

## Cash Flow Forecasting Resource

This Resource should be read in tandem with GFOA's Best Practice -  
*Using Cash Forecasts for Treasury and Operations Liquidity*

### Background

Cash flow forecasting is a critical tool for ensuring sufficient operating liquidity. This cash flow resource will be used to manage expected inflows and outflows on an ongoing basis for the purpose of estimating the available cash balance. GFOA recommends\* governments develop a rolling cash flow forecast for a minimum twelve-month rolling period.

A well-developed cash flow forecast can help a government actively manage its cash position and promote sufficient liquidity to meet ongoing operating expenses. It can also help prevent the need for short-term borrowing or early liquidation of long-term assets (potentially at a loss). Finally, cash flow forecasting can help improve investment efficiency by identifying when cash is needed and aligning investment durations to match the cash flow cycle.

It is important to note that a cash flow forecast is based on estimates and should provide governments with a projected view of the entity's liquidity standing. It should not be a replacement for budget forecasts and the entity's general ledger.

### Key Questions to Consider

Cash flow forecasts do not need to be complex and can be expanded and refined over time. Specialized cash flow forecasting tools exist, but many governments utilize Microsoft® Excel®. It is also important to note that a cash flow forecast is a planning tool – a forecast, developed for internal purposes to ensure a strong liquidity position, serve as a variable for policy decisions (e.g., can we afford the debt service to build a new library), and assist with the entity's investment strategies.

### **What are we trying to accomplish with the cash flow forecast?**

- Estimate the timing of revenues and disbursements over a period of time to understand funding needs.
- Monitor financial and liquidity needs and be better able to respond to changing conditions.
- Planning and/or evaluating for a specific major project, expenditure, or receivable (including an entity's Capital Improvement Plan).
- Meet financial targets, policies, or covenants (e.g., bond covenants).
- Better inform investment decisions.
  - Understand availability of funds along a time horizon to assist with the entity's investment strategies.
  - Avoid selling investments early to meet liquidity needs.
  - Having a full picture of the entity's cash holdings, and where opportunities may exist to invest cash based on your forecasted needs.

### **How often should a forecast be done?**

- GFOA recommends cash flow forecasts be done on a twelve-month rolling period, at a minimum. Governments can choose the frequency of forecast based on their goals and operational needs. Larger entities should consider more frequent forecasts. Types of forecasts include:
  - Daily or weekly review of entity's cash balance (unrelated to reconciling for accounting purposes) – short-term or daily operation focused
  - Monthly
  - Longer term for investing, debt, and Capital Improvement Planning
- Other timing and frequency considerations include:
  - As warranted when there are unique factors related to matters external to the government (e.g., influx of federal funds, national/global crisis, recession).
  - At a pace to assist with complying with entity's investment guidelines, policies, and strategies.
- In addition to completing a forecast, governments should regularly review actuals against their estimates to confirm if they are on trend with the forecast. This feedback can help governments adjust future forecasts for accuracy and respond to changing needs.

### **Who helps develop the forecast?**

- Internal team (professionals from treasury, finance, budget, and the capital program are frequent participants).
  - This team should include representatives from departments that need and use funds, especially on larger and one-time projects.
- Other third-party professionals (e.g., investment adviser, financial-municipal advisor, bank representatives, etc.).
  - While third parties can provide valuable expertise, it is incumbent on the municipality to own and manage the data that feeds inputs for the forecasts. Additionally, municipalities must actively manage these third parties and to ensure accuracy and alignment with policies, assumptions, and risk tolerance.

### **How is the forecast being developed?**

- Start by identifying 4 – 6 major expenditures and revenues. As a starting point, utilize recent annual and monthly budgeted and actual information.
  - Remember, this is an estimate – not every revenue and expense needs to be included, but it is important to capture the main drives of revenues and expenses.
- Use tools already in place to input and retrieve data.
  - Excel (appropriate for most entities)
  - Other in-house software program and/or utilizing more complex Excel features.
  - Third-party systems
- Data to use
  - Internal financial system/documentation
  - Budgets (operating and capital)
  - Bank statements and reports
  - Investment reports
  - Local Government Investment Pool (LGIP) accounts

- Identify timeframes for revenues and disbursements:
  - Recurring and known timeframes (e.g., payroll, accounts payable, bond payments, retiree expenditures) and frequencies (monthly, quarterly, annual, or other seasonal activities).
  - Non-recurring (e.g., federal grant, legal settlement).
  - Portfolio maturities (i.e., when invested cash becomes liquid again).

### Ongoing Considerations

- Be sure to periodically compare with actuals and then adjust the forecast as needed in order to:
  - Ensure that the base model being used is reflective of actuals, or does it need adjustment?
  - Are there anomalies or inconsistencies that may indicate unauthorized or out-of-policy transactions?
- Does the government have a policy defining liquid cash requirement to provides a financial cushion<sup>1</sup>? If not, the government may wish to adopt an informal policy to be prepared for unexpected costs or lower than expected revenues. Examples may include:
  - a small percentage of total budget as a cash cushion,
  - maintaining a number of days of cash on hand in cash, or
  - determine a dollar cushion using the maximum daily outflow based on historical information.
- Bond proceeds and capital projects
  - Governments may wish to separately develop a cash flow forecast for projects paid for by bond proceeds.
  - Knowing the totality and timing of the project, and when funds are needed, is imperative.
  - There are specific federal regulations related to the spending and investing of bond proceeds that must be reflected in the forecast.

### Cash Flow Forecast vs Budgeting

Budgets are, generally, created to project and monitor revenues and expenses on an annual basis, but even a balanced budget can create negative cashflow should revenues lag expenses. A cash flow forecast is designed to identify the daily, weekly, quarterly, and annual inflows and outflows. In other words, the goal of a cashflow is designed to ensure that adequate liquidity to meet anticipated liabilities, such upcoming weekly, bi-weekly and monthly disbursements (e.g., payroll, debt service, pension contribution, etc.) and identify and prepare for nonrecurring events (e.g., influx of federal funds, legal settlement, payments from contract negotiations, etc.). Cash flow forecasts reveal the timing of expenditures and revenues and how they interact to determine long-term and cyclical trends (i.e., months with net inflows and months with net outflows).

### Cash Flow Forecast and Investing

Cash flow forecasting is a prerequisite to implement and structure investment strategies. The fundamental priorities of investing are **safety, liquidity and yield**—*in that order*. Cash flow forecasting is the tool that defines how much cash a government can invest in the first place. Liquidity is critical to avoid having to sell an investment prematurely at a loss. Only by forecasting sufficient liquidity can a government safely commit investable cash to earning yield.

---

<sup>1</sup> This would be different from an entities fund balance. The focus of this cushion is to address immediate liquidity needs.

Cash flow forecasting helps governments predict when they need funding and reduce the likelihood of having to sell an investment early (potentially at a realized loss). A historical trend of cyclical or seasonal cash inflows and outflows can reveal the predictable future cash low points. This information also helps governments better determine which funds can be invested for longer periods.

The GFOA Best Practice on Investing places importance on knowing statutes, defining risk objectives, tailoring the entity's investment policy to its specific needs, understanding staff capabilities, and forecasting cashflow. An external investment manager requires the entity to define how much cash is investable. For additional information on investing, please visit the Investing Policy and Governance Best Practices at <https://www.gfoa.org/best-practices/treasury-operations>.

While governments have unique financial attributes and needs, this Resource strives to help governments understand the importance of cash flow forecasting to ensure sufficient available funds and mitigate financial risks.

#### Resources

\* Using Cash Forecasts for Treasury and Operations Liquidity

<https://www.gfoa.org/materials/using-cash-forecasts-for-treasury-and-operations-liquidity>

## **GFOA BP: Using Cash Forecasts for Treasury and Operations Liquidity**

GFOA recommends that governments perform ongoing cash forecasting to ensure that they have sufficient cash liquidity to meet disbursement requirements and limit idle cash.

Governments conduct cash forecasts to ensure sufficient operating liquidity by estimating the available cash deposits, expected inflows, and required disbursements during a given period. Common inflows include tax receipts, bond proceeds, utility payments received, grant revenue, other revenue from fees and penalties, and maturities and interest revenue from investment securities. Outflows represent anticipated payments such as debt service, employee payroll and benefits, payments to vendors for goods and services, and purchase/roll over of investment securities. Governments should also consider and include non-repetitive receipts and payments such as proceeds from bond issuance, capital expenditures or expected legal settlements, using reasonable assumptions.

The cash forecast analysis is intended to measure and assess the government's ability to meet its liquidity needs. Cash forecasting can reduce the need for short-term borrowing or liquidation of long-term investments before maturity in the event of a cash shortfall, and can identify idle funds and determine whether those funds could be invested during that idle time frame.

Cash forecasting helps governments recognize structural issues that might have a negative impact on their cash positions. When looking at the entire organization, governments use cash forecasting to coordinate spending patterns and mitigate potential shortfalls by using this information to improve revenue collection practices and align revenues and expense cycles. Cash forecasting is therefore an essential tool for informed management decision making.

**GFOA recommends that governments perform ongoing cash forecasting to ensure that they have sufficient cash liquidity to meet disbursement requirements and limit idle cash. The cash forecast period should be at least a 12-month rolling period, as opposed to a fiscal year basis. The forecast within this rolling period should be divided up in at least monthly sections for most governments, or weekly or daily for larger and more complex governments.**

The cash forecast should be based on conservative assumptions about both the cash receipts and disbursement portions of the analysis, and these assumptions should be reviewed and updated regularly, as well after any major changes in operations (e.g., a new debt issuance, new taxes, etc.). An appropriate tool for conducting the cash forecast should be selected; most

governments can complete a forecast using simple spreadsheet software, while organizations that require more complex modeling can use commercially available analytic or business intelligence systems, or modules found within common enterprise resource planning (ERP) or financial management systems.

The cash forecast should be updated periodically by staff to ensure sufficient liquidity and actual cash flow results should be compared with the cash forecast projections. The cash forecast report should be frequently reviewed by finance management and a summarized report could be included in the periodic investment report.

- **Board approval date:** Monday, September 30, 2019