Developing Cash Flow Forecasting

Introduction

Cash flow forecasting is the art of successfully estimating the magnitude and timing of an entity's (city, village, county, other public entity) cash flows. Cash flow forecasts are estimates of cash sources and uses, and the resulting balances, for a given period (daily, weekly, monthly, annually). This type of forecast measures an entity's ability to meet its liquidity needs and also, importantly, estimates investable balances. The objectives of cash flow forecasting are a balancing act: retaining sufficient cash balances to meet expenses and liquidity needs while remaining as invested as possible.

Cash flow forecasting can be extremely useful in helping manage an entity's investment program. The corollary of determining the dollar amount that needs to remain liquid to meet operating obligations is identifying core funds, or those funds available for longer-term investing. While the funds that are intended for expenses can be invested simply in money market instruments of short or matched maturities, local government investment pools or money market funds, the core funds can be invested longer-term. For instance, cash flow forecasts can help identify reasonable maximum and weighted average maturities of investments. In normal interest rate environments, longer-term maturities earn higher returns.

Cash flow forecasting should be done throughout the organization. This allows the entity to coordinate spending patterns and balance the flow of funds. Importantly, an entity can use the cash flow forecast to ensure that its priorities are reflected in the cash flow decisions.

Recent financial upheaval

As a result of the COVID-19 pandemic and the ensuing massive disruptions, local government revenues from sales, property, and income taxes as well as various fees have taken massive hits. The length and severity of the pandemic makes forecasting the level of decreases difficult. Exacerbating the problem is the trickle-down effect from the federal government and states as revenue deficits force some states to cut their own budgets and the revenues due to local governments, and their cash flow problems are also delaying payments to local governments. Forecasting cash flow is extremely difficult when both the size and timing of revenues (and expenses) are in flux. Delayed payments also reduce interest earnings, because the cash from the state is not available to be invested and because the jurisdiction has to free up more cash to meet expenses. Delayed payments from the state can force some localities to borrow money as a stopgap measure. Lost earnings and increased borrowing also affect cash flow forecasts.

In a financial crisis, cash flow reporting takes on renewed importance. Cash is critical for short-term operations. It pays the salaries and rents, and buys the equipment, supplies, and tools. During tumultuous times, governments should develop monthly and perhaps even weekly cash flow forecasts.

Why do it?

- Ensures liquidity for disbursements
- Serves as an early warning system that the cash flow characteristics of an agency are changing
- Identifies short-term cash deficits
- Warns of impending budget problems
- Enhances inter-departmental cooperation
- Can improve investment earnings
    - Allows for investment in longer term, generally higher returning securities
- Avoids forced sales of securities to meet cash needs

Major impediments

- COVID-19 has no precedent
- Tendency to think in budget years
- Difficulty distinguishing between fund balance and cash balance
- Inadequate time and/or staff
- Unpredictability of revenues and expenditures
- Lack of information and communication
- Lack of adequate technology

Tools

- Governor's Revenue Forecast Revisions
- Historical data from general ledger
- Historical data from bank and pool statements
- Current year budget provides information on future revenues and expenses and can identify potential deviation from historic patterns.
- Capital projects and spending projections
- Debt issuance plans and current debt service
- Schedule of investment maturities and coupon payments

How - to

Use the above information to predict upcoming receipts and disbursements, and plan future investments and borrowing requirements.

Revenue

Revenue items should be limited to four or five major sources, with additional revenues lumped together as "other."

1. Prepare a monthly schedule of prior receipts.
2. Then calculate a simple three-year average.

3. Use this average to determine the percentage of each revenue source contributes to the total.
4. Adjust these percentages for any planned changes in timing or amount. This is important during economic slowdowns, when abrupt shifts in sensitive revenues and expenditures can wreak havoc on historical trend information.

Expenses

Non-recurring Items

Prepare expense or disbursements the same way as revenues.

Pulling it All Together - Creating the Cash Flow Forecast

1. Categorize expenses by major type such as payroll, utility payments, debt service payments, capital expenditures, materials and supplies, and other vendor and miscellaneous payments.
2. Prepare a monthly schedule of historical disbursements.
3. Calculate a three-year average.
4. Adjust for anticipated variations and trends.
5. Use forecast revenues and expenses to create a cash flow forecast.
6. Include all available cash and investments in the beginning balance.
7. Add expected receipts to the beginning balance and subtract expenses.
8. The result will be the net cash position, which determines what course of action to take.
9. Excess cash should be invested to maximize investment income. Deficit balances may require short-term financing.

Key take-aways

Sizing fund balance. Cash flow helps identify working capital needs. Cash flows that are volatile and have wide variance between high and low points for given periods may suggest a need for a higher working capital reserve.

Communication tool. Cash flow forecasts can help illustrate the reality of an organization's liquidity situation. Such communication can prove valuable when dealing with stakeholders (elected officials, rating agencies, taxpayers, and constituents).

Investment management. In normal interest rate environments, longer maturities typically have higher yields. With the information garnered from a reliable cash flow forecast, an entity can identify what dollar amount of the portfolio needs to remain liquid to meet disbursement obligations, and it can identify those funds available for longer-term investing.

- Ensure liquidity for disbursements
- Manage investment risks
- Enhance investment returns

- Cash flow forecasting is essential in a financial crisis.
- Cash flow forecasts can provide early warning signs of liquidity problems.
- Cash flow forecasting helps diagnose imbalances in sources and uses and can highlight

patterns that might affect long-range financial position.

- Cash flow forecasting can provide information to help manage liquidity problems.
- Cash flow forecasts can help officials take prompt corrective action and plan for contingencies (accelerate revenue collections, reduce expenditures, make informed decisions about short-term borrowing).

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