



GOVERNMENT TREASURY SINGLE ACCOUNT AND CASH MANAGEMENT IN PEMPAL COUNTRIES: 2021 TCOP Survey Report

December 2021

Abstract

This report is a product of the Treasury Community of Practice (TCOP) operating under the Public Expenditure Management Peer Assisted Learning (PEMPAL) network. It aims to benchmark the treasury single account (TSA) and cash management practices within the PEMPAL community, to help to identify good peer practices and to promote treasury reforms in the member countries. The quantitative core of this paper is the result of the survey conducted among PEMPAL member countries in early 2021. Some of the survey responses, or gaps in the responses, suggest that there are a number of areas that would benefit from further analysis and discussion, with a view to further development. The note is not an official World Bank document and does not represent the official views of the World Bank.

PEMPAL Treasury Community of Practice

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Abbreviations and Acronyms

| | |
|---------|--|
| ACH | Automated Clearing House |
| CBbills | Central Bank Bills |
| EBF | Extra-Budgetary Fund |
| ECA | Europe and Central Asia |
| FMIS | Financial Management Information System |
| MoF | Ministry of Finance |
| MoU | Memorandum of Understanding |
| PEMPAL | Public Expenditure Management Peer Assisted Learning |
| PFM | Public Financial Management |
| RTGS | Real Time Gross Settlement |
| SNG | Subnational Government |
| Tbill | Treasury bill |
| Tbond | Treasury bond |
| TCOP | Treasury Community of Practice |
| TSA | Treasury Single Account |
| ZBA | Zero Balance Account |

EXECUTIVE SUMMARY

1. This paper is a product of the Cash Management Working Group operating within the PEMPAL Treasury Community of Practice. It aims to benchmark the treasury single account (TSA) and cash management practices within the PEMPAL community, to help to identify good peer practices and to promote treasury reforms in the member countries. The quantitative core of this paper is the results of the survey conducted among PEMPAL member countries in early 2021.

2. The results of the survey point to the progress that many PEMPAL countries have made in developing their treasury and wider cash management functions. There is some diversity of practice, which is to be expected in view of different legal frameworks, institutional and financial structures, and administrative cultures and histories. At the same time, there is a solid core of countries that have developed capabilities and mechanisms in line with sound international practice. The responses to the survey also indicate that for many countries activities of the TCOP Cash Management Working Group have contributed to these achievements. The results nevertheless suggest that all countries have at least some need to further develop their practices, instruments or institutions. There is therefore clear scope for further exchange of experiences among the participating countries and the working group continues to be highly relevant for the members.

3. The key results from the survey are:

- i. All countries operate a TSA, and in all it is located in the central bank. In 13 of the 16 countries, the accounts of subnational governments (SNGs) are included in the TSA, although there are some qualifications, and in not all of these case are the SNGs' accounts fully integrated with those of central government.*
- ii. In almost all cases the TSA is either a single bank account or a consolidated bank account with a number of subsidiary accounts; the subsidiary accounts may be bank accounts or based on the ledger of the Financial Management Information System (FMIS) to provide the required separation and accounting for funds. Although the results suggest that there is greater use of ledger coding, some countries still rely on separate bank accounts with the additional control, administration and audit requirements that brings.*
- iii. Central government tax and non-tax receipts flow to the TSA in all countries (in some cases through the commercial banks). That is also the case for SNG tax and non-tax revenues where SNGs are part of the TSA. More than half of the countries also have some other funds, budgetary and extra-budgetary, whose receipts flow to the TSA as do donor grants and loans. But coverage is far from complete. The management of trust/deposit money also remains mixed with fewer than half respondents confirming funds are held in the TSA.*
- iv. There is significant use of electronic funds transfer, with revenues flowing directly to the TSA. For general government tax receipts, generally the most significant source of revenue, only two countries did not deposit funds into the TSA the same day, either*

directly or via zero-balance accounts. The practices in relation to SNG receipts are similar to those of central government.

- v. In 15 out of 16 countries the majority of government payments are made directly from the TSA, i.e. without first transferring cash to a ministry account at a commercial bank, thereby minimising the risk of cash lying idle. A few countries still use cash or cheques to make payments, but the amounts are very small.*
- vi. Most countries have direct access to the banking system, with 10 of the 16 countries a member of the Real Time Gross Settlement system. There is very little differentiation between the handling of payments according to their economic category; the mechanisms used for payments by SNGs for the different economic categories is almost exactly the same as that used by central governments.*
- vii. Almost all countries have documented their relationship with their central bank; and in most of those cases some fees are paid. But only 10 of the 16 receive interest on at least some cash balances at the central bank. Moreover, although there is no dominant benchmark, more countries earn interest somewhat below the central bank's policy rate than above. A similar proportion of countries receive interest on their balances with commercial banks*
- viii. Most countries, 12 of the 16, reported a high-level cash management objective. But some objectives are ill-defined or imprecise; and they are mostly defined in terms of efficiently supporting budget execution, rather than also the efficient use of cash.*
- ix. Only three countries have a formal target for the cash buffer, although others are likely to target a buffer in practice. A variety of drivers were identified. Most countries had some safety nets in place, but none had put in place credit lines, or similar arrangements, with commercial banks.*
- x. All countries have a forecasting capability in place. But there is a variety of practices and coverage. The survey did not indicate forecast performance, but suggests that nearly all countries have room to improve practices whether in terms of time granularity, forecast horizon or forecast frequency,*
- xi. In terms of institutional structures, most countries have a strong treasury function, characteristic of the region, which has clear responsibility for cash flow forecasting. In many of these countries, the debt management function has grown separately from the treasury, with different reporting lines. All models, and in particular those where the treasury and debt management functions are institutionally separate, require coordination and decision-making structures; Despite this only seven of the sixteen countries indicated that they have a formal high-level cash coordination or liquidity management committee.*
- xii. In all countries that responded, it is the debt department or equivalent that is responsible for short-term (as well as long-term) debt issuance and other borrowing. However, the lead responsibility varies for short-term investment of temporary surplus cash, raising concerns about coordinated and consistent interaction with the money markets.*
- xiii. Most countries have Treasury bills available as a short-term borrowing instrument, although the answers suggest that they may be seen more as a debt management*

instrument with a regular issuance programme, rather than as a more flexible cash management instrument.

- xiv. In relation to cash surpluses, half the respondents are able to place deposits with the central bank and half with the commercial banks (with some countries able to do both). Just three countries have capabilities to borrow and lend through repo. The capability to manage cash actively, drawing on a wide range of instruments, clearly has further to develop.*
- xv. 10 out of 16 countries indicated that PEMPAL had contributed positively to their reform program. Knowledge products, expert papers, study tours, and the sharing of experiences and best practices were all mentioned as very useful.*

4. The survey has been a useful tool to review the status of the TSA and cash management in the region. Some of the survey responses, or gaps in the responses, suggest that there are a number of areas that would benefit from further analysis and discussion, with a view to further development.

5. The paper concludes with a list of suggestions on the possible content of the future activities of the TCOP Working Group in the areas of TSA structures and coverage, cash management objectives, cash buffer targets, and investing surplus cash.

INTRODUCTION

PEMPAL, the TCOP, and the TCOP Cash Management Working Group

6. The Public Expenditure Management Peer Assisted Learning (PEMPAL) network¹ facilitates exchange of professional experience and knowledge transfer among public finance management (PFM) practitioners across the countries of Europe and Central Asia (ECA). Participants work together, face-to-face and on-line, to share knowledge and develop approaches to solving common PFM problems. PEMPAL comprises three communities of practice, including the Treasury Community of Practice (TCOP), which focuses its activities on challenges in implementing reform initiatives in treasury and on issues that are of professional interest to its members.

7. Since its inception the TCOP has been encouraging members to form smaller working groups to share experiences and work on common agendas. The cash management group was established at the initiative of several member countries looking to address a number of challenges faced in liquidity management and wishing to move from passive to more active cash management practices.²

Background to this Paper

8. The quantitative core of this paper is the results of a survey conducted among PEMPAL member countries in early 2021. The TCOP countries completed a similar (although slightly shorter) survey in 2016, the results of which were reported to the Annual TCOP meeting at Ankara in March 2016. In the subsequent four years, several member countries have further developed their Treasury Single Account (TSA) and associated payment arrangements, improved their cash flow forecasting, and made progress in developing their broader cash management function. In view of the countries' continued interest in the topic, and following additional consultations with the TCOP Executive Committee,³ it was agreed to refresh the survey to bring all members up to date with recent reforms, innovations and other progress.

9. **This paper aims to benchmark the TSA and cash management practices within the PEMPAL community**, to help to identify good peer practices and to promote treasury reforms in the member countries. It is also one of the practical steps to enrich the knowledge bank of methodological, legal and analytical documentation of professional interest for PEMPAL members.

10. The survey was developed by the TCOP Resource Team with significant thematic contributions by Mike Williams and Mark Silins (international experts). TCOP members from Belarus, Georgia, Russia and Turkey assisted the Resource Team with review and testing of

¹ www.pempal.org

² The TCOP guide provides detailed information on operation of this working group <https://www.pempal.org/event/treasury>

³ July 15, 2020 TCOP Executive Committee meeting

the initial draft and the TCOP Resource Team is very grateful for their valuable comments and suggestions.

11. **Sixteen countries completed the survey in 2021** (compared with 12 in 2016): Albania, Armenia, Azerbaijan, Belarus, Croatia, Georgia, Hungary,⁴ Kazakhstan, Kyrgyz Republic, Moldova, North Macedonia, Russian Federation, Romania, Tajikistan, Turkey, and Ukraine. The questionnaire was circulated to PEMPAL TCOP members, who represent the government treasury function of their countries. This paper is based on information provided by the respondents with only limited editorial input by the TCOP resource team. Some countries, will have made further reforms in the months since the 2021 survey; these have not been reflected in the analyses below.⁵

12. **A preliminary summary of the results was presented during the June 3 session of the 2021 Annual TCOP Plenary Meeting.** The results are developed further in this report. Some of the answers were very rich and potentially a source of future discussion and exploration but have been paraphrased below in the interests of cross-country comparison and identifying the key characteristics. The report, as well as summarizing country responses, highlights individual country experiences or practices where they are significantly different from those of others.

13. **The survey results reported below are framed against an outline of sound practice in government cash management.** There is a more detailed discussion of each of the concepts (highlighted in blue boxes) before the relevant survey results are reported.

Government Cash Management: an Overview of the Main Concepts

The Objective⁶

Government cash management encompasses the strategy and associated processes for managing cost-effectively the government's short-term cash flows and cash balances, both within government, and between government and other sectors. Its overriding objective is to ensure that the government is able to fund its expenditures in a timely manner and meet its obligations as they fall due. However, cost-effectiveness, risk reduction and efficiency are also important, and specifically:

- Minimising the costs of holding cash balances in the banking system
- Reducing risk: operational, credit and market risk; and also enhancing the ability to respond to financial shocks
- Adding flexibility to the ways in which the timing of government cash inflows and outflows can be matched

⁴ Not a formal member of PEMPAL network

⁵ For example, the paper does not take account of changes or improvements to TSA and cash management practices that had taken place in Russia and Turkey during 2021.

⁶ These sub-sections draw on Lienert (2019) and Williams (2010); for country practices, see Coskun and Secunho (2020).

- Supporting other financial policies and in particular debt management policy, monetary policy and the development of domestic financial markets.

There are three pillars of a modern cash management system:

- Treasury Single Account (TSA): a unified structure of government bank accounts to give a consolidated view of government cash resources. Linked with this must be a modern transaction processing system and accounting framework (processing government transactions with few handling steps,⁷ reliance on electronic transactions); and modern banking, payment, and settlement systems.
- Cash Flow Forecasting: the process to estimate future government cash inflows and outflows, with a view to taking action necessary to ensure that sufficient funds are always available to meet any net government cash requirements; and, in any period where there is a net cash surplus, to ensure that it is used to best advantage.
- Active Cash Management: the use of short-term instruments in the money market to help timing mismatches in cash flows and maintaining required cash balances. A distinction can be made between rough tuning – issuing Treasury bills (Tbills), or other short-term borrowing instruments, to a pattern deliberately designed to offset the impact on the banking sector of net cash flows in and out of government; and fine tuning – developing more active policies, drawing on a wider range of instruments or institutional options, to smooth more fully short-term changes in the balance in the TSA.

Effective achievement of the objectives of cash management also necessitates strong institutional interaction. This requirement is developed further below, covering in particular:

- Information sharing between the cash managers, revenue-collecting agencies and spending ministries (and any relevant ministry branch offices)
- Strong coordination of debt and cash management
- Formal agreements between the MoF and the central bank on information flows and respective responsibilities.

Budget Execution and Cash Management

Effective cash management supports the objectives of budget execution, i.e. ensuring that the budget and its financing is implemented and controlled to achieve outcomes for the year as a whole in line with stated objectives (and Parliamentary or other authority). But the processes of budget execution are distinct from those of cash management, as illustrated in Figures 1 and 2. Budget execution certainly requires a cash plan, i.e. the planned profile (usually monthly) of all government cash flows across the year. The plan includes flows or receipts and expenditure and of financing (although depending on accounting practice the inputs may need to be adjusted for non-cash flows). The adequacy of cash in the TSA during or at the end of the year then provides a check on the

⁷ A modern chart of accounts (CoA) structure is becoming increasingly important as it allows separate controls and reporting of specific cash balances while still consolidating these balances in a TSA.

consistency of the budget and its planned financing. The cash plan will normally be updated during the year, in the light of changed circumstances, but it will usually be constrained at any time to the currently approved budget targets.

The cash flow forecast is different from the cash plan. It focuses on what will happen, not what should happen. It is an estimate of future government cash inflows and outflows, made with a view to taking the action necessary to ensure that a sufficient cash balance is always available to facilitate the smooth execution of the budget and also to support other cash management objectives.

Figure 1: Executing the Budget and its Financing

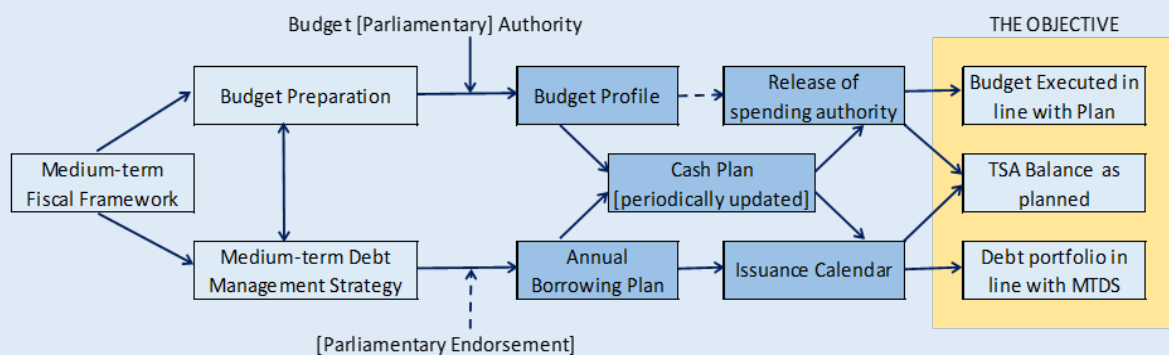
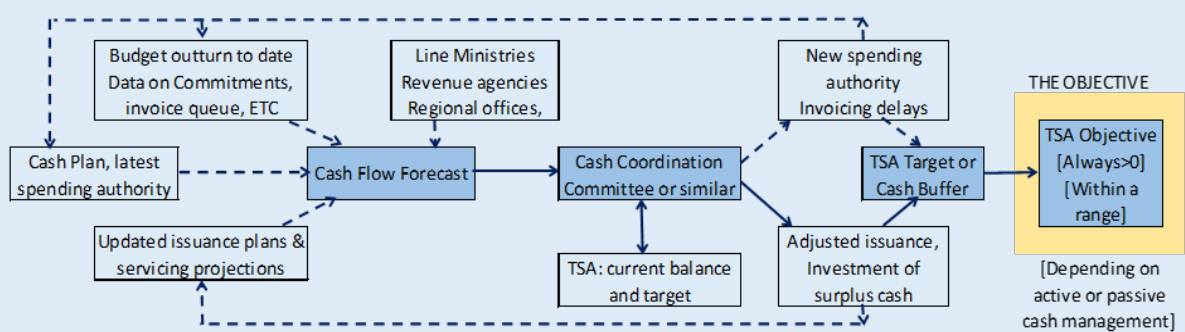


Figure 2: Managing Cash During the Year



The Structure of the Report

14. This report brings together the results of the survey with a discussion of the concepts. It is ordered under the same three main headings that comprised the survey.

The Treasury Single Account: its coverage (in relation to both balances and flows), its structure, its link with payments system and the basis of remuneration of cash balances. There were also some questions on balance remuneration and the relationship with the banking system.

Cash Management and Cash Forecasting: the cash buffer, cash flow forecasts, institutional arrangements, and cash management instruments.

Other Issues: the extent of reforms, impact of PEMPAL, and responses to COVID-19.

THE TREASURY SINGLE ACCOUNT

The Characteristics of a TSA⁸

The TSA is not necessarily a “single” account. It may be one account (although usually with sub-accounts), a series of linked accounts that are zero-balanced which are swept at least each day to a head account (usually electronically), or a network of accounts which are treated as one for purposes of calculating the overall cash balance. Ideally it includes all cash resources including both budgetary and extra-budgetary resources; some countries include the cash balances of lower levels of government, in others it is confined to central government.

All government receipts and payments should be transacted through the TSA. This reflects the principle of unity of cash and the unity of treasury, and applies whether the TSA is a bank account or a set of linked accounts. The principle of unity follows from the fungibility of all cash irrespective of its end use.⁹ Individual cash transactions should be distinguished for control and reporting purposes. But this purpose is achieved through the accounting system and not by holding/depositing cash in transaction-specific bank accounts, which in turn enables the treasury to separate the management of cash from control at a transaction level.

A fully-fledged TSA shares three essential features:

- *The government banking arrangement should be unified, to enable ministry of finance (MoF) or Treasury oversight of government cash flows in and out of these bank accounts. A unified structure of government bank accounts allows complete fungibility of all cash resources, including on a real-time basis if electronic banking is in place. The TSA structure can contain ledger sub-accounts in the government accounting system or a single banking institution (not necessarily a central bank), or both. and can accommodate external zero-balance accounts (ZBAs) in a number of commercial banks;*
- *No other government agency operates bank accounts outside the oversight of the MoF/Treasury. Options for accessing and operating the TSA are mainly dependent upon institutional structures (defined in the accounting framework) and payment and settlement systems;*
- *The consolidation of government cash resources should be comprehensive and encompass all government cash resources, both budgetary and extra-budgetary. This means that all government monies irrespective of whether the corresponding cash flows are subject to budgetary control or not (i.e. reserve funds, earmarked funds and other off-budget/extrabudgetary funds) should be brought under the control of the TSA.*

⁸ See Fainboim & Pattanayak (2010); the MoF, Indonesia (2014) also has an extensive discussion of TSA models.

⁹ In this context, “cash” is largely represented by the balances in the bank accounts that the government controls. In only very few countries is the use of physical cash, i.e. notes and coin, materially important, or are securities, rather than claims on a bank account, used as a means of payment. Cash may sometimes be referred to as “liquidity” (although that has a different meaning in securities markets).

The TSA usually comprises domestic currency only. Where a government holds foreign currency balances they are not usually regarded as part of the TSA unless they can be seamlessly transferred into domestic currency in close to real time. The cash balance in the TSA main account is maintained at a level sufficient to meet the daily operational requirements of the government (sometimes together with an optional contingency, or buffer/reserve to meet unexpected fiscal volatility).

The Coverage of the TSA

At a minimum, the TSA should cover all central government entities and their transactions. These include accounts managed by social security funds and other trust funds, extra-budgetary funds (EBFs), and autonomous government entities, and loans from the multilateral institutions and donor aid resources.¹⁰ It means that all government monies irrespective of whether the corresponding cash flows are subject to budgetary control or not (i.e. reserve funds, earmarked funds and other off-budget/extrabudgetary funds) should be brought under the control of the TSA. Some examples of incomplete coverage of the TSA are at the Annex.

A TSA could also be extended to include sub-national levels of government (i.e. state, provincial or local government, including municipalities) and other public institutions. However, there are also examples where each separate government level has its own TSA (in China for example every single government at each of four levels of government has its own TSA at the central bank, resulting in over 500,000 TSAs across the country). In general, it is not usual for the TSA to extend to government corporations and commercial enterprises.

The TSA in PEMPAL Countries

The Coverage and Structure of the TSA

15. All respondents operate a TSA, and in all countries it is located in the central bank. That was also the case in the 2016.¹¹ There were a few qualifications:

- *Azerbaijan noted that in exceptional circumstances, special-purpose or temporary accounts may be opened with commercial banks.*
- *Belarus noted that there are some accounts held at a commercial bank.*
- *Russia indicated that the National Welfare Fund operates accounts outside the TSA and that foreign currency accounts are held in credit organisations.*

16. **In 13 of the 16 countries, the accounts of sub-national governments (SNGs) are included in the TSA**, the exceptions being Croatia, Hungary and Turkey. Hungary did, however, note that the TSA covered the accounts, among others, of regional development

¹⁰ "Donors" are external to the government and may include governments and non-governmental organisations and they may make grants or loans, and these transfers may be linked to specific projects or outcomes, or be simply budgetary contributions.

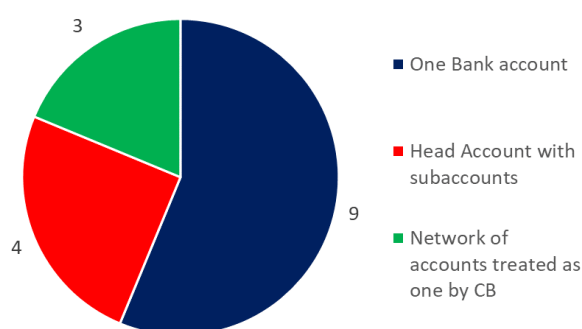
¹¹ Although 11 of the 2016 respondents completed the 2020 survey, one did not; 5 countries completed the 2020 survey but not that of 2016.

councils and of county governments; and in Turkey’s case, although the TSA regulations extend to SNGs, in practice they are not currently included in the TSA. For countries that include the SNGs there are some qualifications, and it is not always clear the extent to which the SNG accounts are fully integrated with those of central government to form a complete TSA. Azerbaijan qualified its response noting that the Nakhchivan Autonomous Republic is within the TSA, but municipalities are able to use the TSA if they wish. Russia noted that SNGs have their own accounts, although they are within the TSA. In the 2016 survey Belarus indicated that local governments have their TSA account in commercial banks; it reports that SNG cash balances are now included in the general government TSA although SNG accounts are still in commercial banks.

Structure of the TSA

17. In almost all cases the TSA is either a single bank account or a consolidated bank account with a number of subsidiary accounts, as shown in Figure 3. In three countries (Turkey, Tajikistan and Russia) the TSA was reported as a set of accounts which the central bank treats as one. Three countries reported “other”, but in two cases this was no more than a qualification (to record that budgetary units or SNGs had separate accounts within the TSA which were otherwise integrated or consolidated); and Azerbaijan noted that it was still closing transit accounts and that the TSA would be one account shortly. The four countries that noted the sub-account structure were Albania, Hungary, Moldova and North Macedonia. The other eight countries not specifically mentioned above all emphasised the one bank account structure (with Azerbaijan making a total of nine in that category).

Figure 3: The Structure of the TSA



18. It is significant that over half the countries (i.e. nine) report a single TSA account, rather than a pyramid or network of accounts. It compares with less than half in 2016. This positive trend is likely to reflect greater use of ledger coding to provide the required separation and accounting for funds which was only possible in the past with separate bank accounts (this feature was not, however, included as a question in the survey and would require further analysis). Although as noted three countries responded with “other” in all cases their explanation clarified that a good practice TSA structure is in place, and they have been reclassified accordingly. In Belarus a single account exists for central government. In North Macedonia, the response suggests that it uses ledger accounts rather than bank

accounts to control separate funds. The important point to note is that all respondents have a TSA structure, based either on bank accounts or the ledger of the FMIS, which allow simultaneous separation and control of funds while fully consolidating cash holdings for at least central general government.

Flows into the TSA

19. In all countries all central government tax and non-tax receipts flow to the TSA (in some cases through the commercial banks). That is also the case for SNG tax and non-tax revenues where SNGs are part of the TSA.

20. **More than half of the countries also have some other funds, budgetary and extra-budgetary, whose receipts flow to the TSA** as do donor grants and loans (and those associated with other financing transactions). In most countries social fund receipts flow to the TSA; such receipts are at least 20 percent of the total in Albania, Belarus, Moldova, North Macedonia, and Russia (and if the definition of “social fund” was extended to include the Health Fund of Hungary, that country would be added to this list). Extra-budgetary receipts flowing to the TSA are most significant in Tajikistan. However, most countries also noted some funds that are outside the TSA.

21. **The management of trust/deposit money remains mixed with fewer than half respondents confirming funds are held in the TSA.** Seven countries indicated that funds are held in the TSA beyond the eight categories identified in the survey but only two gave specific examples. It is difficult to compare fully with the 2016 report, which includes some different respondents, but it appears that the TSA in most countries now has a somewhat wider coverage of revenue/receipt flows. In 2016 only 10 out of 12 countries reported all tax and non-tax revenues flowing to the TSA.

22. The 2021 responses are summarised in Figure 4 and Table 1. Figure 4 shows the simple yes/no score for each category of receipts. In relation to SNG receipts, only tax and non-tax revenues are shown; most other SNG flows are small and the answers (which are not quite as complete as those for central government) suggest that their treatment is similar to the flows to central government (note that three countries do not include SNGs in their TSA). Table 1 has more detailed information by country.

Figure 4: Flows into the TSA: Summary

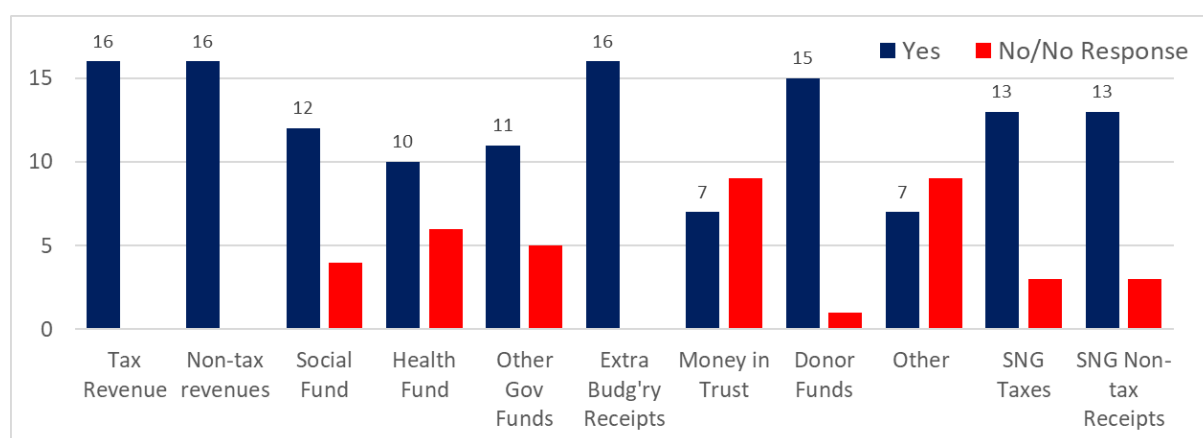


Table 1: Flows into the TSA, by Country

| | Taxes | Non-tax receipts | Social Fund | Health Fund | Other Gov Funds | Extra Budgetary Receipts | Money in Trust | Donor grants & loans | Other | SNG Taxes | SNG Non-tax Receipts |
|---------------------------------|-------|------------------|-------------|-------------|-----------------|--------------------------|----------------|----------------------|-------|-----------|----------------------|
| Albania ¹² | 66 | 3 | 20 | 3 | 1 | Na | Na | 2 | No | 5 | Yes |
| Armenia | Yes | Yes | No | No | No | Yes | Yes | Yes | | Yes | Yes |
| Azerbaijan ¹³ | 19 | Yes | 13 | Yes | Yes | 2 | No | Yes | | 19 | Yes |
| Belarus | 33 | 6 | 31 | | Yes | 1 | Na | No | | 27 | 3 |
| Croatia | Yes | Yes | Yes | No | No | Yes | | Yes | | no | no |
| Georgia | Yes | Yes | Na | Na | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hungary | 50 | 15 | 18 | 13 | 3 | Yes | Yes | Yes | Yes | No | No |
| Kazakhstan | Yes | Yes | Yes | Yes | No | Yes | No | Yes | | Yes | Yes |
| Kyrgyz Republic | Yes | Yes | | Yes | Yes | Yes | | Yes | | Yes | Yes |
| Moldova ¹⁴ | 57 | 4 | 23 | 8 | Yes | 5 | Yes | Yes | Yes | 6 | 1 |
| N. Macedonia | 54 | 4 | 20 | 8 | 1 | 5 | | 2 | | 4 | 1 |
| Russia ¹⁵ | 37 | 11 | 36 | Yes | No | 3 | | Yes | | 27 | 2 |
| Romania | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Tajikistan ¹⁶ | 38 | 9 | No | Na | Na | 8 | No | Yes | 8 | 34 | 1 |
| Turkey | 55 | 12 | Yes | Yes | Yes | Yes | | Yes | Yes | | |
| Ukraine | Yes | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Note: The numbers in the table apply to the percentage of general government revenues; where those percentages have been given, they replace what would otherwise be a simple “yes” (there will be rounding errors). Where the relevant flow is not to the TSA an answer of “No” is shown; if there is no such flow, the answer is “Na”, ie non-applicable. Again, in relation to SNG receipts, only tax and non-tax revenues are shown.

¹² Some fund receipts are recorded below the line. All SNG revenues are included within the total for taxes.

¹³ Some funds are outside the TSA

¹⁴ Substantial receipts (from donor loans & internal security sales) flow to the TSA as below the line financing items and are therefore (it is assumed) integrated into the TSA.

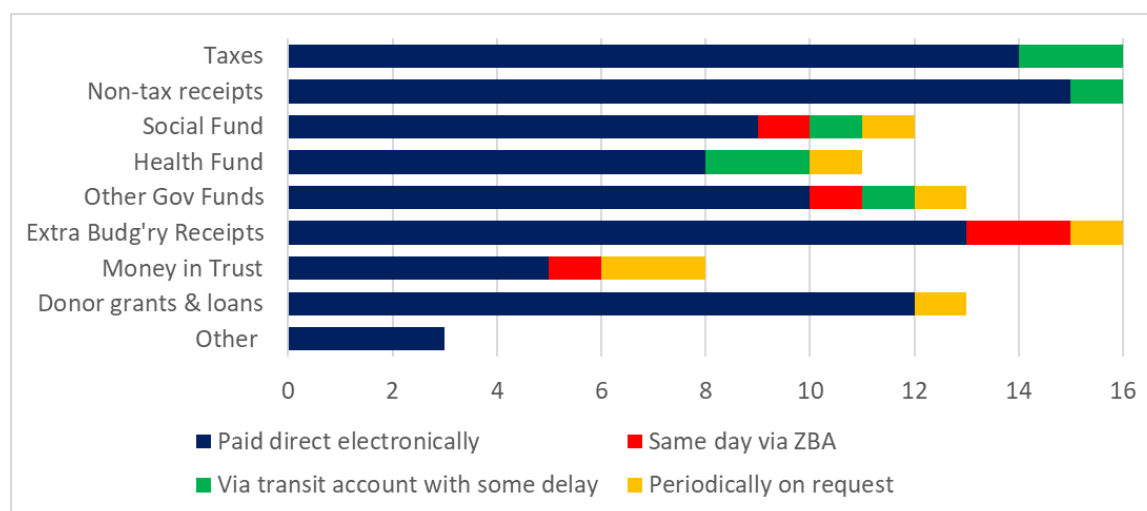
¹⁵ Substantial federal budget receipts flow to the National Welfare Fund (NWF). Separate accounting and management arrangements apply to the NWF; currently the revenues received from placing its funds flow to the federal budget.

¹⁶ Social fund accounts in a State Savings Bank

The Mechanism for Transfer of Revenues to the TSA

23. **There is significant use of electronic funds transfer, with revenues flowing directly to the TSA.** For general government tax receipts, generally the most significant source of revenue, only two countries did not deposit funds into the TSA the same day, either directly or via ZBAs. Both countries used transit accounts for tax and in Albania this was also the mechanism for non-tax revenues. North Macedonia noted the use of suspense or mirror accounts to facilitate the transfers; and Azerbaijan noted that a separate payment system had been created to support transfers to the TSA. Figure 5 summarises the mechanism by type of receipt for central government.

Figure 5: Transfer of Government Revenues to the TSA



24. **Table 2 summarizes the same results by country.** It includes SNG taxes and non-tax revenues. Respondents were asked to identify the mechanism that applied to the greatest proportion of revenue in each category, drawing from the following options:

- Paid directly into the TSA electronically*
- Paid to the TSA the same day through ZBAs in commercial banks*
- Paid to the TSA through transit accounts with some time delay*
- Transferred periodically to the TSA on request from the collecting authorities*
- Other*

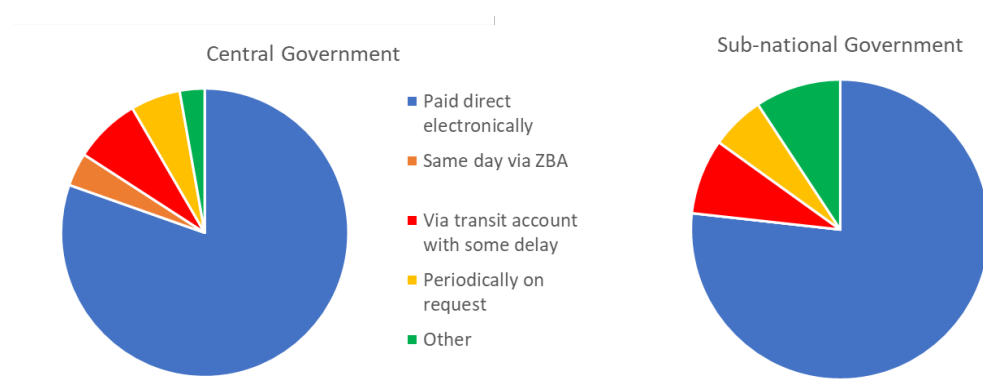
Table 2: Transfer of Government Revenues to the TSA, by Country

| | Taxes | Non-tax receipts | Social Fund | Health Fund | Other Gov Funds | Extra Budgetary Receipts | Money in Trust | Donor grants & loans | Other | SNG Taxes | SNG Non-tax Receipts |
|------------------------|-------|------------------|-------------|-------------|-----------------|--------------------------|----------------|----------------------|-------|-----------|----------------------|
| Albania | c | c | c | c | c | d | c | d | | c | c |
| Armenia | a | a | d | d | d | a | d | a | | a | a |
| Azerbaijan | a | a | a | a | a | a | Na | a | | a | a |
| Belarus | a | a | a | Na | a | b | | | | a | a |
| Croatia | a | a | a | | | a | | a | | | |
| Georgia | a | a | | | a | a | a | a | | a | a |
| Hungary | a | a | a | a | a | a | a | a | a | | |
| Kazakhstan | a | a | | a | a | a | | | | a | a |
| Kyrgyz Republic | a | a | | a | | a | | a | | a | a |
| Moldova | a | a | a | a | a | a | a | a | | a | a |

| | | | | | | | | | | | |
|--------------|---|---|---|----|----|---|----|---|---|---|---|
| N. Macedonia | a | a | a | a | | a | | a | | a | a |
| Russia | a | a | a | a | | a | | a | | a | a |
| Romania | a | a | a | a | | a | a | a | a | a | a |
| Tajikistan | a | a | e | Na | Na | a | Na | a | e | a | a |
| Turkey | c | a | b | c | b | b | | e | | | |
| Ukraine | a | a | a | | a | a | a | a | a | a | a |

25. The practices in relation to SNG receipts are similar to those of central government. Figure 6 is a simple visual illustration of this, showing how all SNG and all central government inflows compare in this respect.

Figure 6: Transfer of Central and Sub-national Government Revenues



Payment Systems

Payment Systems: The International Approach

Governments increasingly process their payments electronically, although some still use cheques or physical cash. Electronic payments are typically processed by accessing one of two country-wide systems:¹⁷

- **The Real Time Gross Settlement (RTGS) system** settles payments between banks in real time on a gross one-to-one basis, without bundling or netting with any other transactions. The RTGS is suitable for low-volume high-value payments; the transfers, settled across banks' accounts at the central bank, are immediate and irrevocable, and therefore carry no credit risk. For these reasons the RTGS is usually managed by the central bank and regarded as part of the country's critical economic infrastructure. Higher charges generally preclude it being used for all transactions.
- **The Automated Clearing House (ACH) system** processes domestic low-value payments between participating financial institutions. It may support both credit transfers and direct debits. The system is designed to process batches of payments, one or more times each day, containing numerous transactions, and it charges fees low enough to encourage its use for low value payments. Within the batch, transactions are netted between the participants, which reduces the number of final settlements but implies delay and some credit risk.

¹⁷ The acronyms used below are generic; many countries have their own nomenclature.

A government may access the RTGS or ACH system, or both; and may do so in a variety of ways. Where it has as an adequate system and security infrastructure, it may itself be a party to the system, interacting with it as would a commercial bank, with the funds transfer probably driven from the IFMIS – see also Box 1. Alternatively, the treasury may instruct the central bank to make payments on its behalf (the payments will usually be batched with the instructions distinguishing between payments made through the RTGS or ACH). Or it may instruct a commercial bank to make the payments; this latter model tends to be used in a dispersed environment when individual ministries process their own payments, although in some cases commercial banks may be instructed to make low-value payments even if the central bank is used for high-value payments. When using a commercial bank, the TSA is debited when a transfer is made to the bank, whether it is in advance or after settlement of the respective batch.

Box 1: Direct Access to RTGS/ACH

As reported below, direct access to the banking system is a strong feature of arrangements in PEMPAL countries. In the case of Moldova, which was among the earlier countries to adopt this technique (in 2007), a major reason was the need to capture detailed receipt data for control and reporting. This was a common issue and challenge, with some central banks being either unwilling or unable to provide the required detail; and the need for proper accounting and controls not always being met when third parties acted on the Treasury's behalf. In view of the strong accounting controls evident in revenue collection in the region it is apparent that this was a successful strategy, as all countries that followed Moldova confirmed. It also highlights the role and importance of government in determining how payment systems operate, particularly in relation to accounting and control over transactional data. At a minimum each country should seek to ensure its complex accounting and reporting requirements are being supported in modern payment systems.

Government Payments in PEMPAL Countries

Processing of Payments from the TSA

26. **In 15 out of 16 countries the majority of government payments are made directly from the TSA**, i.e. without first transferring cash to a ministry account at a commercial bank, thereby minimising the risk of cash lying idle. The question related to the *majority* of payments and some countries will have some payments made from accounts outside the TSA. Albania noted that some government payments are made outside the TSA, for example, health and social fund payments made from other accounts.

27. **Most countries have direct access to the banking system**, either through being a member of a payment system, or using a batch system to access it through the central bank (or both); just two countries use a commercial bank. The number of countries (10 of the 16, i.e. over 60 percent), who are a member of the RTGS is almost certainly much higher than

would be the case for their peers in other regions of the world. The position is summarised in Figure 7 and Table 3.

| Table 3: Access to the Payment System | | | | Figure 7: Access to the Payment System | | | |
|--|--|--|---|---|----|--|--|
| | Direct party to / member of payment system | Access payment system through central bank | Access payment system through commercial bank | | | | |
| Albania | | X | | | 12 | | |
| Armenia | X | | | | 10 | | |
| Azerbaijan | X | | | | 8 | | |
| Belarus | | X | X | | 7 | | |
| Croatia | | X | | | 6 | | |
| Georgia | X | | | | 4 | | |
| Hungary | X | X | | | 2 | | |
| Kazakhstan | X | | | | 0 | | |
| Kyrgyz Republic | X | | | | | | |
| Moldova | X | | | | | | |
| N. Macedonia | | X | | | | | |
| Russia | X | X | X | | | | |
| Romania | X | | | | | | |
| Tajikistan | | X | | | | | |
| Turkey | | X | | | | | |
| Ukraine | X | | | | | | |

28. **The methods of payment are very similar.** E-payments dominate as would be expected in view of RTGS connectivity. Every country either uses the RTGS or a batch payment system (whether through the central bank or ACH); eight use both. Romania and Albania noted that they use the ACH for small value payments, which accounts for the “other” category in Table 4 and Figure 8 which summarize the responses.¹⁸

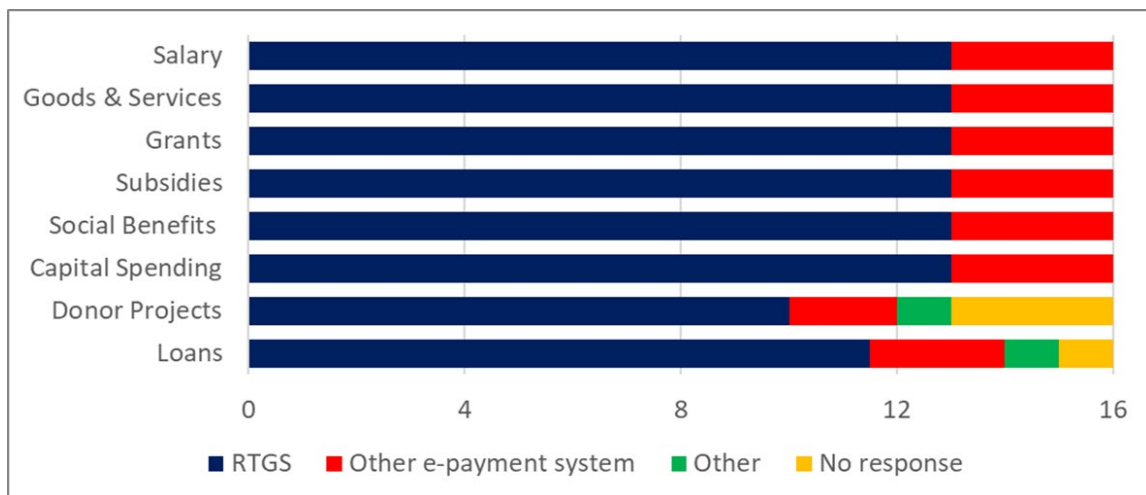
| Table 4: Use of the Payment System | | | | Figure 8: Use of the Payment System | | | |
|---|------|---------------------------------|-------|--|----|--|--|
| | RTGS | Other electronic payment system | Other | | | | |
| Albania | X | X | X | | 16 | | |
| Armenia | X | X | | | 14 | | |
| Azerbaijan | X | X | | | 12 | | |
| Belarus | | X | | | 10 | | |
| Croatia | X | X | | | 8 | | |
| Georgia | X | | | | 6 | | |
| Hungary | X | X | | | 4 | | |
| Kazakhstan | X | | | | 2 | | |
| Kyrgyz Republic | | X | | | 0 | | |
| Moldova | X | X | | | | | |
| N. Macedonia | X | | | | | | |
| Russia | X | | | | | | |
| Romania | X | X | X | | | | |
| Tajikistan | X | | | | | | |
| Turkey | X | | | | | | |
| Ukraine | X | X | | | | | |

29. **There is very little differentiation between the handling of payments according to their economic category.** With the exception of the two countries that largely rely on another payment system (Belarus and Kyrgyz Republic), almost all (large) payments are made through the RTGS whatever their economic category, see Figure 9. The main single exceptions (“other” in the figure) are payments for donor projects and loan repayments in North Macedonia which are made from mirror accounts.¹⁹

¹⁸ Moldova noted in a later part of the questionnaire that it also uses the ACH for some smaller value payments, which may be the case for some other countries

¹⁹ Mirror accounts allow transactions in one account to be immediately reflected in another account. They are often used to mirror in domestic currency transactions that are made in foreign currency.

Figure 9: Payment Mechanism by Economic Category



30. The mechanism used for payments by SNGs for the different economic categories is almost exactly the same as that used by central governments, at least in those countries where SNG balances are integrated in the TSA. Of the other three countries, Croatia and Turkey supplied no details, while Hungary indicated that the SNGs do not use the RTGS but another payment system. Hungary also noted that local governments can decide whether to keep their accounts with the Treasury or with commercial banks.

31. **A few countries still use cash or cheques to make payments, but the amounts are very small.** Russia identified cash used for just 0.02 percent of payments (zero for cheques); Armenia reported less than 1 percent for cash (zero for cheques); and Ukraine noted 0.17 percent for cheques (zero for cash).

Numbers of Accounts and Cash Balances

32. **A series of questions were asked about the number of accounts in different institutions (central bank and commercial banks),** whether they were operating, investment or other accounts and the cash balances currently in each sub-category. The answers were incomplete; some countries did not offer any response. It also seems that the questions may have been interpreted differently, particularly in relation to the split of balances across different categories.

33. **It is clear that there is a range of relevant experiences,** although different approaches to the question suggest that it is not realistic to provide a summary table or figure. Among the experiences noted:

- *Albania distinguished between transit accounts and others, with the former being more numerous.*
- *Armenia noted several investment or term deposits at the central bank.*
- *Azerbaijan referred to the substantial balances (30 percent of the total) held by the State Petroleum Fund in a financial institution (not a commercial bank).*

- *Belarus holds several accounts in both the central bank and the commercial banks.*
- *Romania in contrast said that it has no accounts outside the TSA.*
- *Croatia held investment or term deposits with both the central bank (56 percent of the total) and commercial banks (44 percent); almost all operating or current account balances are in the central bank.*
- *The Kyrgyz Republic explained that there were over 5,000 individual accounts in the central bank, holding more than 50 percent of operational balances, with more than 100 term deposit/investment accounts also holding substantial balances.*
- *Russia reported 16 accounts in the central bank holding 32 percent of balances which operate in addition to TSA.*
- *Ukraine noted some foreign currency accounts for operating purposes in commercial banks as well as the central bank (Azerbaijan also noted separate foreign currency accounts, in its case in the central bank; it is likely that some other countries have them).*

Commercial Relationships with the Central and Commercial Banks

Commercial Relationships: International Practice

Government cash (and debt) managers have a range of relationships with their central bank. *The central bank provides services, notably as banker, but may also be fiscal agent, settlement agent, registrar and so on. As more active cash management develops, increasing importance must be attached to interaction and coordination between the treasury or DMO and the bank in relation to money market operations. They will both have a common interest in developing the money market, but there may be areas of tension, for example, in the respective use of T-bills or central bank bills (CB-bills); the timing and amounts of respective money market auctions and other transactions; in the interest paid on the TSA and impact on central bank's costs; and in the central bank's portfolio of government securities: their roll-over, marketability and potential run-off. Coordination and cooperation mechanisms are needed covering both policy and operations, which are usually expressed in some form of memorandum of understanding (MoU) or similar protocol. Services should be the subject of a contract or service level agreement to clarify roles, responsibilities, and expectations; and should identify, for example, information flows, fees paid and the handling of business continuity problems.*

It is regarded as best practice for the central bank to pay a market-related interest rate on government deposits:²⁰

- *It improves accounting transparency and avoids the implicit cross-subsidy associated with administered rates.*
- *It removes the incentive for the ministry to take economically inappropriate decisions in relation to its balances, such as placing funds in commercial banks with low credit ratings.*

Similarly, in the interests of transparency and proper financial incentives the MoF should pay transaction-related fees when the central bank undertakes transactions on behalf of

²⁰ See Pessoa and Williams (2012)

the government, whether as banker or as fiscal agent. The main benefit of such reciprocal arrangements between the MoF and the central bank is the avoidance of potential distortion to incentives. The reference interest rates that are used vary. They include the rates available for non-bank deposits at commercial banks or for interbank deposits; the rates received on recent Tbill or related tenders; and the rates on counterpart assets held by the central banks. More common are rates linked to the central bank's policy or lower corridor rates. There are other examples where interest is paid, but at rates below the market rates, although currently low international interest rates often make the differential negligible.

Many central banks that do not pay market interest rates on the main TSA current account are willing to do so on term deposits, usually at a rate reflecting the term of the deposits. That recognises the different role of term deposits, which may act as an additional buffer for government, or help the central bank to drain excess liquidity.

The same principles should apply to the relationship with commercial banks, .ie. it should be properly documented and the MoF should pay fees but receive interest as would any other market participant. In some countries legacy arrangements still apply under which neither fees nor interest are paid, with the banks being compensated by free use of deposits from the MoF (sometimes represented by delays in transferring revenue to the TSA).

Commercial Relationships with the Banks in PEMPAL Countries

Interest on Cash Balances

34. **Most countries (10 of the 16) receive interest on at least some cash balances at the central bank.** This proportion is slightly higher than in 2016 (6 of 12) although the 2016 survey did not pick up any differences between current and term deposit accounts. Thus Albania receives interest on term deposits only, but was classified as “no interest” in 2016. Kazakhstan is the other country that has moved from “no interest” to “interest” between the two surveys. In six countries interest is paid on both operating (or current) accounts and term (or investment) deposits. Four more countries have interest on one account category, but six are not paid interest at all. Country experiences are in Table 5. In most cases interest is paid on separate accounts, although in a few countries it is paid on the net balance (the total interest paid will be the same unless some accounts are overdrawn, with a different rate being charged). Some information is given in the Table on rate determination, but it varies greatly and there is no one dominant analogue or benchmark; more countries earn interest somewhat below the central bank's policy rate than above it. Three countries – Moldova, Romania and Turkey – have a revenue sharing arrangement with other institutions that hold their balances in the TSA.

Table 5: Interest paid by the Central Bank

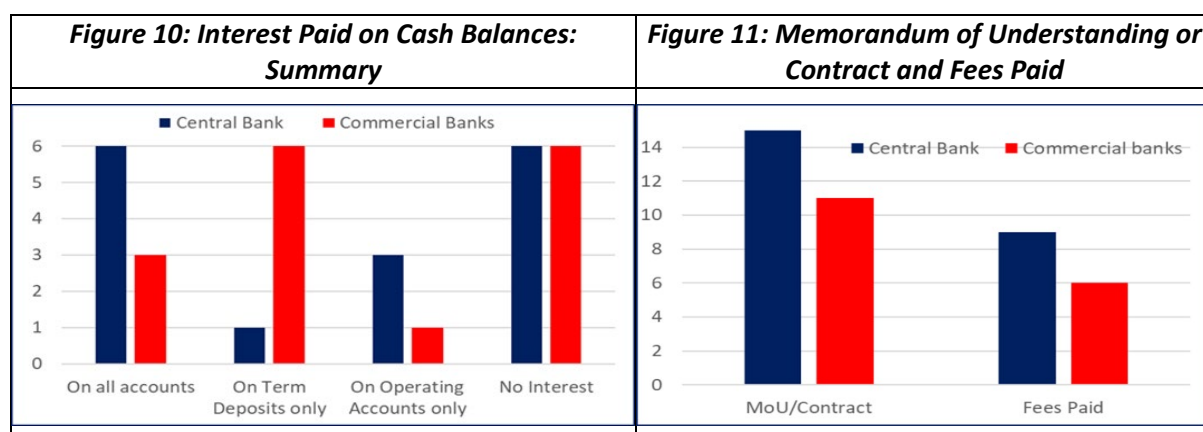
| | Interest on operating or term accounts | On separate accounts or netted | Rate determination and other information |
|-----------------|--|--------------------------------|---|
| Albania | Term accounts only | Each account | Variable rate; interpolating base rate with average yield in 3-month Tbill auction (slightly above base rate) |
| Armenia | No interest | | |
| Azerbaijan | No interest | | |
| Belarus | Both operating and term accounts | Each account | For operating accounts, determined by law (0.5%); for term accounts, market-based as contracted |
| Croatia | Both operating and term accounts | Each account | Weighted monthly average overnight interest rate realized in the interbank market - below policy rate |
| Georgia | No interest | | |
| Hungary | Both operating and term accounts | Net basis | Variable; central bank policy rate and market rate |
| Kazakhstan | Both operating and term accounts | Each account | |
| Kyrgyz Republic | No interest | | |
| Moldova | Both operating and term accounts | Net basis | Weighted average rates on state securities sold in the last auction - above policy rate |
| N. Macedonia | Operating accounts only | Net basis | Based on the interest rates on overnight deposits up to a balance ceiling - below policy rate |
| Russia | No interest | | |
| Romania | Operating accounts only | Each account | Rate paid by central bank on banks' mandatory reserve - below policy rate |
| Tajikistan | Operating accounts only | Net basis | Determined by negotiation - currently below policy rate |
| Turkey | Both operating and term accounts | Each account | Determined by the protocols signed with the Central Bank. |
| Ukraine | No interest | | |

35. **A similar proportion of countries receive interest on their balances with commercial banks.** In this case there are only three that receive interest on both operating accounts and term deposits, although seven more receive interest on at least one of these categories (especially on term deposits). There is again variation in rate determination, although some rates seem to be negotiated rather than strictly market determined. Details are in Table 6. One of the slightly unexpected results of this comparison is that slightly more countries (nine compared to seven) receive interest on their term deposit accounts at commercial banks than at the central bank, whereas more receive interest on their operating accounts at the central bank (nine compared with four). Further analysis would be needed to determine how far the differences reflect local market circumstances or are a reflection of administered arrangements that inhibit financial market development.

Table 6: Interest paid by the Commercial Banks

| | Interest on operating or term accounts | On separate accounts or netted | Rate determination and other information |
|-----------------|--|--------------------------------|---|
| Albania | Term accounts only | Each account | Variable rate, linked to av. yield in 3-month Tbill auction |
| Armenia | No interest | | |
| Azerbaijan | Term accounts only | Each account | |
| Belarus | Both operating and term accounts | Each account | For operating accounts, determined by law (0.5%); for term accounts, market-based as contracted |
| Croatia | Both operating and term accounts | Each account | According to contract |
| Georgia | Term accounts only | Each account | Priced by auction |
| Hungary | No interest | | |
| Kazakhstan | No interest | | |
| Kyrgyz Republic | No interest | | |
| Moldova | Operating accounts only | | |
| N. Macedonia | No interest | | |
| Russia | Term accounts only | Each account | Based on the policy rate of the Bank of Russia or RUONIA, less a discount |
| Romania | No interest | | |
| Tajikistan | Term accounts only | Each account | Linked to commercial rates |
| Turkey | Term accounts only | Each account | Determined by the protocols signed with the commercial banks |
| Ukraine | Both operating and term accounts | Each account | |

36. The aggregate data for whether there is a documented relationship in an MoU or similar is summarised in Figure 11, together with data on whether fees are paid for the services supplied by the central bank and commercial banks. More details are in Table 7. The comparisons are not straightforward because the package of services supplied varies. The central bank will be banker but may also be fiscal agent, paying agent, registrar and so on. Commercial banks will be providing a different service for revenue and payment transactions. It is clear from countries' responses that the fees charged for different services may be calculated differently or in some cases waived.



Contracts and Fees

37. Almost all countries have documented their relationship with their central bank (the Kyrgyz Republic is an exception); and in most of those cases some fees are paid. Only just over half the reporting countries have a contractual or similar relationship with their commercial banks, although most of the others are unlikely to use the banks for any services. Of those with a contract, most pay fees for at least some services. Fee structures for both the central bank and the commercial banks vary: there are differences in the mix of fixed and variable fees, with the variable fees driven either by transaction or by value.

Table 7: The Documented Relationship with Central & Commercial Banks and Fees Paid

| | Central Bank | | | Commercial Banks | | | | |
|------------------------|----------------|--------------|---|--------------------------|-----------|--|--------------------|-----------|
| | MoU or Similar | Fees charged | Summary details | MoU, contract or similar | Fees paid | Summary details | Retention of funds | Days held |
| Albania | Yes | No | | Yes | No | | No | 1 |
| Armenia | Yes | No | | Yes | Yes | For cash payments, up to 1% of the payment amount | Yes | 1 |
| Azerbaijan | Yes | Yes | Symbolic amount | Yes | Yes | Fees for some services | No | |
| Belarus | Yes | No | | Yes | No | | No | |
| Croatia | Yes | Yes | Fixed and turnover-related fees | Yes | Yes | Fixed and turnover-related fees | No | |
| Georgia | Yes | No | | Yes | No | | No | |
| Hungary | Yes | Yes | Fee determined by central bank | No | No | | No | |
| Kazakhstan | Yes | No | | No | No | | No | |
| Kyrgyz Republic | No | No | | No | No | | No | |
| Moldova | Yes | Yes | For selected services | Yes | Yes | Fees a % of value but subject to nominal caps and floors | Yes | 1 |
| N. Macedonia | Yes | Yes | Fee brackets depending on transaction numbers | Yes | Yes | Flat rate per transaction | No | |
| Russia | Yes | No | | Yes | No | | No | |

| | | | | | | | | |
|------------|-----|-----|--|-----|-----|---------------|-----|---|
| Romania | Yes | Yes | Listed tariff for some systems; negotiated contract for others | No | No | | No | |
| Tajikistan | Yes | Yes | Mixed fee, some transaction related fees | No | No | | No | |
| Turkey | Yes | Yes | Listed tariff | Yes | Yes | Listed tariff | Yes | 3 |
| Ukraine | Yes | Yes | Fees for information & technical services; none for other services | Yes | No | | No | |

38. **Table 7 includes two columns on whether revenues flowing to the TSA are retained by commercial banks and if so for how long:** long retention periods are often used (in other regions) to compensate banks for the costs of managing government flows. That does not seem to be the case for PEMPAL countries. Only three noted a period of retention (with a fourth identifying it as more technical). In only one of these cases was the period of retention longer than a day (three days in Turkey²¹). A question was also asked about whether collection agencies hold back funds before transferring them to the TSA, e.g. to allow reconciliation. 15 out of 16 countries said this was not the case, North Macedonia noted a delay of one day.

²¹ The delay of 2-3 days for tax revenues transferred to the TSA only applies to those covered by long-standing contracts of the Revenue Administration with the commercial banks. All flows under the new TSA system (covering special-budget institutions, regulatory bodies, extra-budgetary funds etc.) are transferred to the TSA within the same day without any delay (collections received after 17:00 hours are transferred at 10:00 next day).

CASH MANAGEMENT AND CASH FORECASTING

Moving to Active Cash Management

The operational objectives of cash management may be expressed in different ways.

The high-level objective, i.e. of ensuring sufficient cash or liquidity to facilitate the smooth execution of the budget, is conceptually straightforward. In practice, however, it may need to be elaborated, with reference to indicators, e.g. the avoidance of arrears or other mechanisms that ration cash. The secondary objectives of economizing on cash, and managing efficiently the timing mismatch between inflows and outflows, are more difficult to specify, and their measurement requires a counterfactual. The saving of interest can be estimated by comparing with a more passive strategy. The wider benefits of smoothing the balance in the TSA are more difficult to assess, although some countries will try to assess the benefits to monetary policy in more qualitative terms.

In practice these additional objectives might be expressed in terms of an objective for the balance in the TSA. *It might be defined as a preferred balance or a minimum balance (which may be zero), and may be the same as the cash buffer (see below); or it may be defined as a range with a minimum and maximum; or occasionally as a maximum (e.g. above which balances will not be remunerated).*

The cash buffer is the minimum level of cash balances necessary to be sure of meeting day-to-day cash requirements, at all times, under all circumstances, taking into account the availability of other liquid resources. The required buffer, usually the minimum cash balance in the TSA, may be set in legislation or administratively. It will apply continuously across the year (although the quantum may sometimes be varied to reflect expected future cash needs or the annual borrowing plan for the year), and will be designed to ensure a sufficient balance to meet obligations taking account of cash flow volatility and unanticipated cash flow fluctuations. Some countries define the buffer in nominal terms, others might relate it to expected expenditure or debt servicing flows.²² A further policy choice is whether or not to disclose the buffer to the market. A sufficient buffer is likely to be seen by the market—investors and rating agencies—as a signal of prudence and credible policymaking. A counter argument is that publication of the precise composition may undermine the treasury’s market operations; or there may be concerns that a failure to hit a published target could damage credibility.

Cash flow forecasts are an essential support to more active cash management. *The monthly profile for the year, regularly updated, supports budget execution; but forecasts of future cash resources are needed, looking at least three months ahead to identify future cash flows peaks and troughs as a basis of decisions about future financing. If cash rationing or withholding of allocations is necessary, a longer horizon also gives time for spending ministries to develop a response. Although monthly forecast may initially be prepared, weekly, and subsequently daily forecasts are required as cash is managed more actively. The forecasts should be rolled forward regularly; at least monthly and in due course weekly; towards the end of the budget year, they will have to be rolled forward into the following year to maintain the forecast horizon.*

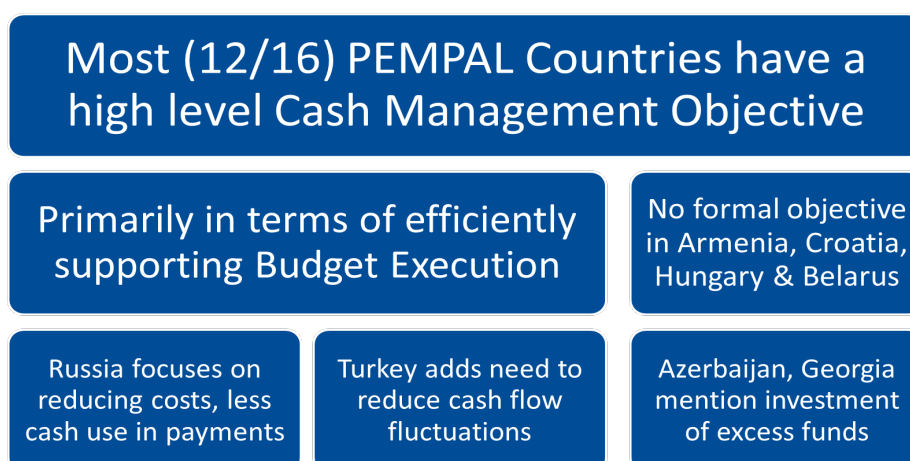
²² For choices and techniques, see Hürcan and others (2020)

Cash Management Objectives and Cash Flow Forecasting in PEMPAL Countries

Cash Management Objective

39. **Most countries, 12 of the 16, reported a high-level cash management objective.** There is no formal objective in Armenia, Croatia, Hungary and Belarus; and those in Georgia and Azerbaijan focus primarily on the investment of surplus funds. The objectives are mostly defined in terms of efficiently supporting budget execution, with Russia in particular putting heavy emphasis on efficiency – as illustrated in Figure 12.

Figure 12: Cash Management Objectives



40. **Many objectives are ill-defined or imprecise.** Several are lengthy (some 150 words in one case) and expressed in legal terms or quotes from legislation; they are really more elaborated versions of what would normally be understood as a high-level objective. Only Turkey’s objective is written more precisely; and, with a reference to avoiding cash flow fluctuations, seems to be more oriented to a more modern conception of cash management (“to provide cash needed for public expenditures in a timely and cost-effective manner...to mitigate unexpected fluctuations in cash flows...to give confidence to the markets by ensuring that budgetary expenditure is financed in a timely manner without delays”).

Cash Buffer

41. Only three countries (Turkey, Hungary and Albania) have a formal target for the cash buffer. Some pertinent characteristics include:

- *Albania: the buffer, minimum and maximum levels, is defined largely in relation to expenditure flows across a month. It can be varied as required.*
- *Hungary: the buffer was first set in 2003; is defined by the DMO in nominal terms and approved by the MoF; it may vary across the year.*
- *Turkey: the buffer, also first set in 2003, is defined in relation to cash flows; it may also vary across the year.*

42. In none of these countries is the buffer published.

- For Turkey and Albania, the target buffer is the same as the balance in the TSA; Hungary notes the availability also of repo investments and foreign currency deposits.
- Turkey has a separate target for foreign currency balances; in Hungary the domestic equivalent of foreign currency balances is included in the target, but not in Albania.

43. **Russia has also emphasised the need for a target buffer in practice**, depending on cash flow; and it may be that most countries operate a buffer in practice even if it is not formally defined (8 of the 12 countries reported a buffer in the 2016 survey)

44. **Countries were asked about the main determinants of the size of the cash buffer.** Most answered these questions fully despite not claiming a formal cash buffer (some comments were slightly artificial because there was no formal cash buffer). But they can nevertheless be interpreted as the factors that would be most important in driving the calculation of the minimum balance in the TSA. The results are in Table 8.

Table 8: Determinants of a Cash Buffer or Minimum TSA Balance

| | Volatility Revenue | Volatility Expenditure | Forecasting error - Revenue | Forecasting error - Expenditure | Auction failure | Wider financial market disruption | The risk of contingent liabilities | Size of obligatory payments |
|-----------------|--------------------|------------------------|-----------------------------|---------------------------------|-----------------|-----------------------------------|------------------------------------|-----------------------------|
| Albania | | X | | | | | | X |
| Armenia | X | X | | | X | | | X |
| Azerbaijan | | | X | X | | | | |
| Belarus | X | X | X | X | | X | X | |
| Croatia | | | | | | | | |
| Georgia | | X | | | | | | X |
| Hungary | X | X | X | X | X | X | | |
| Kazakhstan | X | | | | X | | | |
| Kyrgyz Republic | X | X | | | | | | |
| Moldova | X | X | X | X | | | X | X |
| N. Macedonia | X | X | X | X | X | | | X |
| Russia | X | X | X | X | | | | |
| Romania | X | X | X | X | X | X | X | X |
| Tajikistan | X | | | | | | | |
| Turkey | X | X | X | X | X | X | X | X |
| Ukraine | X | X | X | X | | | | |
| Total | 12 | 12 | 9 | 9 | 6 | 4 | 4 | 7 |

45. **Most countries pointed to the volatility of revenues and expenditures; and the errors in forecasting them.** Other factors – perhaps more relevant to the safety or precautionary component of the buffer, rather than the transactions component, included the risk of auction failure or of wider financial market disruption and the risk of contingent liabilities crystallizing. About half the countries noted the size of obligatory payments as another driver.

46. **Most countries had some safety nets in place, see Table 9 below.** Almost all eschew borrowing from the central bank (Tajikistan is an exception; Moldova noted that it would be able to issue securities to the central bank). Surprisingly no country has put in place credit lines, or similar arrangements, with commercial banks. Several countries, however, have ensured that any term deposits with the banks could be broken on demand. The ability to borrow from other public sector balances can also be useful (although if they are part of central government, ideally their balances would already be fully integrated into the TSA).

Some countries mention their ability to issue Tbills – but that option is available as a safety net only if they can be issued on the same day.

Table 9: Safety Nets

| | Borrowing from Central Bank | Commercial bank credit lines | Breaking term deposits without penalty | Other Statutory Funds | FX balances | Other |
|-----------------|-----------------------------|------------------------------|--|-----------------------|-------------|---|
| Albania | | | | | | |
| Armenia | | | X | | | |
| Azerbaijan | | | X | | X | Issuance of securities (inc to central bank) |
| Belarus | | | | | X | |
| Croatia | | | | | | |
| Georgia | | | X | | | |
| Hungary | | | | | | Repos available |
| Kazakhstan | | | | X | | |
| Kyrgyz Republic | | | | | X | |
| Moldova | | | | | X | Borrowing from EBFs' funds in TSA |
| N. Macedonia | | | | | X | Borrowing from other budget users' funds in TSA |
| Russia | | | X | X | X | |
| Romania | | | | | X | |
| Tajikistan | X | | | | | Issuance of treasury bills |
| Turkey | | | X | | | |
| Ukraine | | | | | | |

Cash Flow Forecasting

47. **All countries have a forecasting capability in place.** Information was asked in the survey on three characteristics: the forecast horizon, the frequency of roll forward and the time granularity, i.e. whether the forecast was daily, weekly or monthly. To present the results, the answers for each characteristic have been “scored” on a simple scale of one to three. These scores do not measure performance. A higher score does not necessarily mean “better”: a weekly roll forward of a daily cash plan extending one year ahead may be of little value in practice (e.g. if it is constrained to the approved budget). But a higher score does give an indication of the scale and ambition of the forecasting infrastructure.

48. **The scoring matrix and the frequency of the scores for each characteristic are summarised in Figure 13.** Time granularity was the characteristic with the highest score: but within this category there is a variety of treatments. Some countries (e.g. Russia, Moldova) develop a daily forecast for the month or weeks immediately ahead, others (e.g. Albania) for the year ahead. Similarly, some countries roll forward regularly, whereas others may roll forward frequently but only as and when needed or new information is available; sometimes the roll forward has a shorter horizon than the base forecast. These differences are not easily captured in the summary score.

49. Despite these shortcomings, the scores of individual countries, presented for each characteristic in Figures 14-16, are of interest. Only Russia has the maximum “score” of nine, although a few others score eight; the lowest aggregate score is four. Some country responses are added in Table 10 (although some relate more clearly to cash planning rather than cash forecasting).

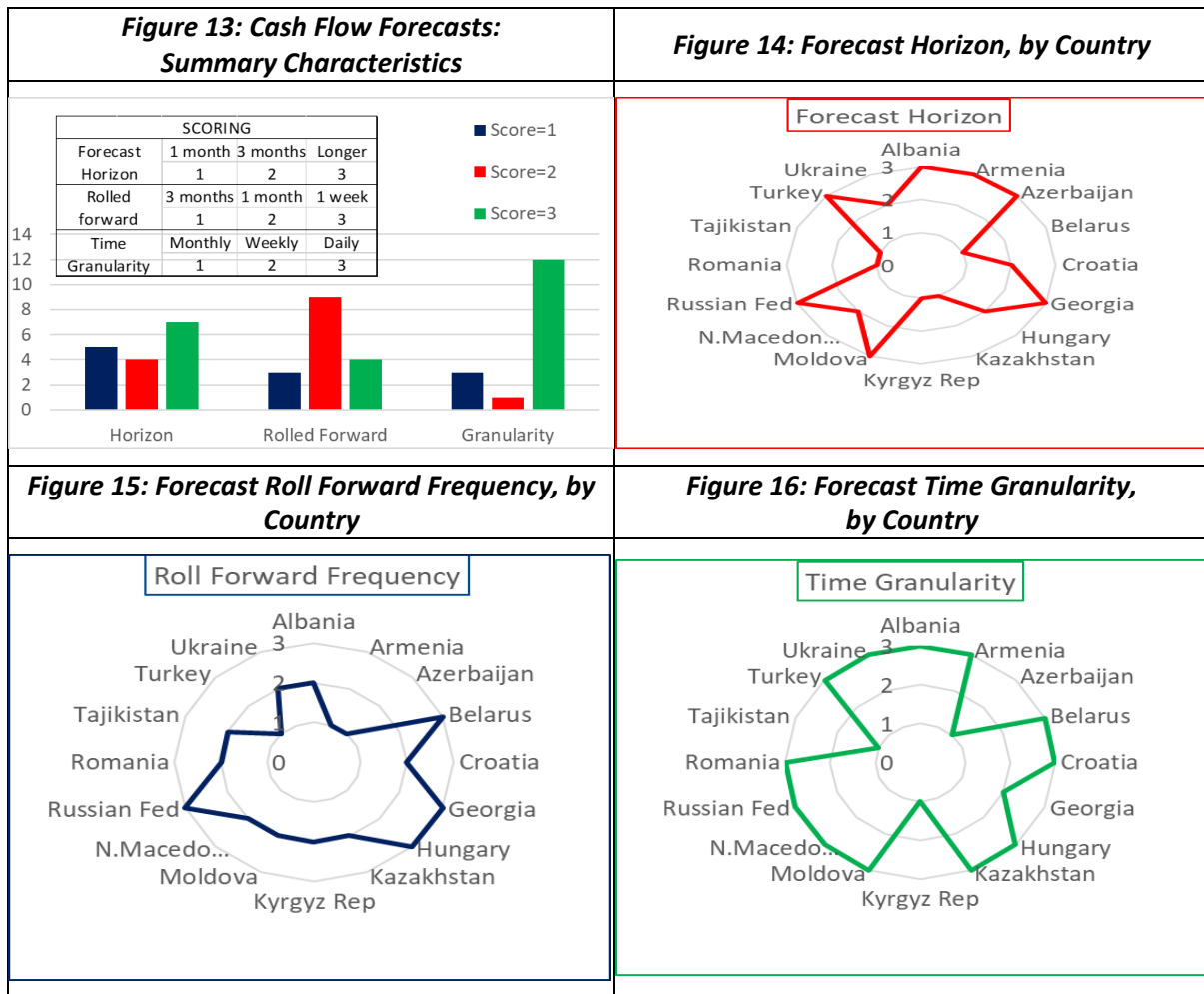


Table 10: Cash Flow Forecasting: Selected Country Responses

| | Country Responses |
|-------------------|--|
| Albania | Forecast is daily for the whole budget year |
| Azerbaijan | A one-year cash budget with a monthly breakdown is approved. Revenues by types, expenditures, deficit funding and raising of additional funds are specified. In the event of divergences, forecasts for the following month or quarter may be adjusted. Longer term adjustments ARE more rare. |
| Croatia | Forecasts are updated daily, and the weekly and monthly forecasts are updated accordingly. (the monthly account balance forecast is 80-85% accurate) |
| Hungary | Roll forward is twice weekly |
| Moldova | During the current month a forecast for the next month is prepared. Based on changes in monthly forecasts (for the current and next months) the one-year forecast is updated. The monthly forecast is broken down by weeks. The first 2-3 weeks where there are cash gaps are broken down by days. The forecast is updated daily. |
| Russia | Before the beginning of the next financial year a forecast is prepared for the year with a monthly breakdown, and a forecast for January with a daily breakdown. During the year the forecast for the year with a monthly breakdown is revised on a monthly basis and, based on the revised data, a forecast for the next month with a daily breakdown is prepared. Legislation does not require mandatory preparation of the rolling forecasts, such forecasts are prepared on a needs basis. |

Institutional Structures and Cash Management Instruments

Institutions and Instruments: International Practice

The international trend is for cash and debt management operations to be integrated in the same unit, which has benefits in terms of policy making and administrative savings (with a common skills base and systems). Moreover, if there are two arms of the MoF interacting with the financial market there is a risk of misleading market signals or a perceived failure to coordinate effectively with consequent impacts on the interest rates achieved.

There are different institutional options. Integration minimizes some of the internal coordination costs as well as ensuring a single point of contact with the market. In some countries, the forecasting function, at least for revenue and expenditure flows, remains with the treasury, even if other front, middle and back-office functions are fully integrated; in other countries functions may be further dispersed. But wherever the cash and debt management functions are organised separately, formal coordination structures are essential. Some form of cash coordination committee is required, bringing together relevant functions, and meeting regularly to review outturns, to review future forecasts and to decide on the necessary policy responses.

Tbills are usually the main instrument in moving towards more active cash management. Tbills potentially have a role as instruments of debt management, of cash management and of monetary policy. In cash management, issuance volumes are varied across the year with the aim of smoothing cash flow volatility; for this purpose the emphasis is usually on shorter-term (e.g. 1 month) Tbills, although Tbills with odd maturities might also be issued, i.e. to mature on days of cash inflow, further helping to smooth the net cash flow. As active cash management develops repo is often used for fine tuning cash flows, but that requires a developed and reasonable liquid repo.

Reverse repo is the preferred instrument for lending temporary surplus cash, if the market is sufficiently liquid.²³ It has the advantage of being both secured and flexible. Many countries, however, use bank deposits, term or overnight, although they should ideally be collateralised. Deposits with the central bank (which should be remunerated) are used, but should be confined to those occasions when they are necessary to underpin the monetary policy stance (i.e. when there is a structural liquidity surplus in the money market).

Institutions and Instruments in PEMPAL Countries

Institutional Structures

50. **Most of the reporting countries have a strong treasury function, characteristic of the region, which has clear responsibility for cash flow forecasting.** In many of these countries, the debt management function has grown separately from the treasury, with different reporting lines (although that of course still allows for operational coordination). Cash management, ie short-term borrowing and lending with a view to managing cash flows, and the forecasting input into those decisions, tends therefore to straddle the

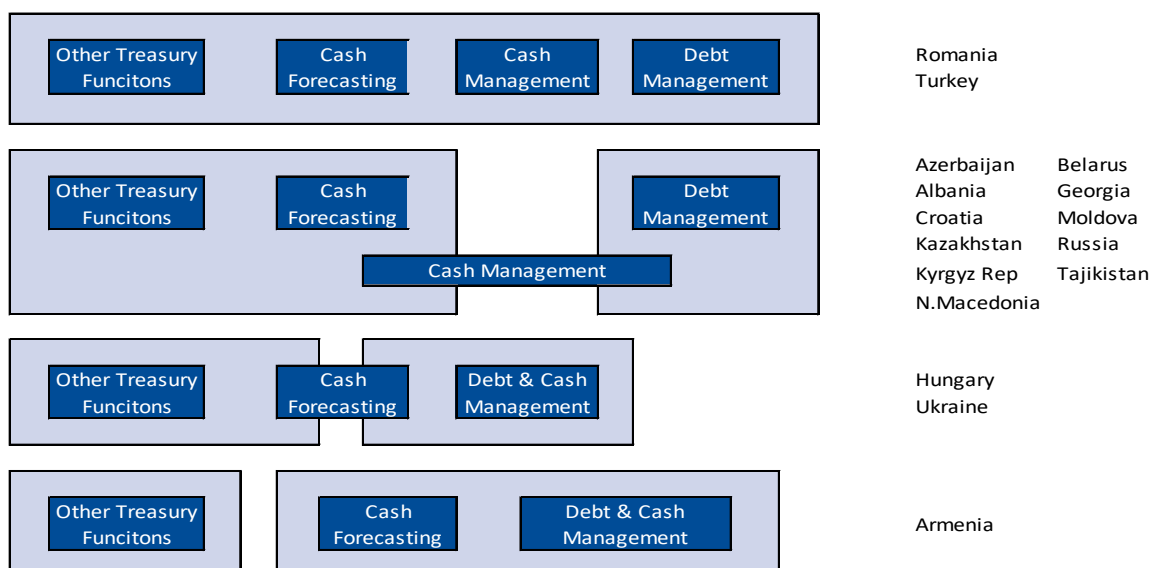
²³ See Fainboim and others (2020)

treasury and the debt management department or agency. This model characterizes 11 of the 16 countries, although there will be differences in their internal structures, i.e. reporting lines, the relationship with other ministry departments, and the range of other functions covered by the treasury.

51. **The other 5 countries all have somewhat different models.** All the models are illustrated, in highly summarised form, in Figure 17.

- *In Romania and Turkey, all the treasury and debt management functions have been brought together in a single general directorate or similar, although with different degrees of integration within that. Moreover, in Turkey the front office function (i.e. debt issuance and other market transactions) has now been spun out as a separate department or agency.*
- *Hungary has a fully-fledged debt management agency also with responsibility for cash management; although the cash flow forecasting is shared with the treasury.*
- *Ukraine is developing a debt management agency, which will take it close to the Hungary model. Currently cash flow forecasting is shared with the treasury and other ministry functions, which in turn interact with the debt management department.*
- *In Armenia, the cash flow forecasting unit is more closely integrated with the debt management department.*

Figure 17: Institutional Models for Cash Flow Forecasting and Cash Management



52. All models, and in particular those where the treasury and debt management functions are institutionally separate, require coordination and decision-making structures. Seven countries have a formal high-level cash coordination or liquidity management committee. Summary details are in Table 11, which also includes North Macedonia which has a technical-level committee. In five of these countries, at least some meetings are chaired by a minister (Albania, Croatia, Hungary, Romania and Turkey); and in the three other cases by

a senior official. Five of these eight countries have the characteristic separation between the treasury and debt department; it must be assumed that the other respondent countries in this category have other coordination structures.

Table 11: High-level Cash Coordination Committees

| | <i>High-level Committee</i> | <i>Chaired by:</i> | <i>Meeting Frequency</i> |
|------------------------|-----------------------------|---|------------------------------------|
| Albania | Yes | Deputy Minister of Ministry of Finance and Economy and/or General Secretary | Monthly |
| Croatia | Yes | Director of the State Treasury, Secretary of State of the Ministry of Finance | At least once a month |
| Hungary | Yes | The State Secretary of the Ministry of Finance | Monthly |
| Kyrgyz Republic | Yes | Ministry's senior management | |
| N. Macedonia | [Technical level] | Head of the Unit for projections and liquidity management | Every week |
| Russia | Yes | Deputy Head of the Federal Treasury | As necessary, but at least monthly |
| Romania | Yes | State Secretary | Monthly |
| Turkey | Yes | Minister (Deputy Minister) of Treasury and Finance ²⁴ | Monthly |

53. In all countries that responded, it is the debt department or equivalent that is responsible for short-term (as well as long-term) debt issuance and other borrowing. However, the lead responsibility varies for short-term investment of temporary surplus cash. In Armenia, Azerbaijan Hungary, Turkey, Ukraine it is closely linked with the borrowing function, which helps to ensure a single point of interaction with the financial markets. That is not the case in the other countries, although some qualifications may be necessary (thus in Romania, the treasury, which leads on short-term investment, is part of the larger integrated department; North Macedonia noted that it has not invested surplus cash; and in those countries with sovereign wealth funds, there will be other relevant institutional structures).

Cash Management Instruments

54. **All countries have some options available in the event of a prospective cash flow shortage.** Details are in Table 12. Tbills are widely used, mentioned by 10 countries. Slightly more countries (12) noted Treasury Bonds (Tbonds) although Tbonds usually require a longer lead time to change the issuance program – see Box 2. Three countries had the useful option of borrowing from within government, for repayment within the year (although as noted above, balances of central government bodies are ideally already fungible with the other balances in the TSA). Recourse to cash rationing is still seen as an option, although more countries would potentially delay allocations (reducing the authority to commit), which is less disruptive than delaying payments. None identified the sale of financial assets as an option.

²⁴ Meetings in which strategic benchmarks and guarantee and on-lending limit proposals are determined and chaired by the Minister.

Box 2: Tbills and Tbonds

The Tbond issuance program is usually announced some months ahead; and changes therefore require a long lead time if the risk of market disruption is to be avoided. Most active cash managers prefer to use the flexibility of Tbills, at least to manage cash shortfalls in the period immediately ahead. If the borrowing requirement for the year as a whole is likely to be increased Tbond issuance can be adjusted over a longer period without breaking announced calendars

Table 12: Responses to Cash Flow Shortfalls

| | Increased issuance Tbills | Increased issuance Tbonds | Borrowing within General Government | Delaying expenditure allocations | Delaying payments | Selling financial assets | Comment |
|-----------------|---------------------------|---------------------------|-------------------------------------|----------------------------------|-------------------|--------------------------|--|
| Albania | x | x | | x | x | | Other issuance options |
| Armenia | | x | | | | | |
| Azerbaijan | x | x | | | | | Liquidity shortage not arisen in practice |
| Belarus | | x | | x | x | | |
| Croatia | x | | x | | | | |
| Georgia | x | x | | | | | Breaking deposits without penalty |
| Hungary | x | x | | | | | Borrowing by repos |
| Kazakhstan | | x | | x | | | |
| Kyrgyz Republic | x | x | | x | | | |
| Moldova | x | x | x | | | | Within government, short-term borrowing from budget users |
| N. Macedonia | x | x | x | x | x | | Within government, short-term borrowing from budget users |
| Russia | | | | | | | Range of options, especially in management of surplus cash |
| Romania | | | | | | | FX from foreign buffer |
| Tajikistan | x | | | x | x | | |
| Turkey | x | x | | x | x | | Access to other borrowing instruments |
| Ukraine | | x | | x | | | |

55. **Most countries have Tbills available as a short-term borrowing instrument,** although the answers suggest that they may be seen more as a debt management instrument with a regular issuance programme. Details are in Table 11. Both Belarus and North Macedonia are able to issue 1-month Tbills which tend to be more useful in smoothing cash flow fluctuations. Ukraine mentioned short-term bonds. As noted above, most countries avoid borrowing from their central banks. Both Hungary and Russia have access to repo (as does Turkey although it has yet to use it). Romania borrows short-term from commercial banks, primarily to manage the intra-month cash flow profile. Details of both short-term borrowing and lending instruments are in Table 13.

Table 13: Short-term Lending and Borrowing Instruments

| | Borrowing Instruments | | | | | | Lending Instruments | | | |
|------------|-----------------------|-----------------------------|-----------------------------------|-------------------------------|------|---------------------|---------------------|-----------------------------------|---------------------------------|---|
| | Tbills | Other short-term securities | Commercial bank loans / overdraft | Central bank loans/ overdraft | Repo | Comment | Reverse Repo | Term deposits w. commercial banks | Term deposits with central bank | Other (please specify) |
| Albania | Yes | No | No | No | No | 3,6,12 month Tbills | No | | Yes | With central bank, 1 week to 1 month (also value limit) |
| Armenia | No | Yes | No | No | No | 3,6,12 month Tbills | No | No | Yes | With central bank 7 days to 12 months |
| Azerbaijan | Yes | Yes | No | [Limited] | No | Tbills rarely used | No | Yes | No | |
| Belarus | No | Yes | No | No | No | 1-month bills | | Yes | Yes | |
| Croatia | Yes | No | No | [Limited] | No | 3,6,12 month Tbills | No | Yes | Yes | |
| Georgia | Yes | | | | | | | Yes | | |
| Hungary | yes | Yes | No | No | Yes | | Yes | No | Yes | |
| Kazakhstan | No | Yes | | | | | | | Yes | |

| | | | | | | | | | | |
|------------------------|-----|-----|-----|----|-----|--------------------------------|-----|-----|-----|---------------------------------------|
| Kyrgyz Republic | Yes | | | | | | | Yes | | |
| Moldova | Yes | No | No | No | No | | No | No | Yes | |
| N. Macedonia | Yes | No | No | No | No | 1,3,6,12 month Tbills | No | No | No | |
| Russia | No | No | No | No | Yes | | Yes | Yes | No | |
| Romania | No | No | Yes | No | No | Commercial banks up to 2 weeks | No | No | No | |
| Tajikistan | Yes | No | No | No | No | Tbills less than 3 months | No | Yes | No | Term deposits less than 3 months |
| Turkey | Yes | | | | | | Yes | Yes | Yes | |
| Ukraine | No | Yes | No | No | No | Short-term bonds | No | No | No | Options available in law but not used |

56. **In relation to lending, half the respondents are able place deposits with the central bank and half with the commercial banks** (with some countries able to do both). The same three countries (Hungary, Russia and Turkey) that have the capability to borrow in repo have the capability to invest through reverse repo. In general, countries reported a wider range of instruments used for borrowing and lending than in 2016 although incomplete responses in the earlier survey complicate comparisons.

OTHER ISSUES

Recent Reforms in PEMPAL Countries

57. **Many countries have worked to develop their TSA and cash management capabilities in the last five years.** A summary is in Table 14. Eleven countries reported widening or other improvements in their TSA or upgrades in their payments systems to support electronic or faster processing. Seven noting cash flow forecasting and cash management reforms. Kazakhstan reported that interest is now paid on the TSA.

Table 14: Recent Reforms

| | Yes/No | Improvements and Changes |
|------------------------|--------|--|
| Albania | Yes | TA from World Bank and IMF on Improving Cash Management and Forecasting |
| Armenia | Yes | Accounts of governmental not-for-profit organizations transferred from commercial banks to Treasury |
| Azerbaijan | Yes | Many improvements in cooperation with the National Bank, Tax Service, Customs, & Pension Fund to lay foundation for electronic & online payments. Most transit accounts of Treasury's regional offices in commercial banks closed. Payments in cas practically abandoned. |
| Belarus | Yes | Active efforts to expand the TSA coverage |
| Croatia | Yes | The TSA has been expanded to include state-owned hospitals and port authorities |
| Georgia | Yes | Auctions - to place idle cash in commercial banks, LEPs and NLEs (legal entities) are obliged to spend funds from TSA, SNG budgets transferred to TSA |
| Hungary | Yes | Initiatives to improve forecasting accuracy. The Treasury's banking system, that manages the TSA subaccounts, will be replaced by a new one |
| Kazakhstan | Yes | Interest on the TSA |
| Kyrgyz Republic | No | |
| Moldova | Yes | Since 2016, the own revenues and resources of budget institutions have been consolidated into the TSA |
| N. Macedonia | Yes | Currently drafting active cash management manual; and implementing new integrated PFM IT system that will streamline and modernize liquidity management |
| Russia | Yes | Reform of treasury services: transition to the TSA and planned Treasury Payment System (TPS); TPS will improve treasury services in overseeing budget funds expenditure across 11 time zones; and also allow greater centralisation of funds and faster processing, increasing available liquidity |
| Romania | No | |
| Tajikistan | Yes | New Treasury law approved; new instructions at the approval stage; new information modules relating to obligations and cash management are at implementation stage. Full implementation will support modern methods of cash management |
| Turkey | Yes | With the latest amendment to the law, the scope of TSA system in Turkey is redesigned beyond general budget administrations to cover nearly all public financial resources (excluding Unemployment Insurance Fund etc) |
| Ukraine | Yes | Since January 2020, TSA model has been centralised: Treasury's local entities disconnected from electronic payment system and related sub-accounts closed. Budget Code modified to allow creation of new Government Debt Management Agency. New liquidity management framework also approved |

58. **Ten countries indicated that PEMPAL had contributed positively to their reform program.** A summary is in Table 15. Knowledge products, expert papers, study tours, and the sharing of experiences and best practices were all mentioned.

Table 15: The Contribution of PEMPAL to the Reform Program

| | Yes/No | The Contribution of PEMPAL |
|------------------------|--------|---|
| Albania | Yes | Knowledge products, study visits in Treasury system best practices, templates from the legislation of best practices |
| Armenia | Yes | Any cooperation with PEMPAL benefits the implementation of reforms. |
| Azerbaijan | Yes | A PEMPAL meeting resulted in a detailed description of the liquidity management model in many countries, especially in Russia. The MoF senior management has shown interest in this experience, with plans for the future |
| Belarus | Yes | Participating countries' experience has helped establish ways for engaging with stakeholders, explain rationale for the Treasury's actions in this area, identify types of resources to be accounted for in the TSA |
| Croatia | No | |
| Georgia | Yes | Experience of other countries |
| Hungary | No | |
| Kazakhstan | No | |
| Kyrgyz Republic | Yes | As regards the implementation of liquidity management practices |
| Moldova | No | |
| N. Macedonia | Yes | Many member countries have developed their active cash management - notwithstanding illiquid money market in N. Macedonia it potentially adds new value for budget users and taxpayers |
| Russia | Yes | Participation in PEMPAL programs increased understanding of certain TSA liquidity management issues; knowledge sharing with TCOP members relating to cash management development also beneficial |
| Romania | No | |
| Tajikistan | Yes | Study of expert papers on modern methods and consideration of other countries' experience via participation in regular video conferences contributed to development of cash management framework |
| Turkey | Yes | Sharing of TSA experiences of the PEMPAL member countries assisted in improving the TSA system in Turkey |
| Ukraine | No | |

The Impact of COVID-19

59. Two questions were asked in the survey; on whether COVID-19 had led to any changes in cash management policies and procedures and whether future changes were being considered as a result of the pandemic.

60. **Seven countries attributed changes to the pandemic, whether current or prospective.** Improved communication and coordination is noted (Albania and North Macedonia), as well as more efficient processes (Croatia), widening of the TSA (Turkey) and increases in the cash buffer (Hungary). In relation to future reforms, there is a wider range of initiatives in prospect although they were identified by only five countries, see Table 16. The planned changes include broadening the TSA (Hungary), placing funds with banks (Kyrgyz Republic), improved forecasting techniques (North Macedonia), TSA hedging (Russia), and developing the cash buffer (Turkey).

Table 16: The Impact of COVID 19

| | Changes to Cash Management as Result of the Pandemic | | Future Changes Contemplated as Result of the Pandemic | |
|------------------------|--|--|---|--|
| | Yes/No | Responses | Yes/No | Future changes |
| Albania | Yes | Wide range of actions responding to pandemic required close coordination between budget execution, debt management and monetary policy implementation to protect expenditures plans from cash flow volatility | No | |
| Croatia | Yes | Amendments to State Budget Act conserve cash by requiring that funds are remitted to spending units/bodies on the basis only of liabilities due within 30 days (90 days for EU financed projects) | No | |
| Hungary | Yes | Increased cash buffer. Challenges of forecasting cash flows | Yes | Broader coverage of the TSA needed because of increasing expenses. Develop repo operations and cash forecast |
| Kyrgyz Republic | No | | Yes | Implementation of a project for the placement of funds with commercial banks |
| N. Macedonia | Yes | Greater frequency of communication and data exchange with institutions providing inputs for the forecast | Yes | Using advanced tools and techniques, data analytics and data science, to add new dimension to the forecasts |
| Russia | No | Overall, there are no changes in liquidity management policies and procedures that are likely to remain after the pandemic subsides. However, if necessary, funds can be mobilized, and the placement program revised with respect to volumes and terms. | Yes | Provide for additional measures for TSA hedging |
| Turkey | Yes | Increased the pace of the work, initiated before the pandemic, to extend the TSA system | Yes | Sufficient cash buffers will be crucial to cope with fluctuations and to mitigate cash shortages |

CONCLUSIONS AND IMPLICATIONS FOR FUTURE TCOP ACTIVITIES

61. The results of the 2021 survey point to the progress that many PEMPAL countries have made in developing their treasury and wider cash management functions. There is some diversity of practice, which is to be expected in view of different legal frameworks, institutional and financial structures, and administrative cultures and histories. At the same time, there is a solid core of countries that have developed capabilities and mechanisms in line with sound international practice. The responses to the survey also indicate that for many countries activities of TCOP Cash Management Working Group have contributed to these achievements. The results nevertheless suggest that all countries have at least some need to further develop their practices, instruments or institutions. There is therefore clear scope for further exchange of experiences among the participating countries and the TCOP working group continues to be highly relevant for the members.

62. **The survey has been a useful tool to review the status of the TSA and cash management in the region.** Some of the survey responses, or gaps in the responses, suggest that there are a number of areas that would benefit from further analysis and discussion, with a view to further development.

63. Possible future areas for the TCOP to explore include:

- a. *TSA structures; and the respective roles of the IFMIS, central bank and commercial banks: (i) pros and cons of different models for the structure of the TSA (e.g. pyramids or networks) and for the control of payments – advantages of credit limits generally, and advantage of controlling them from the IFMIS; (ii) how the TSA is structured in the UCoA and the central bank to achieve consolidation; how countries are using ICT to improve consolidation and reduce accounting and control issues (including using the banking system to identify budget entities).*
- b. *Extending the TSA to fully cover general government – this would focus on the areas yet to be covered such as trust monies, but also highlight recent positive examples of expansion of coverage. The choices for managing SNGs' balances could also be explored.*
- c. *Cash Management Objectives: what should be the objective; and what would that mean for Treasuries in the region; and the implications for institutional structures and required capabilities.*
- d. *Cash Buffer targets. Previously discussed in TCOP but would draw on more recent work; and also discuss safety nets and scenarios, and short-term safety nets.*
- e. *Investing Surplus Cash – Options and Institutional Arrangements. Investment as part of Cash Management; Risks and Instruments; Institutional Arrangements & Processes; Investment in Practice.*

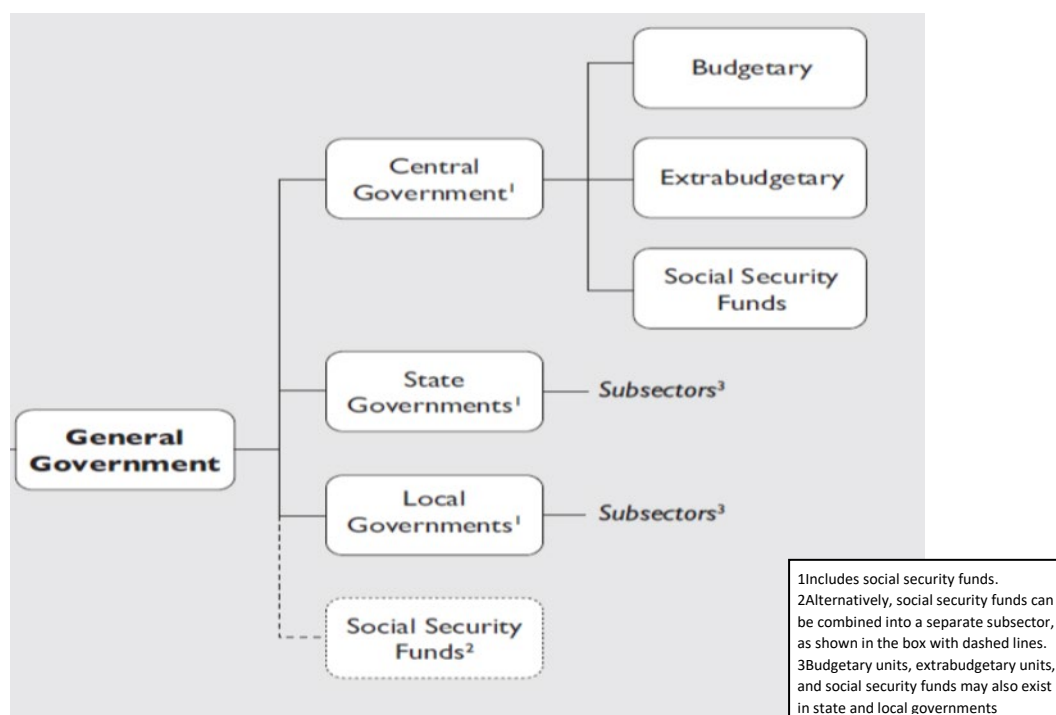
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ANNEX: THE COMPREHENSIVE TSA

The coverage of the general government sector is shown in the below Figure (an extract from GFSM2014²⁵) shows. As stressed in the main text, at a minimum, the TSA should cover all central government entities and their transactions. . In some cases it will include the balances of state and local governments. In general, it is not usual for the TSA to extend to government corporations and commercial enterprises.²⁶

Figure: General Government and its Main Components



Examples of incomplete TSA coverage include:

- Where ministries, departments or agencies (MDAs) operate bank accounts to retain “own source revenues.” Examples include, where the MDA sells certain goods or services, or through a government policy decision, collects and retains a proportion or full amount of certain taxes and fees. These funds remain government money and should not be held in separate bank accounts other than ZBAs or transitory accounts.
- EBFs (e.g. health or road transport funds; and also social security funds although they are sometimes combined into a separate sub-sector and not covered by the TSA). They will often claim the protection of legislation that gives them control over “their” resources. But their cash should nevertheless be in the TSA; because the TSA allows the separation of the control over resources, that arrangement does not deny the fund the use of the resources when required, but in the meantime the government has use of the cash.

²⁵ IMF “Government Finance Statistics Manual 2014” at <https://www.imf.org/external/Pubs/FT/GFS/Manual/2014/gfsfinal.pdf>

²⁶ The distinction between corporations and statutory general government bodies is not always clear. GFSM2014 does provide a useful guide on how to define each public body to the correct sector

- *Where ministries control deposit or trust funds outside the TSA, for example funds provided as security by importers against the future payment of duties, money deposited by government contractors pending completion of contractual obligations, money held and collected by government on behalf of a third party. Even though these funds are not technically government owned, they are government controlled and should be consolidated in the TSA.*
- *Where revenue-collecting MDAs maintain accounts for collections other than ZBAs including the retention of some funds for tax and other revenue refunds.*
- *Where development partners provide grants and loans and require separate bank accounts to be maintained other than sub-accounts in a TSA structure. While it is acknowledged that DPs will frequently require this “separation” these funds do represent public money and therefore should be incorporated into the TSA..*

If one or more of the above examples operate outside of the TSA banking arrangements then, although there may be a TSA, it cannot strictly be described as comprehensive.