

# Essential Elements of a Successful Investment Program



**PFM Asset Management LLC** 

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# Investment Program Development Objectives

- 1) Create and Implement Sound Investment Policies
- Determine the Investment Horizon
- 3) Understand and Implement Investment Performance Benchmarks
- 4) Developing an Investment Portfolio and Management Strategies
- 5) Track and Report Investments and Investment Earnings

# Considerations for the Investment Program

- Florida Statutes
- GFOA Best Practices



- Association of Public Treasurers of the US & Canada
- Association of Financial Professionals
- CFA Institute











# 1. Developing Investment Policies

Florida State Statute requires you to have an investment policy?



#### Which of the following factors should influence an entity's investment policy?

- a. Investment objectives
- b. Legal or internal restrictions
- c. Timing of cash flows
- d. All of the Above

# Florida Statute 218.415 Local Government Investment Policies

Investment activity by a unit of local government must be consistent with a written investment plan adopted by the governing body, or in the absence of the existence of a governing body, the respective principal officer of the unit of local government and maintained by the unit of local government or, in the alternative, such activity must be conducted in accordance with subsection (17).



Any such unit of local government shall have an investment policy for any public funds in excess of the amounts needed to meet current expenses as provided in subsections (1)-(16), or shall meet the alternative investment guidelines contained in subsection (17).

Such policies shall be structured to place the **highest priority on the safety of principal and liquidity of funds.** The optimization of investment returns shall be secondary to the requirements for safety and liquidity. Each unit of local government shall adopt policies that are commensurate with the nature and size of the public funds within its custody.

#### What are the permitted investments if you do not have an investment policy?

- a. Local Government Surplus Funds Trust Fund (SBA) or any intergovernmental investment pool authorized pursuant to the Florida Interlocal Cooperation Act
- b. SEC Registered Money Market Funds
- c. Interest bearing time deposits or savings account in qualified public depositories
- d. Direct obligations of the U.S. Treasury
- e. All of the above

Florida State Statute has specific limits for the overall Duration of your portfolio (e.g. 1-3 years)?



Florida State Statute has specific limits on Credit Quality (e.g. AAA, AA, A)?



#### A local government investment policy should include which of the following:

- a. List of portfolio holdings
- b. Reporting requirements
- Resumes of the investment staff
- d. Cash handling procedures
- e. Disbursement procedures

# Key Components of an Investment Policy

- l. Scope
- II. Investment Objectives
- III. Performance Measurement
- IV. Standards of Care
- V. Authorized Investments
- VI. Maturity & Liquidity

- VII. Authorized Financial Institutions
- VIII. Safekeeping & Custody
- IX. Bid Requirement
- Internal Controls
- XI. Continuing Education
- XII. Reporting Requirements

## Key Points in Developing an Investment Policy

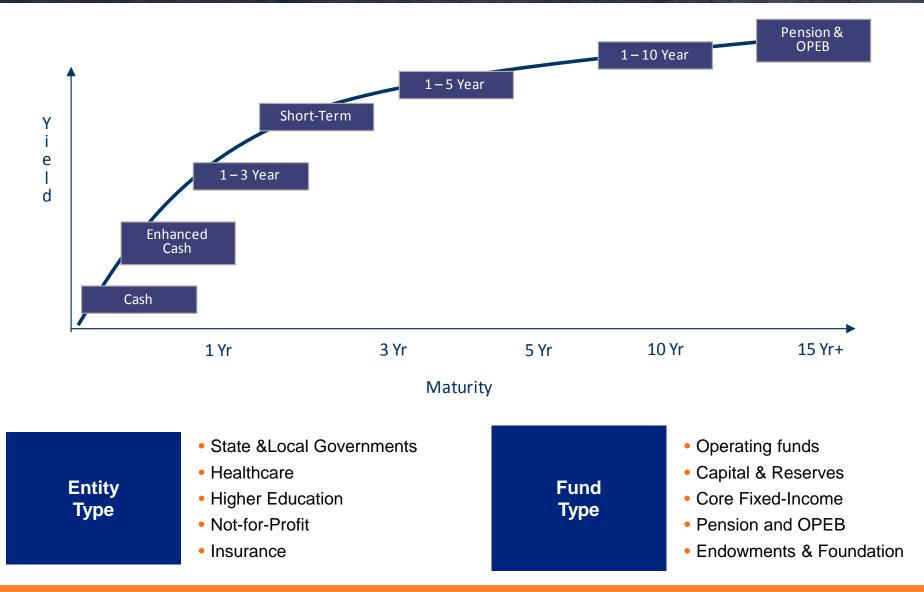
- Policy should be structured to place the highest priority on the:
  - Safety of principal
  - Liquidity of funds
- The optimization of Returns shall be secondary (yet important maximize earnings that can be kept)
- Compliance with legal restrictions/regulations
- Flexibility
- Stability (Limited Volatility)
- Simplicity

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# 2. Determining the Investment Horizon

### **Investment Horizons**



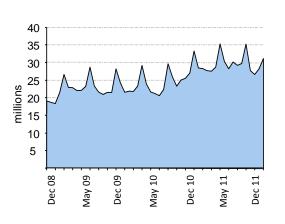
## Benefits of a Cash Flow Analysis

- Important Component of an Effective Overall Investment Management Program
  - Determining Long Term versus Short Term Assets
- Better Understanding of Timing of Revenues and Expenditures
  - Results in more effective cash flow management, e.g. stretching out accounts payables and speeding up collection of receivable to finance part of the operations internally
- Better Investment Selection
  - Appropriate security selection
- Increase investment income
  - Amounts available for investment
  - Period of time to hold the investment



## Cash Flow Analysis

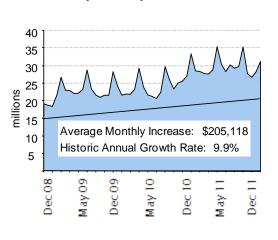
**Step 1: Review Historic Balances** 



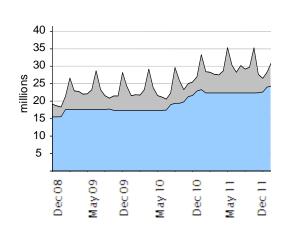
**Step 2: Compute Seasonal Factors** 

Seasonal	Factors
January	94%
February	93%
March	94%
April	96%
May	116%
June	102%
July	96%
August	97%
Septembe	r 96%
October	99%
November	118%
December	98%

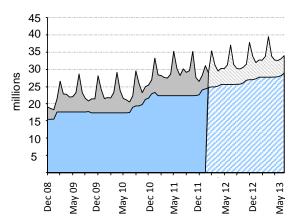
**Step 3: Compute Growth** 



**Step 4: Identify Core Portfolio** 



Step 5: Project Balances

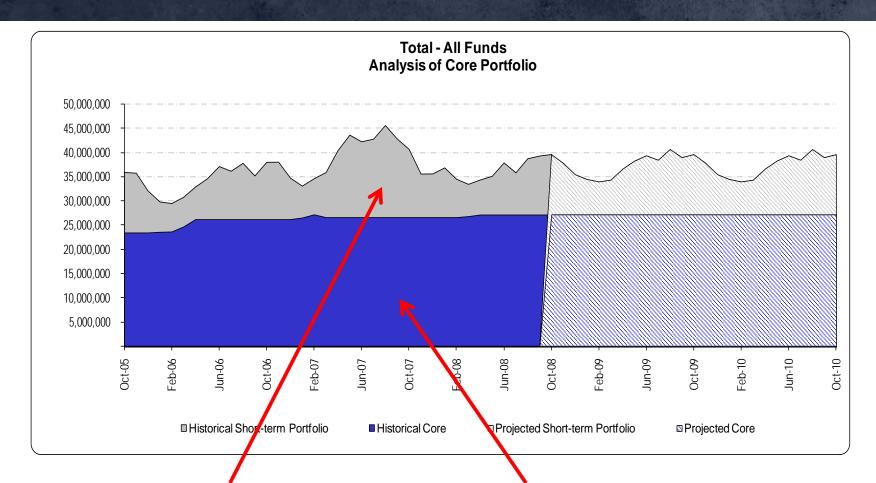


**Step 6: Recommendations** 

The results of the Cash Flow analysis will help answer the following questions:

- How predictable are cash flows?
- Is there a statistically significant seasonal pattern?
- Is there a growth trend?
- What will the portfolio balance be during any month?
- How much is available for longer-term investment?
- How much money should remain in overnight or other highly liquid investments?

## Components of Investment Assets



#### **Short-term Portfolio**

- Highly liquid funds
- Cover specific, predictable cash flows (i.e. payrolls, debt service)

#### Long-term ("Core") Portfolio

- Funds not expected to be spent
- Extraordinary circumstances
- Longer-term securities and higher expected return

3. Establishing Performance Benchmarks

## The CFA Institute

International, non-profit organization





- Administers the Chartered Financial Analyst program
- Sponsors the Global Investment Performance Standards (GIPS)

#### **Mission Statement**

To lead the investment profession globally by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society.

# Why is GIPS® Good for Public Agencies?

The Standards provide assurance that a firm's presentation of investment performance is:

- Fairly presented
- Properly calculated
- Comparable across managers
- Of the highest professional standards



# GIPS® Standards Requirements in 5 Key Areas

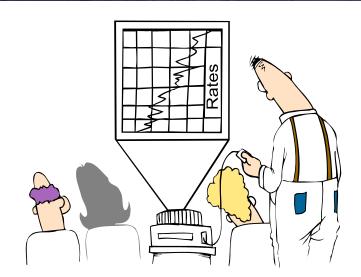
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Key Area	Significant Requirements
Input Data	Portfolio valuations must be based on market values (not cost or book)
Calculation Methodology	Total Return must be used, including realized & unrealized gains and income
Composite Construction	All fee paying, discretionary portfolios must be in at least one composite
Disclosures	Statement of Official Compliance: (FIRM) has prepared and presented this report in compliance with the Global Investment Performance Standards.
Presentation & Reporting	<ul> <li>A minimum of 10 years of annual performance history</li> <li>Annual returns for all years</li> <li>The number of portfolios and amount of assets in the composite (or the percentage of the firm's total assets represented by the composite at the end of each period)</li> <li>A measure of dispersion of individual component portfolios around the aggregate composite return</li> </ul>

### Total Return and Yield

- Returns shown could be:
  - Total Return
  - Yield
- Returns are retrospective
- Yields are prospective



- interest earnings,
- realized gains/losses, and
- unrealized gains/losses



#### A performance benchmark should not:

- a. reflect the composition of the portfolio
- b. be high just to give the portfolio manager something to strive for
- c. be an independent representation of the market
- d. accurately reflect the portfolio or strategy

### Florida Statute 218.415

(3) **PERFORMANCE MEASUREMENT** – The investment policy shall specify performance measures as are appropriate for the nature and size of the public funds within the custody of the unit of local government.



# Using Benchmarks in Portfolio Management

#### Comparability

 Close comparability between portfolio and selected benchmark

#### Identification and Explanation

 Specifically identified and explained before implementing the proposed portfolio strategy

#### Investable & Unambiguous

 Data should be available with the names and weights of the securities comprising the benchmark

#### Measurable

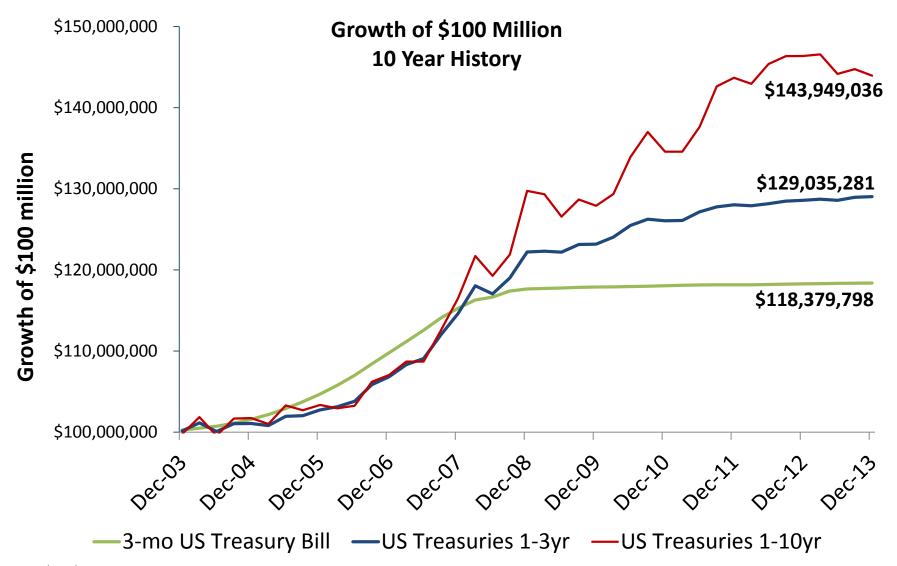
 The benchmark return should be readily available to compare portfolio performance

#### **Typical Benchmarks\* include:**

- Merrill Lynch 1 Year T-Note Index
- Merrill Lynch 1-3 Year Treasury and Agency Index
- Merrill Lynch 1-5 Year Corporate and Government Index
- Barclays Capital 1-3 YearGovernment Index

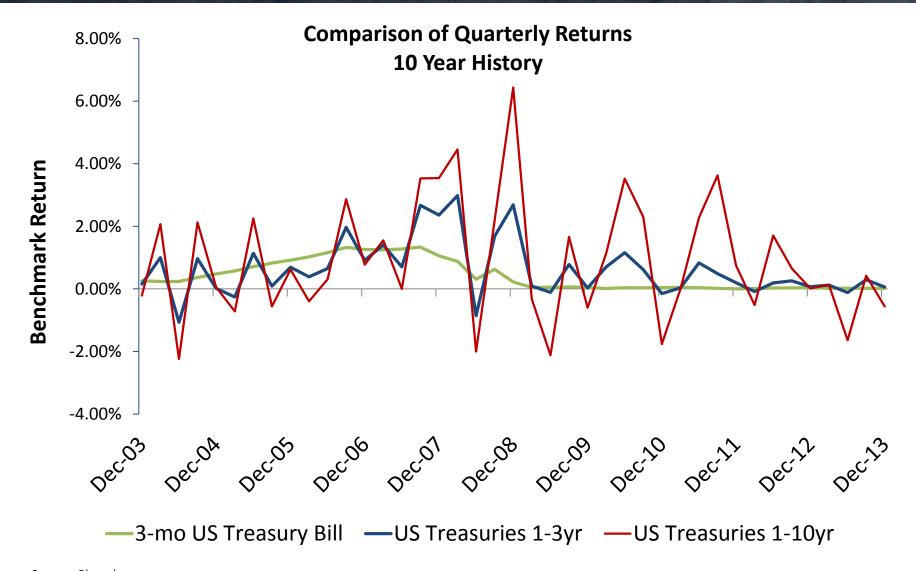
<sup>\*</sup>This is a partial listing of available benchmarks

# Longer-Term Benchmark Provides Greater Expected Return in the Long-Term...



Source Bloomberg

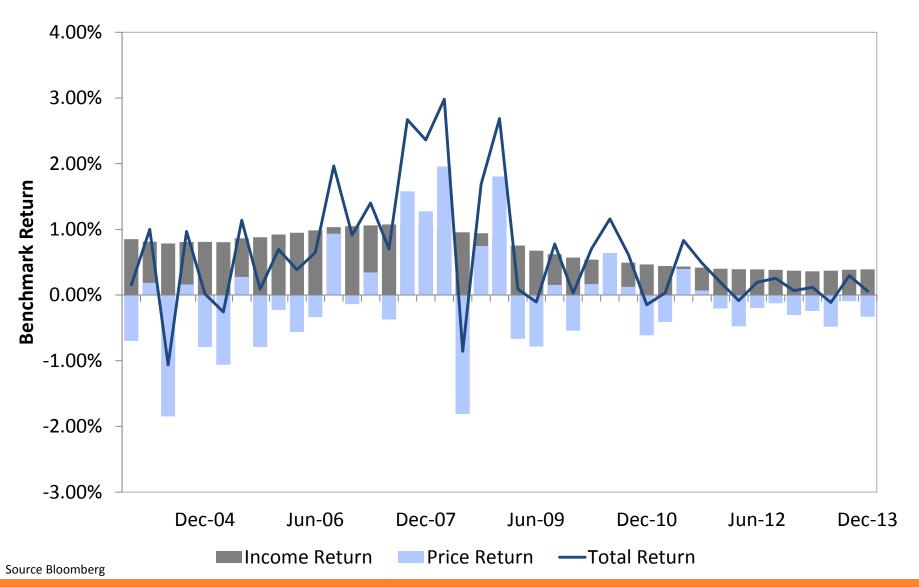
# ...Longer-Term Benchmark Also Provides Greater Volatility in the Short-Term



Source: Bloomberg

## Historical Return Breakdown: Total Return

(1-3 Year BAML US Treasury Index – Quarterly Returns)



4. Developing and Managing Portfolios

## Overview of Investment Portfolio Management Process

#### **TOP DOWN STRATEGIES**

Analysis of macro-economic conditions, asset class return expectations, interest rate levels and trends, yield curve structure, inflation expectations, economic forecasts, credit outlook, and political/international factors.

Objectives and Policies

**PORTFOLIO CONSTRUCTION & MANAGEMENT** 



#### **BOTTOM UP STRATEGIES**

Relative value analysis, issuer credit research, quantitative security analysis, horizon analysis, individual issue selection, and yield/return comparison.

# Strategies To Add Value

Sector allocation

Duration management

Maturity distribution

Yield curve placement

Industry selection

Issue selection

## Risk Management

# Portfolio risk management

- Duration managed within defined bands
- Diligent, proactive credit process
- Credit monitoring tools for timely identification of emerging trends
- Regular sector/issuer exposure reviews
- Competitive bid process with aggressive price negotiation

#### Compliance

- Pre-trade and post-trade compliance checking
- Daily policy compliance check on every portfolio
- Comprehensive compliance policies and procedures
- Active, integrated Compliance Department
- Full transparency

## "Pragmatic" Credit Process - More than Ratings

- Credit Committee: Responsible for developing and maintaining approved credit list
- Pragmatic approach that focuses on market events and security price tracking
- Early warning system drives proactive credit decisions

Preliminary Screening

General Market
Assessment

Issuer Review **Approved Issuer List** 

#### **Quantitative Analysis**

- Balance sheet analysis
- Earnings: actual and projections
- Asset quality and impairments
- Price movement of fixed-income and equity securities
- Monitor credit default swap levels
- Trading volume
- Dividend and capital policies

#### **Qualitative Analysis**

- Industry trends
- Competitive environment
- Business cycle
- Corporate governance
- Regulatory environment
- Analysts' recommendations
- Rating agency actions
- News releases

# Example of Active Credit Management

Quarter Ended	20	06	2007				2008				2009				2010				2011			
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
American Express Credit																						
Bank Of Nova Scotia																						
Bear Stearns Co Inc																						
BNP Paribas Finance Inc																						
Citigroup Funding Inc																						
Danske Corporation																						
Dexia Delaware LLC																						
HSBC Finance Corp																						
Lehman Brothers																						
Merrill Lynch & Co																						
Rabobank USA Fin Corp																						
Royal Bank Of Canada																						
Societe Generale																						
Toyota Motor Credit Corp																						
Wal-Mart Stores Inc																						
Westpac Banking Corp																						
		Approved						Hold					Removed									

# Overview of Strategies

- Portfolio managers use a variety of strategies in order to earn the highest returns for client portfolios:
  - Buy and Hold
  - Active Management
    - Duration Management
    - Maturity Distribution Ladder, Barbell or Bullet
    - Sector Allocation
    - Security Selection

A benchmark is selected to monitor portfolio performance

# Sector Allocation Strategy Minimizes Risk & Enhances Return

- Diversification
  - Concentration of funds in one sector may leave a portfolio vulnerable to unique sector risks



- Alter sector allocation to take advantage of spread changes
  - Purchase when spreads are high
  - Sell once spreads narrow

## Fixed Income Sector Returns

### Quarterly 1-3 Year Index Returns

Index / Ending Duration	06/30/10	09/30/10	12/31/10	03/31/11	06/30/11	09/30/11	12/31/11	03/31/12	06/30/12	09/30/12	12/31/12	03/31/13	06/30/13
U.S. Treasury / 1.89 Years	0.85%	2.28%	0.97%	1.00%	1.39%	0.76%	0.83%	2.28%	0.58%	1.91%	0.88%	0.76%	-0.11%
Bullet Agencies / 1.85 Years	0.60%	2.07%	0.60%	0.68%	1.08%	0.57%	0.62%	1.89%	0.39%	1.69%	0.50%	0.48%	-0.13%
Callable Agencies / 1.61 Years	0.59%	1.81%	0.17%	0.66%	1.07%	0.49%	0.40%	1.19%	0.36%	1.05%	0.31%	0.45%	-0.13%
Corp AAA / 2.10 Years	0.56%	1.34%	0.10%	0.61%	1.05%	0.48%	0.37%	0.76%	0.35%	0.91%	0.21%	0.35%	-0.17%
Corp AA / 1.99 Years	0.54%	0.70%	0.05%	0.42%	1.01%	0.42%	0.32%	0.43%	0.25%	0.88%	0.13%	0.29%	-0.18%
Corp A / 1.98 Years	0.50%	0.62%	-0.03%	0.30%	0.89%	0.17%	0.23%	0.42%	0.19%	0.33%	0.11%	0.12%	-0.20%
Corp BBB / 1.96 Years	0.43%	0.52%	-0.04%	0.14%	0.85%	-0.38%	0.20%	0.30%	0.19%	0.27%	0.07%	0.11%	-0.20%
MBS 0 - 3 / 1.69 Years	0.24%	0.52%	-0.15%	0.13%	0.83%	-0.68%	0.18%	0.21%	0.19%	0.26%	0.02%	0.09%	-0.25%
Municipals / 1.77 Years	0.14%	0.20%	-0.37%	0.03%	0.66%	-0.72%	-0.23%	-0.08%	0.16%	0.17%	-0.31%	0.01%	-1.00%

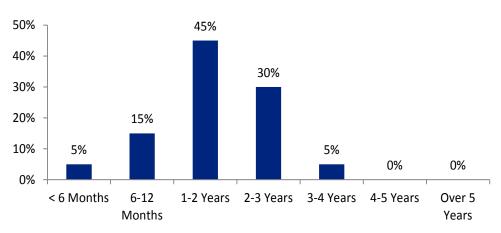
Source: BofA Merrill Lynch Indices

## Sample Portfolio

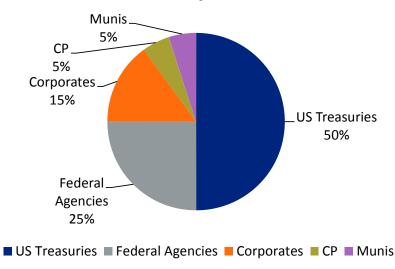
#### **Summary Characteristics**

Strategy	1-3 Year Government / Minimum "A"- Rated Corporate
Size	\$50 Million
Yield to Maturity at Market	0.47%
Effective Duration	1.69 Years
Average Credit Quality	AA+

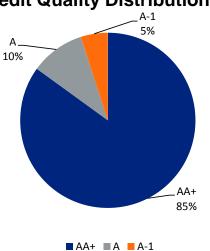
### **Portfolio Maturity Distribution**



#### **Portfolio Composition**



### **Credit Quality Distribution**



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# Trading

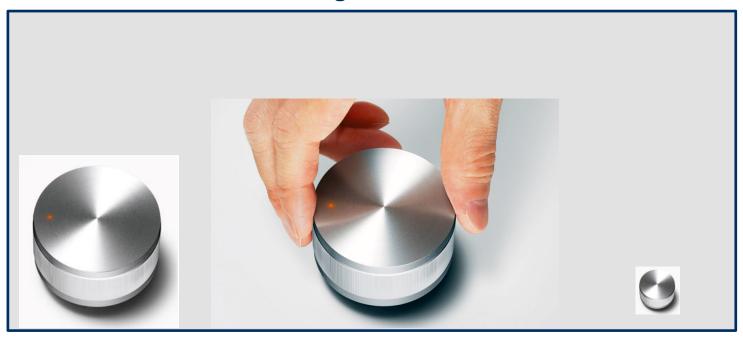
- Need for periodic rebalancing
  - passage of time
  - changing interest rates
  - actuarial assumptions
- To generate incremental income
- To enhance total return



## Dialing Up Risks (and Reward)

There are three main drivers of portfolio performance for short to intermediate term core portfolios

### **Portfolio Manager Investment Decisions**

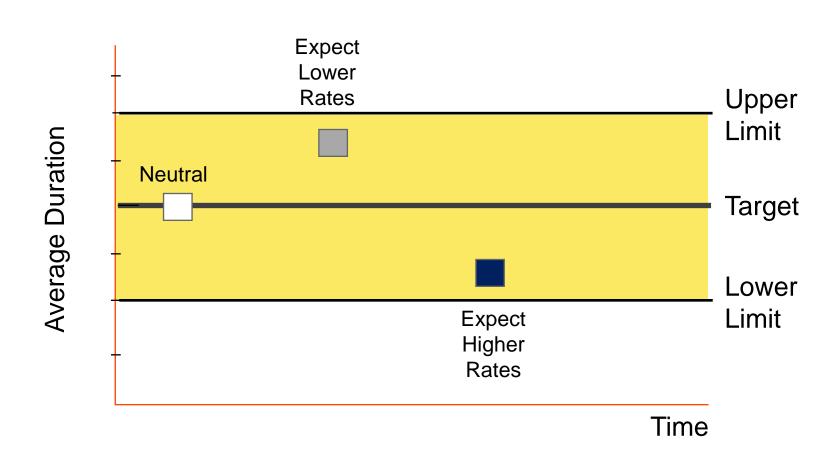


**Sector Allocation** 

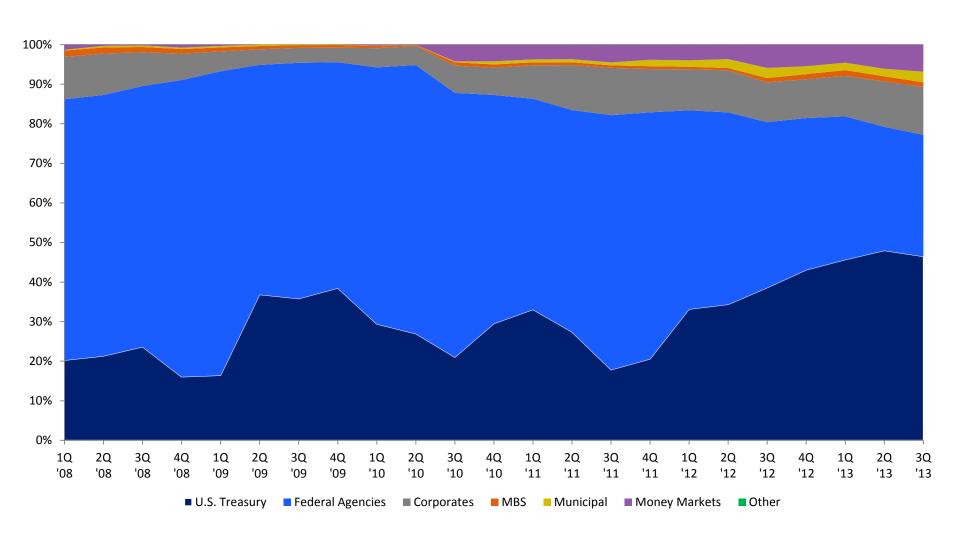
**Duration** 

Individual Security Selection

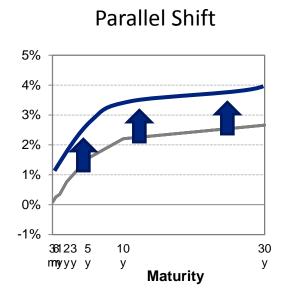
## Active Duration Management

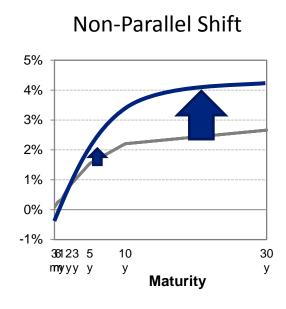


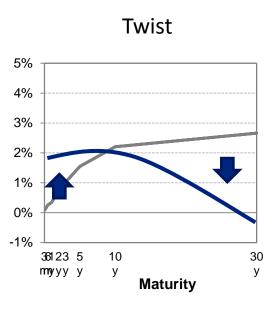
## Relative Value Sector Allocation Over Time



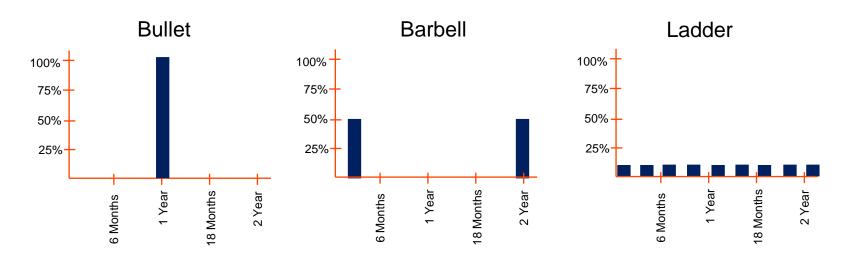
## Yield Curve Shape Variability







## Maturity Distribution Strategies

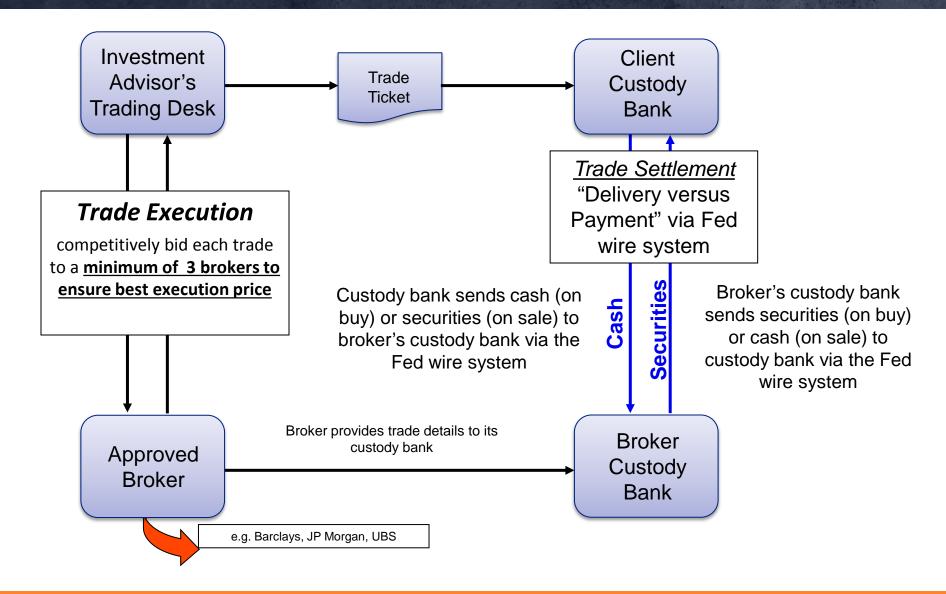


- Bullet Portfolio
  - Single maturity to meet an expected future liability
- Barbell Portfolio
  - Short and long term investment maturities, typically used in low interest rate environments to maintain liquidity while earning higher yields further out on the yield curve
- Ladder Portfolio
  - Evenly spaced investment maturities to minimize loss due to interest rate changes

# Competitively Shop Around!

Broker	Price (32nds)	Price (decimal)	Yield	Cost (\$)	Difference (\$)
Barclays	116-08 5/8	116.27	1.044%	8,364,294.34	-
Merrill Lynch	116-08 5/8	116.27	1.044%	8,364,294.34	-
BNP Paribas	116-09	116.28	1.042%	8,365,126.37	832.03
JP Morgan Chase	116-09 1/8	116.29	1.041%	8,365,403.71	1,109.37
Deutsche Bank	116-17 7/8	116.56	0.986%	8,384,817.78	20,523.44

## Transaction Process - Delivery versus Payment



# 5. Reporting

# Reporting Securities Holdings

### Regular reporting of securities holdings is required by the investment policy

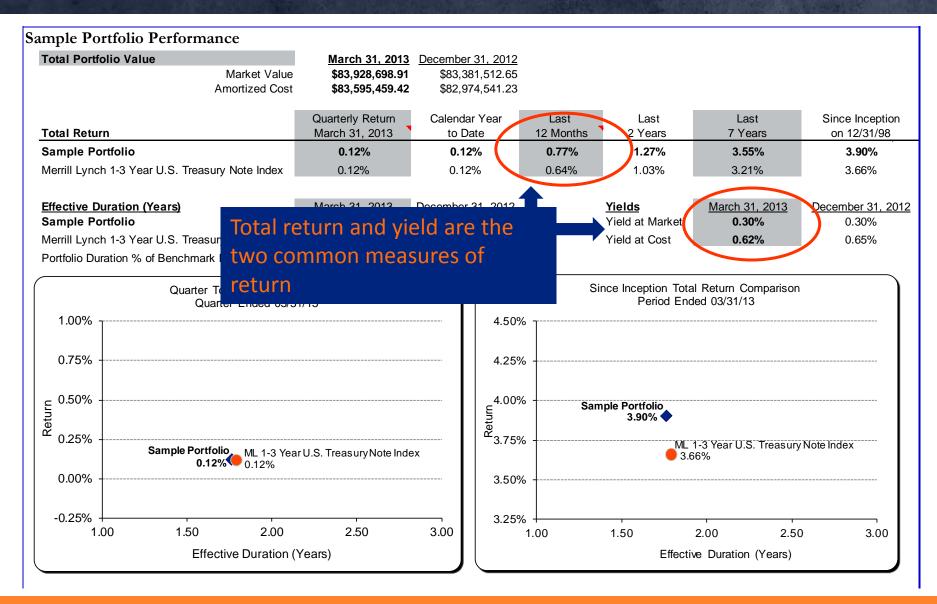
	-		Managed Account Detail of Securities Held						For	For the Month Ending March 31, 2013			
	Sample Client - Investmen												
	Security Type/Description Dated Date/Coupon/Maturity	CUSIP	Par F		Moody's Rating	Trade Date	Settle Date	Original Cost	YTM at Cost	Accrued Interest	Amortized Cost	Market Value	
	U.S. Treasury Bond / Note												
	US TREASURY NOTES DTD 04/15/2011 1.250% 04/15/2014	912828QC7	2,000,000.00	AA+	Aaa	04/29/11	05/02/11	2,014,687.50	1.00	11,538.46	2,005,213.82	2,022,188.00	
	US TREASURY NOTES DTD 05/16/2011 1.000% 05/15/2014	912828QM5	1,960,000.00	AA+	Aaa	03/27/12	03/29/12	1,985,878.13	0.38	7,417.68	1,973,657.44	1,977,839.92	
	US TREASURY NOTES DTD 10/17/2011 0.500% 10/15/2014	912828RL6	2,210,000.00	AA+	Aaa	10/27/11	10/31/11	2,210,949.61	0.49	5,100.00	2,210,496.15	2,219,323.99	
	US TREASURY NOTES DTD 12/15/2011 0.250% 12/15/2014	912828RV4	3,070,000.00	AA+	Aaa	01/05/12	01/06/12	3,057,288.28	0.39	2,256.11	3,062,606.21	3,071,200.37	
Detailed info	ormation	28285E1	1,405,000.00	AA+	Aaa	02/22/12	02/27/12	1,397,481.06	0.43	436.64	1,400,235.84	1,404,945.12	
describing th	ne securities as	28285K7	630,000.00	AA+	Aaa	03/13/12	03/15/12	627,883.59	0.49	109.14	628,618.18	631,501.29	
		28285K7	2,980,000.00	AA+	Aaa	06/27/12	06/29/12	2,977,322.66	0.41	516.24	2,978,069.20	2,987,101.34	
•	hase informatior	2828NZ9	300,000.00	AA+	Aaa	09/06/12	09/10/12	308,250.00	0.34	10.25	306,751.21	307,054.80	
and market	values	2828NZ9	3,200,000.00	AA+	Aaa	08/29/12	08/30/12	3,285,125.00	0.38	109.29	3,268,993.50	3,275,251.20	
	US TREASURY NOTES DTD 11/01/2010 1.250% 10/31/2015	912828PE4	3,195,000.00	AA+	Aaa	11/29/12	12/05/12	3,279,118.36	0.34	16,769.34	3,269,795.37	3,271,130.46	
	US TREASURY NOTES DTD 11/30/2010 1.375% 11/30/2015	912828PJ3	4,800,000.00	AA+	Aaa	11/01/12	11/05/12	4,942,312.50	0.40	22,120.88	4,923,697.15	4,932,748.80	
	US TREASURY NOTES DTD 01/15/2013 0.375% 01/15/2016	912828UG3	530,000.00	AA+	Aaa	01/30/13	02/04/13	529,275.39	0.42	417.27	529,313.28	530,538.48	
	US TREASURY N/B DTD 05/02/2011 2.000% 04/30/2016	912828QF0	3,325,000.00	AA+	Aaa	03/27/13	04/01/13	3,489,951.17	0.38	27,922.65	3,489,951.17	3,489,431.23	
	Security Type Sub-Total		29,605,000.00					30,105,523.25	0.44	94,723.95	30,047,398.52	30,120,255.00	

# Reporting Portfolio Transaction Activity

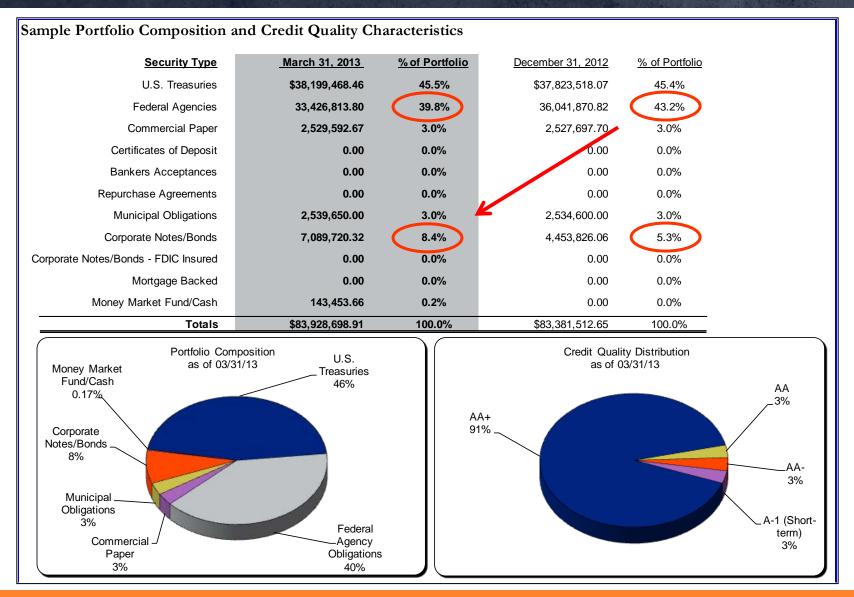
All transactions related to securities that occurred during the month should also be reported on a regular basis to show and monitor trading activity

	_	Ma	anaged Acc	ount Security	/ Transactions	& Interest		For the Mont	n Ending <b>March</b>	31, 201
Sample	e Client	- Investment Portfolio								
Transacti Trade	on Type Settle	Security Description	CUSIP	Par	Principal Proceeds	Accrued Interest	Total	Realized G/L Cost	Realized G/L Amort Cost	Sale Method
BUY										
3/01/13	03/06/13	TOYOTA MOTOR CREDIT CORP DTD 02/17/2012 1.000% 02/17/2015	89233P5Z5	1,825,000.00	(1,841,589.25)	(963.19)	(1,842,552.44)			
03/27/13	04/01/13	US TREASURY N/B DTD 05/02/2011 2.000% 04/30/2016	912828QF0	3,325,000.00	(3,489,951.17)	(27,922.65)	(3,517,873.82)			
Transactio	n Type Sub	-Total		5,150,000.00	(5,331,540.42)	(28,885.84)	(5,360,426.26)			
INTERE	ST					_				
03/01/13	03/01/13	MONEY MARKET FUND	MONEY0002	0.00	0.00	Trar	nsaction	activit	y includ	ies ,
3/04/13	03/04/13	GENERAL ELEC CAP CORP (FLOATING) DTD 06/02/2011 0.917% 06/02/2014	36962G5E0	1,550,000.00	0.00	inte	rest pay	ments	huvs	
03/15/13	03/15/13	US TREASURY NOTES DTD 03/15/2012 0.375% 03/15/2015	9128285K7	2,980,000.00	0.00					
03/15/13	03/15/13	US TREASURY NOTES DTD 03/15/2012 0.375% 03/15/2015	9128285K7	630,000.00	0.00		s, and m			_
3/19/13	03/19/13	FHLMC NOTES DTD 08/12/2011 0.500% 09/19/2014	3134G2YJ5	4,040,000.00	0.00	¹ with	n any rea	alized g	ains or	
3/19/13	03/19/13	FHLMC NOTES DTD 08/12/2011 0.500% 09/19/2014	3134G2YJ5	3,960,000.00	0.00	loss	es			
03/22/13	03/22/13	FREDDIE MAC GLOBAL NOTES DTD 08/05/2011 0.750% 09/22/2014	3134G2WG3	3,600,000.00	0.00	1				
3/30/13	03/30/13	FANNIE MAE GLOBAL NOTES DTD 02/15/2013 0.500% 03/30/2016	3135G0VA8	1,820,000.00	0.00	1,137.50	1,137.50			
3/31/13	03/31/13	US TREASURY NOTES DTD 09/30/2010 1.250% 09/30/2015	912828NZ9	3,200,000.00	0.00	20,000.00	20,000.00			
03/31/13	03/31/13	US TREASURY NOTES DTD 09/30/2010 1.250% 09/30/2015	912828NZ9	300,000.00	0.00	1,875.00	1,875.00			
Fransactio	n Type Sub	-Total		22,080,000.00	0.00	67,903.99	67,903.99			
SELL										
03/01/13	03/06/13	US TREASURY NOTES DTD 02/15/2012 0.250% 02/15/2015	912828SE1	1,835,000.00	1,835,286.72	240.78	1,835,527.50	10,106.84	6,746.38	SPEC LOT

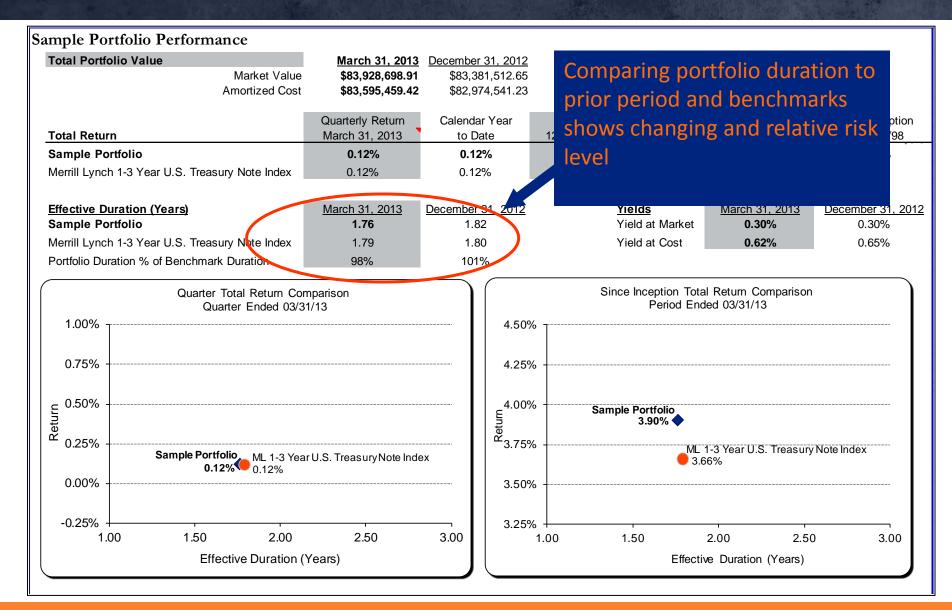
## Quarterly Performance Reporting



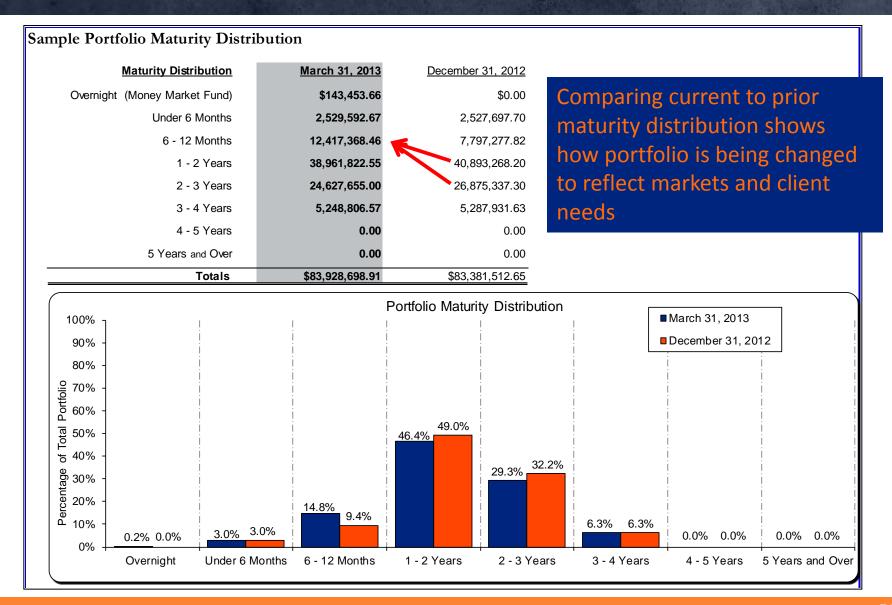
## Portfolio Characteristics



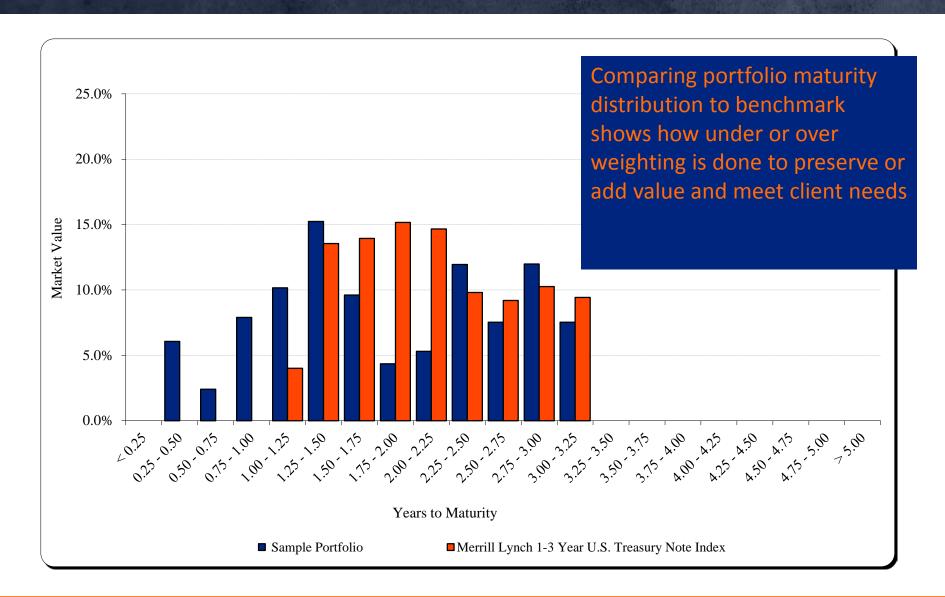
## **Duration Comparison**



## Portfolio Characteristics: Maturity



## Portfolio Maturity vs Benchmark



# **Investment Policy Compliance**

Security Type	Balance	Percent Allocation	Permitted by Policy
United States Treasury Securities	113,756,971.02	59.92%	100%
Federal Instrumentalities	28,727,002.90	15.13%	80%
Commercial Paper	2,527,880.42	1.33%	35%
Corporate Notes	10,811,781.85	5.70%	15%
State and/or Local Government Debt	2,510,750.00	1.32%	20%
Fixed Income Money Market Mutual Funds	10,429,120.83	5.49%	75%
Intergovernmental Investment Pools	21,071,859.05	11.10%	25%

Individual Issuer Breakdown	Balance	Percent Allocation	Permitted by Policy
FNMA	11,337,406.74	5.97%	50%
FHLMC	17,389,596.16	9.16%	50%
Commercial Paper Issuer A	2,527,880.42	1.33%	10%
Corporate Notes Issuer A	3,677,218.15	1.94%	5%
Corporate Notes Issuer B	2,013,093.28	1.06%	5%
Corporate Notes Issuer D	2,494,987.93	1.31%	5%
Corporate Notes Issuer E	2,626,482.49	1.38%	5%
Municipal Bond Issuer F	2,510,750.00	1.32%	20%
Money Market Fund – G	10,429,120.83	5.49%	25%

## Disclaimer

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