

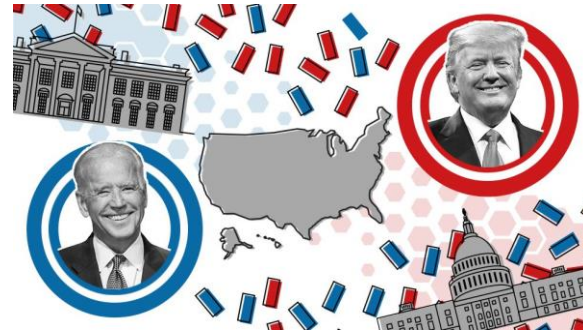


Cash Flow

Managing and Forecasting

Module #5

The Year 2024: What will it bring?

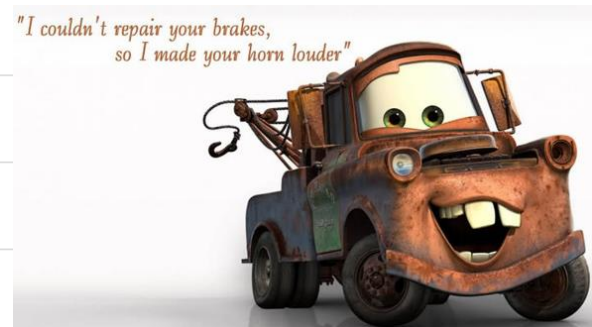
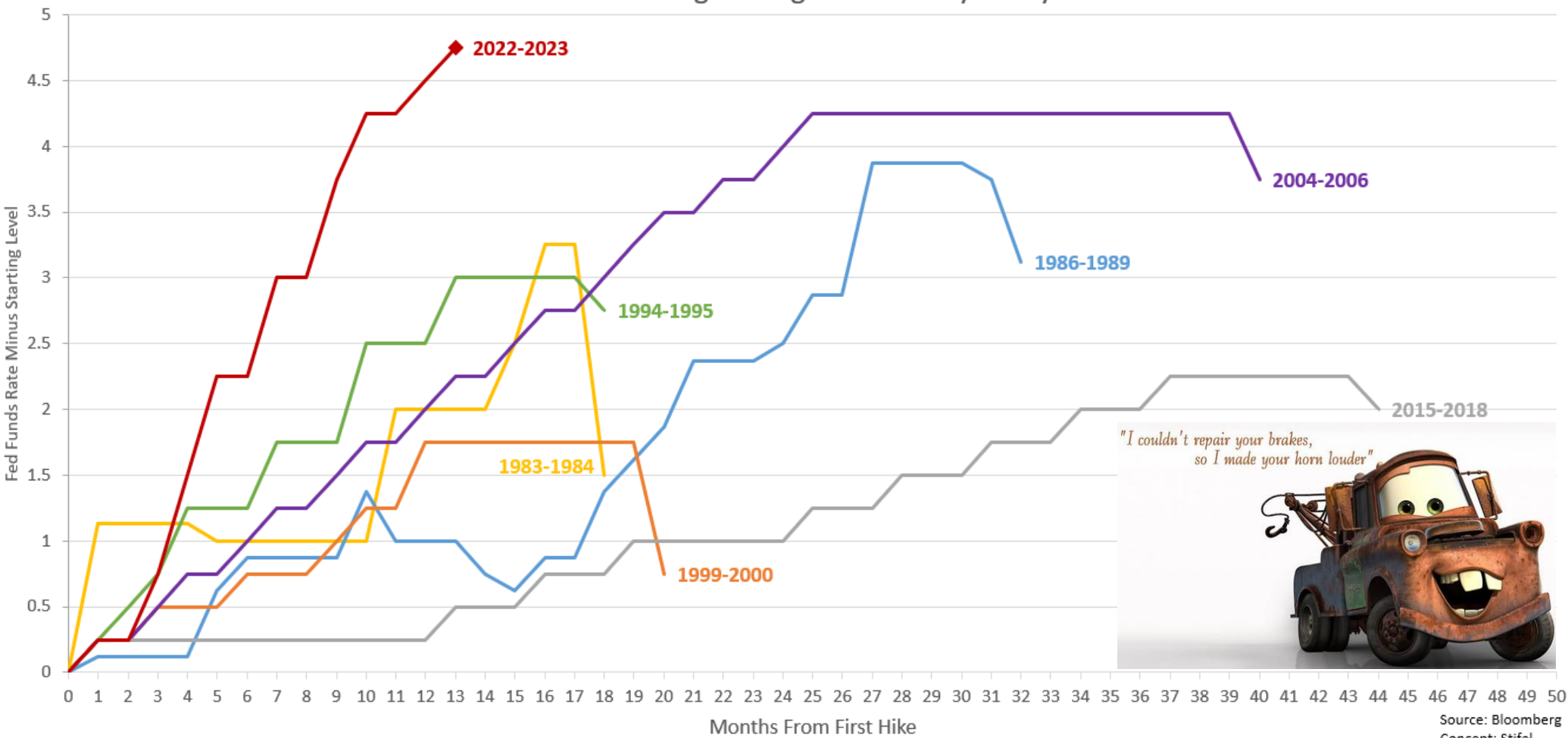




Is it inevitable that we will all be playing pickleball in 2024?



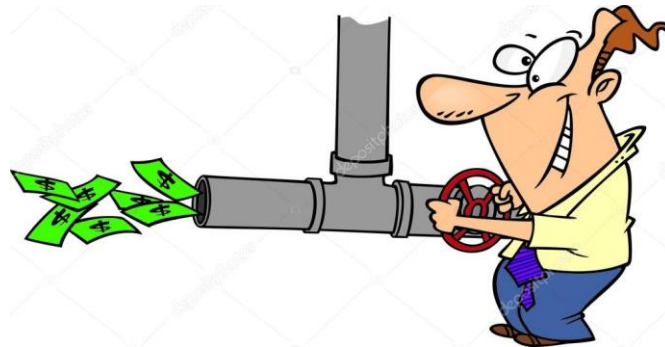
Cumulative Tightening of Monetary Policy



Source: Bloomberg
Concept: Stifel

Learning Objectives

- ✓ Bank Accounts
- ✓ Investment Accounts
- ✓ Creating a Reserve Account
- ✓ Determining Surplus Funds
- ✓ Cash Flow Forecasting



Components of Cash Forecasting

- ✓ Bank Account Balances
 - Projected Interest Earnings
- ✓ Projections of Receipts
 - Winter/Summer Tax Cycle
 - Bond Issuances
- ✓ Projections of Disbursements
 - Consistent?



Benefits of Cash Forecasting

- ✓ Putting Idle Cash to Work
 - Improve Investment Earnings
- ✓ Ensure Liquidity
 - Not Having to Sell Securities
- ✓ Minimize Borrowing
 - Identify Cash Shortfalls



Constraints

- ✓ The Time and Resources
 - Staff or Department?
- ✓ Accuracy of Information
 - May Need to Start Here
 - Most Basic History Should be Available



Basic Information Needs

- ✓ Beginning Cash/Investment Balances
- ✓ Historical Analysis of Receipts and Disbursements
- ✓ Apply Historical Experience vs. Current Budget
- ✓ Capital Budget Spending Projections





Managing Cash Works Better With Separate Baskets

- ✓ Operational Funds
- ✓ Static Liquidity
- ✓ Invested Funds
- ✓ Reserve Pool





"Hold on, where's the forest again?"



Sub - Accounts

- ✓ Static Liquidity
 - Sweep Account
 - Money Market
- ✓ Invested Funds
 - Safekeeping Account



Static Liquidity Account

- ✓ Liquid
 - In a Diversified Vehicle – Sweep
 1. Bank Trust Account
 2. Money Market Fund
 - FDIC Insured (\$250,000 limit)
 - Collateralized / LOC





Surplus / Investment Account

- ✓ Diversify Investments
- ✓ Diversify Maturities
- ✓ One Custody Account – not 10!



**I DON'T ALWAYS STASH ITEMS AWAY FOR
SAFE KEEPING**



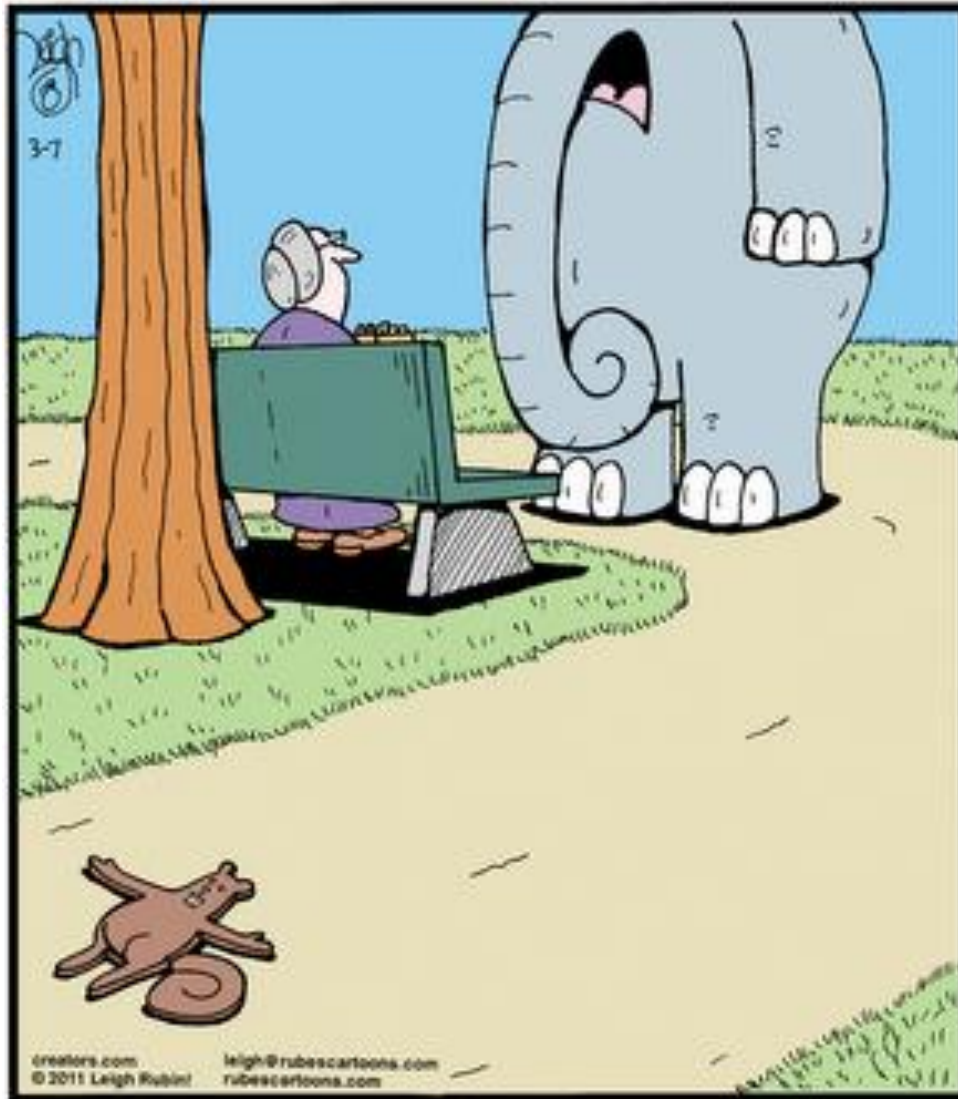
**BUT WHEN I DO, I PREFER TO PUT
THEM IN PLACES I WON'T REMEMBER**



Safe-Keeping / Custody

- ✓ Depository Trust Company (DTC)
- ✓ Federal Reserve Book Entry
- ✓ FedWire

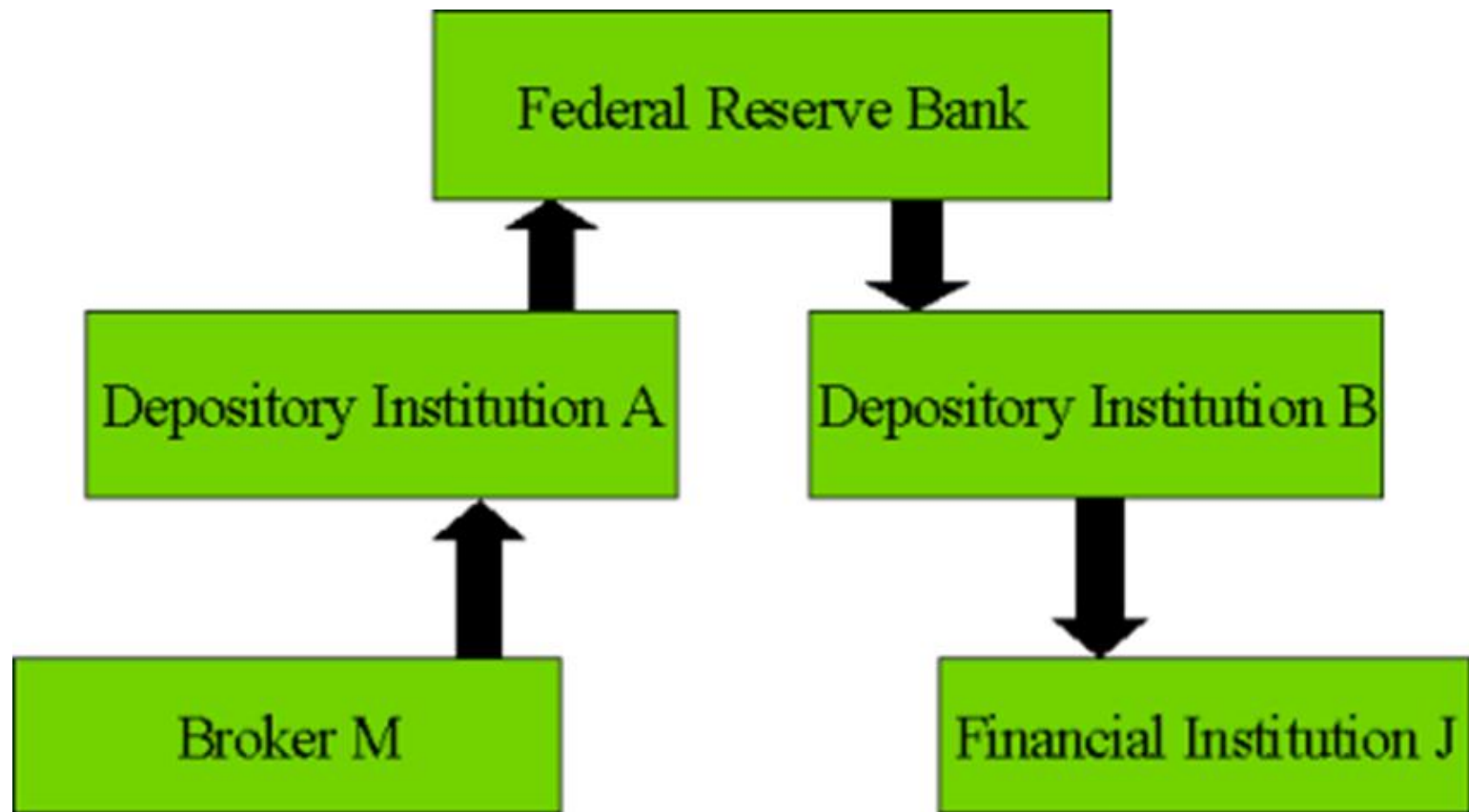




"Chip sincerely regrets being unable to join you today. However, he did request that any peanuts you care to donate be given to me for safekeeping."



Delivery vs. Payment (DVP)



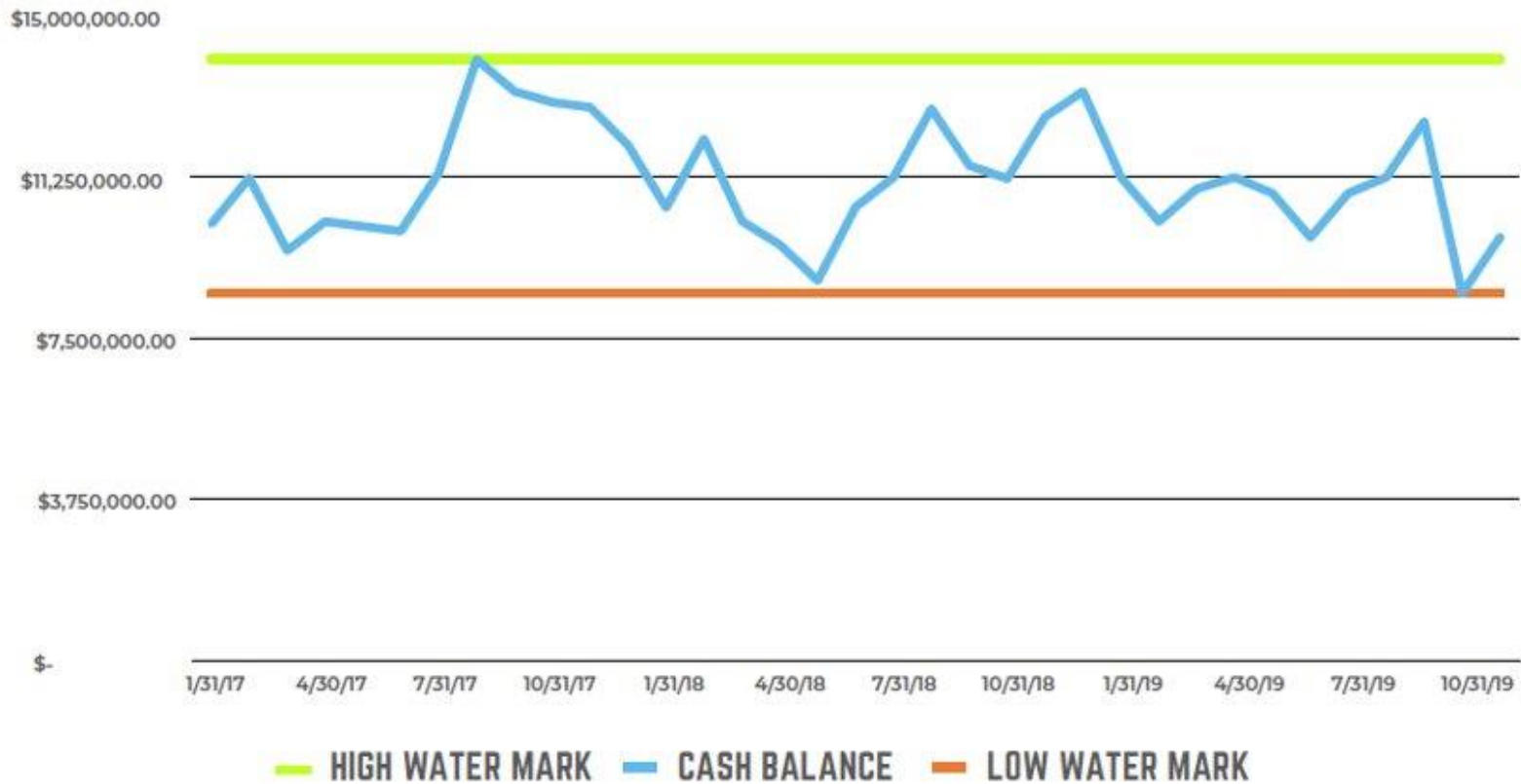
Cash Flow Analysis

- ✓ Primary Objective – Project Available Cash for Investing
- ✓ Need to Determine:
 - How Much to Keep Liquid
 - How Much to Dedicate to Projects



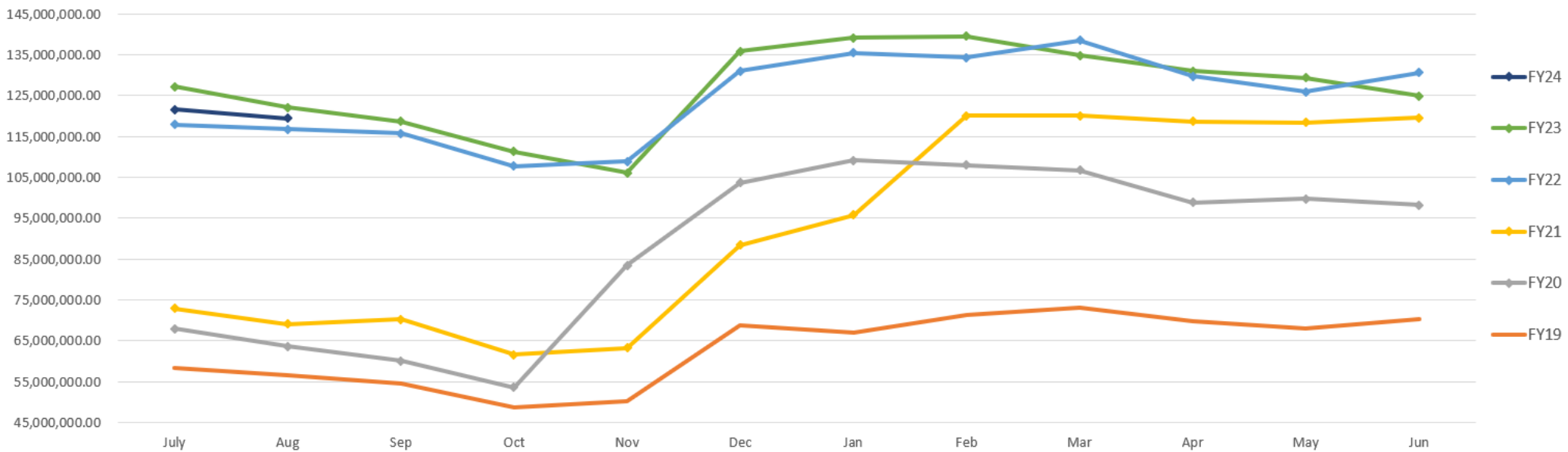
Sample Cash Flow Analysis

OPERATING CASH BALANCES



Know Your Cash Flows

Fiscal Year Balances



Liquidity Needs Analysis

- ✓ Data on Income and Expenses
- ✓ History as Far Back as Possible
- ✓ Looking for Past Trends
- ✓ Reasonably Determining Future Trends
- ✓ Putting it in a Spreadsheet



Recurring or NonRecurring

- ✓ Recurring Cash Flows
 - Regular and Predictable
 - Property Taxes, Wages and Benefits
- ✓ Nonrecurring
 - Receipts From Sale of Assets
 - Unexpected State Funding Change
 - Capital Projects
 - Bond Proceeds



Income Examples

- ✓ Taxes: Property, Income, Etc.
- ✓ Special Assessments
- ✓ Fed, State or Intergovernmental
- ✓ Charges for Services
- ✓ Investment Income
- ✓ Sale of Assets



Expenditure Examples

- ✓ Salaries and Wages
- ✓ Benefits
- ✓ Contractual Services
- ✓ Commodities – road salt, water pipes
- ✓ Interest on Debt
- ✓ Capital Outlays



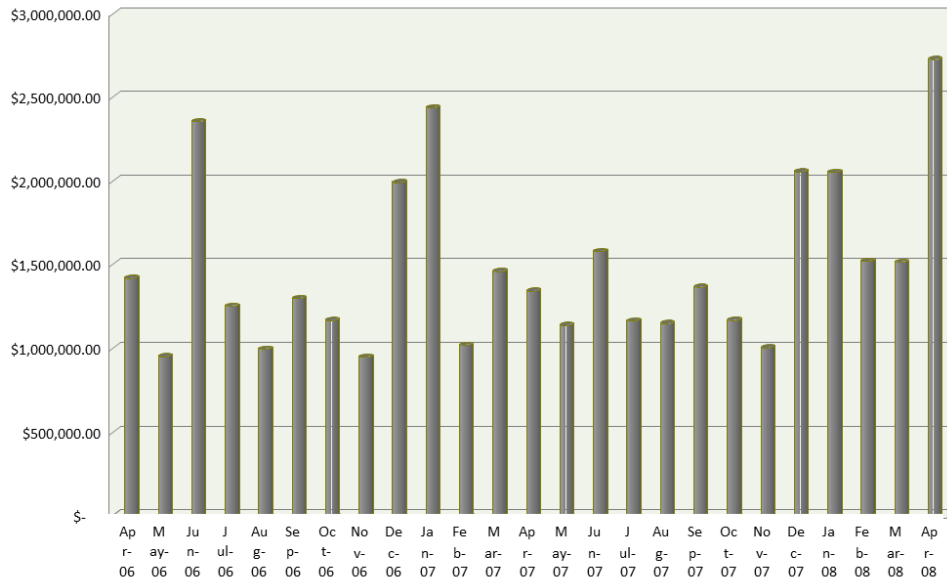
Capital Expenditures

- ✓ Largest Nonrecurring Expenditure
 - Work to Develop Estimates with Project Leaders
 - Explain the Importance of Cash Flow to the Success of Your Investment Approach

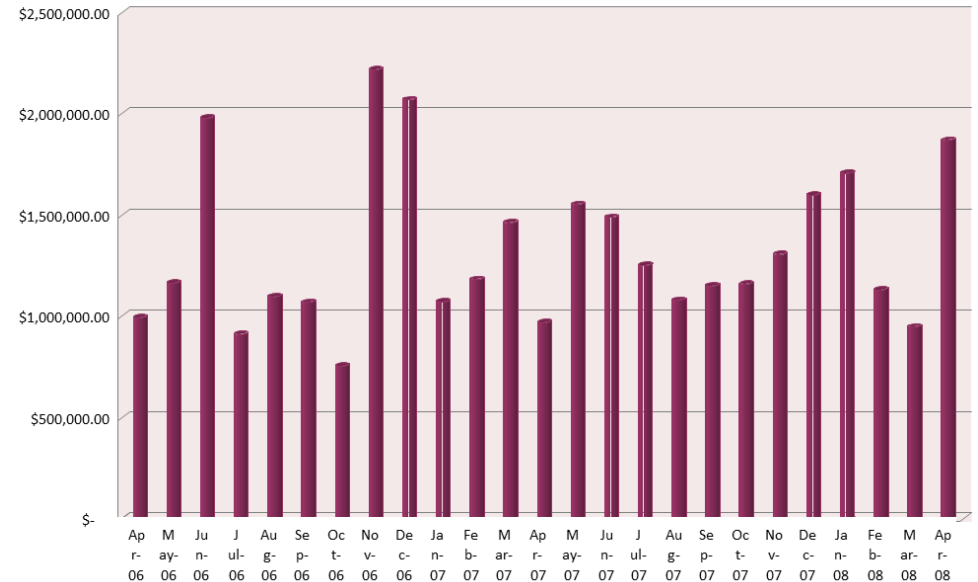


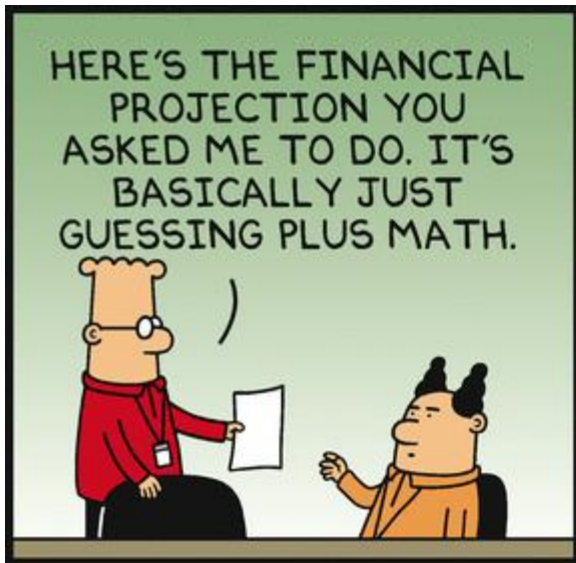
Graph Both

Gross Receipts

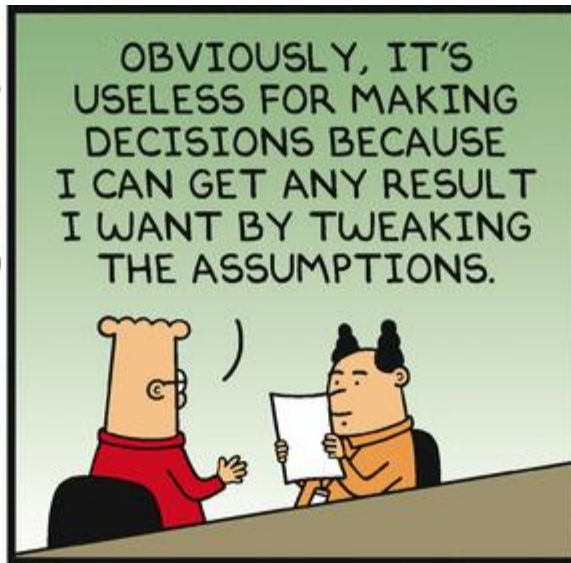


Expenses





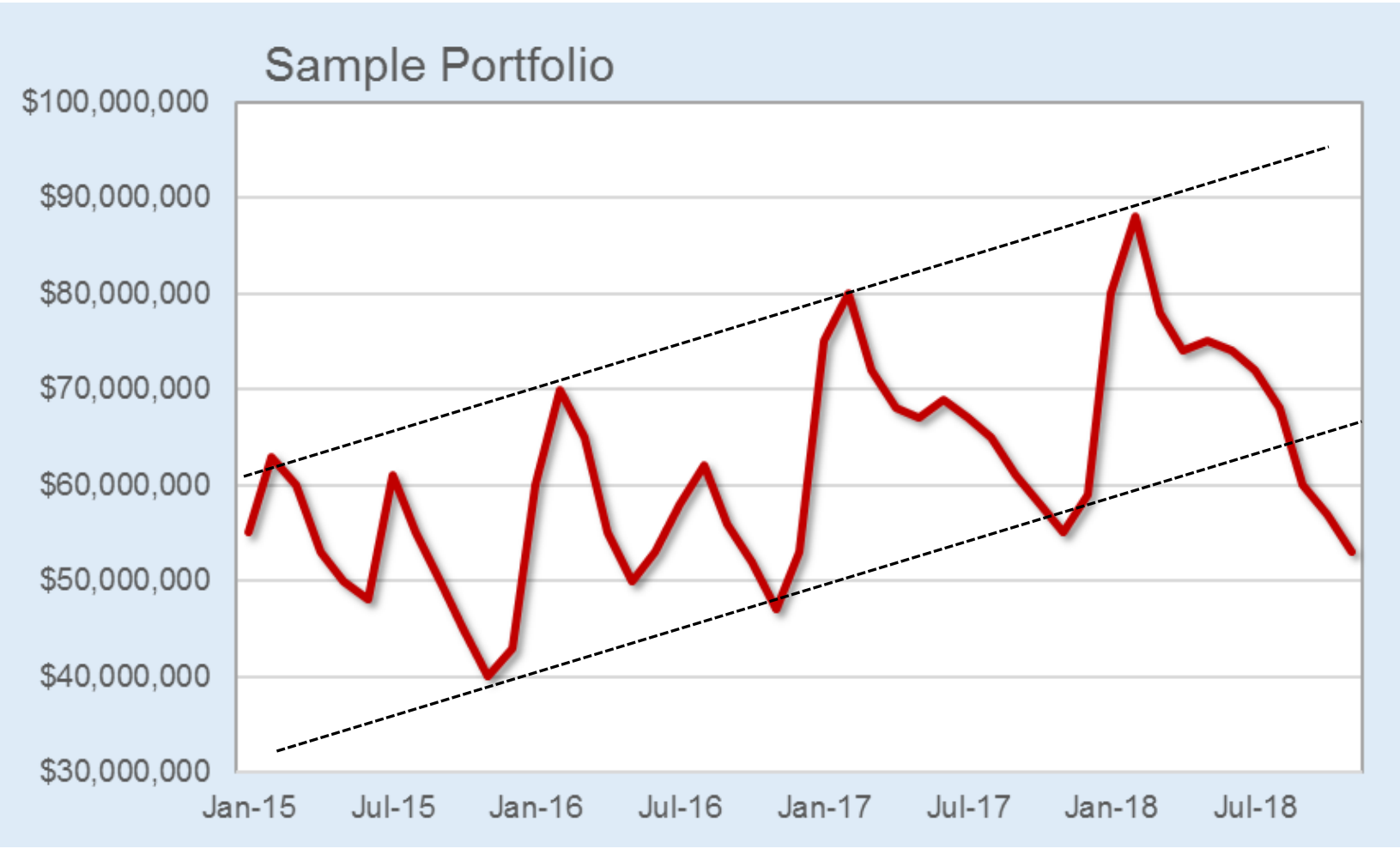
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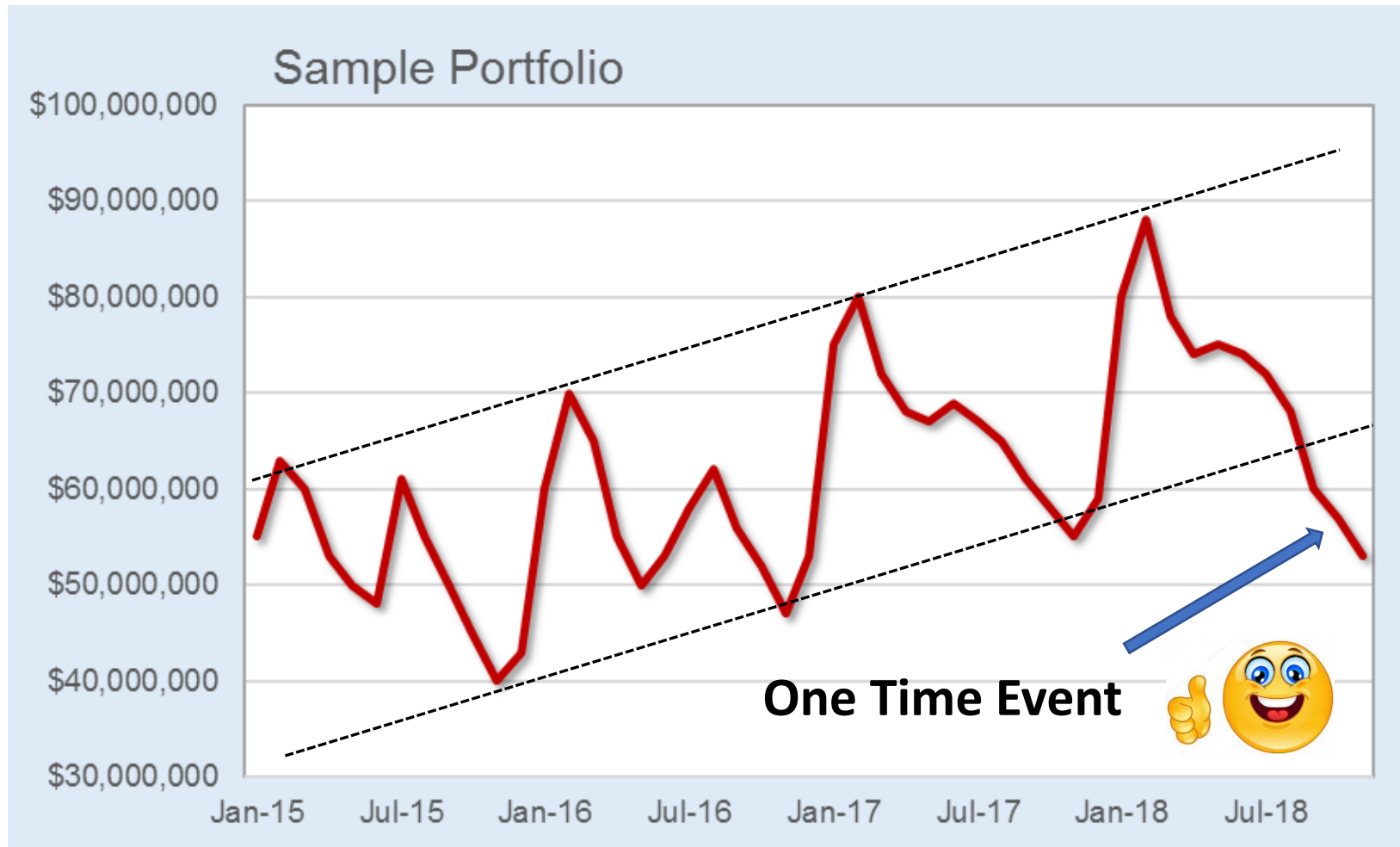
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Sample Graph Output



Identify Outliers Accordingly



K.I.S.S.

Historical Cash Data	Month 1				Month 2			
	Year 1	Year 2	Year 3	3 Year Average	Year 1	Year 2	Year 3	3 Year Average
Revenue								
Property Taxes	13%	15%	14%	14%	13%	15%	14%	14%
State Grants	14%	15%	15%	15%	14%	15%	15%	15%
Charges for Services	16%	14%	15%	15%	16%	14%	15%	15%
Investment Income	9%	8%	8%	8%	9%	8%	8%	8%
Other Revenues	10%	8%	8%	9%	10%	8%	8%	9%
Gain on Exchange of Assets	0%	0%	10%	3%	0%	0%	10%	3%
Expenditures								
Salaries & Wages	8%	8%	9%	8%	8%	8%	9%	8%
Fringe Benefits	8%	9%	8%	8%	8%	9%	8%	8%
Professional/Contractual Services	10%	10%	15%	12%	10%	10%	15%	12%
Commodities	8%	8%	9%	8%	8%	8%	9%	8%
Interest on Debt	50%	50%	50%	50%	0	0%	0%	0%
Capital Outlay	10%	10%	15%	12%	10%	10%	15%	12%

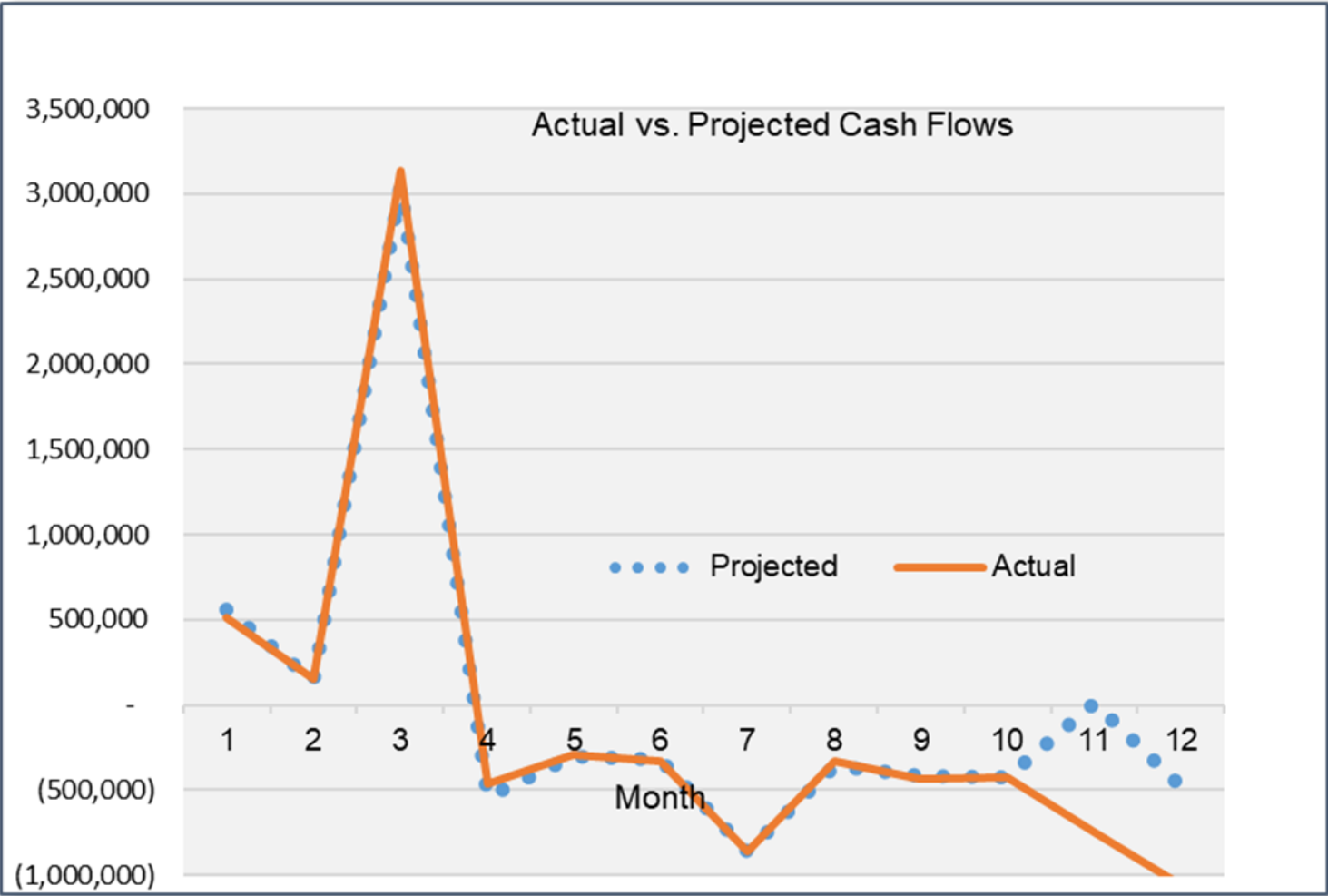


Link Spreadsheets Together

Current Budget	Adopted Budget		Month 1		Month 2	
			Ave %	Estimate for Mo.	Ave %	Estimate for Mo.
Revenue						
Property Taxes	6,000,000	60%	14%	840,000	14%	840,000
State Grants	800,000	8%	15%	117,333	15%	117,333
Charges for Services	2,000,000	20%	15%	300,000	15%	300,000
Investment Income	500,000	5%	8%	42,167	8%	42,167
Other Revenues	250,000	3%	9%	21,917	9%	21,917
Gain on Exchange of Assets	50,000	1%	3%	1,667	3%	1,667
Transfers In	400,000	4%	0%	-	0%	-
	10,000,000	100%		1,323,083		1,323,083
Expenditures						
Salaries & Wages	5,000,000	50%	8%	421,667	8%	421,667
Fringe Benefits	2,250,000	23%	8%	183,750	8%	183,750
Professional/Contractual Services	750,000	8%	12%	87,500	12%	87,500
Commodities	500,000	5%	8%	42,217	8%	42,217
Interest on Debt	500,000	5%	50%	250,000	0%	-
Capital Outlay	1,000,000	10%	12%	58,333	12%	116,667
Transfers Out	-	0%		-		-
	10,000,000	100%		1,043,467		851,800
Cash from Operations	0			279,617		471,283
Beginning Cash & Investments	1,300,000			1,300,000		1,579,617
Ending Cash & Investments	1,300,000			1,579,617		2,050,900



Track Your Projections



Establish a Floor

Lowest 24 Month Bank Balance \$	8,425,253.14
"plus" Lowest revenue collection in any single month \$	945,750.43
"minus" Highest expenditure total in any single month \$	2,218,167.82

Equals" Worst-case Liquidity Scenario

\$ 7,152,835.75



Managing to the “Perfect Storm”



THE PERFECT STORM

has arrived

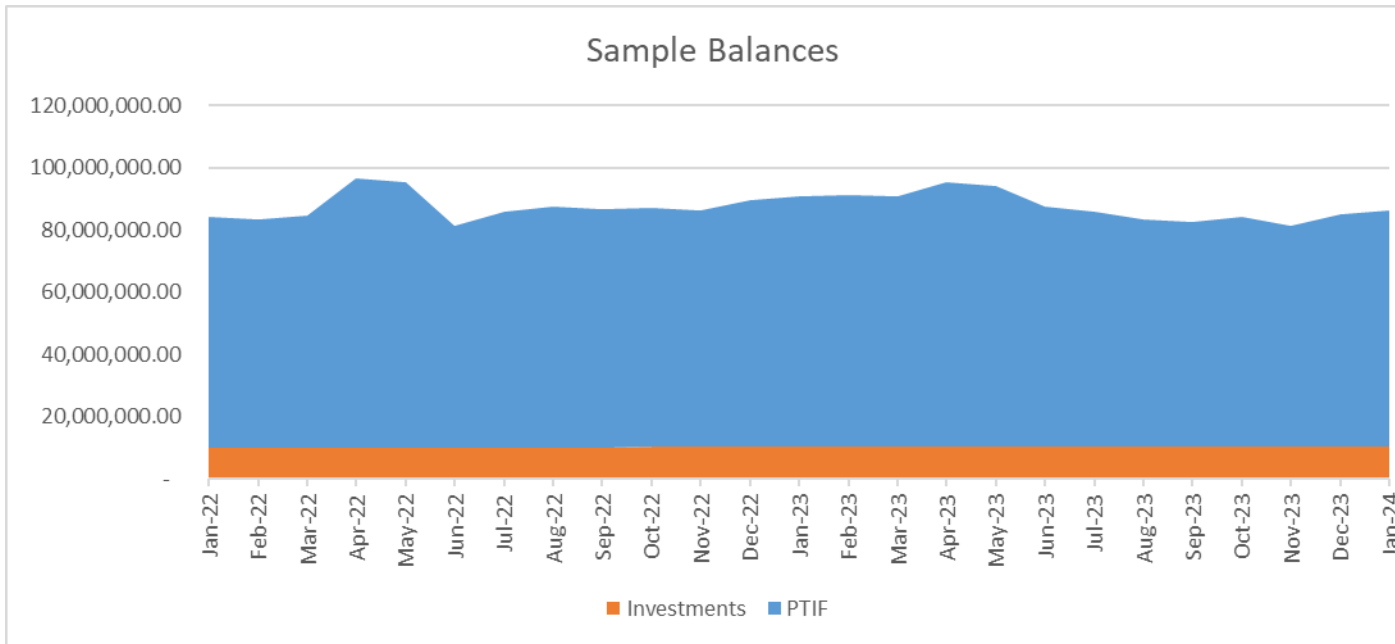
STRANGETHEBEAVER.com



Cash Flow Theory

- ✓ Compare over 3 Years – Minimum
- ✓ Determine Lowest Fund Balance for Cash
- ✓ Identify any Significant Seasonal Changes
- ✓ Identify Trends
- ✓ Project Future Changes



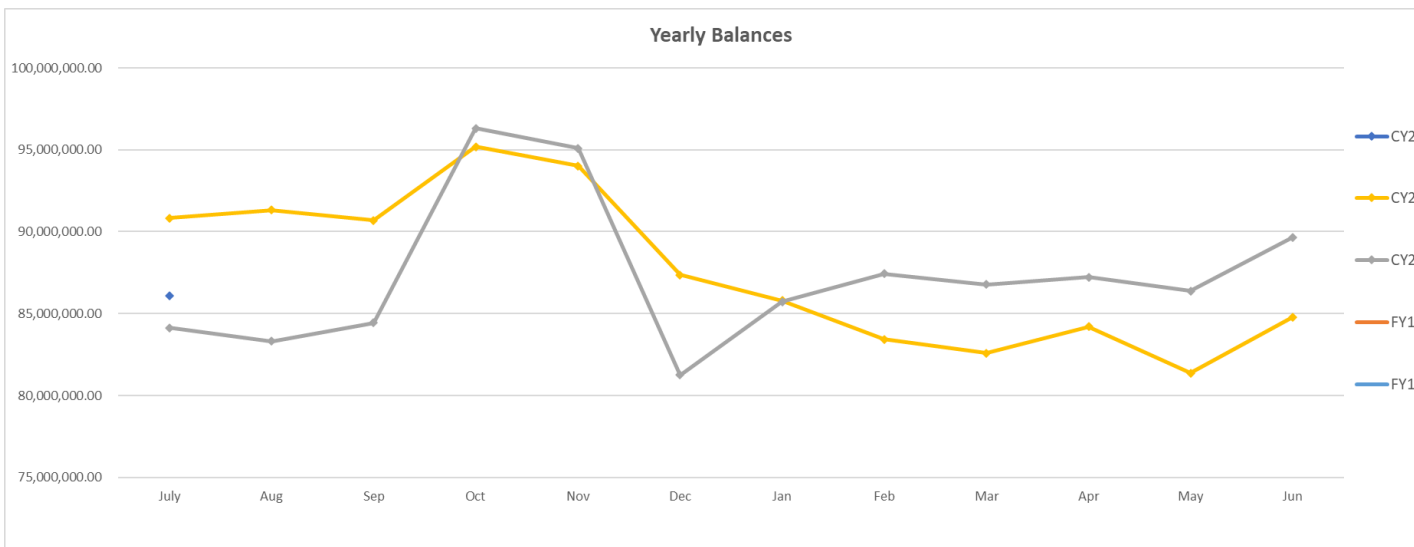


- Money rises around December and hits highest point a few months later.

- Money falls steadily into the late summer/early fall

- Biggest drop from high month until preceding low point was \$8Mil

- Investing \$20Mil into a laddered portfolio would provide approx \$6.5Mil in secondary liquidity on a rolling 12 month period



- Primary Liquidity = PTIF @ \$15-18Mil

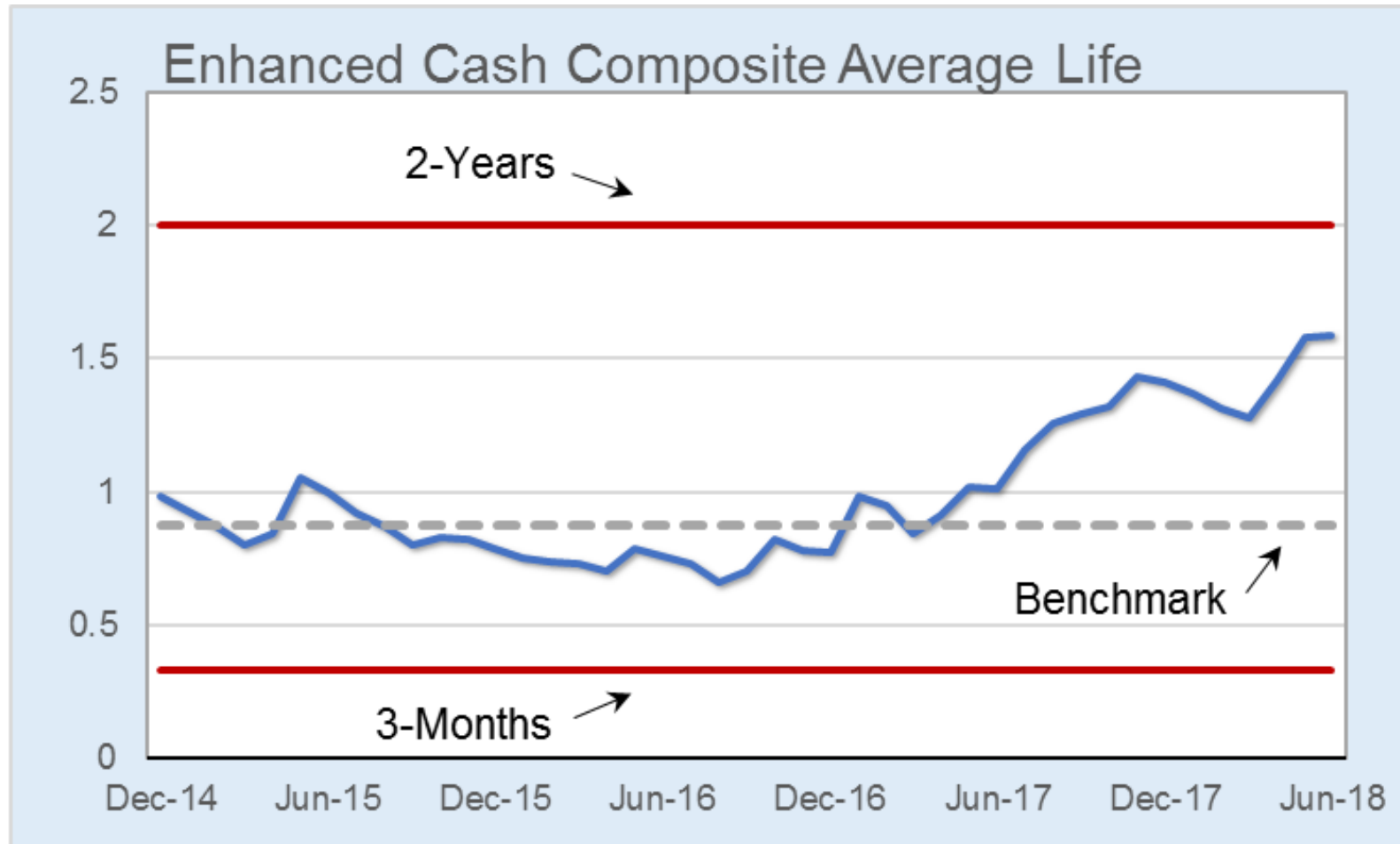
Secondary Liquidity = Laddered Portfolio \$6.5Mil

Total Liquidity In a 12 Month Period = \$21.5Mil - 24.5Mi

- Total Liquidity = 3x The City's Biggest Spending Year



Want Flexibility to Change Investments

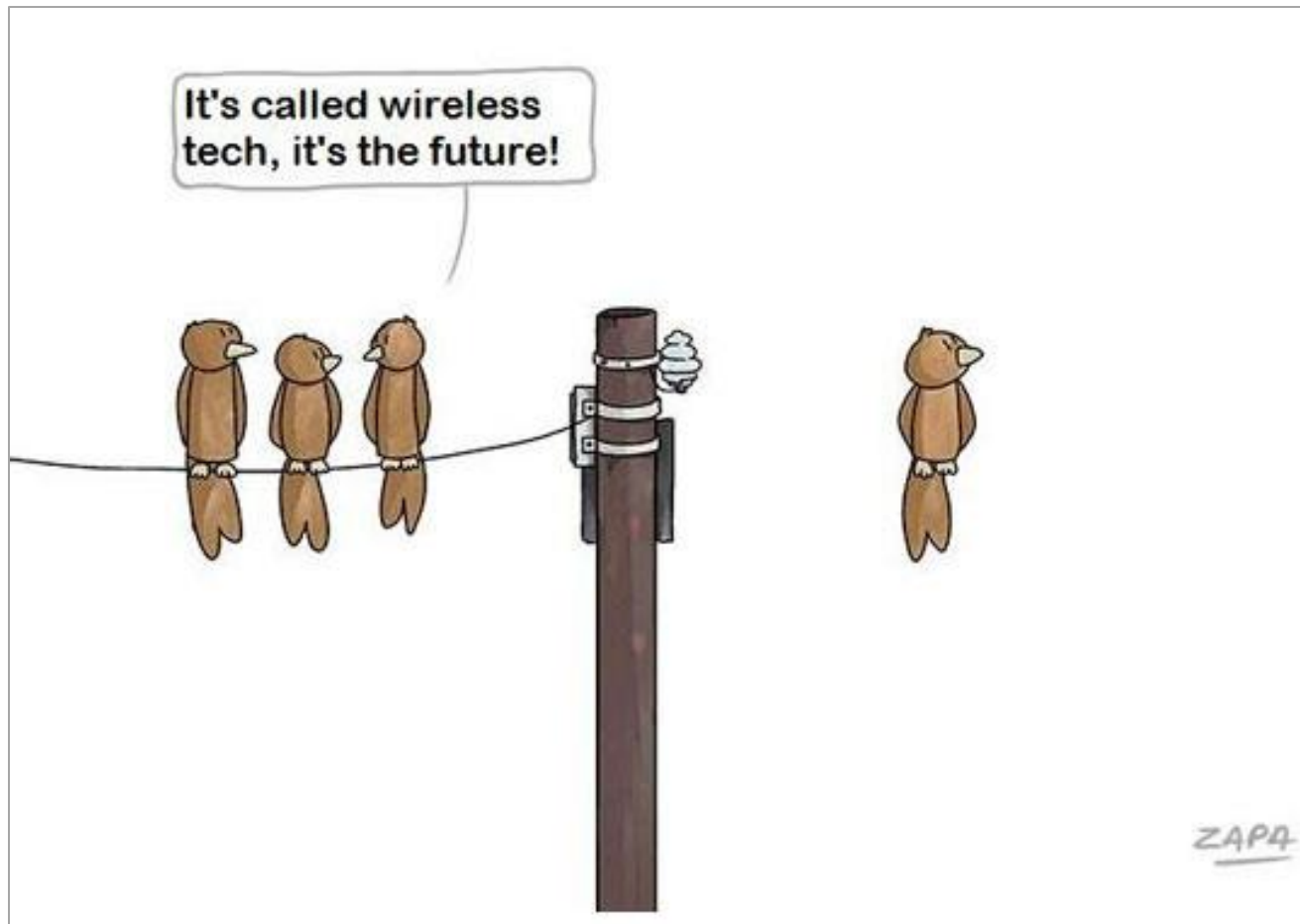


Anticipate Future Change

- ✓ Extrapolate From the Past
- ✓ Millage: New / Renewal Expectations
- ✓ Property Value Changes
- ✓ Anticipated Projects
- ✓ Apply Changes to Next Budget



Anticipate Future Change



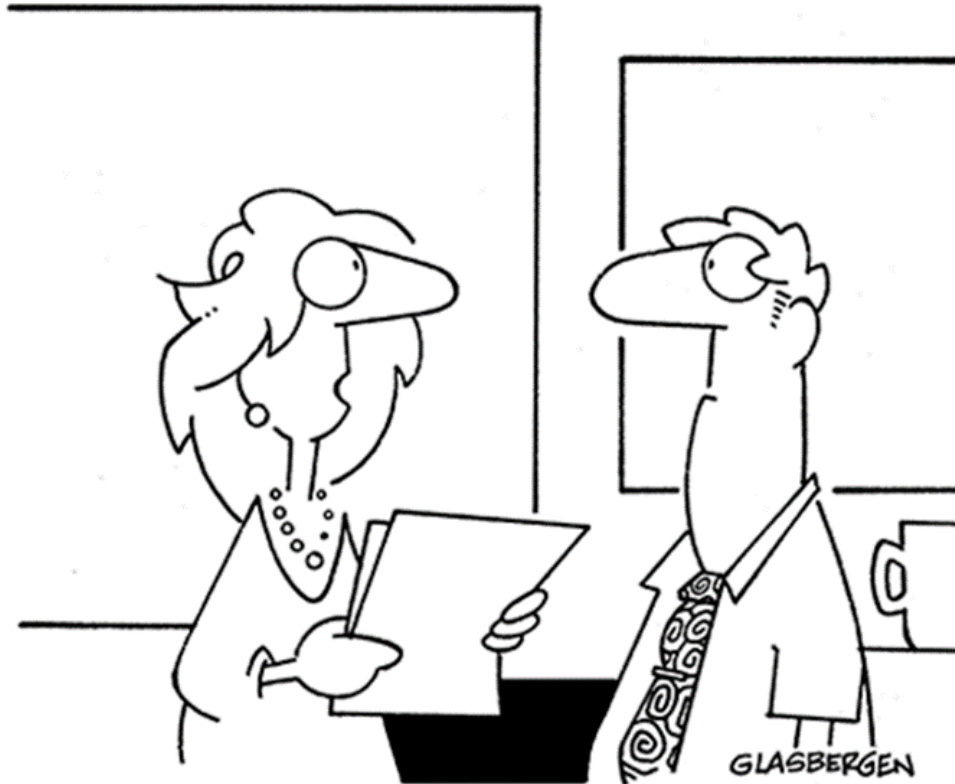
General Rules

- ✓ Only Forecast Categories That Account for 5% or More of the Budget
- ✓ Once Set-Up the Forecasts are Easier
- ✓ Combine Investment Maturities With Cash Flow Forecast – Visualize Time Periods Where Cash Flow High/Low



Analysis Paralysis

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**“He said our team is suffering from ‘paralysis by analysis’.
Nobody knows what that means, but if it rhymes
it must be very profound!”**



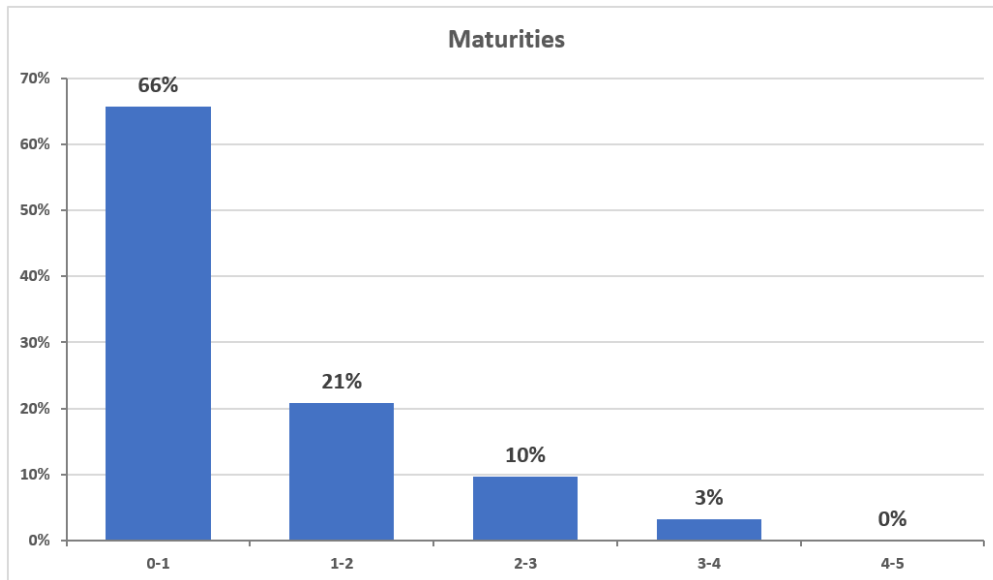
**There are two
rules in life:**

**1. Never give out
all the information.**

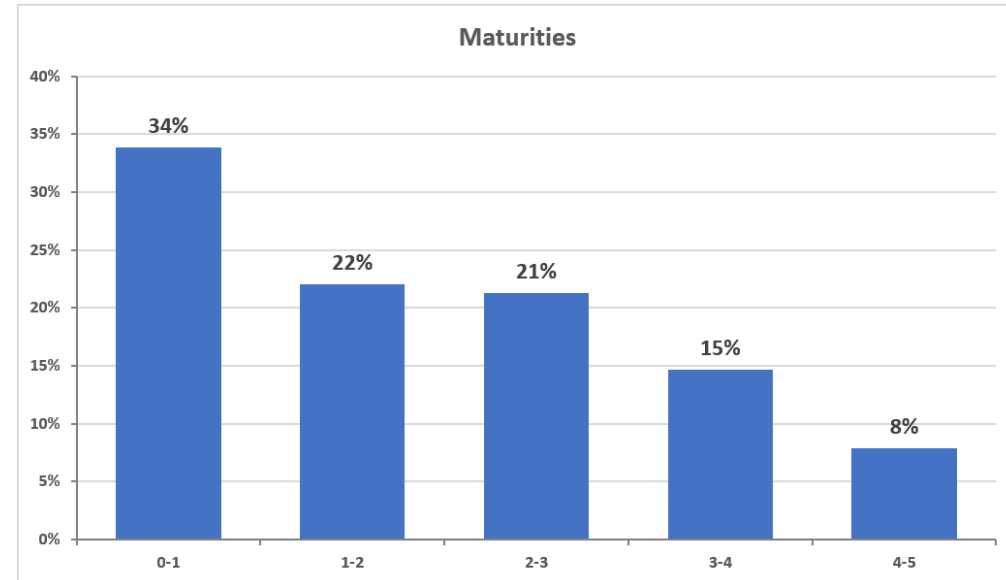


Laddering Cash Flows

When Rates Are Low and **Expected To Rise**, You Should Incrementally Shorten Your Duration By Reinvesting Maturities Into **Shorter Maturities**



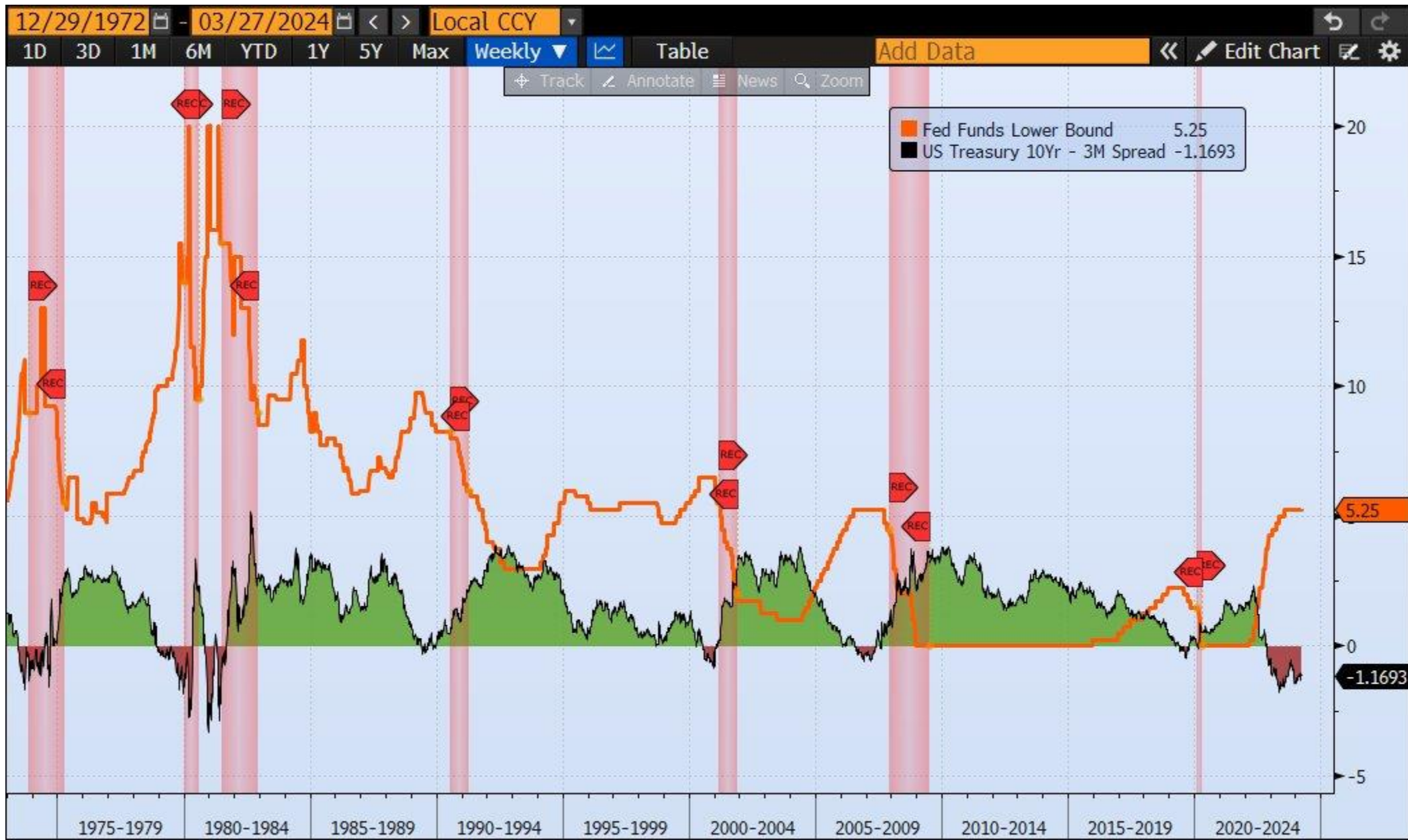
When Rates Are Rising and **Expected To Top**, You Should Incrementally Lengthen Your Duration By Reinvesting Maturities Into **Longer Maturities**



Source: Moreton



Short Term Interest Rates vs Long Term



Benefits to Forecasting

- ✓ Minimize Borrowing
- ✓ Improve Investment Earnings
- ✓ Longer Maturity Securities Earn More

**TODAY'S FORECAST
99% CHANCE OF
I WILL DRINK A
BEER**



Summary

- ✓ Internal Controls are for Your Protection
- ✓ Important to Identify Liquidity Needs
- ✓ Surplus Funds Invested Longer
- ✓ Find “Perfect Storm”
- ✓ Forecast Future Change



