El papel de la Programación Financiera dentro de una Administración Activa de Caja

II Seminario Latinoamericano sobre Gestión de Tesorerías Públicas 2011

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mike.williams@mj-w.net

To Recall the Objectives of Cash Management….

Ensuring cash is available to meet commitments

Overriding objective – other objectives must be subject to it

But other objectives are important

- Economising on cash within government
  - Saving costs
  - Reducing risk
- Managing efficiently the government's aggregate short-term cash flow
  - Both cash deficits and cash surpluses
- In such as way as also to benefit
  - Debt management
  - Monetary policy
  - Financial markets (market liquidity and infrastructure)

Approaches to Cash Management

Traditional (Passive) Approach

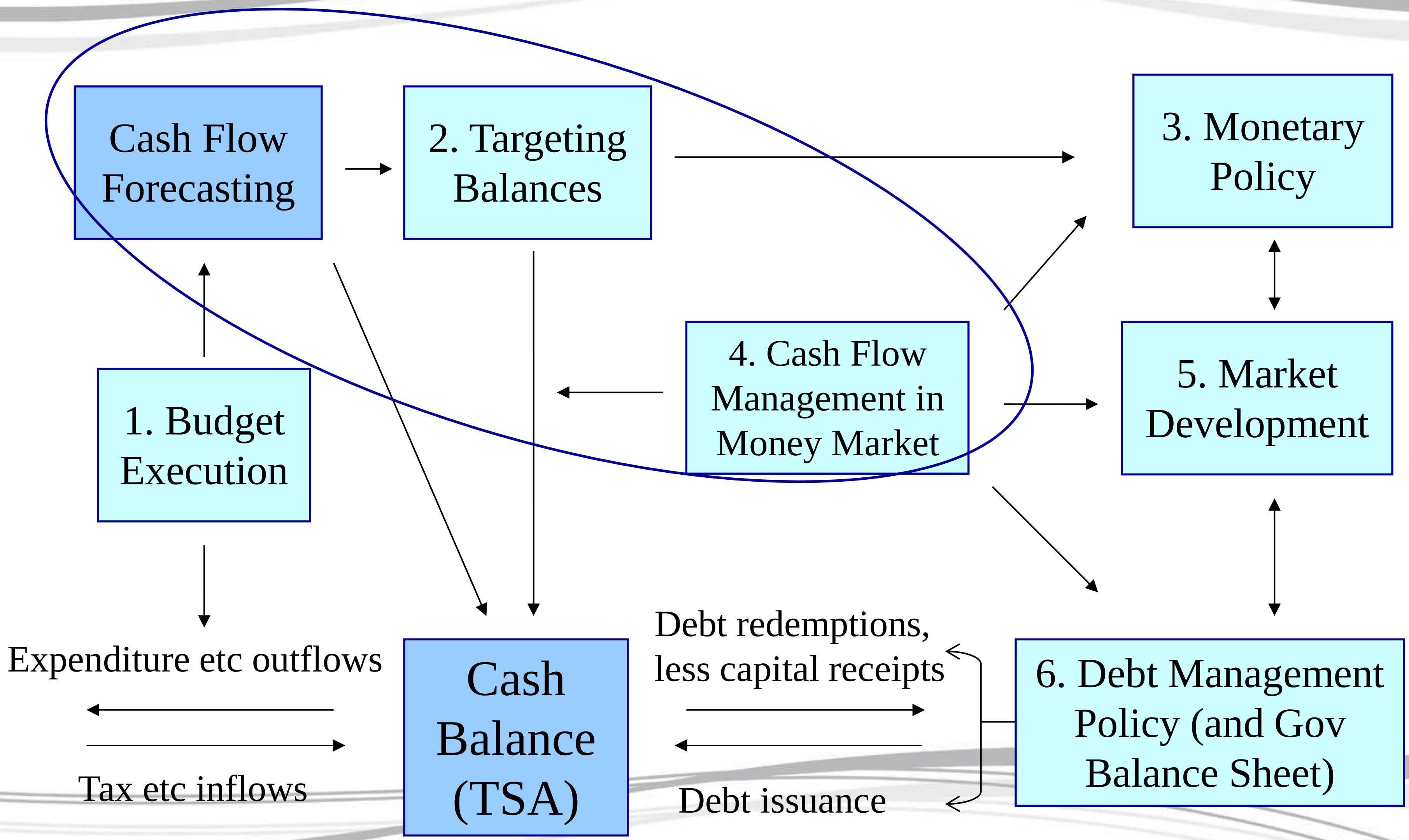
- Essentially passive
- Monitoring cash balances, maintaining cash buffer to handle both volatility and unanticipated outflows
- If necessary restraining / slowing expenditures or delaying bill payments - cash "rationing" not cash management

Modern (Active) Approach

- Managing cash more actively
- Trying to smooth weekly or daily cash flow by more active borrowing and lending in money market
- Allows lower average cash buffer – with benefits to other policies
- Gives tools to protect expenditure plans from cash flow volatility

OECD and many middle-income countries (especially in Europe) moving toward more active approach   Latin America ?

The Policy Challenges are Inter-related…



Cash Flow Forecasting

- Efficient cash management requires ability to forecast daily cash flows across the TSA
  - To facilitate orderly achievement of budget targets; and to ensure that budgeted expenditure is smoothly financed
  - To devise the strategies for smoothing the cash flow profile
- Characteristic of all modern government cash management systems
- A smoother cash flow means:
  - Lower average cash balances
  - Reduced borrowing costs
    - Interest on cash balances always less than interest on marginal borrowing
  - Less pressure on central banks' monetary policy operations

Active Cash Management and Monetary Policy

- Domestic banking sector liquidity depends on:
  - Central banks' monetary policy operations – lending to or borrowing from credit institutions, reserve requirements, deposit facilities, etc
  - "Autonomous" influences – public's demand for banknotes (predictable), net foreign currency inflows (which depend on intervention policy) and **changes in government deposits at central bank (i.e. changes in TSA balance)**
- Less fluctuation in government cash flows across TSA ⟹ less fluctuation in money market / bank liquidity (other things equal)
  - Less weight has to be placed on monetary policy operations to control liquidity
  - Active cash management works to benefit of central banks
- Holding the TSA in a government-owned bank avoids the monetary policy problem, but creates others:
  - weakens the MoF's policy leverage over the management of its own cash flows and/or puts strains on coordination structures, including with central bank
  - potentially exposes the government to moral hazard
  - potentially drives a wedge between the short-term and longer-term market

Cash Flow Forecasting: the Aim

- Objective is to anticipate cash needs of government
- Forecasts needed of total net cash flow (hence also cash balance)
  - Receipts and payments (above the line); and
  - Financing transactions (below the line) - debt redemptions, new borrowing, also eg assets sales
  - Focus is domestic currency
    - May need to identify FX, donor flows separately (depends on TSA structure)
- Forecast information is needed for some period ahead
  - Timing of future peaks and troughs must be identified to make decisions about the maturity of required borrowing or lending
- Ideally
  - Daily (if necessary weekly) some 3 months ahead
  - Rolled forward regularly (weekly)

Key Features of Forecasting Framework

- Framework must be comprehensive
- What matters is cash flow
  - Separation of permission to spend from actual spending
  - Tax revenue in TSA not in banking system
- Monitor actual changes in close to real time
  - Analyse divergences
- Forecasting relies heavily on those in spending units and tax departments closest to cash flows (see later)
- Concentrate on major inflows and outflows
- Emphasis on history and experience
  - Not econometrics

Tool and Techniques - 1

- At start of year, forecasts consistent with annual budget
  - But need unbiased estimates – what is going to happen, not what "should" happen; do not constrain to budget as year progresses
  - May help to separate forecasting from budget execution processes
- Revenue forecasts from the tax departments
  - Monthly totals of tax receipts, by tax for xx months ahead
  - Daily [weekly] tax receipts for next month, 1-3 months if possible
  - Tax usually more variable and more unpredictable
- Expenditure forecasts from spending agencies or units
  - Expected expenditure (cash not commitments) by day/week for xx months ahead
  - Focus on largest spending units [80/20 rule]
  - Require pre-notification of major expenditures
  - Many countries have an end-year surge in expenditure – avoid rules preventing end-year carryover of unused appropriations?

Tool and Techniques - 2

- Indentify seasonality
  - Monthly salary payments; regular social welfare or pension payments
  - Some other expenditures – eg agricultural support – may be seasonal
  - Tax payment days (gear tax payment days to days of expenditure outflow)
- Indentify major individual flows – some are precise and predictable
  - Debt issuance and redemption; interest on government debt (avoid redemptions on days of heavy expenditure)
  - Transfers to lower levels of government
  - Receipts from major asset sales
  - Less predictable but important to identify:
    - Payments on major public projects
    - Tax payments by the largest companies
- Particular problems with donor grants and disbursements
  - Highly uncertain, difficult to forecast, depends on project progress
  - May be possible to assume that project spending and project-related funding net to zero – but does not cope with lumpy flows
  - Inflows may also go to separate accounts not TSA

Making Forecasting Work in Practice

- Important that Spending Units and Tax Departments cooperate
  - Insist on profiles and forecasts
  - Good administrative practice should be enough; but if necessary legislate
- Carrots and Sticks
  - Reward good forecasting: greater delegated authority, easier virement, roll-over unused appropriations (financial penalties for poor forecasting)
  - Ensure there is no incentive to hoard cash
- Daily monitoring
  - Monitor actual transactions across TSA
  - Outturn for the day must be known no later than following morning
  - Analyse experience: e.g. do forecast errors imply timing changes within the month or changes in the level of activity?
- Personal contacts
  - Avoid requests / information going up hierarchy, across and down
  - Cash forecasters in Treasury must have direct contact with opposite numbers in major spending units and tax departments

Managing Forecast Data

- Cash flow forecasting usually requires development of a single central database independent of the GIFMIS. Reflects different purposes:
  - Cash flow data are needed to support immediate operational decisions
  - They do not have to be of "accounting" quality or precision
- Cash managers need a database that is:
  - Flexible and under their control
  - Allows preparation of scenarios, what-ifs etc
  - Able to hold outturn information for analytical purposes
- Many countries use Excel, at least initially

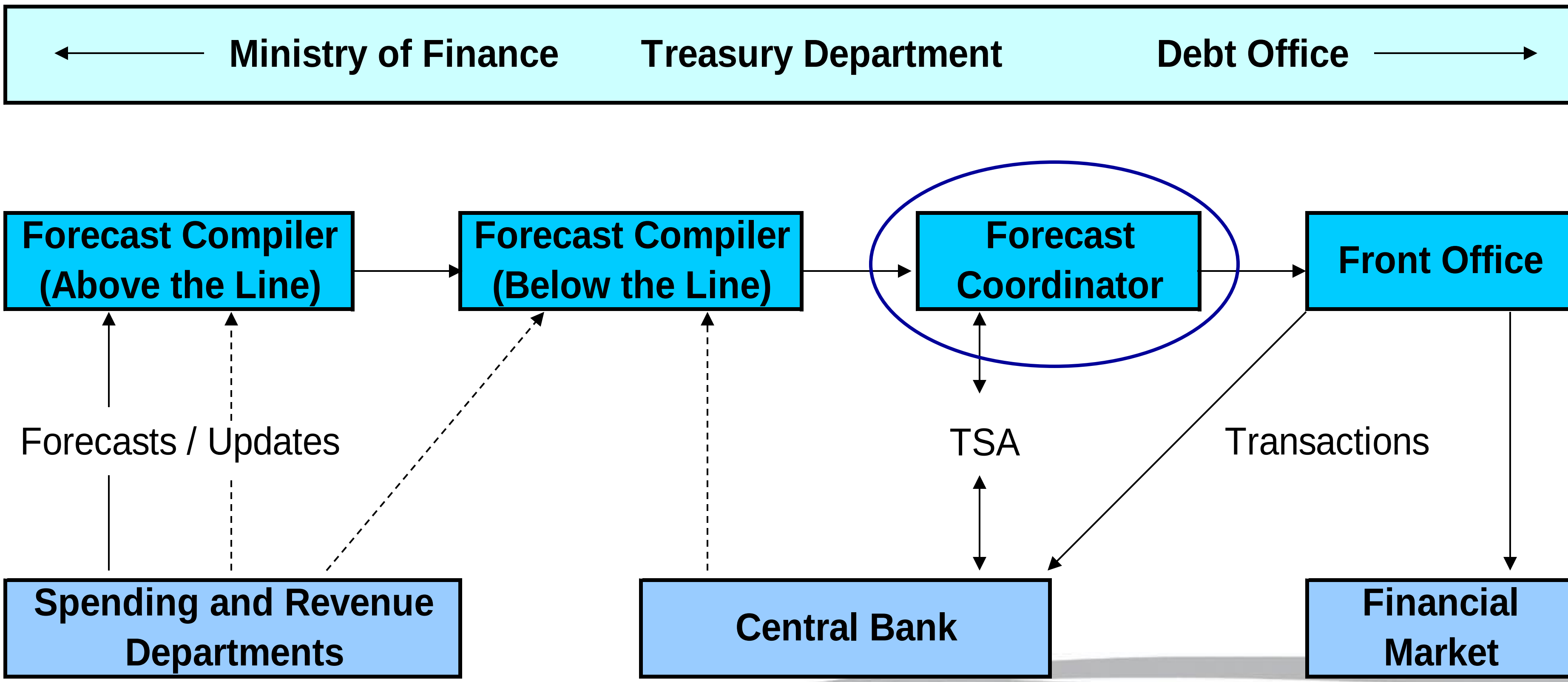
Who does What?

- Various national models – no “right” approach – but emerging best practice
- Spending units and tax departments – provide above the line data
- In MoF/Treasury/Debt Management Office distinguish between:
  - Who aggregates ‘above the line’ forecasts; and takes responsibility for the projection of the total
  - Who adds ‘below the line’ transactions – will often be debt managers
  - Who is responsible for taking decisions about investment of surpluses or issuance of TBills to manage cash flow
- Central bank – provides banking services and information flows
  - May provide details of actual flows or disbursements
- Good practice guidance
  - Identify who is responsible for what – others should not second guess
  - Single focus for final compilation and decision making
  - Regular [weekly] meetings of those responsible in MoF to review forecast updates, decide on investment / issuance policies, establish risk parameters

Putting the forecast to work…

- Smoothing the net cash – target a range of fluctuations of the TSA balance
- Central bank no longer has sole responsibility for managing day to day fluctuations
  - Associated with – and supports – monetary policy independence of central bank
  - Major benefits – clarity in financial markets, eases monetary policy operations
  - But residual cash flow forecasts should be passed to central bank
- Distinguish between:
  - "Rough tuning" – issuing Treasury bills (or other short-term instruments) to a pattern designed to offset the impact on banking sector of net cash flows in and out of government, ie to smooth somewhat the changes in the TSA
  - "Fine tuning" – more active policies, wide on a wider range of instruments, to smooth the treasury's balance more fully – technically more demanding
- Identify responsibility within MoF/Treasury/DMO
  - Increasingly given to DMO or similar, in consultation with others, because of the benefits of integration between debt and cash management
  - But different international models

Responsibilities: a Summary



Cash Management Instruments

Borrowing

- Treasury bill usually main instrument in moving towards more active cash management
  - TBill has different roles as instrument of
    - debt management
    - cash management
    - monetary policy
  - Emphasis on shorter-term (e.g. 1 month) bills for cash management
- Some EU countries issue commercial paper (CP)
- Repo usually used for fine tuning – but requires liquid market

Lending

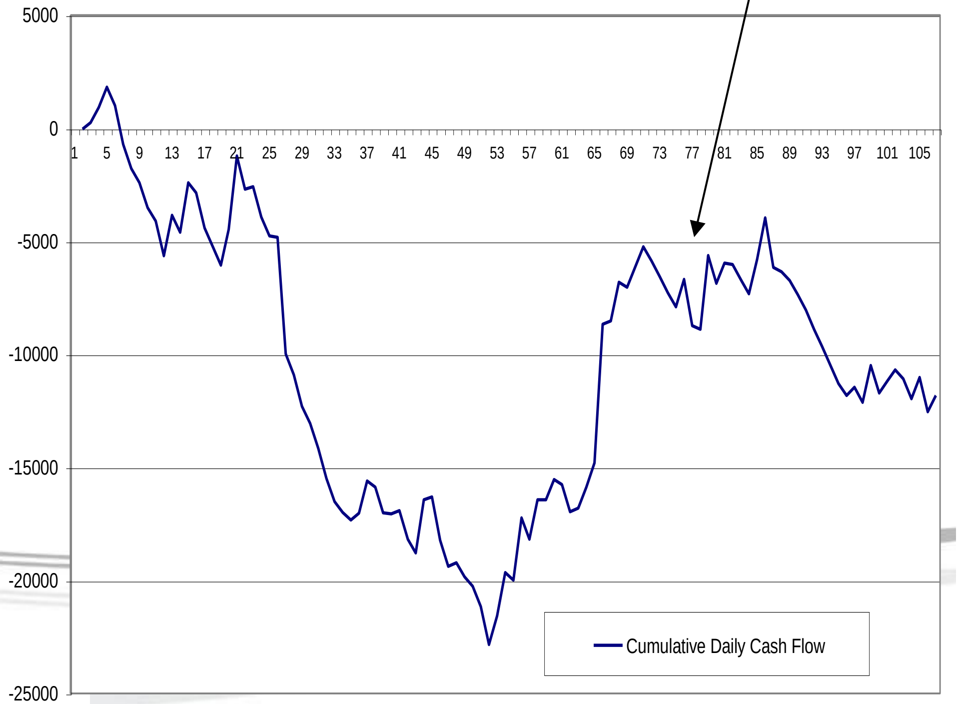
- (Reverse) repo preferred instrument if market sufficiently liquid
  - Secured and flexible
- Many countries use bank deposits
  - Lend at market rates – term or overnight
  - Competitive process (by tender if no transparent prices)
  - But must be colleralised – reduce credit risk
- Consider (remunerated) deposits with central bank if important to underpin monetary policy stance

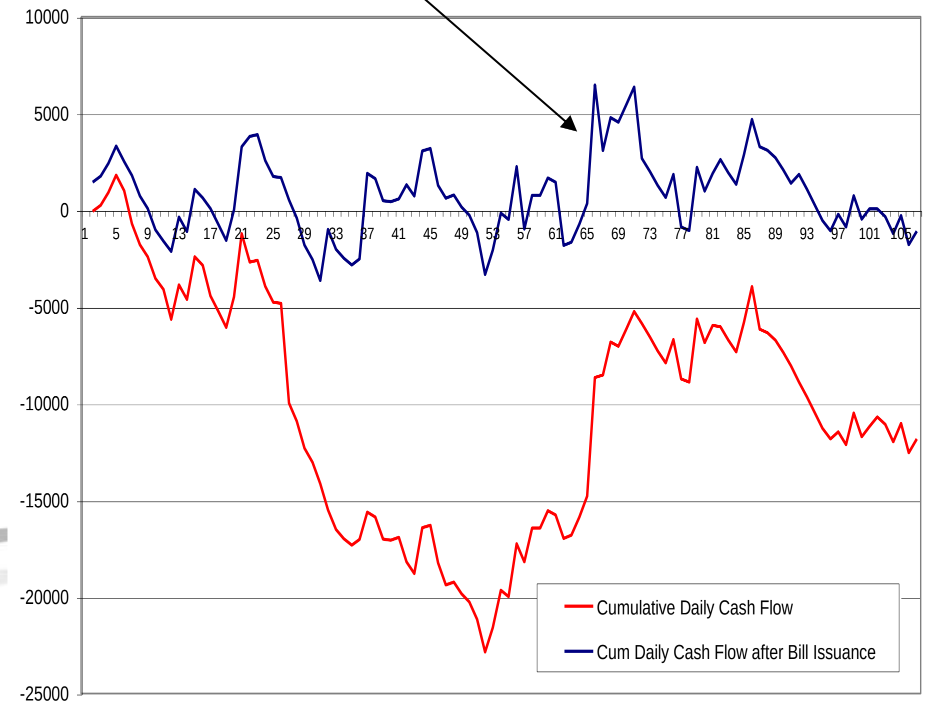
Rough Tuning: Example

Rough Tuning with weekly issue of Treasury Bills only

Converts **this** profile to **this** profile

[Fine tuning makes it flat]

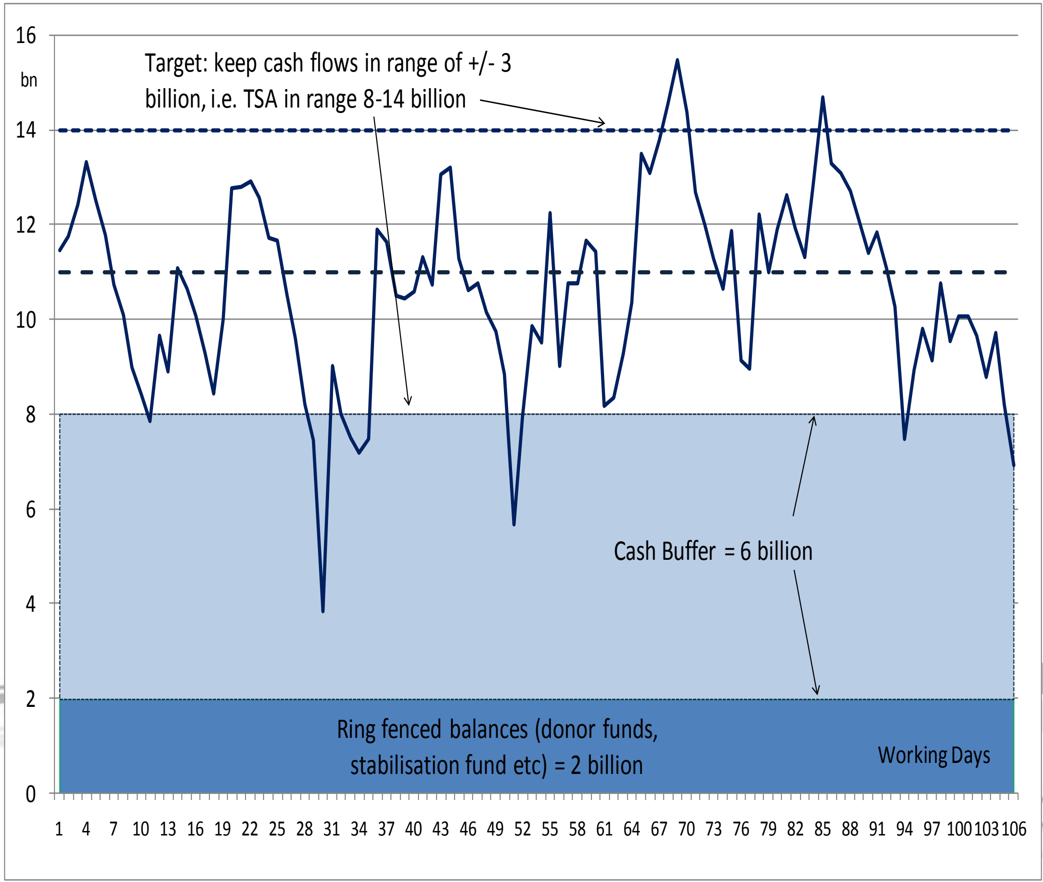




Management of Cash Balances

- Separately identify
  - Management of day to day cash, including the cash buffer
  - Management of a structural surplus (net of any debt repayment)

- Structural surplus: distinguish between
  - Cash that might be needed one day [eg in 6 months] – usually managed by cash managers alongside the cash buffer
  - Longer-term funds
    - Sovereign wealth funds, funds for future generations, fiscal stabilisation funds, pension liability funds etc
    - Managed separately – in context of government's whole balance sheet
- Governments need access to liquidity – implies some cash balances
  - How do you decide the minimum?



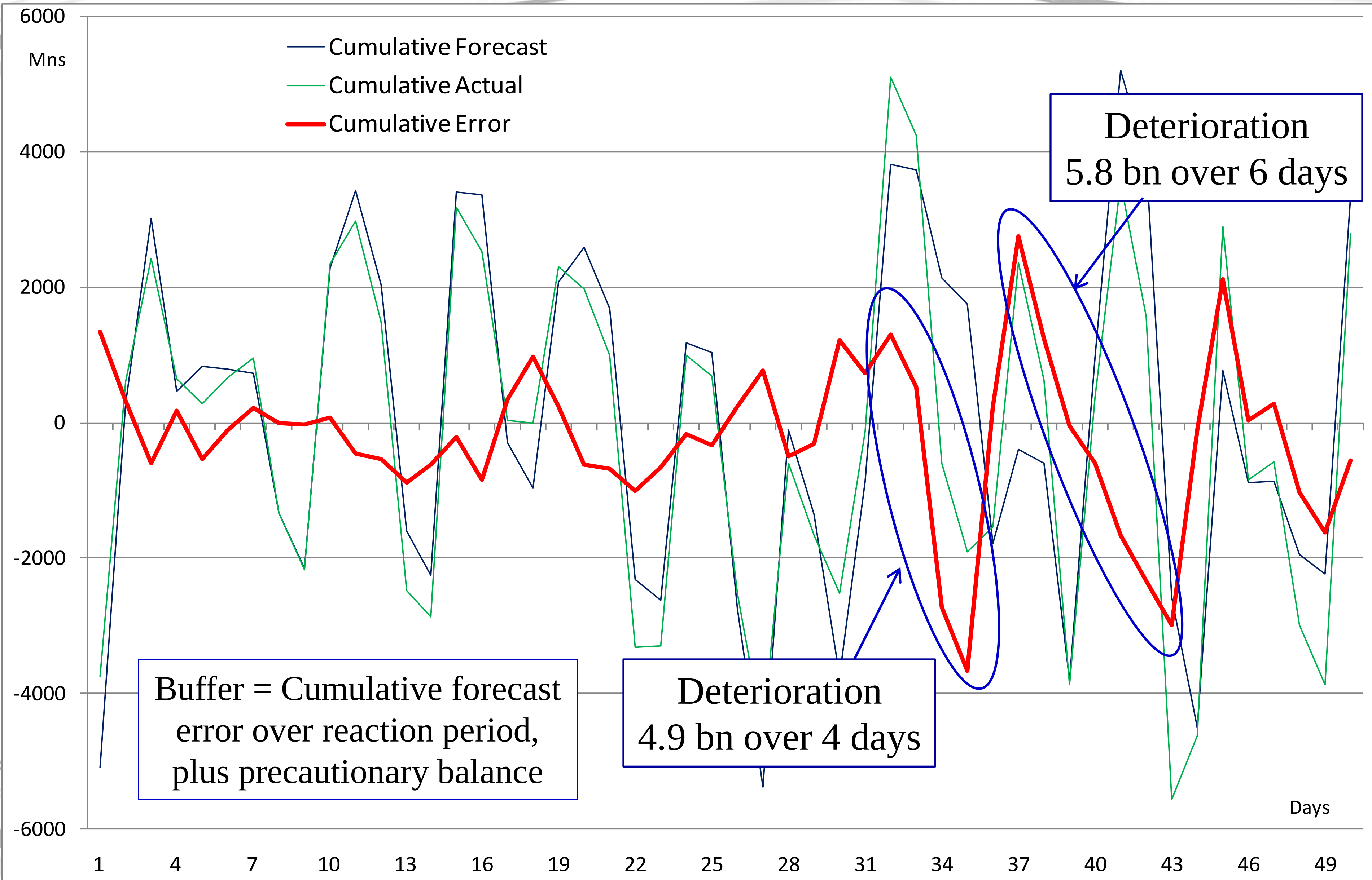
What Determines the Cash Buffer?

1. The volatility of daily cash flows
2. The ability to forecast those cash flows
   - The standard deviation of errors in the forecast will [should] be much less than standard deviation of outturn
   - Key area for policy focus – Treasurers have less leverage over other determinants
3. The scope to manage unanticipated fluctuations and the timescale over which they can be managed
   - How soon can additional TBills be issued?
4. Safety nets
   - Emergency credit facilities or cash reserves
   - End of day borrowing from commercial banks
   - [Short-term borrowing from central bank]

Cash Buffers in Practice

- Several northern European countries operate with cash balances in the central bank << 0.1% annual central government expenditure
  - But they have liquid money markets, sophisticated active cash management. Some plan to be long of cash and on-lend only when position is secure
  - Drying up of liquidity led some to be more cautious
- Some other approaches – the importance of signalling prudence:
  - Target balance calculated as a safety reserve in event of adverse market conditions – depends on expected time to return to normality
  - Maintaining balances as least as great as the debt redemptions due in the following month, implicitly allowing for a failed auction
  - To guarantee budget execution or debt service for [X] months
  - In Italy there is a legal requirement for balances to exceed €10 billion – the peak of cumulative net outflows reached in any period
- Recommended buffer in absence of developed cash management:
  - Cumulative forecast errors over policy reaction period coupled with a cautionary balance for market disruption or auction failure
  - But the buffer has an opportunity cost – there is a trade-off with caution

Cash Flow Buffer: Illustration



The Financial Crisis: Some Lessons?

- The Cash Management Reform Programme
  - More focus on liquidity risks => higher cash buffer
  - Importance of improved cash flow forecasting
- Strong case for close coordination (or integration) of cash and debt management
  - Money market is an additional short-notice source of funds – huge increase in TBill issuance in many countries
  - Both debt managers and cash managers need a liquid money market
- Develop mechanisms to cooperate with central bank
  - Essential when banking sector under stress
  - Mutual interest in money market development – develop repo market
  - Cooperation does not jeopardise policy independence
- Develop a "financing continuity plan"
  - Greater caution in respect of cash, some front-end loading of auctions; procedures for short-notice issuance/[tapping] of TBills, TBonds
  - Develop cash management safety nets – alongside the cash buffer

Conclusion

- Growing international appreciation of the importance of active cash management
  - Reduces debt interest costs
  - Contributes to other policies
- Underpinned by cash flow forecasts
  - Anticipate cash flow needs of government
  - Dependent on centralising information from many sources
- Use of TBills, collateralised deposits and repo and reverse repo to tune cash flows
  - Identify key responsibilities
  - Focus on money market development
- Identify target cash balances – but include a buffer

Thank You!