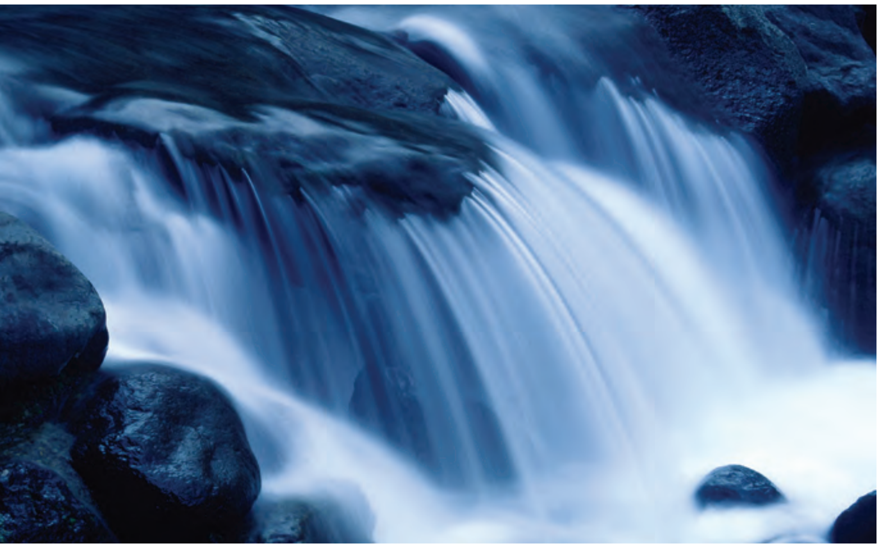
cash management
FORECASTING

Managing the flow

ADDING UP THE BENEFITS OF CASHFLOW FORECASTING.



Executive summary

A fundamental part of the cash and liquidity management processes is, as for any process, planning ahead. Cash is rarely instantaneously available – all but the simplest markets and instruments need some sort of notice to use them, if only due to authorisation processes and processing deadlines. The delay might be as short as a day for a payment, or it might be a week if the company is chasing an important sales receipt, or it might be weeks or months if the company needs to raise equity or to borrow by issuing a bond on the capital markets.

Companies prepare forecasts in order to plan ahead for to ensure that cash will be available as and when required.

Cashflow forecasting aims to identify where, when and in what currency cashflows are expected to occur.

Liquidity forecasting aims to identify and plan how shortfalls will be funded, and how surpluses will be invested.

The boundaries between cash and liquidity forecasting are often blurred, however cashflow forecasting tends to be shorter term whereas liquidity forecasting is more strategic. The exact process will be defined by the needs of the business and management.

BENEFITS OF CASHFLOW FORECASTING Being able to forecast cashflow is one of the most important elements of treasury management. Treasury's primary responsibility is to ensure that the company has sufficient liquidity (i.e. access to cash) so that it can meet all known obligations and to allow it to continue to function.

By predicting shortfalls and surpluses treasury can improve investment returns, negotiate better borrowing terms and conditions and minimise external borrowing, optimising the use of cash and of borrowing facilities and avoiding shocks. When assessing potential surpluses and deficits of cash it is necessary to assess not only amounts and currencies, but also the periods for which the surpluses or shortages will occur.

Most short-term funding of overseas subsidiaries inside groups of companies is by inter company financing. This is automated in most modern treasuries for most countries but is difficult in some countries which suffer various restrictions, such as exchange controls, tax barriers or difficulty over currency convertibility or at a more simple level of dealing with time zones. Cash forecasting can highlight where such pressures may arise and allow time for the treasurer to plan for it properly.

There can be disadvantages to forecasting as well and these mainly revolve around the time, and hence cost, spent by finance managers in preparing them. Often pushed from every side, further pressure and questions on the forecasts they have prepared to tight deadlines can cause friction.

CASH FORECASTING TIME HORIZONS For cash management purposes there are usually three time horizons for forecasting, each serving a different purpose and using different forecasting methods:

- Short term, today up to between 30 days and three months, the forecast is by day and by week.
- Medium term, from 1-3 months up to one year where the forecast is by month.
- Long term, over one year, where the forecast is for one or more years.

As the time horizon extends, however, it becomes more difficult to forecast with accuracy and the usefulness of the forecast diminishes.

Short-term cash forecasting Short-term cashflow forecasting is for time horizons from "close of business today" out to between 30 days and three months. Short-term forecasts help with:

- ensuring adequate liquidity to meet future obligations;

Main benefits of cashflow forecasting

- **Liquidity management** Ensuring adequate borrowing facilities are available to fund shortages, and sufficient creditworthy investment opportunities for surpluses.
- **Minimising cost of funds** Knowing when and where funds are required enables them to be obtained efficiently either internally or from external sources.
- **Maximising interest earnings** Knowing when and where surpluses are expected enables them to be used efficiently either by making investments or by repaying borrowings.
- **Foreign exchange** Producing forecasts in currency will identify the size and timings of currency flows, and hence indicate the risks over the forecast period which treasury may have to manage.
- **Working capital management** Forecasting should identify changes in requirements for working capital, enabling corrective action to be taken if need be.
- **Financial control** The cash forecasts can be analysed and compared to actual results to ensure that subsidiary companies are managing their cash flows in line with plans and corporate policy.
- **Investing and funding strategies** Longer-term forecasts are used to identify structural cash shortages and surpluses.
- **Strategic investment** For mergers or acquisitions, forecasting is essential to calculate available cash and the amount that must be borrowed to complete the deal. Cashflow forecasts are an essential element in the process to acquire fixed assets such as plant, machinery or a factory.
- **Strategic objectives** Corporate strategies and objectives can be reviewed or monitored by comparing actual cashflows against those planned. Longer-term forecasts should also include any anticipated market, economic and competitive changes.

- managing day-to-day liquidity by identifying expected cash receipts and payments;
- minimising balances in non-interest or low-interest bearing accounts;
- identifying funding requirements where cash deficits are forecast; and
- making investment decisions where cash surpluses are expected.

Short-term forecasts are prepared ideally:

- based on the opening cleared balance and expected cashflows over each individual company bank account;
- for short periods at the beginning, lengthening as the time horizon extends. For instance the first two weeks may be forecast by day, the next two weeks by week, and the balance of the three month period by month; and
- on a rolling basis; by periodically revising and re-forecasting.

And indeed this would be a standard to be applied inside the treasury department with its large cashflows. However, for businesses this may be impractical, the time delay between preparation and consolidation in large groups making information out of date before it is seen in the treasury department. Short-term cash forecasting may instead be based on book values or estimates, not split by bank account and not analysed by day.

Inside the treasury, bank tools are available which can forecast balances for the day and these, with treasury's own forecasts, are used to manage day to day liquidity.

Medium-term cash forecasting Medium-term forecasting is used to identify net cash surpluses and deficits for periods from one month to one year. It seeks to establish overall trends and averages, rather than detailed daily positions and provides a view of the overall funding/investment patterns expected over the period. Typically companies using medium-term forecasting have a rolling monthly forecast with a 12 month time horizon, usually similar to a budgetary horizon. Medium-term forecasting is usually based on accounting projections of revenues, expenses and changes in the balance sheet items rather than on individual bank accounts. Monthly rolling forecasts are used for:

- Forecasting the cashflow impact of changes in working capital requirements;
- Forecasting medium-term investment and/or borrowing programme requirements;
- Reviewing credit terms offered to customers and taken from suppliers;
- Monitoring compliance with financial covenants; and
- Capital expenditure budgeting such as the purchase of a new production line.

Objectives of long-term cash forecasting Long-term forecasting covers periods in excess of one year. The period is consistent with the company's strategic planning horizon i.e. the longer-term sales, purchases and product strategies of the company, and can be as long as ten years. Like medium term forecasting, long-term forecasting is based on accounting projections.

The objectives of long-term cash forecasting are to help with:

- setting and monitoring strategic objectives for the business;
- forecasting long-term liquidity needs;
- assisting with interest rate risk management;
- planning long-term capital structure;
- planning the long-term credit rating and financial ratios of the company; and
- identifying any conflicts between spending ambitions and affordability.

Both medium and long-term forecasts tend to reflect accounting assumptions about future cashflows rather than the cleared funds position recognised by the bank.

SENSITIVITY Longer-term forecasts in particular should be

subjected to sensitivity analysis, to quantify any uncertainties in the forecast. The parameters may include:

- differences in timing or amount of cashflows
- exchange rate fluctuations
- interest movements
- changes in rates of inflation
- economic influences
- changes in the market place
- competitor strategies

Companies will usually produce several forecasts based on a number of scenarios, ranging from "worst case" to "best case".

FORECASTING USING A RECEIPTS AND PAYMENTS FORECAST Receipts and payments forecasts are generally used for shorter-term forecasting. They provide a great deal of detail, but beyond about three months forward they become less accurate or useful. The forecast starts ideally with today's cleared bank balances although some business units may use a book balance instead. Changes in each balance are then forecast using anticipated future cleared receipts and payments. Preparing a receipts and payments forecast requires:

- timely and accurate identification of cleared funds on bank accounts; and
- an analysis of receipts and payments. This should be prepared by people closely involved with managing the cashflows themselves, and Enterprise Resource Planning (ERP) systems are often capable of creating a suitable report automatically.

Underlying receipts and payments information is collated into a receipts and payments forecast.

CASH FORECASTING USING FINANCIAL STATEMENTS When preparing cash forecasts beyond three months, most companies base the forecast on projected financial statements and not receipts and payments. The two main reasons for this are:

- Beyond about three months receipts and payments forecast become increasingly inaccurate; and
- Preparing the forecast from projected accounting data makes it easier to check that the cashflow forecast is consistent with the accounting forecast.

There are a variety of ways to generate an accounts-based forecast. One approach involves using an opening[1] balance sheet + forecast income statement + forecast closing balance sheet to generate a cashflow forecast. We can use historical accounting data presented in the balance sheet and income statement to produce a cashflow statement, and we can use projected accounting data, i.e. an opening balance sheet, a forecast closing balance sheet and a forecast income statement, to produce a cashflow forecast.

FORECAST CASHFLOW FROM INCOME STATEMENT AND BALANCE SHEET INFORMATION The aim is to identify from the forecast financial statements, the cash inflows and outflows for a given forecast period. By deducting one from the other, we get a net cashflow forecast i.e. the change in cash. By using the following formula, we can calculate any change in cash relating to a balance sheet account for the forecast period:

Opening balance sheet account + adjustments + income / expense = Closing balance sheet account + change in cash.

Therefore:

Opening balance sheet account + adjustments + income / expense – Closing balance sheet account = change in cash.

So if we have an opening and a closing balance sheet amount and we know the value of any adjustments (typically transfers to other balance sheet accounts), and the associated income or expense, we can work out the cashflow in the period.

This article is based on the Study Unit – Cash and Liquidity Management Cash, Liquidity and the Business for the Certificate in International Cash Management (CertICM) from the ACT.

[1] An "opening" balance sheet is the balance sheet at the start of the forecast period and the "closing" balance sheet is the balance sheet at the end of the forecast period.