

CDIAC/CMTA Public Funds Investing

Session Six:
Cash Flow Analysis for Portfolio Management
Part One - Concepts

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What is a Cash Flow Forecast

- Projection of anticipated cash receipts

- Projection of anticipated cash disbursements

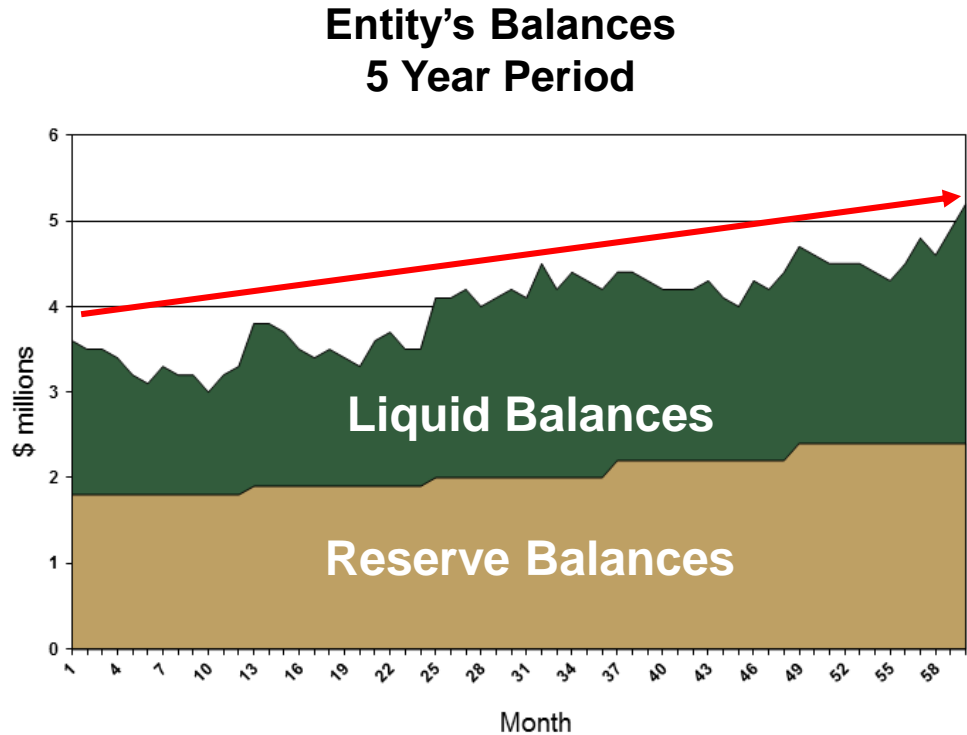
- To create an estimate of investable cash balances
 - Liquid funds
 - Reserve funds

- “Cash” is the operative word in “cash flow forecasting”.
 - It is not accruals or budgeted funds
 - Only cash is spendable or investable!



Identify Liquid & Reserve Balances

- Total balances are trending higher
- But balances fluctuate throughout the year
- The “Liquid Balances” are established to meet cash needs
- The “Reserve Balances” are generally stable and available for longer-term more diversified investing





Objectives of Cash Flow Forecasting

- Ensure sufficient liquidity for 6-12 month disbursements

- Improve investment earnings by
 - Matching sources and uses of funds
 - Investing reserve/core funds longer-term and more diversified
 - Managing investment risks
 - Liquidity risk
 - Market risk

- Identify Short-term Cash Deficits

- Warn of Impending Budget Problems



Annual Cash Flow Forecasts

- Estimates monthly cash position
- Determines cash available for investments of more than 30 days
- Provides a useful monthly overview for investment decision-making
- Prepared for this fiscal year and next one to three fiscal years



Creating Annual Cash Flow Forecast

- Beginning balance of cash and investments
- Monthly revenue projections
- Monthly expenditure projections
- Projected net change
- Projected cumulative balance of cash and investments
- Schedule of current investments and coupon payments



Identify Revenues and Expenditures

■ Major revenues

- Property tax
- Sales and use tax
- User fees
- Shared revenues
- Non-recurring
 - Bond proceeds
- Other

■ Major expenditures

- Payroll and benefits
- Operating expenses
- Debt service
- Capital projects
 - Draw-down schedule
- Non-recurring
- Other



Sources of Information

- Historical Data from General Ledger
- Historical Data from Bank and Pool Statements
- Current Year Budget
- Capital Project Spending Projections
- Schedule of Investment Maturities and Coupon Payments



Annual Cash Flow - Example

	Beg. Balance	Jan-15	Feb-15	Mar-15	Apr-15	May-15
Liquid Fund Balances	95,542,961	94,422,259	93,301,557	92,180,855	91,060,153	89,939,451
Inflow						
Sales Tax Collections		3,516,116	3,516,116	3,516,116	3,516,116	3,516,116
Property Tax Collections		10,507,259	10,507,259	10,507,259	10,507,259	10,507,259
Intergovernmental		10,264,623	10,264,623	10,264,623	10,264,623	10,264,623
Other Revenues		7,919,282	7,919,282	7,919,282	7,919,282	7,919,282
Outflows						
Personnel		(12,778,319)	(12,778,319)	(12,778,319)	(12,778,319)	(12,778,319)
Operating & Maintenance		(1,199,030)	(1,199,030)	(1,199,030)	(1,199,030)	(1,199,030)
Charges for Services		(11,597,717)	(11,597,717)	(11,597,717)	(11,597,717)	(11,597,717)
Debt Service		(1,093,706)	(1,093,706)	(1,093,706)	(1,093,706)	(1,093,706)
Other Expenses		(6,659,210)	(6,659,210)	(6,659,210)	(6,659,210)	(6,659,210)
Actual/Projected Net Change		(1,120,702)	(1,120,702)	(1,120,702)	(1,120,702)	(1,120,702)
Projected Liquid Balance		94,422,259	93,301,557	92,180,855	91,060,153	89,939,451
Projected Invested Balance		141,565,000	141,565,000	141,565,000	141,565,000	141,565,000
Total Projected Balance		285,268,483	285,268,483	285,268,483	285,268,483	285,268,483
Actual Liquid Balance		85,862,465	203,231,573	124,216,038	201,625,430	150,181,434
Actual Invested Balance		141,565,000	146,645,000	146,645,000	146,645,000	149,645,000
Total Actual Balance		227,427,465	349,876,573	270,861,038	348,270,430	299,826,434
Difference		(57,841,018)	64,608,090	(14,407,445)	63,001,947	14,557,951

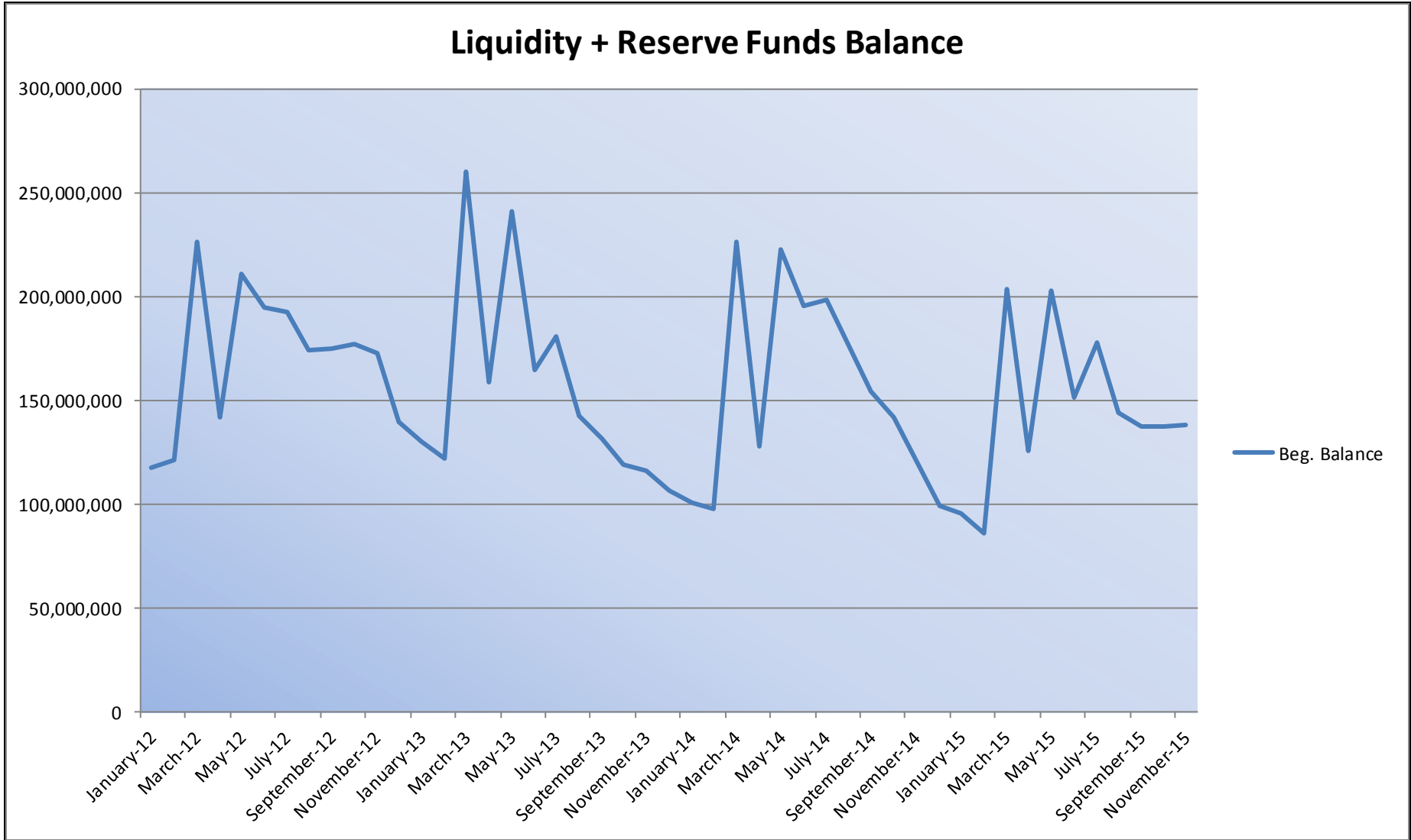


Funds Balance Cash Flow

Consolidated Cash Flow				
Funds Balance				
Month	Beg. Balance	Cash Inflows	Cash Outflows	Net Change
January-15	95,542,961	243,572,384	-253,257,765	-9,685,381
February-15	85,857,580	143,962,217	-26,607,427	117,354,790
March-15	203,212,370	41,584,603	-119,098,784	-77,514,181
April-15	125,698,189	94,526,488	-17,116,990	77,409,497
May-15	203,107,686	33,277,738	-84,727,349	-51,449,611
June-15	151,658,075	102,278,132	-76,404,216	25,873,915
July-15	177,531,991	2,747,874	-36,416,262	-33,668,388
August-15	143,863,603	32,888,804	-39,493,932	-6,605,128
September-15	137,258,475	251,833,487	-251,697,780	135,707
October-15	137,394,182	242,834,825	-242,187,729	647,095
November-15	138,041,277	232,485,117	-239,719,807	-7,234,690
<u>For Period</u>				
Low Balance	\$85,857,580			
High Balance	\$259,994,231			
<u>Average Balance</u>				
Prior 12 Months	\$155,641,677			
Prior 36 Months	\$159,324,198			



Graphing Balances Over Time





Challenges to Developing Forecasts

- Systems
 - Limitations of computer systems for historical data or data management

- Physical structure
 - Locations of people

- Political
 - Elected officials agenda

- Inter-departmental communications
 - Departments not understanding importance of information



Review and Maintain Cash Flow Forecast

- Compare actual versus forecast
- Identify reasons for variances
- Adjust assumptions if warranted
- Follow up with department heads on capital project slippage
- Update database for accurate future projection
- Retain documentation for future reference