



PEMPAL Treasury Community of Practice (TCOP)

Extended Study Visit to Georgia



Tbilisi, May 28 – 30, 2025

EVENT REPORT



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Introduction & Opening

On May 28-30, 2025, PEMPAL Treasury Community of Practice (TCOP) conducted an Extended Study Visit to Georgia. The main objective of the event was to discuss the progress in modernizing treasury operations in Georgia and the applicability of the Georgian experience to other countries.

The event was hosted by the Ministry of Finance of Georgia and was attended by over 80 participants including over 70 officials from 16 TCOP member countries (Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Moldova, Montenegro, Romania, Serbia, Tajikistan, Türkiye, and Uzbekistan). Several countries (Azerbaijan, Kazakhstan, and Uzbekistan) extended their country delegations at their own cost to ensure that more staff could have the opportunity to learn about the experience of Georgia. Representatives of the Directorate General of Treasury of the Ministry of Finance of Indonesia joined the plenary remotely.

The meeting was facilitated by the World Bank team, including Elena Nikulina (Senior Public Sector Specialist, PEMPAL TCOP Resource Team Leader), Fabienne Mroccka (Senior Public Sector Specialist), Galina Kuznetsova and Elena Dobrolyubova (PEMPAL TCOP Resource Team members), Mike Williams (PEMPAL TCOP Resource Team Advisor). Mingul Seitkazieva and Mikaela Stepanyan (PEMPAL Secretariat) provided logistical support to the event.



The meeting was opened by **Davit Gamkrelidze, Head of State Treasury of Georgia**, who welcomed the guests and noted the vital role of the community in inspiring reforms in Georgia and other countries of the region and disseminating good practice. He highlighted TCOP's role in strengthening the shared mission of national treasuries, to serve their clients with agility, resilience, and responsiveness, and wished the participants fruitful discussions.

Ekaterine Guntsadze, Deputy Minister of Finance of Georgia, welcomed the participants on behalf of the Ministry of Finance. She pointed out the strong impact of PEMPAL in fostering the capacity of public financial management (PFM) professionals and noted that Georgia was a good example of a country that both benefited from others and shared its own experience of PFM reforms. One of the key achievements of Georgia in this area was budget transparency. Based on the 2023 Open Budget Survey, Georgia was ranked the best in the world on budget transparency, and was among the top five countries in the world in terms of public participation and oversight scores.



In his opening remarks, **Nazim Gasimzade, Head of State Treasury Agency of Azerbaijan and TCOP ExCom Chair**, pointed out the role of TCOP, not only in exchanging knowledge and experiences, but also in strengthening the collective expertise driving treasury reforms across the nations. For the past years, 85% of TCOP member countries – 17 nations – have implemented treasury reforms inspired by the insights gained through this network. Furthermore, many member countries are now preparing the next phase of reforms, striving for even greater efficiency in treasury operations. He thanked the hosts for inviting TCOP to Tbilisi



and noted that the progress in treasury modernization in Georgia set an admirable benchmark for the community.

Rolande Simone Pryce, Regional Director for the South Caucasus, welcomed the participants on behalf of the World Bank. She noted that the high interest in the Georgian experience was not surprising, as the country was among early reformers in the region and had achieved significant improvements in PFM, as confirmed by the recent PEFA assessment. The role of the treasury in ensuring sound PFM can hardly be overestimated as improving cash management and cash forecasting practices helps governments to reduce borrowing costs and raise the efficiency of public spending. Rolande extended her gratitude to the Ministry of Finance of Georgia and the Treasury team for hosting this event in Tbilisi and wished the participants interesting and productive discussions.



Elena Nikulina welcomed the participants on behalf of the Resource Team, thanked the Ministry of Finance and State Treasury for inviting TCOP to Georgia, outlined the main objectives of the event, and introduced the participants and event agenda.



Day 1: Good Treasury Practices in Georgia

1.1 Overview of Treasury Operations

In his first presentation, **Davit Gamkrelidze** provided an overview of treasury development in Georgia. He explained that the treasury had evolved from a traditional transaction processing organization to a more modern institution focused on active cash management and risk management in treasury operations. Digital transformation has been a driving force in developing treasury operations in Georgia and has allowed the treasury to significantly extend its coverage without increasing staff (Table 1). The ongoing work implementing AI/ML will facilitate further extension of



the TSA to budget organizations and some SoEs. Once the extension is completed, Georgia will become one of the few countries with the full TSA coverage.

Table 1: Selected Accomplishments in Digitalizing Treasury Operations

Years	Accomplishments
2010	<ul style="list-style-type: none"> • Concept of the PFMS developed based on the WB Treasury Reference Model • Main subcomponents identified. Business analytics and software developing started
2011 - 2013	<ul style="list-style-type: none"> • Electronic Treasury Launched (2011) • Integrated with the E-budget in 2012, with External Debt and grant management in 2013. • State Budget Loan Management module developed and integrated into the Core Treasury System from 2013. Payroll in General Ledger – on accrual basis (2013)
2013	<ul style="list-style-type: none"> • Treasury IS Integrated with the Public Procurement Agency's Electronic Procurement System in 2011. Integration deepened in 2012-2013, enabling two-way information flow.
2015	<ul style="list-style-type: none"> • First wave of TSA coverage extension, extending to municipalities and semi-independent institutions (e.g. universities)
2016	<ul style="list-style-type: none"> • Implementation of the Single Tax Payment Code
2017	<ul style="list-style-type: none"> • Implementation of the Cash Management Module
2023-2025	<ul style="list-style-type: none"> • Second wave of TSA coverage extension, extending to e.g. schools and general government state-owned enterprises (SoEs)
2024-2026	<ul style="list-style-type: none"> • Implementation of Artificial Intelligence / Machine Learning solutions

Source: presentation by Davit Gamkrelidze

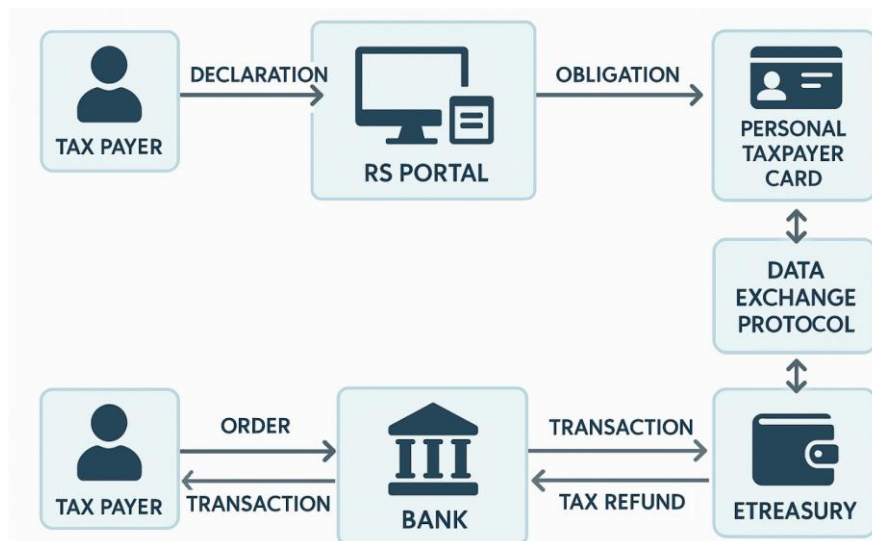
The presentation prompted active discussion. **Rakhat Tokbayev, Kazakhstan**, inquired about the legal basis for including SoEs into the TSA. **Mario Glibić, Bosnia and Herzegovina**, asked about the instruments that Georgia used for earning interest on the TSA. **Barış Can, Türkiye**, asked Davit if Georgia used KPIs for cash forecasting accuracy and whether Georgia had faced any resistance to the TSA extension. **Sara Guliyeva, Azerbaijan**, inquired how cash forecasting was integrated with institutional cash plans. **Davit** clarified that the TSA was extended only to general government SoEs, i.e. those involved in quasi-fiscal operations or dependent on budget financing. Georgia had followed the guidance in the IMF's Government Financial Statistics Manual in deciding which SoEs should be included with the TSA. The TSA currently includes the balances of 36 SoEs with the balances of a further 30 to be added. He noted that political support was critical to implement TSA extension as there was resistance from institutions. The only concession made so far was to allow some balances to be held in commercial banks, although all transactions had to go through the TSA. The only instrument currently used to manage cash was deposits in the commercial banks, which were almost all collateralized. Uncollateralized deposits would offer higher interest rates, but since the main priority of the investment strategy was safety (followed by liquidity and profitability), collateralized deposits were preferred. Different sources of information are used for cash forecasting, including both top-down and bottom-up approaches. Using transactions data has improved cash forecasting quality, and the internal performance target for cash forecasting accuracy is 5 percent.



1.2 Single Tax Payment Code

Subsequent presentations provided further details on the Georgian PFM experience and achievements. **Levan Todua, Head of Deposit Insurance Agency of Georgia**, shared the results of implementing the single treasury tax payment code. This single payment code was introduced in 2016 to simplify the payment process for taxpayers. Based on the integration between the revenue service and the treasury, the system automatically distributes payments by tax obligations and tax revenues by tax types. As part of the reform, personal taxpayer cards were introduced both for individuals and for legal entities (Figure 1). The reform improved the accuracy of tax accounting and reporting and reduced costs for the state (by reducing paperwork and corrective operations) and for the taxpayers (who can now pay all taxes with one payment and get an automatic VAT refund).

Figure 1: Application of the Single Tax Payment Code Principle



Source: presentation by Levan Todua.

The participants demonstrated high interest in the single tax payment code approach. **Rakhat Tokbayev** inquired if Georgia had encountered resistance from the Revenue Service during the reform's implementation and whether a tax refund was mandatory or subject to taxpayer decision. **Nazim** raised the issue of efficiency improvement measurements and asked how the system would allocate tax payments if the amount paid were less than the amount due. **Sara** inquired about the RS portal functions. **Levan** clarified that the RS portal provided the data to the treasury system on tax obligations and provided taxpayers with information on their taxes due and paid. Since both revenue service and treasury were subordinate to the Ministry of Finance, no major resistance was noted. He also added that automatic refund was mandatory for VAT, while excessive payments on other taxes could be kept to cover future taxpayer obligations. Though no specific evaluations have been made, time savings were considerable since, before the single tax payment code was introduced, all



corrections and refund procedures had been initiated by the taxpayers. He pointed out that the allocation of tax revenues by tax types was implemented based on the dates when taxes were due.

Lusine Ayvazyan, Armenia, noted that a similar approach to the single tax payment code was implemented in Armenia in 2017. In 2026, it is planned to also introduce a similar approach to state duties. She inquired whether there were similar plans to extend the single tax payment code to other types of state revenue in Georgia. **Levan** pointed out that Georgia was considering extending this approach to state duties, but that would be more difficult since more revenue administrators were involved in state duties collection. **Attila Gyorgy, Romania**, noted that there was a similar system for 15 types of taxes in Romania, but its implementation turned out to be very difficult. He inquired about the actions taken in case taxpayers submit corrections to the previously submitted tax return. **Levan** confirmed that in the case of tax return corrections, the system automatically adjusted tax liabilities.

Given the high interest in the subject, **Elena Nikulina** suggested holding a joint meeting of treasury and tax administration officials in the future to further discuss various approaches to integration. **Davit** supported this proposal and noted that some countries, for instance, Australia, already used AI to analyze tax returns.

1.3 Cash Management and Cash Forecasting

Erekle Gvaladze, Deputy Head of Cash Flow Forecasting and Management Department and **Giorgi Gognadze, Acting Head of Cash Flow Forecasting Division, State Treasury of Georgia** shared the experience of Georgia in active cash management and cash forecasting. Since 2017, Georgia has been using the Bloomberg platform to auction cash deposits. Most deposits require collateral (lari-denominated government securities, IFI securities), and the minimum acceptable rate is the central bank's refinancing rate.



Non-collateralized deposits are used to attract smaller banks, but in this case the deposit amount cannot exceed 7 percent of the bank's equity. The presentation also included demonstrations of the deposit auction and of the BI cash forecasting tool which uses various sources of data (historical execution data as well as the macro data) to predict the cash flows. This cash forecasting tool is linked with all information sources and allows the weights given to previous years to be (manually) adjusted as required. Currently the tool complements the Excel-based top-down forecasting model.

Bariş Can asked several clarification questions related to the decisions on the amount of cash to be invested and the rate, on coordination procedures with debt management/Central Bank, on remuneration of the TSA idle balance, and on the right to withdraw funds earlier from the deposits in an extreme situation. **Erekle** explained that in Georgia there was a coordination mechanism that brought together the Treasury and other Ministry of Finance departments (those managing public debt and in charge of macro projections), as well as the Revenue Service. In addition, close



communication with the National Bank of Georgia (NBG) is maintained on a weekly basis. All deposits placed by the Treasury are callable and can be withdrawn. In the case of withdrawal, the Treasury receives half of the interest payable as of the withdrawal date. Since the introduction of the auction practice, there has been only one case when a deposit was withdrawn by the Treasury.

Nazim asked about the idle cash balance kept on the TSA and the cash forecasting frequency. **Davit** emphasized the importance of cooperation with the NBG. Currently, NBG does not charge the Treasury for payments but also does not remunerate the TSA balance. Before deposit auctions were introduced, the idle funds on the TSA exceeded GEL 1 billion, and the opportunity costs of not using these temporarily available funds were very high. It is estimated that, without active cash management operations, the current TSA balance would exceed GEL 3 billion. As a result of investing the idle balances, the actual TSA balance was about GEL 200-250,000. The amount on the TSA balance depends on the quality of cash forecasting: the better the forecasting quality, the lower balance can be left on the TSA. Currently, Georgia is piloting a BI tool that uses 3-5 years of past data, the cash plans collected from the institutions, and the budget data. **Mike Williams** commented that the experience of Georgia in cash forecasting was in line with the IMF CFAT tool approach, but was more detailed as it allowed for daily forecasting and using different sources to inform the cash flow forecast.

To continue the discussions on country approaches to cash management, **András Réz, Advisor to Vice President, Hungarian State Treasury** shared recent developments in Hungary related to broadening the range of active cash management instruments and extending the TSA. In addition to Treasury bills, Hungary uses other cash management instruments, such as bond buy-backs, standby credit lines (since 2022 also provided in EUR), repos and reverse repos, as well as foreign currency swaps. Repo operations are considered the most effective with volumes reaching EUR 1.5 billion (the average TSA balance is EUR 2 billion). Since 2025, foreign currency swaps have been used to complement the repo operations (in case of low demand of the market for repos). To address the high exchange rate volatility and account for the foreign currency balances of some budget institutions, Hungary established in 2024 a TSA in foreign currency. This part of the TSA can also be used for foreign currency swaps. Currently, Hungary is extending its TSA to include local authorities. The largest local authorities will be covered by the treasury in 2025, while the rest will join in 2027. This will help to reduce public debt and manage public resources more effectively. **András** also elaborated on the approach of Hungary to coordinating cash forecasting and cash management using a two-tier structure of Cash Coordination Committees.

Mike asked about the reason for including foreign currency in the TSA, as this risked the need for a separate cash forecast for foreign currency and a separate FX cash buffer. **András** agreed that the best place to hold foreign currency was in the Central Bank but noted that the TSA was also kept in the Central Bank, and before the foreign currency accounts were integrated into the TSA there were



cases of transaction delays for operations requiring foreign currency. Furthermore, the Central Bank was reluctant to work with some currencies, such as CNY.

To contribute to the discussion on cash management and inform the participants about the on-going work on the TCOP Note on Cash Coordination Committees (CCCs), **Mike** summarized country experiences in using CCCs to coordinate debt and cash management, as well as any interactions with monetary policy. In their simplest form, CCCs review recent market developments and forecast performance, review the cash flow forecasts for the period ahead, and decide on action necessary to ensure cash availability or meet the cash buffer target. As the on-going TCOP Thematic Survey demonstrated, some PEMPAL countries also have cash management committees (Box 1).

Box 1: Cash Coordination Committees in PEMPAL Countries

Based on the TCOP survey results, 6 examples of CCCs in PEMPAL countries were identified (out of 13 replies to date).

- 4 of those have also integrated many cash and debt management functions – in a debt office (**Hungary**) or in a wider MoF/treasury function (**Romania, Türkiye, Croatia**), but still have chosen to have a CCC to ensure policy interests are aligned
- **Albania** – debt and cash in sperate DGs => recognized need for a CCC at Deputy Minister/State Secretary level; supported by Treasury chaired working group to develop forecasts
- **Georgia** – a Treasury chaired CCC with focus on identifying surplus cash for investment.

Source: TCOP Thematic CCC Survey

Reflecting on the practice of CCCs, **Mike** pointed out that the budget execution decisions, for example those needed to avoid expenditure rationing or accumulation of arrears should not be the role of the CCC, whose focus should be on ensuring cash availability (and identifying risks of shortfalls).

Nazim asked Mike for an advice where to start if a country wanted to establish a CCC. **András** inquired if the Central Bank should have a larger role in CCCs given that it has more resources and, in the Hungarian context, also develops a cash forecast. **Mike** highlighted the need to ally with debt managers and develop a clear process for coordination and information exchange, and agreed with the need also for a regular exchange of information with the Central Bank. **Davit** added that, as well as the debt managers, it was also very important to coordinate cash management with revenue administrations (tax and customs) and large spending units. **Elena Nikulina** thanked all participants for the active discussion and noted that a special VC on CCCs would be organized once Mike completes the preparation of the CCC Note.

1.4 Table Discussions

During the last session on Day 1, Study Visit participants reflected on the presentations made during the day and formulated some recommendations that the State Treasury of Georgia could consider for the future development (Table 2).

Table 2: Discussions Summary: Reflections and Recommendations



Most interesting aspects potentially applicable to other countries	Recommendations to Georgia on further steps
<ul style="list-style-type: none"> • Single tax payment code enabling tax collection • Extending TSA to include some SoEs • Cash management practices of Georgia (using Bloomberg platform, collateral, high competition, minimum interest rate) • Diversification of financial instruments in Hungary, • Foreign exchange buffer in Hungary, • Cash forecasting practices and the use of various data sources, including macro forecast, • Using AI in budget execution, • CCC practices, and • Impressive development of IFMIS. 	<ul style="list-style-type: none"> • Refunding other types of taxes (in addition to VAT), • Stipulating the criteria for selecting SoEs to be included in the TSA in relevant legislation, • Diversifying active cash management instruments (to include repo operations and operations with securities to hedge risks and smooth cash flows), • Amend the relations with the NBG to secure remuneration on the TSA cash balance, • Ensuring staff continuity and development, and • Further developing the cooperation with the Ministry of Finance Academy, including introducing IPSAS certification.

Davit thanked the participants for their reflections and recommendations and agreed with the need to consider diversification of active cash management instruments. **Elena Nikulina** pointed out that TCOP visits to Georgia had been synchronized with the reform dynamics and the current visit also coincided with significant treasury developments. She underlined the usefulness of Georgain experience in developing forecasting procedures that were more sophisticated than those currently offered by CFAT, and noted the interest of the participants to further discuss the boundary of the TSA.

Day 2: Digital Transformation in Treasury Operations

2.1 E-Treasury and TSA Extension

To provide a framework for further discussions on digital transformation in treasury operations, **Sophio Nemsadze, Head of Service Department, State Treasury of Georgia** presented the approach of Georgia to processing payment operations that had enabled the Treasury to drastically extend the TSA coverage over the past decade. Since the launch of e-treasury in 2012, the number of organizations using the system has increased from 408 to 2,959 in 2024, whereas the number of payment orders has grown from 2.6 to 9.6 million. Currently, the TSA in Georgia covers all central government and local government spending units, legal entities of public law and non-profit organizations, all preschool institutions and about 90 percent of public schools as well as about 40 SoEs. The transition to e-treasury called for addressing important challenges, including insufficiently qualified staff, different accounting systems employed by SoEs, and the increased load on the e-treasury system. To address these issues, the Treasury jointly with the Ministry of Finance Academy organized training for new users, and made some concessions for the SoEs by waiving requirements for full accounting and submission of common procurement vocabulary (CPV) codes while retaining the requirements on accounting in accordance with the budget classification. Overall, the reform resulted in improved PFM efficiency and transparency, ensured the integration of public finance into



a unified accounting and information system, and enhanced the control over cash flow, enabling more effective use of idle balances.

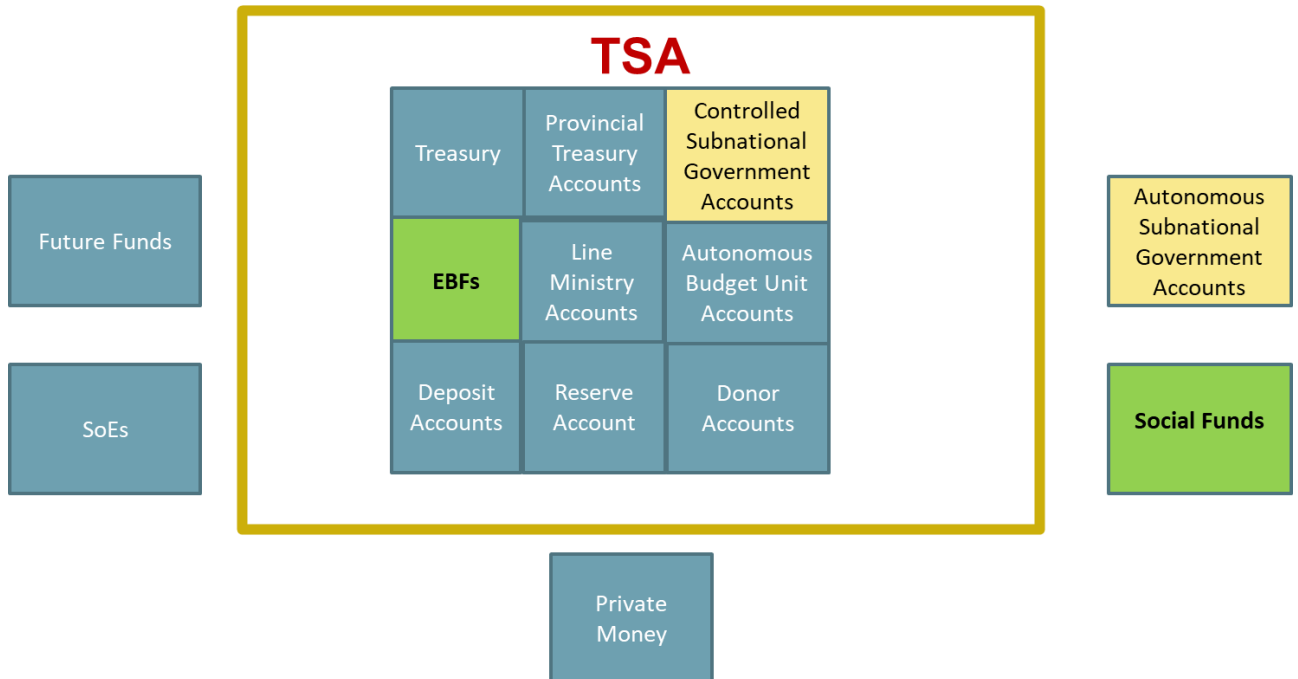
During the discussion, several questions were asked. **Rakhat** inquired about the traceability of procurements to the payment stage. **Nazim** raised the issue of the control over contract performance guarantees. **Lusine** asked about the registration of the data on multi-year contracts in the system. **Sophio** confirmed that the use of the CPV codes enabled the Treasury to trace the contracts to the payment stage. Though there are no legal limits on advance payments, these amounts should be covered by contract performance guarantees that are subject to control by the State Procurement Agency. **Davit** agreed that e-Treasury could include automated control over the contract performance guarantees. **Sophio** also confirmed that the information on the multi-year contracts is included in the system as a single amount and updated and detailed annually, based on the quarterly appropriations imported from the e-Budget system.

To comment on the issue of the TSA extension, **Mike** briefly revisited the recent TCOP knowledge product focusing on the *Optimal Coverage of the TSA*¹. He noted that although there are some general approaches (Fig. 2), the practice differs, and various criteria can be applied to identify an optimal TSA coverage for a given country. Thus, the definition of general government suggests that in most cases SoEs should be outside the TSA, except for the cases when they are effectively arms of government or heavily dependent on budget funding. The investment horizon and role of future funds is another important criterion suggesting that their balances should be kept outside the TSA. **Elena Nikulina** added that inclusion of local budgets in the TSA was also not a clear-cut case.

¹ The knowledge product can be found here: <https://www.pempal.org/knowledge-product/optimal-coverage-treasury-single-account>



Figure 2: TSA Boundary



Source: compiled by TCOP Resource Team

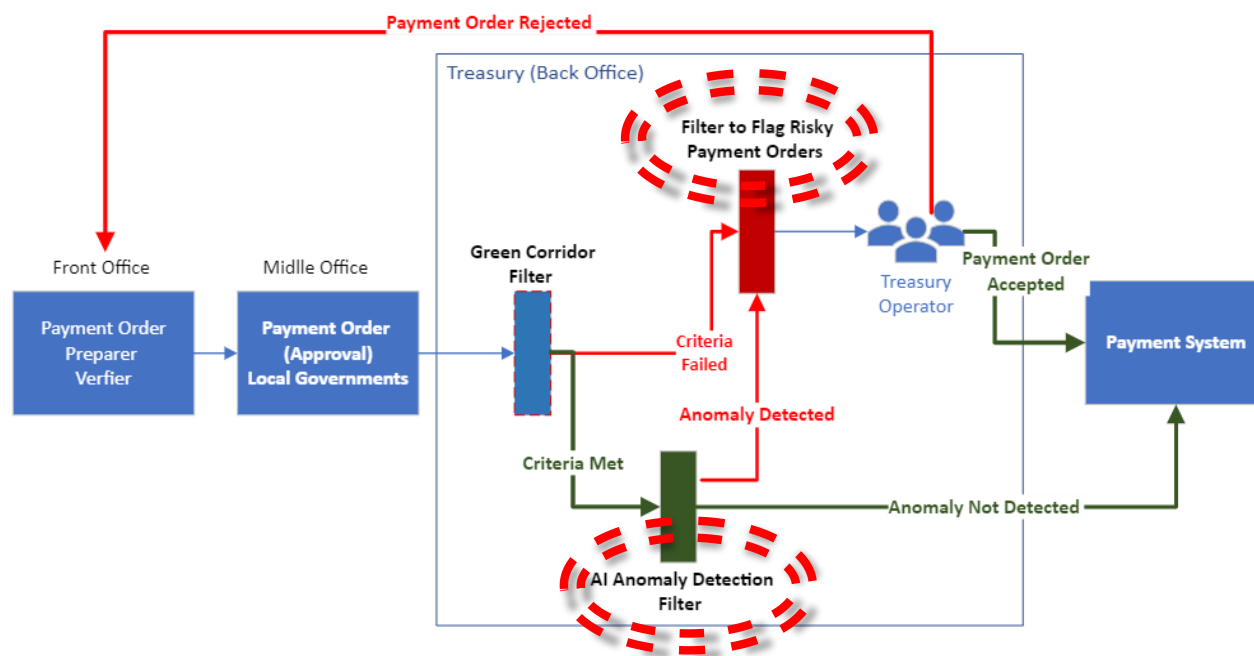
2.2 Implementing Artificial Intelligence in Treasury Operations

The drastic increase in the number of treasury clients and hard treasury staffing constraints (Georgia has a centralized treasury with only 75 staff and no deconcentrated units) made a case for introducing artificial intelligence (AI) in the payment authorization process. **Davit Gamkrelidze** shared the Georgian approach to using AI as a complementary tool, helping to manage transaction risks. Since 2015, Georgia has implemented a Green Corridor system² that processes low-risk transactions (salaries and utility payments) automatically. Other types of payments go through a Red Channel and are controlled by the treasury staff. In 2025, an additional AI-based filter was applied to the Red Channel transactions that helps to identify anomalies in payments and focus the manual controls on the riskiest payments (Fig. 3).

² For more information on the Green Corridor approach, see the TCOP Success Story: <https://www.pempal.org/green-corridor-leveraging-technology-implement-risk-based-approaches-payment-authorization>



Figure 3: AI-Enabled Payment Authorization and Processing



Source: presentation by Davit Gamkrelidze

For the first two months of operation, the AI demonstrated high levels of accuracy in its decisions (95.3 percent). Currently, the AI analyzes only the Red channel transactions. In the future, Georgia plans to apply machine learning (ML) in cash forecasting, use natural language processing (NLP) in accounting, and enhance customer service quality through large language models (LLMs).

The Georgian experience in implementing AI in treasury operations prompted very high interest among the participants. **Rakhat** inquired about the parameters used for identifying the Red and Green channels. **Barış** asked if there were plans to apply AI also to the Green Channel transactions. **Sara** noted the data security concerns and asked about the reasoning for prioritization of areas for AI application. **Abdulaziz Khaydarov, Uzbekistan**, noted that the Treasury in his country had about 20,000 clients and there was a need in a similar system. He asked if any treasury controls on the accuracy of payroll calculation and targeted use of budget funds were in place in Georgia.

Davit noted that payments were directed to the Green or Red channels based on the line item types (i.e., utility and salary payments are directed to the Green channel), while the size of the transaction is not used as a criterion. Salary amounts are not controlled by the Treasury, only the availability of budget appropriations. It is planned to apply AI also to the Green channel transactions, but this would require utilizing unsupervised learning and comparing the results of several models. Another possible area of AI application could be detecting anomalies in payment amounts based on the deviations from cluster averages. **Davit** stressed the importance of data quality for implementing AI and pointed out that the operational need is the main reason for introducing cutting-edge



technology. He also emphasized the need for AI and humans to work together to minimize the technology-related risks.

Rusli Zulfian, Deputy Director of Treasury Information System and Data Science Management, Ahmad Iqbal Zakyuddin, Section Head of Treasury Information System and Data Science Management I, and Gilang Fajar Febrian, Information Technology Specialist in Data Analytics, General Directorate of Treasury joined the meeting remotely to share the Indonesian experience in implementing AI in treasury operations. In its aspiration to become a data-driven organization, the Treasury of Indonesia has implemented advanced digital technologies, including Big Data, data analytics, ML and AI to support decision-making and automate some treasury functions (Table 3).

Table 3: Use Cases of Advanced Digital Technologies in Indonesia

Technology	Use cases (projects)	Purpose
Big Data	Big Data Project, Open Data	Aggregates and manages vast volumes of structured and unstructured data from various treasury sources to enable deeper insights, efficient storage, and fast retrieval for downstream analytics and modelling.
Data analytics	Management Dashboard, Subsidy Dashboard, Asset and Liability Dashboard, FLPP Dashboard, RCE Dashboard	Explores and interprets large datasets using statistical and visual techniques to discover patterns, trends, and insights that support strategic decision-making in treasury operations
Machine Learning	Financial Distress Local Govt, Early Warning System SOE, Fraud Detection Village Funds, Anomaly Detection PPP, Disbursement Docs Classification	Utilizes algorithms and statistical models to enable systems to learn from historical treasury data, automate processes, detect anomalies, and improve forecasting accuracy over time without being explicitly programmed
Artificial Intelligence	Cash forecasting, Treasury Artificial Intelligence	Builds intelligent systems that simulate human reasoning, decision-making, and problem-solving using advanced ML techniques, natural language processing, and automation to enhance treasury functions.

FLPP: Government Payment Liquidity Facilities, RCE: Regional Committee of Economy, PPP: Government Payment Platform.

The presentation focused on the experience of using AI for cash forecasting. To support effective cash management, the Treasury of Indonesia developed a simulation system that can produce projections of the state budget (APBN) realization (revenue, expenditure, and other key items) based on predetermined scenarios. During the presentation, a revenue forecasting ML-based model was demonstrated which has achieved high levels of accuracy (average deviation of 1.3 percent).

Following the presentation, **Davit** inquired about the types and depth of the data and the models used for cash forecasting. It was clarified that, currently, XGBoost model was used. Although the Treasury AI project allows using 6 or 7 models, computing power constraints mean that only one model is used at a time. The representatives of Indonesia emphasized the significant potential AI



could offer for anomaly detection and noted that the Georgian experience in exploring anomalies based on the types of transactions could complement the current Indonesian approach which is focused on the spending unit level.

1.3 Integrating Cross-Cutting Issues in Budget

Maintaining strategic focus on cross-cutting policy priorities, such as climate and gender policy, calls for integrating cross-cutting issues in budget planning and execution. **Natia Gulua, Head of Budget Department, Ministry of Finance of Georgia** shared the experience of Georgia in budget tagging. To implement budget tagging, Georgia introduced a "**Policy Classifier**" component to the e-Budget system that enables all spending units to link their programs/sub-programs with the relevant policy classifier, including Sustainable Development Goals (SDG), gender equality, climate change, and sectoral strategies. The expenditures can be tagged at the program or subprogram level. In preparation of the 2025 budget, six line ministries managing 65 percent of budget expenditure tagged their 63 programs/subprograms with respect to Climate Change impacts. Climate issues are also considered in public investment planning and reporting. Currently, an ePIM system is being developed which will be integrated with e-Budget and contain live dashboards for real-time climate-related budget tracking.

Rakhat inquired about the responsibility of filling out performance data on budget programs and public investment projects. **Nazim** asked about the history and the current coverage of budget tagging. **Natia** explained that during budget planning the data is provided by line ministries. This enables the Ministry of Finance to generate all chapters required for the Budget Law from the e-Budget system. The practice of budget tagging was first introduced in 2023 for the 2024 budget and, currently, the tagging covers 80% of the budget. **Elena Nikulina** commented that in Georgia the tagging was implemented only at the subprogram level, i.e. was based on the existing program structure. **Natia** commented that it was planned to have a lower-level tagging in the future.

To contribute to the budget tagging discussion, **Elena Nikulina** revisited the recommendations from the TCOP knowledge product on the Unified Chart of Accounts (UCoA) developed during the COVID Pandemic³. She pointed out that capturing transactions at a detailed level helps maximize reporting capabilities and can also enhance the reliability of cross cutting reporting. She noted that at a technical level tagging requires application of additional identifiers (tags) in addition to the existing classification or introducing an additional classification segment (like in Georgia) to capture policy priorities. In both approaches, the design of the FMIS may pose technical restrictions on the number of tags that can be applied or the length of the additional classification segment. It is therefore critical that the reporting needs of all stakeholders are considered when the UCoA is developed.

³ The knowledge product is available here: <https://www.pempal.org/knowledge-product/unified-chart-accounts-design-how-respond-reporting-requirements-during-crisis>



1.4 Small Group Discussions

The small group discussions focused on comparing experience of other TCOP members with the approaches presented in Georgia in terms of TSA extension, treasury digital transformation, and budget tagging, and the applicability of the Georgian experience for other countries (Table 4).

Table 4: Applicability of the Georgian Experience to Other PEMPAL Countries

Area	Practices in other TCOP countries	Potential applicability
TSA extension	Most PEMPAL countries do not have SoEs in the TSA. In many countries local self-governments or sub-national governments are covered, but some countries (Croatia, Türkiye) find the inclusion of LSGs in TSA politically sensitive.	Several countries are considering further extension of the TSA (Romania). Also, increasing fungibility of funds on the TSA remains an issue to be addressed in some countries.
Risk management for payment control and authorization	Green corridor is implemented in Moldova and Tajikistan, in Kazakhstan (for utility service payments), in Armenia for payments to the Pension Fund. It is planned to extend it for new types of payments in Moldova and Tajikistan and implement in Kyrgyzstan. Amount-based green corridor approach is implemented in Serbia.	Though some countries find the existing treasury controls sufficient, others are interested in further developing risk management approaches, including based on AI.
Using AI in treasury operations	Most PEMPAL countries do not use AI for treasury operations. Türkiye is experimenting with AI in cash forecasting and also for payment processing (at the testing stage). Serbia uses AI to verify the validity of payment documents, such as signatures and stamps.	There is significant interest in using AI in treasury operations, both for automating treasury controls and for cash forecasting.
Budget tagging	Several PEMPAL countries have implemented some green budgeting / other budget tagging measures, at least at the pilot basis (Azerbaijan, Croatia, Hungary, Romania, Serbia). Several countries used budget tagging to track COVID-related expenditures during the pandemic. In Albania, the use of parent codes makes budget tagging more flexible.	All countries expressed interest in further implementation of expenditure tagging both at the budget planning and execution stages.

The participants also formulated several recommendations that Georgia could consider in further treasury development:

- Including the criterion of transaction amount for directing payments to the Green corridor,
- Using AI not only to free up the workforce and detect anomalies in payment documents but also to identify fraudulent transactions,
- Using both external and internal data for cash forecasting,
- Accounting for one-off events and policy changes (i.e., tax rate changes) in cash projections,
- Implementing green tagging at the activity level and at the budget execution stage.



Overall, all participants were very impressed by the progress made by Georgia in modernizing treasury operations, and asked the Georgian team to keep sharing their accomplishments with peers from other countries.

Day 3: Public Sector Accounting and Reporting Reform

2.1 Public Sector Accounting and Reporting Reform. IPSAS Implementation

On Day 3 of the event, representatives of **Georgia** and **Albania** shared their approaches to implementing public sector accounting reforms and IPSAS implementation.

Lela Patariaia, Deputy Head of Reporting and Methodology Department, State Treasury of Georgia, shared the progress in implementing public sector accounting reform and the results of the recent PULSE assessment. As of 2024, Georgia has adopted two additional IPSAS standards (26 IPSAS standards have been implemented in total) at the central government and subnational levels. A Unified Chart of Accounts and accrual-based accounting and reporting rules have been implemented. However, despite the significant progress, important challenges remain. Thus, the consolidated financial statements do not cover administered items (assets, liabilities, revenues and expenses on behalf of government), a single complete registry of public assets is lacking, and since the Treasury General Ledger needs further development, the full consolidation has not yet been achieved. **Lela** pointed out that the accounting reform was a long journey requiring political support, financial and human resources, as well as cultural changes in the public sector.

Elena Nikulina commended Georgia on the significant progress achieved in implementing public sector accounting reform and noted that in Georgia the State Treasury was responsible for this reform, unlike in some other countries.

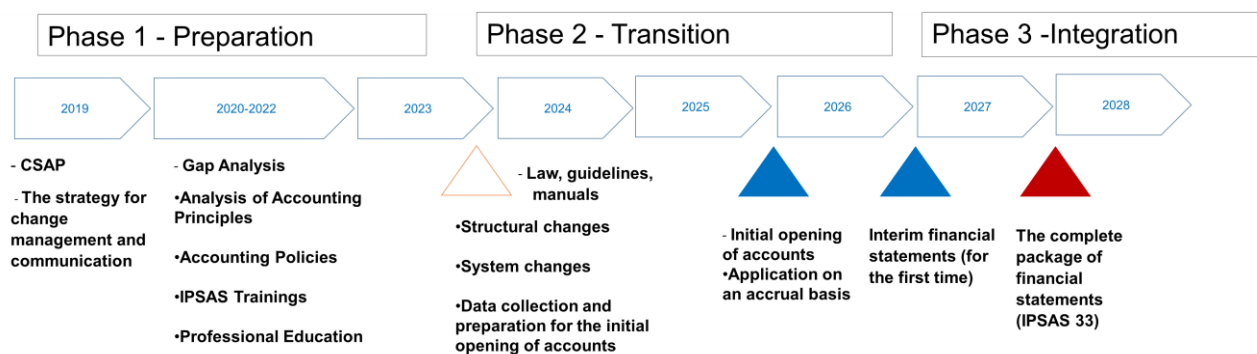
The presentation prompted several questions from the audience. **Dorottya Kiss, Hungary**, inquired about the future plans for adopting IPSAS standards and the standards that were the most difficult to implement. **Nazim** raised a question about the submission of an annual report to the Parliament. **Galina** asked about the reaction of the Parliament to the financial statements. **Lusine** raised a question about certification of accountants. **Lela** noted that there were plans to update some IPSAS standards on fixed assets revenue and to adopt new IPSAS standards on assets for sale, transfer expenses, and financial instruments in the next five years. Based on past experience, implementation of the IPSAS standards related to property and equipment proved the most difficult, reflecting the lack of funding for revaluation of assets. In addition, the standards that related to transactions that are not common in the public sector proved difficult. Currently, there is no certification program for public sector accountants, but it is planned to introduce one in the Public Finance Academy. **Lela** clarified that the financial statements were not formally submitted to parliament, but were published by July 1 of the following year. In 2025, the financial statements will be audited by the Supreme Audit Institution for the first time. **Davit** added that there is a need to develop knowledge and expertise in the parliament so that the financial statements could be used as a basis for decision-making. He



noted that implementing fully automated consolidation of financial statements is on the State Treasury's agenda. **Galina** commended Georgia for gradual improvements in the area of public sector accounting. **Elena Nikulina** noted that the new PULSE methodology was used for the public sector accounting assessment in Georgia, and in view of the likely interest from some TCOP members, a separate VC could be organized to discuss this tool.

Mimoza Pilkati, Director of Treasury Operations and **Elson Beleshi, Expert, Ministry of Finance of Albania** presented progress in implementing accounting and financial reporting reform and introducing IPSAS in Albania. **Mimoza** noted the difference in accounting methodology applied by AGFIS (modified accrual basis) and the systems used in budget institutions (modified cash basis). Therefore, the consolidation of financial reporting has only been partially automated. **Elson** pointed out that Albania opted for a partial implementation of IPSAS, since not all the IPSAS standards were relevant for the Albanian context. He emphasized that the reform required a gradual approach and that the end objective was to prepare consolidated financial statements compliant with IPSAS by 2030 (Fig. 4). To date, the efforts have been focused on the preparation of instructions and extensive training of public sector accountants. **Elson** emphasized political, organizational and capacity-related challenges and noted the need for a change management strategy for the successful reform implementation.

Figure 4: Timeline for IPSAS Adoption in Albania



Source: presentation by Mimoza Pilkati and Elson Beleshi.

Zurab Tolordava, Georgia, inquired about the procedure for submitting consolidated financial statements to parliament. **Mimoza** clarified that detailed consolidated statements, including both central government and local governments data, were submitted to parliament for approval at the end of June. **Elena Nikulina** asked why a high-risk rating had been assigned to the AGFIS module on accounting. **Mimoza** noted that the differences between the accrual and cash-based accounting were the basis for the high-risk rating.



2.2 Thematic Agenda Wrap-Up

Mike Williams and **Fabienne Mroccka** wrapped up the thematic agenda. **Mike** thanked the Georgian hosts for presenting the impressive progress across various dimensions of PFM reforms, including the single tax payment code, TSA extension, investing surplus cash using good international practices, and implementing the AI in treasury operations. The experience of Georgia demonstrates that both careful planning and high-level support are needed to implement such reforms. These changes are not easy and require upfront financial and human resources, even when they may result in later resource savings. **Fabienne** noted that the event was very valuable and allowed her to learn about the way PEMPAL operates first-hand. She thanked the hosts and all presenters for their openness and readiness to share their experiences and pointed out the importance of integrating various PFM reforms to achieve visible improvements.

2.3 Feedback Session

During the feedback session, the participants shared their impressions about the event and discussed possible topics for the next TCOP events. In their reports, all participants thanked the hosts and emphasized that the event allowed them to learn many new things and broaden their contact networks. Implementing AI in treasury operations, extending the TSA and strengthening cash forecasting, introducing the single tax payment code, budget tagging, and implementing accounting reforms were named as interesting topics relevant to treasury development in other PEMPAL countries. The participants proposed a broad range of topics that could be discussed during the future TCOP events (Table 5).

Table 5: Topics for Discussion during the Next TCOP Events

Area	Possible topics
Cash management	Cash management and practice of CCCs (cash and debt management coordination) TSA extension to SoEs Forecasting and reporting tools Active cash management, including borrowing operations
Using IT in treasury operations	Implementing IFMIS; IFMIS models Using advanced technologies for cash forecasting and reporting Using AI in treasury operations
Public Sector Accounting and Reporting	Public accounting reform Accounting legislation Accrual accounting of revenue and expenditure Consolidated financial reporting (incl. local governments and quasi-public sector) Reporting in the public sector and by the SoEs IPSAS implementation (possibly in cooperation with ACCA) Reporting transparency
Other	Risk management, including operational risk, in treasury operations

In addition to group discussions, a thematic survey on priority topics for future TCOP events and possible contributions by member countries was conducted during the meeting. The results of the survey are summarized in the Annex to this report.



Elena Nikulina thanked the participants for their proposals and noted that two face-to-face TCOP events were planned over the period to February 2026. In addition, several VCs, including the one on the experience of CCCs will be organized. **Davit** thanked everyone for active participation, rich discussions, and the opportunity not only to share experience but also to receive feedback from peers and wrapped up the meeting.

Conclusions

The discussions demonstrated that Georgia has made impressive progress in various aspects of treasury modernization, including implementing single tax payment code to reduce administrative burden on taxpayers, extending the TSA coverage and managing cash actively using international best practices (e.g., ensuring competition and requiring collateral when making deposits), introducing climate and other policy budget tagging, and implementing most of IPSAS accounting standards. Continuous high-level political support to this diverse reform agenda has been one of the critical success factors.

The State Treasury of Georgia is one of the pioneers in the world in implementing cutting-edge technology – AI – in the payment authorization and processing process. It should be noted that the use of AI to identify anomalies in payment orders is complemented by final human checks that help to minimize technology-related risks. The initial results of the AI application show high levels of AI accuracy in anomaly detection (over 95 percent).

The Georgian experience exemplifies how digital transformation allows countries to do much more with limited resources. Based on the first phase of implementing e-treasury, the State Treasury of Georgia was able to optimize the organizational structure and close all regional offices. As a result of the second stage of digitalization, when the risk-based approach to payments (the Green Corridor system) was first introduced, a significant extension of the TSA to the local government level was achieved. Finally, the implementation of AI is meant to support the current extension of the TSA which will result in a triple increase in the number of treasury clients without any increase in treasury staff levels.

The event participants expressed very high interest in various aspects of the Georgian experience and many delegations noted the discussions were directly relevant to their reform agendas.





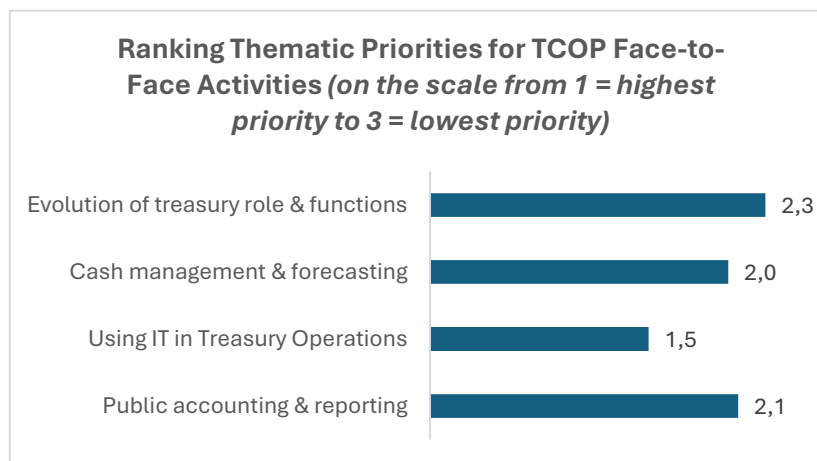
Annex: Member Thematic Survey

The Thematic Survey was conducted during the TCOP Extended Study Visit to Tbilisi, Georgia, on May 29-30, 2025. The paper questionnaires were distributed to all TCOP country delegations present at the event (Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Moldova, Montenegro, Romania, Serbia, Tajikistan, Türkiye, and Uzbekistan). Each delegation provided one written response.

Priority Thematic Areas

Countries were asked to identify up to three priorities among the four major TCOP thematic areas that the country delegation preferred to discuss at the next TCOP face-to-face meetings in autumn 2025 – winter 2026 and rank these priorities from 1 (highest priority) to 3 (lowest priority). In responses, some countries also rated one of thematic areas at “4” – these responses were excluded for consistency purposes. Some countries assigned highest priority rating to more than one area.

Based on the survey results, eight countries out of 16 (50 percent) assigned some priority to the thematic area *Evolution of the Treasury Role and Functions*, while 15 countries assigned some priority



rating to the other three thematic areas. The average ranking of thematic priorities is presented in the Figure. As follows from the figure, the highest thematic priority for discussion at the next TCOP face-to-face events is related to the use of IT in Treasury operations. This thematic area is followed by cash management and forecasting and public accounting and reporting.

Note: average ratings estimated based on responses from 16 TCOP member countries.

Georgia proposed risk management as an additional thematic area.

Priority Topics for Discussion

TCOP members identified multiple topics for discussion at the next face-to-face meetings and offered to contribute to these discussions by sharing their country experiences.

In the area of **using IT in treasury operations**, there is a strong interest in discussing automation of business processes and full digitalization of the treasury (Azerbaijan, Serbia, Uzbekistan, Tajikistan), implementing AI in treasury operations (Albania*, Armenia, BiH, Georgia, Hungary, Kyrgyz Republic,



Montenegro*⁴), using IT systems for generating financial reporting (Albania), enhancing transparency in PFM based on integration with other information systems (Croatia), and implementing a centralized public sector accounting system (Kyrgyz Republic). It should be noted that some of these topics cover several themes, i.e., IT and cash management, or IT and risk management, or IT and reporting.

Several countries offered to make presentations on IT-related issues at the next face-to-face meetings:

- Implementation of AI (Georgia),
- AI-driven processing payment operations project (Türkiye),
- Treasury information systems (Armenia),
- New developments in Romanian IT platform for public financial reporting (Romania)
- Automating business processes in accordance with the advanced digital technology trends (Serbia), and
- Integration of budget and treasury data to align the inputs and outputs of their respective systems and financial reporting (Albania)

In the area of **cash management and forecasting** the main areas of interest for TCOP member countries are (i) **cash forecasting**, including models and tools ensuring cash forecasting accuracy and the prospects of using AI in this area (Albania, Azerbaijan, Croatia, Hungary, Montenegro, Serbia, Tajikistan), (ii) **active cash management**, including both investing surplus cash (Armenia, Croatia, Kazakhstan, Tajikistan, Uzbekistan) and borrowing instruments (Türkiye), and (iii) **TSA coverage**, specifically, the criteria for inclusion of SoEs in TSA (Serbia and Uzbekistan). Tajikistan also noted its interest in the practice of CCCs.

Several TCOP member countries are ready to contribute to the discussions on cash management and forecasting and make presentations on the following topics:

- Cash management (Georgia),
- Cash forecasting (Hungary),
- Strengthening cash management practices and introducing forecasting tools to improve liquidity planning (Azerbaijan),
- Using securities in treasury system – ‘digital treasury obligation’ (Kyrgyz Republic),
- TSA coverage (Armenia).

In the area of **public accounting and financial reporting**, TCOP members are interested in discussing accounting reforms related to implementing IPSAS and transiting to accrual-based accounting (Albania, Bosnia and Herzegovina, Moldova, Montenegro, Romania), preparation of consolidated

⁴ With specific emphasis on using AI for cash management and cash forecasting.



financial reporting, developing reporting to meet transparency needs (Croatia) and integrating financial and performance reporting (Azerbaijan).

The proposed possible presentations from TCOP members include:

- New developments in Romanian IT platform for public financial reporting (Romania),
- Integration of budget and treasury data to align the inputs and outputs of their respective systems and financial reporting (Albania),
- Public sector accounting reform, transition to accrual-based accounting (Montenegro).

The survey also demonstrated the interest of Albania in evolution of treasury role and functions in the process of the public accounting reform and the interest of Georgia and Kyrgyz Republic in risk management in treasury operations. Armenia offered to share its experience in implementing a unified tax payment code.

In addition to face-to-face events, delegation of the Kyrgyz Republic recommended organizing VCs with participation of the representatives from national treasuries – leaders in modernization of treasury operations.