

# Common Pitfalls in Cash Flow Forecasting

*Presented by :*

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# Cash Forecasting 101

## **What is a cash flow forecast?**

- A cash flow forecast is a plan that shows how much money an entity expects to receive in, and pay out, over a given period of time

# Cash Forecasting 101

## **Why is a cash forecast important?**

- To ensure you have sufficient cash liquidity
- To meet all disbursement requirements
- To avoid the liquidation of investments before maturity
- To limit idle cash and maximize investment earnings

# Cash Forecasting 101

“The requirement of G.S. 159-30(a) that “[t]he investment program shall be so managed that investments and deposits can be converted into cash when needed” dictates that a cash forecast be developed. Without a forecast of cash receipts and disbursements, it is impossible to structure the investment portfolio in such a way that cash can be available when needed without investing in almost immediately available instruments.”

# Cash Forecasting 101

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

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BEST PRACTICES



## 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.

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

# Cash Forecasting 101

## **What are the basic components of cash flow forecasting?**

- Available cash deposits
- Estimated cash inflows
- Projected cash disbursements

# Cash Forecasting 101

## Common Inflows

- Property taxes
- Sales taxes
- Utility payments
- Fees and charges
- Grants
- Financing proceeds
- Investment income

# Cash Forecasting 101

## Common Outflows

- Salaries and benefits
- Operating expenditures
- Capital outlays
- Debt service payments
- Investment maturities



# Cash Forecasting 101

## Guiding Principles

- Know your inflows and outflows
- Be data driven
- Be conservative
- Review assumptions often

# Cash Forecasting 101

## Tools for Cash Forecasting

- Spreadsheets
- Commercially available software and services
- Modules available in your ERP system

# GFOA simplified Excel-based monthly cash flow forecasting model

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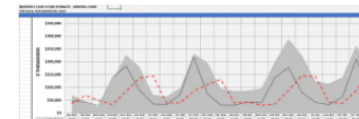
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## Cash Flow Forecasting Tool

This simplified Excel-based monthly cash flow forecasting model provides a simple tool for analyzing the net impact of major revenues, expenditures, and corresponding balances projected over a 36-month period.



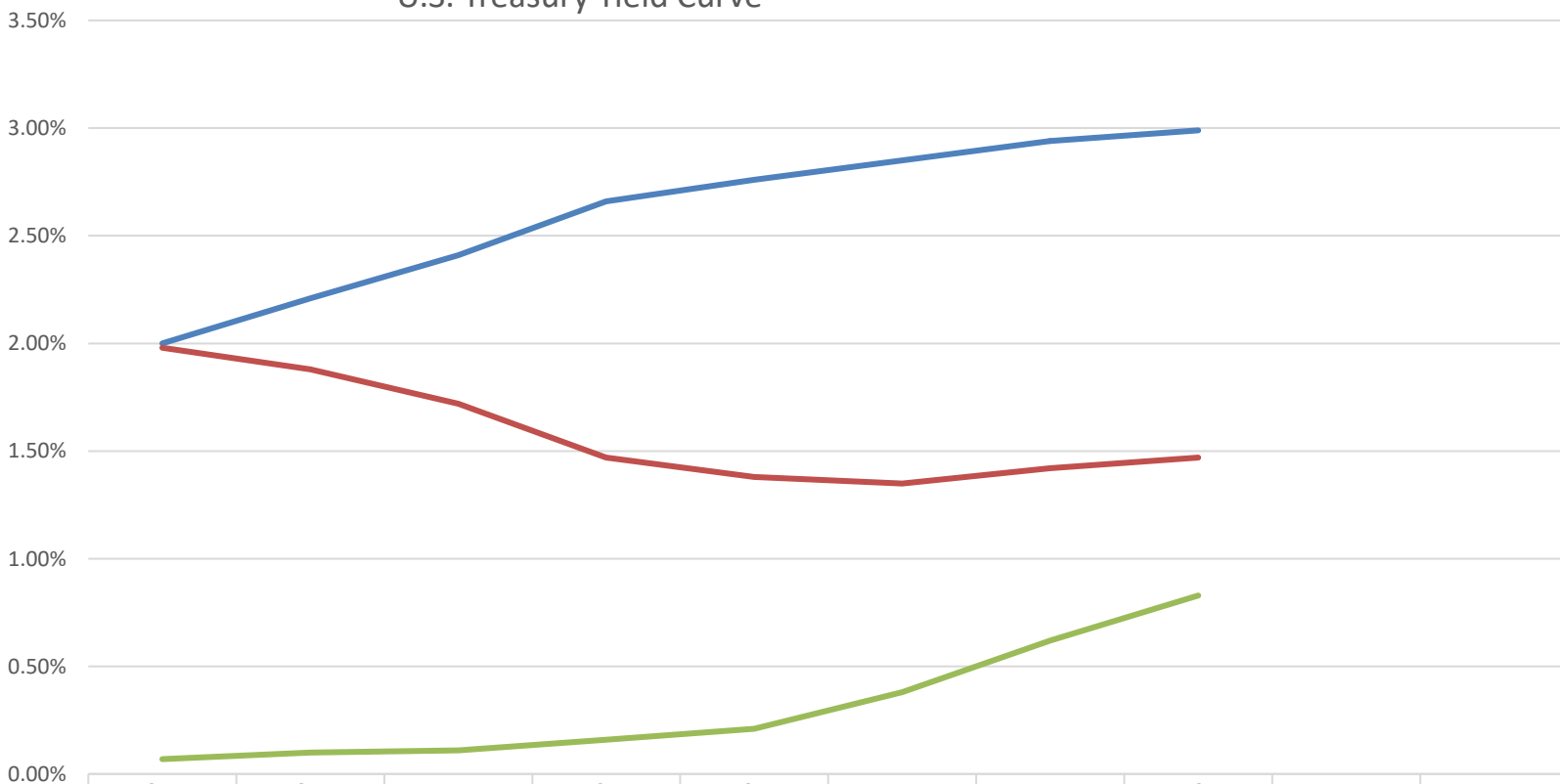
**Publication date:** August 2020

# Common Pitfalls

## Common Pitfalls in Cash Forecasting

- Relying too heavily on historical data, recessions are unpredictable
- Not expecting the unexpected- i.e. – Board or Commission commits to a large purchase unexpectedly (land, buildings, etc.)
- Not realizing where rates are compared to historical averages
- Not reading warning signs in the markets
- Investing too far out on the yield curve
  - When rates are so low, and the yield curve is flat, you are not compensated to extend maturities. If you do extend, you open yourself up for negative Fair Value Adjustments (FVA) should rates rise.

## U.S. Treasury Yield Curve



	3M	6M	1Y	2Y	3Y	5Y	7Y	10Y		
8/2/2018	2.00%	2.21%	2.41%	2.66%	2.76%	2.85%	2.94%	2.99%		
9/3/2019	1.98%	1.88%	1.72%	1.47%	1.38%	1.35%	1.42%	1.47%		
11/20/2020	0.07%	0.10%	0.11%	0.16%	0.21%	0.38%	0.62%	0.83%		

— 8/2/2018   
 — 9/3/2019   
 — 11/20/2020

## From LGC Sample Policy

“The cash management portfolio of the [Unit Type] shall be designed with the objective of regularly meeting or exceeding a selected performance benchmark, selected from the average return on the three-month U.S. Treasury bills, The North Carolina Capital Management Trust or the average rate of Fed funds. These indices are considered benchmarks for lower risk investment transactions ...”

## Cash Flow Forecasting

How much risk do you want to take?

“Many practitioners believe that local governments will perform best if they simply calculate the investment horizon for which funds are available, and obtain the best return feasible within the standards of prudence. Trading should be left to the professionals and the investment officer is insulated from public attacks over the wisdom of specific strategies. **The public official is charged with the care of public funds and not earning excess return.**”

There have been financial market upheavals 2x in the last 12 years and 3x in the last 20 years. Economic cycles seem to be shorter and more brutal than before.

That is a good argument for having a higher cash level.

## Ways for Managers to Outperform

Increase risk—this is generally the only way

- Credit Quality—use lower credit quality investments
- Extension—go further out the yield curve
- Trading—try to capture gains in market value

Finance Officer ultimately accountable



# Common Pitfalls

## Questions for Forecasters

- What items should I be focusing on in this environment?
- What will I do when my model does not work?
- How can I plan better for uncertainty?
- How would I invest differently if I knew a crisis was coming?

# List of Recessions

<b>Name</b>	<b>Range</b>	<b>Peak Unemployment</b>	<b>GDP Decline</b>
1. Great Depression	8/29-3/33	24.9%	-26.7%
2. Recession of '37	5/37-6/38	19.0%	-18.2%
3. Recession of '45	2/45-10/45	5.2%	-12.7%
4. Recession of '49	11/4/-10/49	7.9%	-1.70%
5. Recession of '53	7/53-5/54	6.1%	-2.6%
6. Recession of '58	8/57-4/58	7.5%	-3.7%
7. Recession of '60-'61	4/60-2/61	7.1%	-1.6%
8. Recession of '69-'70	12/69-11/70	6.1%	-.60%
9. Recession of '73-'75	11/73-3/75	9.0%	-3.2%
10. 1980 Recession	1/80-7/80	7.8%	-2.2%
11. 81-82 Recession	7/81-11/82	10.8%	-2.7%
12. Early 1990's Recession	7/90-3/91	7.8%	-1.4%
13. Early 2000' Recession	3/2001	6.3%	-0.3%
14. Great Recession	12/07-6/09	10.0%	-5.1%
15. COVID-19 Recession	2/20-present	14.7%	TBD

# Thank you!

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