were organized across the country, video training materials were developed, and a special call center was established to support the implementation of the system. A separate division in the Central Treasury was charged with supporting the system rollout. **Anvar** inquired if secret expenditures were included in the system. **Talant** responded that these expenditures were not included, but were added as a single amount at the latest stage of consolidation.

Wrapping up the thematic agenda, **Roman Kachur** highlighted the technology-driven trends transforming public finance. Digital currencies offer quick settlements, reduce transaction costs, and allow for transaction traceability. New payment systems enable fast and traceable G2P payments. These technological advancements should be incorporated into the future agenda of the treasury community.

Mike Williams thanked the hosts for organizing a productive meeting and summarized the discussions held throughout the event. He noted that many countries were working on upgrading or developing new IFMISs to



implement advanced ICT solutions in PFM, but often the challenges related to the new technologies, such as AI, were underestimated. These challenges range from collecting and cleaning data to developing adequate infrastructure and upgrading staff capacity and skills. The 'black box' nature of AI is another challenge that needs to be addressed if AI-based models were to be used for cash forecasting. The discussions during the event highlighted significant improvements in cash and debt management across the region. They demonstrated that active cash management can support monetary policy, provided that structured coordination mechanisms between the treasuries and central banks are in place.

Key Takeaways

Romania was one of the first PEMPAL countries to establish a modern treasury in 1992, which has undergone significant evolution over the past 34 years. The country presents a good example for coordinating cash and debt management functions, and the delegation of authority provides the treasury with the flexibility it needs to manage government cash effectively. The State treasury of Romania employs active cash management instruments (such as T-bills and short-term deposits from commercial banks) and is among the leaders in terms of treasury coverage among PEMPAL countries. Significant attention to treasury digitalization has supported many PFM areas in Romania by, inter alia, strengthening commitment controls, increasing public finance transparency, and supporting public accounting and reporting. Notably, treasury digitalization in Romania has resulted in tangible benefits for treasury clients that now spend less time on routine operations and have more time and resources on analytics.

Consolidation of government cash on the TSA and increased interest in more active cash management across the PEMPAL region call for stronger coordination between national treasuries and central banks. Country cases demonstrate that active cash management can support the central bank in implementing monetary policy by reducing TSA fluctuations and aligning treasury operations (such as T-bill issuances and investing idle cash) with monetary policy priorities. Achieving this synergy calls for institutionalizing coordination mechanisms between the ministries of finance and central banks.

More active cash management calls for strengthening cash forecasting. While most countries still rely on Excel-based tools, there is a broad understanding of the need for improvement and a growing interest in implementing AI and related techniques in this area. To support member countries in this area, TCOP has launched a survey on data for cash forecasting, which will help to summarize the current approaches and identify areas for peer-to-peer exchange.

Integrating budget execution (treasury) systems with budget planning, accounting and reporting can yield important benefits both for countries that have opted for a decentralized approach to managing public finance and those pursuing more centralized approaches. Even if transaction systems are decentralized, centralizing PFM data is essential for decision-making. Though most of the PEMPAL countries already have some integration between the budget planning and budget execution systems in place, further efforts are needed to leverage modern IT in accounting and reporting areas.

Feedback Session

During the feedback session, the participants thanked the hosts for their hospitality, shared their impressions of the meeting, and formulated thematic proposals for the future TCOP events (Table 6). Overall, the



participants agreed that holding events in a hybrid format could allow for broader participation of interested PFM practitioners, but engaging the online participants was challenging.

Table 6 – Themes of Interest for the Future TCOP Events

Thematic Area	Themes
Evolution of treasury role & functions	<ul style="list-style-type: none"> ▪ Treasury control systems ▪ Evaluating treasury performance ▪ Linking performance budgeting with budget execution
Cash management & forecasting	<ul style="list-style-type: none"> ▪ Cash management instruments for investing cash surpluses ▪ Cash buffers ▪ Cash forecasting models (incl. AI-based)
Using IT in Treasury Operations	<ul style="list-style-type: none"> ▪ Integrating FMIS with other government systems, incl. procurement ▪ Automating treasury operations ▪ Cybersecurity ▪ Using AI in treasury operations ▪ Role of AI in decision-making
Accounting & Reporting	<ul style="list-style-type: none"> ▪ Accounting: link with budget execution and statistics ▪ Consolidating financial statements ▪ Transition to accrual accounting in various types of institutions (central and local governments, EBFs, SOEs)

Source: table reports

Fabienne thanked everyone for their active participation during the meeting and for sharing constructive feedback, which would be considered during the preparation of the next TCOP events.

