

# Government Cash Management: International Practice

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Government cash management is important: poor practices and structures waste money, add to risk and complicate other financial policies. This paper reviews, against the background of practice in more developed countries, how emerging market and developing countries can strengthen their cash management arrangements. Cash management is distinct from budget management and execution. It is instead about ensuring that the government has the liquidity to execute its payments, but doing so in ways that also minimise costs, reduce risks and support other financial policies. The note outlines four steps in the development of a cash management function: (1) creation of a Treasury Single Account; (2) improvements in cash flow forecasting; (3) rough tuning cash flows; and finally, (4) fine tuning cash flows. For emerging market and developing countries sequencing and priorities have to be addressed, but improvements can be made incrementally and not everything has to be in place before the benefits are apparent.

## 1 INTRODUCTION

1. Government debt management receives plenty of attention, which is perhaps not surprising in view of the experience of financial crises of the last 15-20 years. In many cases, these crises were greatly exacerbated by inadequate or inappropriate debt structures. Government cash management cannot claim the headlines in quite the same way, but poor practices and structures waste money, add to risk and complicate other financial policies.

2. There is no single definition of international best practice in cash management; but there is an understanding of the key elements. Against the background of practice in more developed countries, this paper reviews how emerging markets and developing countries might strengthen their cash management arrangements, highlighting some of the policy issues involved. Of course, there are differences between individual countries' legal frameworks, constitutional arrangements and administrative practices. A credible and well designed reform process must take these differences into account.

## 2 DEFINITION AND OBJECTIVES

3. "Cash management" is a slippery term. It is variously linked to budget execution, to government account integration and to management of government cash in

the financial markets. This paper adopts a wide definition:

"...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."<sup>1</sup>

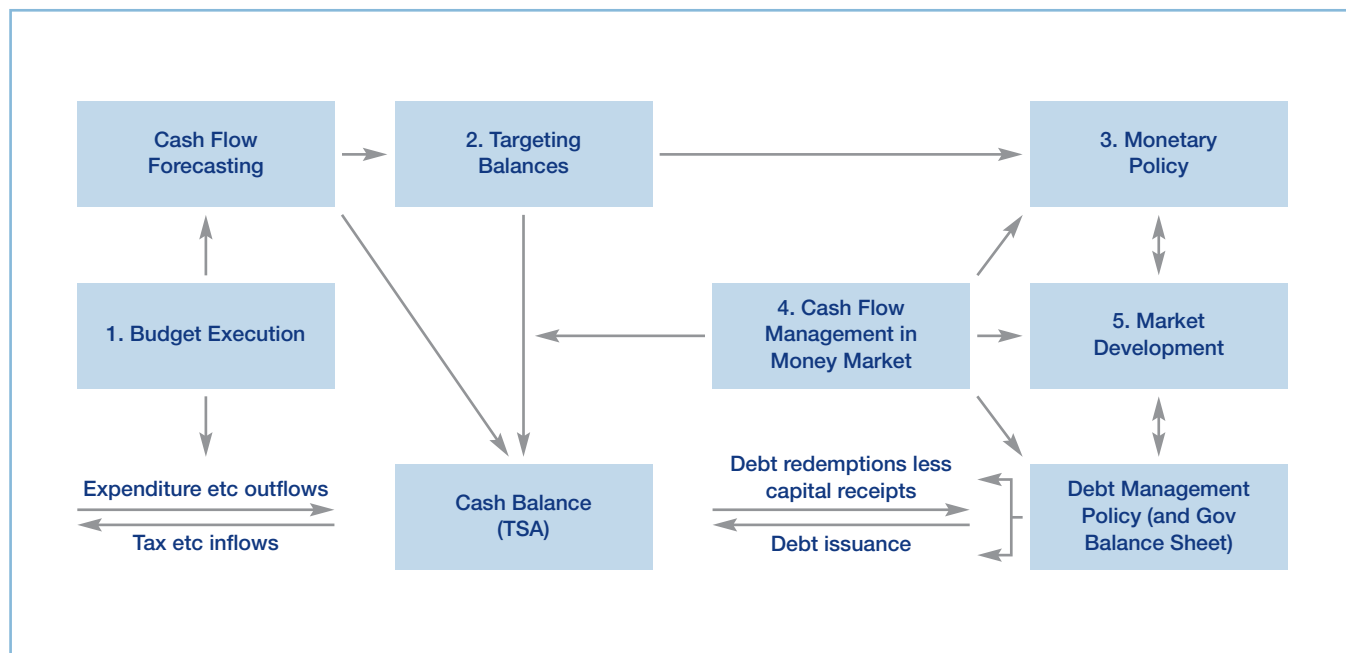
4. This definition encapsulates both cash flows and cash balances as well as operations within government and the government's interaction with other sectors, particularly the financial sector.

5. Cash management is distinct from budget management or budget execution. Budget execution is about ensuring that the budget is managed consistently within agreed financial limits. This covers everything from direct control over cash releases linked to resource availability, to ensuring that releases are in line with spending commitments, through to full delegation of budget management to line ministries.<sup>2</sup>

6. By contrast, cash management is about ensuring that the government has the liquidity to execute its payments. This requires planning ahead. Cutting planned expenditure because of a lack of cash is cash rationing, not cash management. Effective cash management removes the need for cash rationing.

7. The overriding objective of cash management 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

Figure 1: Cash Management: Links with Policy Issues



reduction and efficiency are also important. This paper therefore considers additional objectives, including:

- Minimising the costs of holding cash balances in the banking system;
- Reducing risk: operational, credit and market risk;<sup>3</sup>
- Adding flexibility to the ways in which the timing of government cash inflows and outflows can be matched; and,
- Supporting other financial policies.

8. Cash management has implications for, and is affected by, a wide range of policy issues. The interactions with six areas of policy are illustrated in Figure 1.

9. To elaborate on the figure: the focal point is the government's cash balances, consolidated in the Treasury Single Account (TSA). The TSA fluctuates with cash inflows and outflows generated by tax, expenditure, debt and other capital transactions. The first policy choice is how budget execution and payment processes interact with expenditure flows. The second is to what extent the level of cash balances is a policy target. Effective targeting requires cash flow forecasts and efficient budget execution facilitates forecast preparation. Depending on how accurately the cash balance target is met, there will be benefits to monetary policy; and how the Treasury chooses to manage the target in the money markets also has implications for both monetary policy and financial market development. This in turn brings potential benefits to debt management.

### 3 BEST PRACTICE IN CASH MANAGEMENT

#### 3.1 Payment Processes

10. Modern payments processes are designed to avoid unnecessary use of cash, as well as to reduce operational risk and opportunities for fraud. They rely increasingly on electronic transactions, centralising receipts and payments through a limited number of agents. Government transactions are processed with minimum intermediate handling steps.

11. There are marked differences between countries in the degree to which the payments process is centralised within the Treasury<sup>4</sup> and central bank, versus being reliant on the commercial banking system.

12. Central control of payments tends to be associated with use of the central bank (e.g. France). This is the model that many transition countries, which have inherited wide central bank networks, have followed. Conversely, dispersal of payment responsibility tends to be linked with use of the commercial banking system. The choice of banking services supplier might be left to individual ministries (e.g. Australia), or there may be a centrally-determined contract, often let periodically on a competitive basis (e.g. UK). The ability of the banks to sweep balances back to the Treasury Single Account (see below) will be an important criterion for that choice, along with the extent of charges and commissions. The growing complexity and volume of financial transactions suggests that this model is likely to be more robust in the longer term.

### 3.2 Treasury Single Account

13. The TSA is a central feature of modern cash management. It involves the consolidation of all government cash balances, in principle also including balances of extra-budgetary funds, into a single account at the central bank.

14. Centralisation of all balances in this way facilitates control and financial planning. It also allows the Treasury to minimise the volume of idle balances in the banking system, with consequent cost savings. These cost savings derive from the interest that is saved from using cash surpluses from one area of government activity to cover cash shortages in another. If cash was not consolidated, the extra cash requirement would have to be financed with a loan or by issuing debt. These savings are, of course, net of any interest that would have been earned on the surplus cash, but that will usually be much less than the cost of the borrowing to cover cash shortages.

15. Some central government funds are managed entirely separately from the budget and may have to be excluded from the TSA for policy, transparency or legal reasons. Such funds might include bond redemption funds or pension or other social security funds. However, it is still possible to lend surplus cash from these funds to government. This is an indirect way of minimising the net government cash balance. Such lending should only be undertaken where it does not pose risks to the funds' ability to meet their liabilities. The transactions involved must be transparent and objective, for example, based on a short-term market-related interest rate.

16. The TSA can work with payments systems that are centralised within government or dispersed to the banking sector. Some countries operate a hybrid system under which major receipts and payments flow directly across the TSA, but smaller transactions rely on the commercial banking system. However, in all these arrangements it is important that any balances left with the banking system are consolidated overnight back into the TSA. All or part may be returned the following day depending on the transactions volumes expected. It is then for the Treasury to decide to what extent any aggregate balance should be lent back to the banking system. This process not only allows for the netting of the transactions balances between different line ministries to minimise the surplus cash used, it also reduces exposure to the banking sector and thus credit risk and moral hazard.<sup>5</sup>

17. The extent to which all government accounts are consolidated into the TSA varies across countries. In some countries it includes the balances of sub-national governments (e.g. France). There are also differences in

the mechanics of the process: for example, the extent of sweeping and exactly how it operates; and whether or not line ministries retain any responsibilities. The structure of the TSA also varies, often with a large number of sub-accounts for management accounting or control purposes. Where sub-accounts exist, it is important that they can be aggregated into a single net figure which is the focus of cash management. Ideally, this should happen automatically.

### 3.3 Forecasting and Systems

18. Efficient cash management requires the ability to forecast daily cash flows across the TSA (ideally at least three months ahead). This must be coupled with an ability to monitor actual changes in close to real time. Such forecasting and monitoring is important:

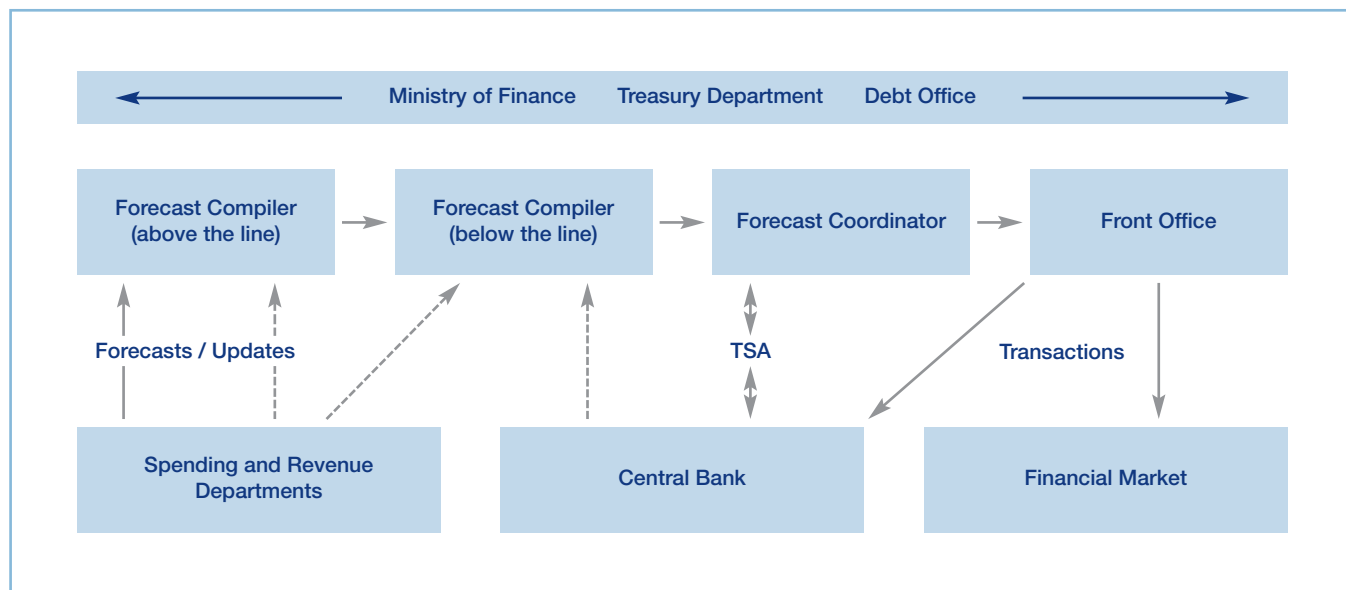
- To facilitate the achievement of budget policy targets in an orderly way, and to ensure that budgeted expenditure is smoothly financed, avoiding disruptive payment delays;
- To devise strategies for smoothing the cash flow profile, minimising idle cash balances and reducing borrowing costs; and,
- To contribute to the smooth implementation of monetary policy.

19. Forecasting systems use a variety of techniques, tending to draw on both bottom-up information – the detailed information available to line ministries and tax departments – and top-down analysis – the centre's experience of how total spending and revenue varies over time. It is important to emphasise the use made of the relevant spending or revenue departments' own knowledge; they are closer to the transactions than the Treasury, and they monitor actual cash flows. This requires good information networks, both personal and systems-based. Where relevant this can be backed-up by information from local branches of the Treasury or central bank.

20. The combination of cash flow forecasting and modern payments systems allows for separation between the permission to spend and the provision of cash. It is no longer necessary for spending units' bank accounts to receive funds before expenditure is authorised. It is the availability of cash in the head account (i.e. the TSA) at the time that the payments are cleared that is important. Therefore, it is flows through the TSA that are the focus of the forecast.

21. International experience offers little guidance as to the precise organisational responsibility for bringing together the forecasts. The variety of potential arrangements is illustrated in Figure 2. Often a distinction is drawn between the compilation of "above the line" forecasts of revenue and expenditure, and "below the

Figure 2: Organisational Responsibilities for Forecasting: Conventional Arrangements



line” forecasts of debt and other financial transactions. The former tend to be formulated by those monitoring budget execution, the latter tend to be undertaken by cash and debt managers.

22. Figure 2 distinguishes between four forecasting processes. The above the line forecast may be compiled by those who are responsible for budget execution; they will draw on information from the revenue and spending departments. This is then passed to another compiler who adds below the line transactions. That function may often lie in the Treasury department or possibly in the debt office, if there is one. The data are often generated directly in that department (e.g. from debt transactions), although capital receipts and information from the central bank on foreign currency transactions may also be important. The forecast coordinator works closely with the front office (i.e. that part of the debt office dealing directly with the market). The coordinator must always have available an up-to-date cash flow position, monitoring actual transactions across the TSA, as well as updated forecasts.

23. Sophisticated cash management functions will have systems requirements over and above those usually needed for public expenditure and debt management. Public expenditure management needs in-year expenditure profiles; but rarely requires daily forecasts. The initial priority for debt management is a database to record debt and to generate servicing payments. As capability develops, countries improve connectivity to other systems and to market data, and develop auction processing or risk management systems. Active cash management brings with it further requirements. In most cases, it involves a greater number of daily transactions than for debt management. This implies a greater burden

on transactions processing systems and the back office functions of confirmation, reconciliation, payment and collateral management.

24. Most countries develop databases for cash flow forecasts that are separate from the main public expenditure or debt management systems. Cash flow data are needed to support immediate operational decisions and as such do not have to be of high accounting quality or precision. Separate databases also help to reduce the risk that cash flow forecasts will be biased by the pressures to meet budgetary targets. The cash management databases must also be flexible, and under the control of the cash managers.

## 4 ORGANISATIONAL ARRANGEMENTS FOR CASH MANAGEMENT

### 4.1 Coordination between Cash Management and the Debt Management Function

25. The importance of integration, or close coordination, between debt and cash managers is increasingly recognised.<sup>6</sup> Such coordination ensures that strategies are co-coordinated across the full range of financing instruments. It also allows for debt issuance decisions to be taken in the context of the government’s overall cash flows.

26. Active management of the short-term cash position makes it possible for the timing of bond sales to be largely independent of net cash flows arising as a result of a mismatch in the timing of receipts and payments. The benefit from being able to manage cash flexibly in this way may be of particular value in handling economic

shocks or unanticipated changes in the government's cash position without sudden changes in the bond issuance programme.

27. This integration of cash and debt management is increasingly the norm in OECD countries, often with the formation of a debt office or similar. Such models are being followed by many middle income countries although the combined function may continue to be part of the Ministry of Finance, rather than a semi-independent agency. Some countries rely on coordination between the two functions, rather than integration (e.g. the USA, Canada). There is considerable variation across countries in the extent to which the debt management office (or similar) is independent of the rest of the Ministry of Finance.

#### 4.2 Coordination with Central Bank

28. Changes in the government's daily balances at the central bank are mirrored by changes in banking sector liquidity. Indeed, they may be the most significant autonomous influence on liquidity. It is the central bank's task to take these changes into account in its monetary policy operations. Efficient cash management is therefore characterised by agreement between the Treasury and central bank on:

- The flow of information from the Treasury to the central bank on the likely future size of the TSA (in most cases this means sharing forecast information, and in some cases mutually agreeing a forecast);
- Information from the central bank on flows into, and out of, the TSA and changes in the balance. Ideally this should be provided in real time, certainly before the start of the next day; and,
- How changes in the balance of the TSA will be taken into account by the central bank in its monetary policy operations. This links to whether the Treasury is able to manage its cash flows sufficiently to meet a target balance at the central bank.

29. These arrangements may be accompanied by coordination meetings, at policy or working level. However, a clear distinction must be maintained between active cash management and monetary policy operations in order to underpin the credibility of both functions in the financial markets.

30. The Treasury and central bank must also reach agreement on whether interest will be paid on the balance in the TSA. International experience on this issue varies. Best practice, followed in most OECD countries, is to pay a market-related interest rate.<sup>7</sup> The benefits of this approach are as follows:

- It improves accounting transparency and avoids the implicit cross-subsidy associated with administered rates;<sup>8</sup>

- It removes the incentive (i.e. the interest earned) for the Treasury to take economically inappropriate decisions in relation to its balances, such as placing funds in commercial banks with low credit ratings; and,
- It reduces the risk that some part of the extra "profits" generated by the central bank would be lost through leakage to higher administrative or other expenses.

31. Similarly, in the interests of transparency and proper financial incentives, the Treasury should pay transaction-related fees to compensate the central bank for the costs of the services that it supplies.

#### 4.3 Cash Balance Targeting

32. The extent to which Treasuries seek to target the cash balance at the central bank varies greatly. This might be done by short-term borrowing or investment of temporary surpluses.

33. A distinction can be made between "rough tuning" and "fine tuning". Rough tuning is the issue of Treasury bills (T-Bills), or other short-term borrowing instruments, in a way deliberately designed to offset the impact on the banking sector of net cash flows in and out of government. Essentially net T-Bill issuance will be higher or lower in any week depending on whether inflows are expected to be lower or higher than outflows in that week.

34. Fine tuning involves more active policies, drawing on a wider range of instruments or institutional options, to smooth more fully short-term changes in the Treasury's balance at the central bank. Fine tuning is more detailed and precise, with the focus on the day rather than the week; but it is also more time and systems intensive.

35. Although many countries rough tune their flows, relatively few can accurately fine tune their balances. Fine tuning is achieved by some Eurozone countries, as well as the UK and Sweden. In the Eurozone, the operation of monetary policy by the European Central Bank (ECB) requires balances at the national central bank to be managed to a target figure. This means that the potential impact of government flows on monetary conditions is offset within the banking sector and so does not have to be taken into account in the ECB's monetary policy decisions. In practice, some member countries are more successful at achieving these targets than others.

36. Countries which attempt to maintain a target cash balance do so using a diverse array of market borrowing instruments. Of these, T-Bills are the most important, and tend to be used for rough tuning, particularly shorter-term bills (e.g. one month). A few countries also use commercial bills. Some countries will also sell T-Bills outside the normal cycle (usually weekly). For example,

an additional issue of T-Bills may be announced if there is expected to be a significant cash outflow in, say, the following week. Sometimes bills with unusual maturities are issued to redeem on a day of strong cash inflow.

37. In middle income countries more active cash management can contribute to the development of the local money market. Initially by increasing the range of T-Bill maturities, subsequently by developing a secondary market, and in time by trading in repo (see below) or other securities, money market liquidity is greatly enhanced, to the benefit of the government and the central bank, as well as the market more generally.<sup>9</sup> A liquid money market in turn contributes to the development of the government bond market, for example by making it easier for banking intermediaries to finance their bond transactions.

38. Fine tuning is typically done on the day through repos,<sup>10</sup> the interbank market, and, as necessary, emergency overdraft facilities at commercial banks. The secured markets (repo and reverse repo) are preferred to the interbank market but that is also used, if only for very short-term transactions. At a more detailed level, techniques for fine tuning differ. Some countries deal with uncertainty in their cash flow forecasts by tending to hold more cash, lending it back to the market at the end of the day (e.g. Spain and France). Other countries are more concerned with cost-effectiveness, and so prefer to hold little cash, knowing that they are able to borrow if they need to (e.g. the Netherlands).

39. The effect of the Treasury successfully targeting a stable cash balance in the TSA is that government cash balances become largely neutral for monetary policy purposes.<sup>11</sup>

## 5 THE CHALLENGES FOR EMERGING MARKET AND DEVELOPING COUNTRIES

40. For emerging market and developing countries, the final goals of cash management are no different. However, there are choices to be made on the priorities to be set and how best to sequence cash management reform.

41. There are particular problems in some low income countries. Cash management is often still entwined with budget execution, and spending allocations tend to be released only when cash availability is assured. Indeed the “real” budget may in practice bear little relation to the published budget and rationing is used as a simple but capricious and disruptive way of closing the gap between reality and political expectations. Even without this problem, it may be difficult to create the fiscal space needed to build a cash buffer sufficient to cope with

fluctuations in revenue – not least inflows from donors.

42. Almost all emerging market and developing countries have recognised the advantages of a TSA. However, for some it is a long process to close line ministries’ accounts or to otherwise bring all government balances within the TSA. This is particularly problematic where the role of extra-budgetary funds is significant; and in some countries the Treasury may lack authority (e.g. over the Ministry of Defence).

43. In poorer countries the problem may start further back. If there is no integrated interbank payment system, time-lags are inevitable in passing receipts to the centre of government or in clearing payments directly through the TSA; and it will not be possible to integrate government balances, let alone sweep them overnight to the TSA. If payments rely heavily on notes and coin, as may be the case particularly in rural areas, this will add to the Treasury’s “cash” requirement – with no prospect of earning interest and a heavy administrative cost.

44. Cash flow forecasting is underdeveloped in many emerging market and developing countries, even in the middle income group. Information may be drawn from a variety of sources but it is often incomplete and unreliable. The difficulties of cash forecasting involve not only lack of good internal coordination and administrative structures, but also additional problems such as poor advance information on loan or grant disbursements. The development of forecasting may also be complicated by advice from donors to delegate responsibilities to lower tiers of government. Despite these difficulties, some countries are developing semi-formal contacts across government to pull together cash flow information. Others, however, remain constrained by the more general problems of poor IT, lack of human capacity and insufficient authority for the Treasury.

45. Among transition and middle income countries, many have taken the decision within the last few years to integrate (or coordinate much more closely) debt and cash management. Several now rough tune by varying T-Bill issuance across the year. Some countries have taken advantage of state-owned enterprises as a source of cash or a convenient investment vehicle. However, it is increasingly recognised that using state-owned enterprises in this way lacks transparency, is potentially damaging for the enterprises, and does nothing for money market development.

46. Emerging market countries often have only a narrow range of financial instruments available to them. Those with an insufficiently liquid domestic market may have difficulty issuing a wide range of T-Bills. Central banks may be concerned that unusual or varying issuance patterns could have an impact on domestic interest

rates, cutting across their monetary policy operations. More generally, coordination between the cash manager and the central bank is often patchy and central banks tend to be suspicious of the competence of Ministry of Finance officials. In some cases the central bank would prefer to take full responsibility for offsetting the impact of fluctuations in the government's cash flows in their monetary policy operations.

47. However, where such problems exist they can be improved with goodwill and the right signals from ministers and senior officials. The fact that the central bank may have concerns about active cash management is not an argument for failing to develop capacity in that area. Rather, it means that such capacity must be built over time, taking account of both market development and the importance of good operational coordination. Competent cash managers will be beneficial to the central bank, since they will absorb and inject liquidity in a direction that helps the central bank.

48. As emphasised above, fluctuations in the government's cash balances will typically be the main autonomous influence on banking sector liquidity. However, this is not necessarily the case. In some middle income or resource rich countries the domestic liquidity impact of government is currently relatively modest; and the central bank is more preoccupied by managing the impact of strong foreign currency inflows which in turn puts pressure on the central bank's balance sheet (often making it reluctant to remunerate the Treasury's balances). The management of these flows raises other challenges,<sup>12</sup> but it also underlines the importance of effective coordination structures between the Treasury and central bank.

## 6 CONCLUSIONS: DEVELOPMENT OF AN EFFECTIVE CASH MANAGEMENT FUNCTION

49. Before any progress can be made, the need for reform must be acknowledged within government and the necessary authority given to the Treasury (which will normally be where the task falls). The commitment must extend to (relatively modest) investment in systems and personnel. The trigger may be realisation of the opportunity cost of poor cash management; or the wider linkages to other parts of the public financial management reform programme.

50. The preceding discussion suggests four separate steps in the development of a cash management function:

- **Step 1:** Treasury Single Account – the integration of government accounts, and the sweeping of overnight balances into a single account held by the Treasury at the central bank.

- **Step 2:** Forecasting capability – the development of capability within the Treasury to monitor and forecast flows in and out of government – i.e. changes in the balances held by the Treasury at the central bank. Related to this are decisions about the institutional location of the cash management function.
- **Step 3:** Rough tuning – issuing T-Bills (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. Management of surplus balances that are structural or longer-term (more than a few weeks) also falls under this heading. In principle all government balances at the central bank should be brought within the targeting process.
- **Step 4:** 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 Treasury's balance at the central bank.

51. These steps are descriptive, not necessarily prescriptive. In particular, moving from step 3 to step 4 is especially challenging and the costs and benefits of doing so need to be assessed in the local context.

52. The steps need not necessarily follow each other in sequence. Nor are there sharp discontinuities between them. For example, the TSA can be built up in parallel with the development of the local banking system, and as the flow of information improves, experience of patterns arising can be used to improve the first cash flow forecasts. Similarly, rough tuning requires a forecasting capability: the stronger the capability, the greater the improved ability to rough tune. This can, in turn, develop gradually into a more active approach to the handling of short-term surpluses, initially on a monthly or weekly basis, taking account of market development.

53. It may be possible to tackle many of the required capabilities in parallel. However, there are some interdependencies which cannot be overlooked. In particular, the development of a TSA both squeezes excess balances out of the government system and gives the Treasury an aggregate to be managed. Any management of that aggregate, however limited, will require some forecasting capability. The speed of change will also be linked to, or constrained by, the growth, integration and sophistication of the local banking system, the shift to electronic payments, and the development of the money market.

54. In short, the development of cash management is a project and, as with all projects, there are dependencies, bottlenecks and a need to prioritise. Four streams of work can be identified; each applies to some extent to all four of the steps above:

OPM provides high quality analysis, advice and support in the design and implementation of economic and social development policies primarily in low and middle income countries. We strengthen the public institutions in charge of those policies and through them contribute to improved economic and social outcomes.

- **Within the Treasury:** the policy approach; resource requirements (people, training, systems); institutional responsibilities and coordination; and the legal framework.
- **Between the Treasury and other parts of government:** cash handling requirements and information flows.<sup>13</sup>
- **Between the Treasury and the central bank:** structure of the TSA and sweeping arrangements; information flows; account remuneration; and operational interaction.
- **Between the Treasury and the financial market** (involving as necessary the central bank and the financial market regulators): sweeping arrangements; market infrastructure; preferred instruments (T-Bill maturities, development of repos); and borrowing facilities.

55. This is a challenging programme and one that requires goodwill and cooperation between the Treasury, the central bank and other government departments. But improvements can be made incrementally and not everything has to be in place before the benefits will become apparent.

## CONTACT INFORMATION

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## ENDNOTES

1. Williams (2004)
2. In many OECD countries the traditional budget execution function of the Ministry of Finance has withered away. Instead, a line ministry's agreed budget is released at the start of the year, with limited Treasury involvement in decisions as to the profile of spending. The coordination of spending requests is left to the line ministries, who are best able to decide how to manage spending to meet the ministry's objectives with due regard to value for money (and to be accountable accordingly).
3. Operational risks are those arising from people, systems, processes or external events that jeopardise operational effectiveness (including in this context the risk that cash is not available when it is needed). Credit risk arises from exposure to counterparties or creditors who are unable or unwilling to honour their liabilities (e.g. a bank that holds government deposits). Market risk is the risk that fluctuations in interest or exchange rates adversely affect the value of assets and liabilities (including increasing the cost of refinancing).
4. The term 'Treasury' is used throughout this note to refer to the government agency that is responsible for cash management. The name given to this institution varies across countries, and may include or also involve the Debt Management Office or the Ministry of Finance.
5. Moral hazard arises because exposure to a bank may affect the government's ability to act objectively in the event that the bank gets into financial difficulties; and the bank may seek to take advantage of this.
6. Debt management involves establishing and executing a strategy for managing the government's debt in order to raise the required funding, to achieve cost and risk objectives and to meet related goals. Its focus tends to be on planning and meeting annual financing requirements; whereas cash management is about in-year cash flow fluctuations.
7. However, there may be penalties if the balance diverts from the predicted or target level.
8. The cross subsidy arises because the rates paid are not reflective of underlying costs; the central bank's cheap source of funds will, other things being equal, increase its accounting profits, potentially allowing it to subsidise other activities.
9. The operational details of government money market transactions need to be discussed with the central bank, to avoid cash management and monetary policy operations getting in the way of each other; or the Treasury and central bank giving conflicting signals to the market.
10. Repos are sale and repurchase agreements. The lender of the cash receives securities (usually government bonds) which it holds during the period of the contract as security against default by the borrower, returning to the borrower in exchange for cash at the completion of the contract period. Although legally there has been a sale and repurchase of the securities, in economic terms the transaction is a collateralised loan.
11. In some countries the central bank takes direct responsibility for managing the net government cash flow, integrating it with its own monetary policy operations. Canada is a leading example of this, although the UK operated with this system until the transfer of responsibility for cash management to the UK Debt Management Office in 2000. It is therefore the arrangement that operates in many emerging market countries with no developed cash management function.
12. The cash manager can still play a part here, for example by issuing additional T-Bills at the request of the central bank with the proceeds sterilised in an account at the bank (earning the same rate of interest as paid on the additional T-Bills). Thus liquidity is drained without the fragmentation of bill market liquidity that can happen if the central bank issues its own bills alongside T-Bills. It is important that the arrangement and any additional issuance are transparent to the market – to avoid any confusion between debt or cash management and monetary policy operations.
13. Interaction with donors comes under this sub-heading. Improved information is needed on aid flows or project disbursements and possibly understandings about donor bank account structures and how they relate to the TSA.

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