Data sources for budgets and funds flow forecasts

Q 6-03. What is the value of budget information in forecasting?

A budget is the primary financial management tool of the government and forecast of the government's annual cash flows. Related estimates of cash flows should start with this financial management tool. This is especially true if the budget is prepared on a cash basis. The budget will also detail the accounting of subsidiary cash flows and how they roll up to an overall value. This is useful for selecting data series for any statistical forecast of particular flows.

It is desirable also, if treasury forecasts made near the start of the fiscal year tie back to the budget forecast. This serves institutional ends by endorsing the budget that has already been passed by the legislature and avoids the appearance of a split within the ministry of finance. Subsequent forecasts can be expected to drift away from the initial budget forecast as the unfolding of the year brings fresh actual data into use.

Q 6-03.01. Can accounting data be misleading as a data source?

If timing of events is crucial to the accuracy of a forecast, accounting data may sometimes mislead in forecasting cash flows. This can happen when one uncritically uses accounting data as cash data because accrued transactions are not necessarily coincident with cash transactions or movements. The problem is mitigated when, for example, all transactions are electronic because this leads to a situation in which there is no difference between "cash" and "book." If payments or remittances are not instantaneous, there may be a discrepancy. For example, in the case of reported collections versus cash deposits, the accounts may report one value but the cash flow may be slightly different.

Q 6-03.02. Does it matter if the budget data are on a fund or agency basis?

The distinction is between forecasting cash flows based on governmental fund types, e.g. general revenue fund, highway (road) fund or governmental agency or ministry.

The choice must be rational; it should be based on the best cost-benefit ratio among the different planning, collection and forecasting techniques. If a strong information technology system exists for compiling and synchronizing spending plans, then the agency approach may be the better choice. If there are only three or four major fund groups and if they are of equal size, then it may be preferable to use data on a fund basis.

Q 6-03.03. Does it matter if the budget data are on an economic or functional basis?

The distinction is between forecasting cash flows based on economic classification or on the functional basis of government. From an accounting viewpoint, the former is probably better because it lends itself to robust variance, i.e., difference between forecast and actual values, analysis. Using the economic classification likely lends itself to the easiest forecast to compile and analyse.
The latter is more descriptive of the intent of government operations, but does not appear to lend itself to a thorough analysis of patterns or variances between forecasts and results.

Again, the choice must be supported by the analysis of costs and benefits of the different collection and forecasting techniques as well as information available.

Q 6-03.04.   What are some practical issues in forecasting revenue streams?

The budget should serve as source reference. The treasury should use the revenue forecasts from the budget – assuming the budget was done well -- in the initial formulation of its cash forecast because the budget is the principal financial document. The initial budget revenue estimate must be backed by some consistent, corroborating macroeconomic analysis. Revenue collecting agencies should prepare monthly estimates using the budget as a base. Weekly or daily estimates of the monthly plan can be prepared using historical daily data lined up against "payment due dates".

As the year progresses updates should be made as new information becomes available on the revenue side. This needs to be a collaborative effort with revenue collecting agencies. To keep the cash flow forecast from being seen as an alternate budget, updates to revenue and expenditures need to be done in a way that provides information that can be used by the legislative branch if adjustments need to be made to the budget.

These observations apply equally to on-budget and off-budget revenue and expenditure flows.

Q 6-03.05.   What are the practical issues in forecasting and spending plans?

A spending plan forecast is critical to budget planning and execution. Spending units should prepare monthly spending estimates and these should be based on the budget and on revenue forecasts when appropriate. The spending plan should incorporate the proper level of flexibility given the seasonal nature of some spending categories.

Whether a spending plan should be developed, however, must be examined on the cost of doing them and the benefits they yield. Using spending plans to control monthly cash outflows works if there is a financial management system that integrates the spending (budget) plans with the accounting system that processes payments. If such a system does not exist, the costs of collecting estimates, issuing allotments, and following up on compliance with plans will likely be quite high. In an integrated system, plans may be easily synchronized and spending limits can be easily implemented, monitored and changed as conditions change.

In developing a spending plan, focus should be on the areas with the biggest fiscal impact. For example, payroll costs often consume a major share of the budget, but are fairly regular in timing and amount. They should be easy to forecast and a good estimate should be easy to develop. Similarly, transfers to lower levels of government should also be easy to forecast, especially if the transfers are supported by a federal law or existing regulations governing the timing of their disbursement.

Once they are available, spending plans provide a key data source in developing topical forecasts of cash outflows.

Q 6-03.06. Can historical information be used to forecast expenditures?

The past is often a very good predictor of the future in countries with mature financial and budgetary systems. The treasury should be able to use historical information to check the spending plans, especially in the major areas of expenditures. In mature financial and budgetary systems, budgets tend to grow at predictable rates which can translate into predictable rates of growth or decline in cash out- and in-flows. In countries with young financial and budgetary systems, historic data can also be a good predictor if information can be "normalized" for the current year's situation.

The best information gleaned from historical cash flows, however, is not necessarily the actual figures but the seasonality or patterns of spending and revenue collection.

Q 6-03.07. What does it mean to "normalize" historic information?

In the case of a rapidly changing financial situation in a country, historical information should be "normalized" for use in forecasting by making adjustments that account for significant changes in fiscal flows affecting only levels of flow, but not the basic pattern, or affecting the basic pattern of a flow only in a highly predictable way. Changes that can be so accommodated include inflation, changes in public salary levels, and emergency situations which will distort future patterns in predictable ways. Special note should also be made of historic spending patterns that may have been distorted due to the non-payment of incurred expenditures and that led to arrears. Similarly, historic revenue information must be normalized to adjust for changes in tax rates, types of filers, or types of taxes. Finally, past investment and spending on capital projects must be reviewed diligently since the patterns associated with this category of expenditure are unlikely to be repeated in the future.

Q 6-03.08. How can reference to calendar dates improve forecasts?

Look at patterns in cash flows in relation to the calendar. Some funds flows will be driven by particular days of the week. Months that have five of such days instead of four may show higher activity. Other flows may vary systematically among the days of the week or the weeks of the month. Patterns such as these may be quite complex and difficult to solve from a purely statistical sense, but may be self-evident and easy to describe when seen on the calendar.

Known or legislatively or administratively determined dates can provide assistance in interpreting or weekly patterns. It is likely that there will be separate peaks for cash outflows during the month for vendor payments, payrolls, pensions, and other social insurance disbursements. These known peaks should be overlaid on the forecast. Similar information can be drawn from transfers to other levels of government and debt service.

Q 6-03.09. What debt information can be used?

Both potential debt and issued debt provide information that can improve the quality and accuracy overall of budgetary and cash flow forecasts.

As discussed in the question of calendar based data, the schedule of payments and maturities on outstanding debt should be immediately available for budget purposes. It is also prudent to use reasonable placeholder values for likely issue dates and amounts for to-be-issued debt and its subsequent financing payments.

In addition, budgets may be improved by noting the potential for debt issuance. The budget forecast should acknowledge how much debt is authorized but has not been issued. Additional information regarding legal limits on the amount, restrictions on long-term or short-term debt, options for borrowing through direct credit or issuance of securities are all useful.

Q 6-03.10. What other funds flows should be noted in the budget forecast?

Many exceptional events can be anticipated and should be included in the budget forecast.

The forecast should include estimates of cash flows arising from settlement of accounts receivable, asset sales and privatization, sale of precious metals, dividends from equity investments, foreign exchange activity, and maturing investments.

Likewise, the forecast should estimates of cash outflows going to equity investments in public entities, purchases of precious metals, settlement of past due accounts payable, foreign exchange activity, and new short-term investments made for cash management or liquidity purposes.