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Establishing a cash forecasting system for central administration in Portugal

Proposed concept note

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Outline

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Rationale for establishing a new cash forecasting system

Cash forecasting practices need improvement

2015 Budget Framework Law requires:

- **All CA entities must prepare rolling monthly cash flow forecasts for the following 12 months** to ensure that they have enough disposable funds to settle

Current practices are not sufficient to support the DGO and the IGCP in their daily tasks:

- The IGCP needs to keep a **large liquidity buffer to absorb unanticipated expenditure payments** not captured in cash forecasts, as well as to manage its rollover risk for public debt
- **The DGO needs more reliable in-year profiles (cash plans) to monitor implementation of the budget** and to project the size of a deficit

Towards a new cash forecasting system

- **Improve information for decision making** for budget, liquidity, and debt management, as well as improve the **identification of risks**
- **Enhance predictability of changes in TSA balances (and thus gross debt),** supporting the IGCP's objectives for cash and debt management

Current main weaknesses in cash forecasting

1. CA entities' **in-year profiles (cash plans) are considered to be of poor quality** by the DGO	4. The **basis on which SSFs currently deposit funds in the TSA causes problems** for cash forecasting
2. The IGCP is **overly reliant on 'top-down' cash plans** for a TSA system of such complexity and wide scope	5. **Time-lags between the actual collections of non-tax revenue and its recording in accounting systems** have a negative impact on cash forecasting (around 20% of budgeted revenue is without DUC)
3. Forecasting sizable and volatile **off-budget cash flows is a major challenge** for the IGCP, with historic data analysis being an inadequate forecasting tool	6. **Co-operation** between the DGO and the IGCP on cash forecasting is limited

Overview of current cash forecasting practices

Two separate cash forecasts with different scope and coverage are prepared

- **The DGO** consolidates CA entities' **monthly in-year profiles for budget execution** at the start of the year and updated cash plans for the month ahead ('bottom-up' approach)
- **The IGCP** prepares **rolling daily cash forecasts for 12 months ahead** for both on-budget and off-budget TSA flows based on historic data analysis ('top-down' approach)
- The DGO and the IGCP **do not share their cash plans** regularly

DGO

Purpose: expenditure control and monitoring

Budgetary revenue
Budgetary expenditure
***Outcome*: Forecast budget surplus/deficit**

IGCP

Purpose: cash and debt management

Budgetary revenue
Budgetary expenditure
Net cash flows from acquisition of financial assets
Debt management transactions
CA entities' off-budget cash flows & GG entities' deposits
TSA cash balances
***Outcome*: net change in TSA cash balances and forecast TSA cash balances**

However, their horizons are similar

DGO

1. **Credit releases** for payments — Monthly 1m
2. **Availability of funds** for commitments — Monthly for 3m ahead
3. **Budget monitoring** — Monthly for the fiscal year

In-year profiles (cash plans) include **detailed information** on tax and non-tax revenue and expenditure for 'double earmarking' of non-tax revenue and for expenditure controls

IGCP

1. **Liquidity management** — Daily for up to 3m ahead
2. **Debt management** — Rolling monthly for 12m ahead

Cash forecasts include **aggregate level information** on budgetary revenue and expenditure, financing transactions and other cash flows for cash and debt management

Objectives of the new cash forecasting system

The proposed cash forecasting system has three main objectives

1. To prepare **comprehensive cash forecasts** covering both the on-budget and off-budget cash flows of the TSA
2. To prepare and update **two types of in-year cash forecasts:**
   - daily/monthly for 3 months ahead and
   - monthly from 4th month to 12th month ahead
3. To **improve current** cash management **practices**

Comprehensive coverage of cash forecasts

Data requirements for new cash forecasts

All CA entities already submit their monthly budgetary cash plans to the DGO

All CA entities

- Budgetary revenue
- Budgetary expenditure
- Net cash flows from acquisition of financial assets (Chapter 60)

Cash forecasts for budget deficit monitoring (ESA)

The 80/20 principle is to be followed in defining those large entities providing off-budget cash forecasts

The largest CA entities

- CA entities' other cash flows

Large public entities depositing in the TSA

- GG entities' voluntary deposits
- Debt management transactions
- Bank account balances (IGCP and commercial banks)

Cash forecasts for cash and debt management

Alternative: the IGCP adds this information to its cash forecasts by itself

Preparation of two in-year cash forecasts

CASH FORECAST A for 3 months ahead	
Purpose	• **Liquidity management** (forecast broken down by days) • Input for monthly **credit releases and for setting commitment ceilings** (forecast broken down by months)
Forecast providers	• **The large revenue collectors/spending entities, incl. voluntary depositors in the TSA (20-30 entities)** provide on-budget and off-budget cash flows broken down by days (using Excel spreadsheets initially) • **Medium-sized and small entities** provide monthly cash plans for budgeted revenues and expenditures in the current format
Sources of data	• **Automatic data submission from the entities' accounting system** (a/c payables and receivables, commitments, e-invoices) once IT solutions for commitment management system have been implemented • **Some manual forecasts** for cash flows not covered by data extracted from accounting systems
CASH FORECAST B for the 4th to 12th month ahead	
Purpose	• **Debt management** and **budget monitoring**
Forecast providers	• **The large revenue collectors/spending entities, incl. voluntary depositors in the TSA**, provide rolling monthly forecasts that also include off-budget cash flows, with cash forecasts updated monthly • **Medium-sized and small entities** follow the current practices for updating their respective cash forecasts for budget
Sources of data	• **Mainly manual forecasts**, automatic data from accounting system when appropriate • Entities forecast their cash flows based on their updated budget execution plans and do not forecast the DGO's allocation of funds from the General Budget

Improvements in current cash management practices

1. **Inclusion of large regular payments, not just salaries, in the 'calendar of monthly payments'**
   - For example, transfers, subsidies, benefits and pensions to fix payment dates
2. **Introduction of a notification requirement for all entities to inform the IGCP of large payments and receipts**
   - For example, payments in excess of EUR 50 million five business days before the payment date (except for 'calendar payments')
3. **Introduction of regulations and guidelines** for CA entities and those public entities depositing in the TSA for submission of intra-year cash forecasts

Cash forecasting functions and processes

A dedicated cash forecasting team should be established

Main tasks of the cash forecasting team - a new function in the MOF:

1. To **collect data and to maintain a database** of CA entities' cash forecasts and actuals
2. To prepare **consolidated cash forecasts in agreed format and with agreed frequency** for budget monitoring and liquidity and debt management
3. To prepare **variance analysis** in cooperation with forecast users
4. To provide **guidance and training** to CA entities and Coordinating Entities
5. To **be accountable for and to develop** the cash forecasting system

Allocation of roles and responsibilities in the cash forecasting system

CA ENTITIES	COORDINATING ENTITIES	CASH FORECASTING TEAM	USE OF FORECAST
BUDGET EXECUTION	MONITORING BUDGET EXECUTIONS	CONSOLIDATING CASH FORECASTS	MONTHLY CREDIT RELEASES
COMMITMENT CONTROL (within limits set by DGO)	VALIDATION OF CALCULATIONS OF AVAILABILITY OF FUNDS	PREPARING SPECIFIC FORECASTS FOR FORECAST USERS	SETTING COMMITMENT LIMITS
CASH FORECASTING	ASSESSING THE QUALITY OF CASH FORECASTS	VARIANCE ANALYSIS OF FORECASTS (in cooperation with users)	BUDGET MONITORING
	CONSOLIDATING CASH FORECASTS	GUIDANCE AND TRAINING TO LARGE ENTITIES AND COORD. ENTITIES	LIQUIDITY AND DEBT MANAGEMENT
	VARIANCE ANALYSIS OF FORECASTS		

Improvement of co-operation on cash forecasting

A specialist-level technical committee needs to be established:

- To drive on-going quality improvements in cash forecasts
- To discuss future developments in cash forecasting
- To ensure that all main function areas of the MOF are 'on the same page' regarding cash forecasts

Tasks	• **To approve templates and data requirements for cash forecasts for CA entities** and those public entities depositing in the TSA • **To approve templates for Cash Forecasts A and B** provided by the cash forecasting team to the DGO, the IGCP and any other user of cash forecasts • **To analyse monthly variance reports** prepared by the cash forecasting team and to understand the reasons for forecast errors • **To discuss future developments** in cash forecasts
Members	• **Specialists** from cash forecasting, budget monitoring, liquidity and debt management, macro-fiscal analysis • Large CA entities (e.g., Tax Authority), the Banco de Portugal and the Statistical Office are invited when needed
Frequency of meetings	• **Monthly** • Secretary of the technical committee is the head of the cash planning team

Expected benefits

Expected benefits of the new cash forecasting system

- **<u>The key win is within the IGCP</u>: improved forecasting of the TSA cash flows is critical for risk financial management and provides better control over changes in debt stock**
- **More broadly, a new system will be beneficial for all stakeholders**

For entities	In-year cash planning **enhances the quality of entities' financial planning**
For budget monitoring	Reliable 'bottom-up' forecasts enable the DGO to make more **informed decisions for budget management**; to **identify budgetary risks** and **to adapt current budget control systems**
For liquidity management	Reliable 'bottom-up' forecasts enable the IGCP to **reduce liquidity requirements for the TSA** as forecast errors decrease
For debt management	Reliable 'bottom-up' forecasts enable the IGCP to make **more informed decisions on debt management** to meet debt stock targets and to reduce interest costs

Phased implementation plan

A phased process for introducing new cash forecasting system

Phase 1

- Phase 1 will be **a preparation period with** a focus on developing the new cash forecasting team and setting up the technical-level cash forecasting committee in the MOF
- Improvements to current practices and processes, incl. regulatory changes as needed

Phase 2

- Phase 2 will be **a 'trial and error' period** where consolidated cash forecasts will be prepared using current IT systems and Excel spreadsheets

Phase 3

- Phase 3 will include **implementation of a new IT solution** to support cash forecasting processes for CA entities

Implementation risks

- **The main risks for cash forecasting system at the initial stage include**:
  - **Lack of capacity** from CA entities and those entities voluntarily depositing in the TSA
  - **Understaffing and/or insufficient training** of the cash planning team

- **Going forward, the use of highly-automated cash plans based on invoice due dates will be problematic if entities make their payments late**
  - Current practice is to make payments up to 60 days **after** the invoice due date
  - This would lead to wildly over-conservative cash forecasts if cash planning is automated based on invoice due dates, unless payment culture changes

Any questions?