



# Making the Most of Your Financial Assets: Portfolio Management Strategies & Reporting

**Presented By:**

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## Taking the Long View



**“My short-term financial goal is to survive until Tuesday.  
My long-term financial goal is to survive until Friday.”**

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## Investment Objectives

**Safety:** Preserve capital with high-quality investments

**Liquidity:** Plan for and provide liquidity as needed

**Yield:** Seek to safely increase earnings through disciplined portfolio strategy



## Managing an Effective Investment Program

<b>Investment Policy Development</b>	<ul style="list-style-type: none"><li>• Establish the foundation of an effective investment program</li><li>• Comply with California Government Code (CGC)</li><li>• Meet industry best practices</li></ul>
<b>Cash Flow Analysis</b>	<ul style="list-style-type: none"><li>• Analyze historic cash flow patterns to project future cash flows</li><li>• Determine appropriate liquidity cushion</li></ul>
<b>Establishing Duration</b>	<ul style="list-style-type: none"><li>• Establish target duration based on anticipated cash needs and risk tolerances</li><li>• Adjust portfolio duration based on interest rate trends</li></ul>
<b>Sector Selection</b>	<ul style="list-style-type: none"><li>• Seek broad diversification</li><li>• Analyze yield spreads and value amongst permitted sectors</li></ul>
<b>Competitive Shopping</b>	<ul style="list-style-type: none"><li>• Shop from approved list of 50 broker/dealers</li><li>• Provide full transparency and documentation</li></ul>



## Investment Policy Development

Scope/Policy Statement	Performance Evaluation
Objectives	Safekeeping & Custody
Authorized Investments	Prudence
Ineligible Investments	Delegation of Authority
Diversification	Internal Controls
Maximum Maturity	Reporting Requirements
Selection of Broker/Dealers and Financial Institutions	Policy Review

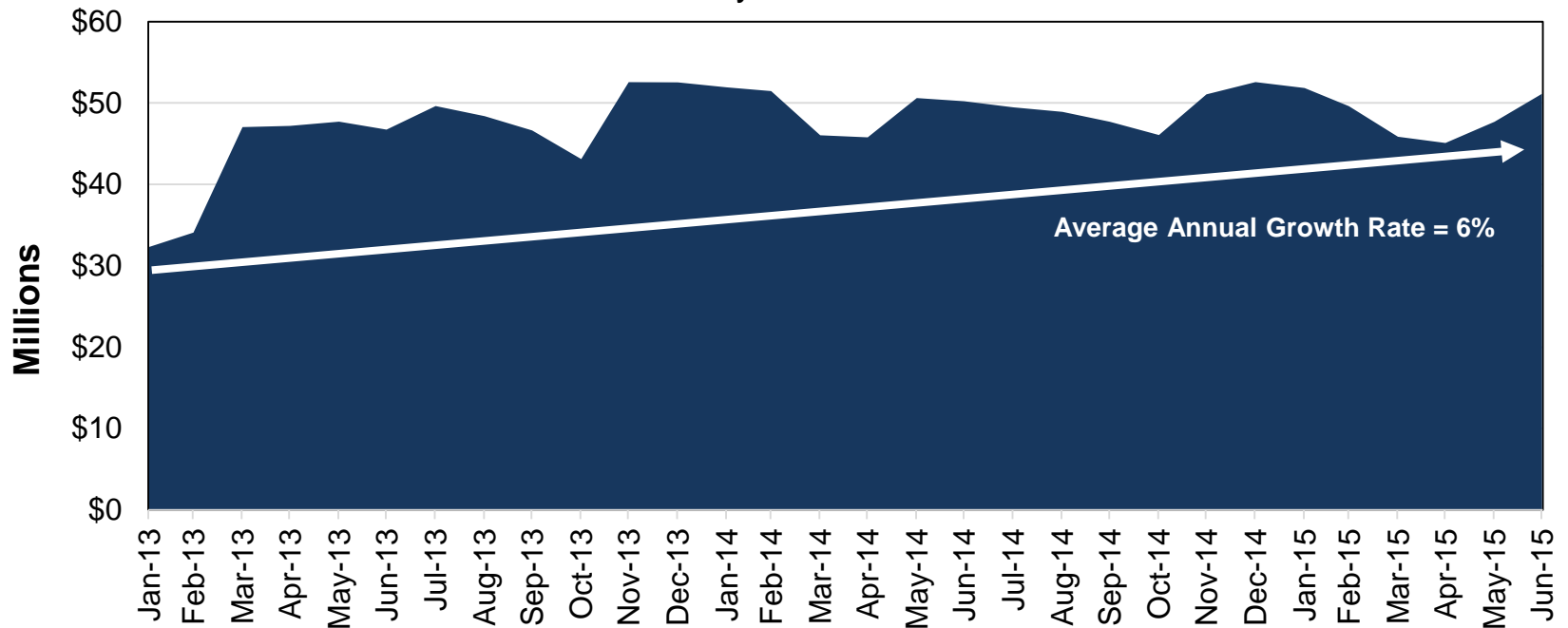
Source: CAJPA website.



## Cash Flow Analysis

- At the outset of portfolio construction and periodically thereafter, it is important to analyze historic cash flow patterns and growth rates in order to determine the appropriate balance between the liquidity and core portfolio components.

**Sample Client**  
**Historic Cash Balances**  
January 2013 – June 2015





## Portfolio Components

### ◆ Liquidity Balance

- Highly liquid funds to meet daily disbursements needs, known recurring payments, and unforeseen expenditures
- Funds may be invested in short-term investment pools and bank products offering liquidity

### ◆ Core Portfolio

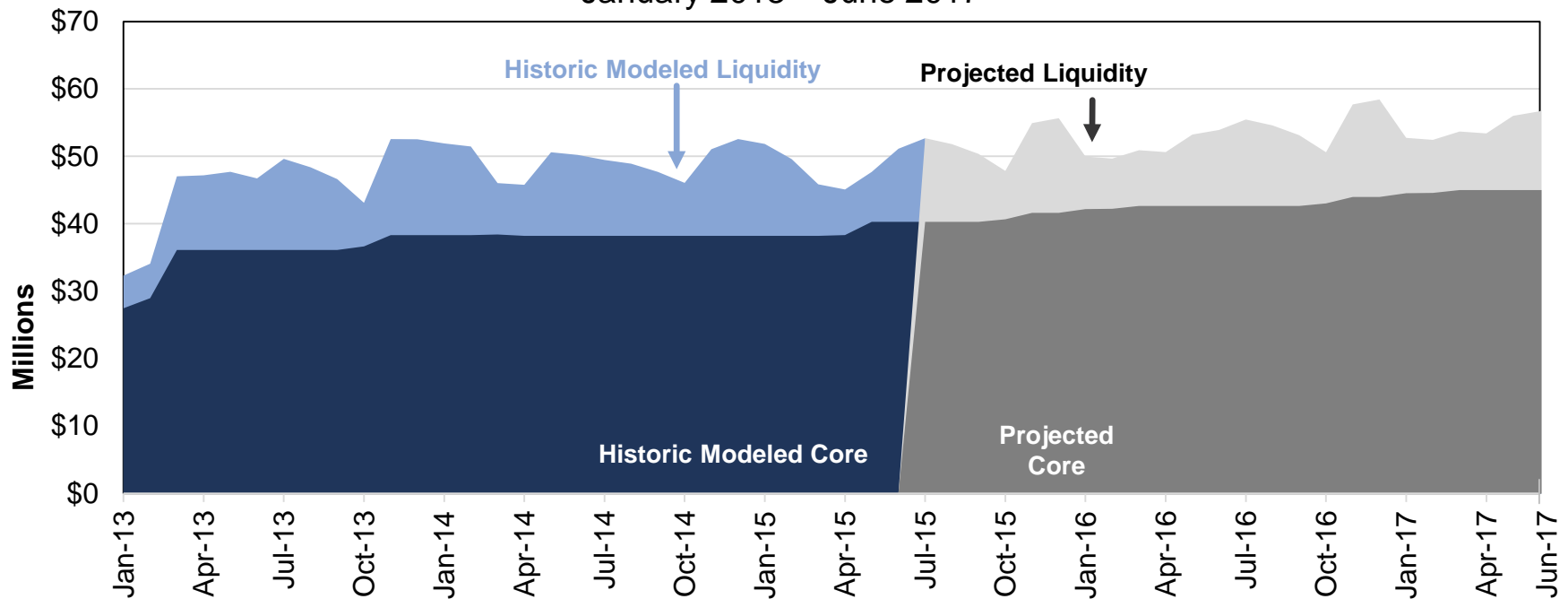
- Funds that are not expected to be spent but may be disbursed in extraordinary circumstances
- May be invested longer-term in order to enhance earnings



## Projection of Cash Balances

- Accurate cash flow analysis also allows for the projection of future cash balances and the determination of core vs. liquid portfolio components.

**Sample Client  
Historic and Projected Balances**  
January 2013 – June 2017



Note: Assumes a 15% liquidity cushion.





## Establishing Duration

- ◆ Duration, which should be aligned with JPA's liabilities and risk/return preferences, is likely to be the greatest determinant of the expected rate of return and volatility in a portfolio.
- ◆ The performance benchmark should match the target duration.



**Duration**

**Sector  
Allocation**

**Issue  
Selection**



## Performance Benchmark Selection: Core Portfolio

- ◆ Purpose of a Benchmark:
  - Measures and evaluates relative investment performance
  - Provides for comparison of risk and return
  - Should align with long-term investment strategy
  
- ◆ A Benchmark Should:
  - Be an independent representation
  - Reflect asset mix, credit quality, and average maturity or duration of the portfolio, *or*
  - Be a baseline, such as a U.S. Treasury Index



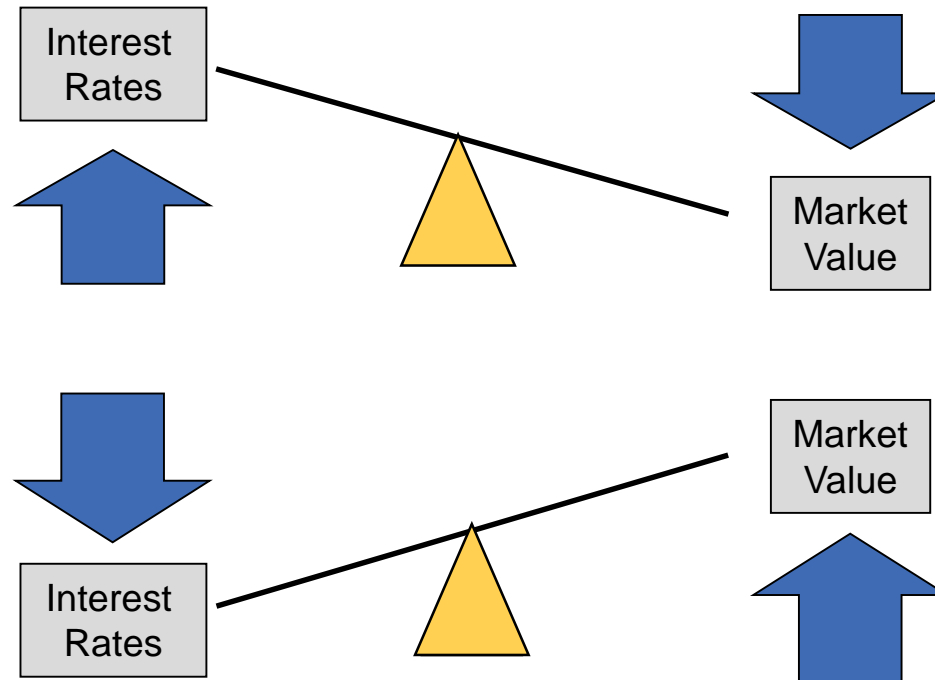
## Understanding Total Return—Yield vs. Total Return

Yield	Total Return
Percentage rate that expresses annualize rate of return at a point in time	Percentage rate that expresses annualize rate of return over a specific period
Forward- looking number	Historical number
Assumes no change in cash flow, and reinvestment at the same rate	Takes into account all changes in portfolio, including market value changes, reinvestment rates, and all cash flows



## Total Return = Income + Change in Market Value

- Market values move inversely to interest rates.

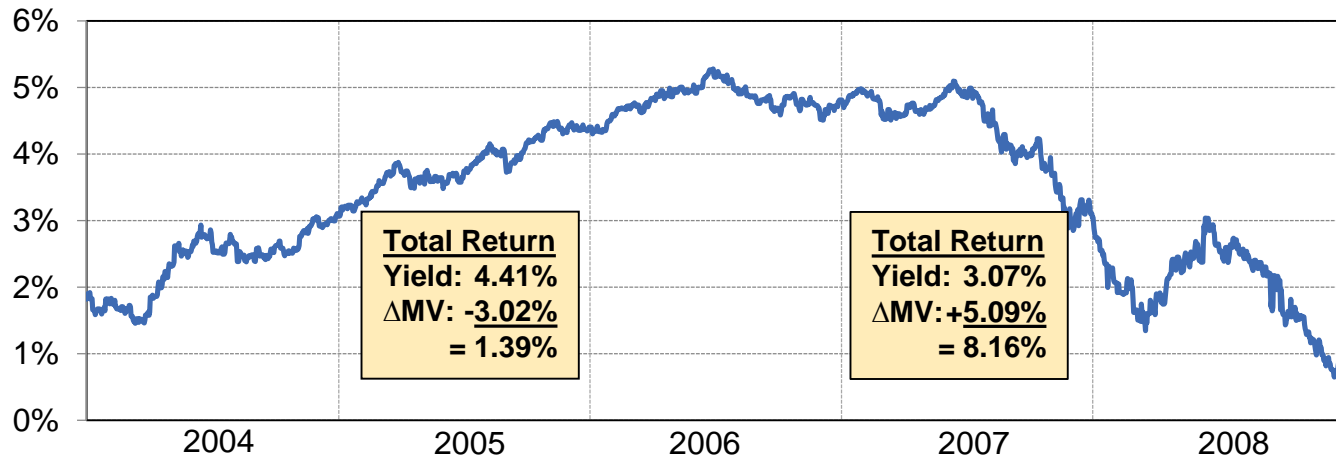




# Total Return

- ◆ Total Return = Yield + Change in Market Value

**2-Year U.S. Treasury Note Yield History**  
2004–2008



**Bank of America Merrill Lynch Treasury Index Annual Returns**

	2004	2005	2006	2007	2008
<b>1-5 Year Treasury</b>	1.31%	1.39%	3.81%	8.16%	8.73%

Sources: Bloomberg, Bank of America Merrill Lynch.



## Historic Risk-Return Analysis

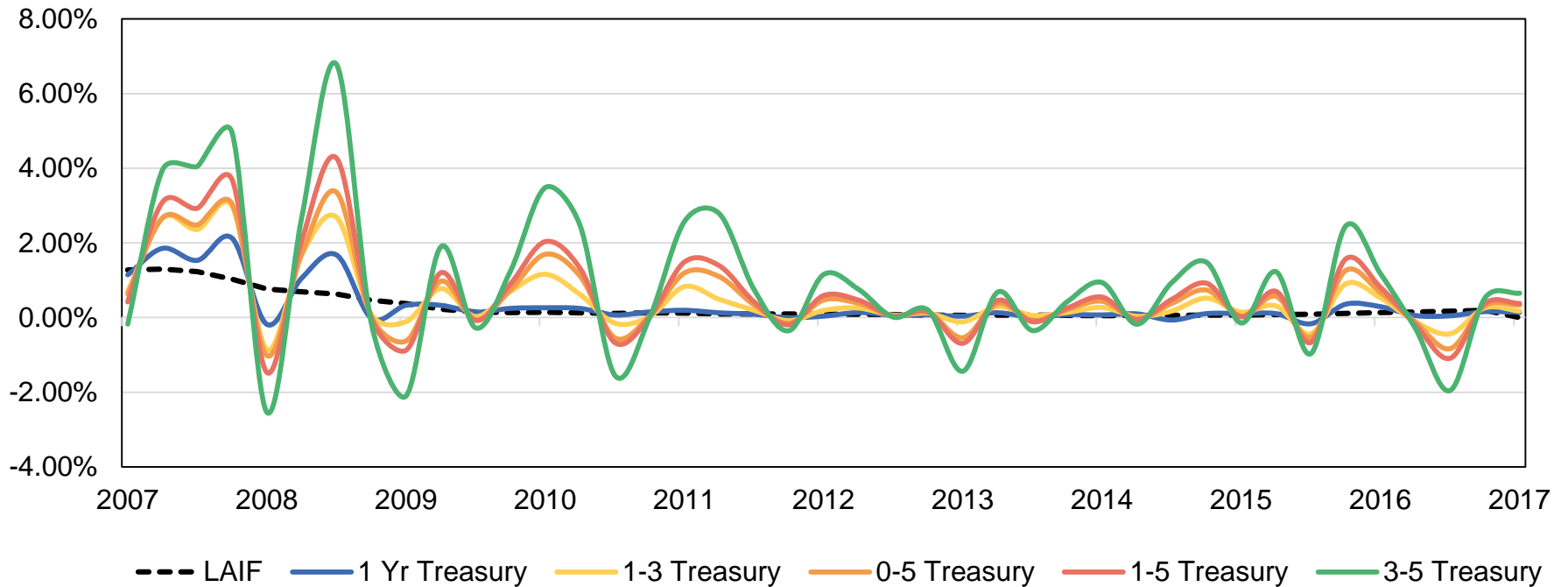
Risk/Return of Various Investment Strategies 10 Years Ended June 30, 2017				
Strategy	Duration (years)	Annualized Total Return	Cumulative Earnings on \$50 Million	Quarters With Negative Total Return
LAIF	0.00	0.97%	\$55,097,374	0 out of 40
1 Year U.S. Treasury Index	0.91	1.21%	\$56,411,361	5 out of 40
1-3 Year U.S. Treasury Index	1.82	1.94%	\$60,628,703	8 out of 40
<b>0-5 Year U.S. Treasury Index</b>	<b>2.16</b>	<b>2.23%</b>	<b>\$62,333,793</b>	<b>11 out of 40</b>
<b>1-5 Year U.S. Treasury Index</b>	<b>2.63</b>	<b>2.65%</b>	<b>\$64,936,111</b>	<b>12 out of 40</b>
3-5 Year U.S. Treasury Index	3.74	3.77%	\$72,440,973	13 out of 40

Sources: LAIF website and Bloomberg.  
Indices shown are Bank of America Merrill Lynch indices. Unrebalanced durations shown.



## Quarterly Unannualized Total Returns—10 Years

Comparison of Unannualized Quarterly Total Returns  
10 Years Ended June 30, 2017



Sources: LAIF website and Bloomberg.  
Indices shown are Bank of America Merrill Lynch indices.



## Quarterly Impact of Changes in Interest Rates on Returns

### 2-Year U.S. Treasury Note Yield History

June 30, 2014 – June 30, 2017



### Quarterly Returns - Unannualized

Index	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017
LAIF	0.06%	0.06%	0.06%	0.07%	0.08%	0.09%	0.11%	0.14%	0.15%	0.17%	0.19%	0.23%
1 Year UST	0.10%	-0.07%	0.11%	0.10%	0.11%	-0.17%	0.36%	0.29%	0.06%	0.05%	0.16%	0.14%
1-3 Year UST	0.03%	0.17%	0.52%	0.15%	0.31%	-0.44%	0.90%	0.53%	-0.11%	-0.43%	0.26%	0.17%
0-5 Year UST	-0.03%	0.38%	0.74%	0.03%	0.57%	-0.53%	1.26%	0.67%	-0.12%	-0.83%	0.32%	0.34%
1-5 Year UST	-0.06%	0.49%	0.92%	0.02%	0.70%	-0.66%	1.57%	0.81%	-0.19%	-1.09%	0.37%	0.38%
3-5 Year UST	-0.18%	0.94%	1.48%	-0.15%	1.23%	-0.97%	2.45%	1.18%	-0.28%	-1.95%	0.52%	0.65%

Sources: LAIF website and Bloomberg.  
Indices shown are Bank of America Merrill Lynch indices.





## Interest Rate Sensitivity

### Market Value Change on \$50 Million Portfolio Due to Instantaneous Change in Interest Rates

BofA Merrill Lynch Index	Portfolio Duration (years)	Interest Rates Fall 0.25%	Interest Rates Fall 0.50%	Interest Rates Unchanged	Interest Rates Rise 0.25%	Interest Rates Rise 0.50%
1 Year U.S. Treasury Index	0.91	\$113,750	\$227,500	\$0	(\$113,750)	(\$227,500)
1-3 Year U.S. Treasury Index	1.82	\$227,500	\$455,000	\$0	(\$227,500)	(\$455,000)
<b>0-5 Year U.S. Treasury Index</b>	<b>2.16</b>	<b>\$270,000</b>	<b>\$540,000</b>	<b>\$0</b>	<b>(\$270,000)</b>	<b>(\$540,000)</b>
<b>1-5 Year U.S. Treasury Index</b>	<b>2.63</b>	<b>\$328,750</b>	<b>\$657,500</b>	<b>\$0</b>	<b>(\$328,750)</b>	<b>(\$657,500)</b>
3-5 Year U.S. Treasury Index	3.74	\$467,500	\$935,000	\$0	(\$467,500)	(\$937,000)

Source: Bloomberg, Bank of America Merrill Lynch. Unrebalanced durations as of June 30, 2017.



## Sector Allocation: Diversify, Diversify, Diversify

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### Investments and Financial Planning



**“I have a diversified retirement portfolio: 25% down  
the drain, 40% out the window, 35% gone with the wind.”**

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## Investment Sectors Permitted by California Gov't Code

		Overnight	180 Days	270 Days	1 Year	5 Years	Beyond 5 Years	
"Conventional" Fixed-Income	U.S. Treasuries	Permitted					With Prior Approval	
	Federal Agencies	Permitted					With Prior Approval	
	Municipal Securities	Permitted					With Prior Approval	
	Negotiable Certificates of Deposit	Permitted					With Prior Approval	
	Commercial Paper	Permitted			Prohibited			
	Bankers' Acceptances	Permitted		Prohibited				
	Medium-Term Corporate Bonds ("A" or Better)	Permitted					Prohibited	
	Asset-Backed Securities (ABS)	Permitted					Prohibited	
	Supranationals ("AA" or better)	Permitted					Prohibited	
	Repurchase Agreements	Permitted					Prohibited	
	Money Market Funds	Permitted	Prohibited					
	Local Government Investment Pools	Permitted	Prohibited					
Broader Fixed-Income	Foreign Sovereign	Prohibited						
	Commercial MBS	Prohibited						
	High-Yield	Prohibited						
	Private Placements	Prohibited						
	Convertibles	Prohibited						
	Non-U.S. Dollar Investment Grade	Prohibited						
	Emerging Markets Debt	Prohibited						
Equities	Domestic Small/Mid Cap	Prohibited						
	Domestic Large Cap	Prohibited						
	Domestic Value/Growth	Prohibited						
	International Small/Mid Cap	Prohibited						
	International Large Cap	Prohibited						
Alternatives	Emerging Markets	Prohibited						
	Commodities	Prohibited						
	Real Estate	Prohibited						
	Hedge Funds	Prohibited						
	Private Equity	Prohibited						
	Venture Capital	Prohibited						
	Tangible Assets	Prohibited						

Source: California Government Code, §53600 et seq.



## Current Yield Environment

- 1.09% - LAIF daily yield as of August 30, 2017.
- 1.43% - Bank of America Merrill Lynch 1 – 5 Year UST Index yield as of August 31, 2017.

As of August 31, 2017

Maturity	Treasury	Federal Agency	AA Corporate	A Corporate	AAA Tax-exempt Municipal
3-Month	0.99%	1.04%	1.23%	1.30%	-
6-Month	1.08%	1.12%	1.34%	1.41%	-
1-Year	1.22%	1.26%	1.43%	1.59%	1.35%
2-Year	1.33%	1.39%	1.64%	1.80%	1.58%
3-Year	1.43%	1.50%	1.83%	2.00%	1.77%
5-Year	1.70%	1.73%	2.18%	2.35%	2.14%

Source: Bloomberg BVAL yield curves for Treasury, Corporate and Municipal yields, TradeWeb for Federal Agency yields. Three and six month corporate yields from commercial paper; A-1+ for AA and A-1 for A. LAIF yield information is sourced from the LAIF website. Bank of America Merrill Lynch information is sourced from Bloomberg.



## The Value of Diversification

### Annual Return BofA Merrill Lynch 1-5 Year Indices

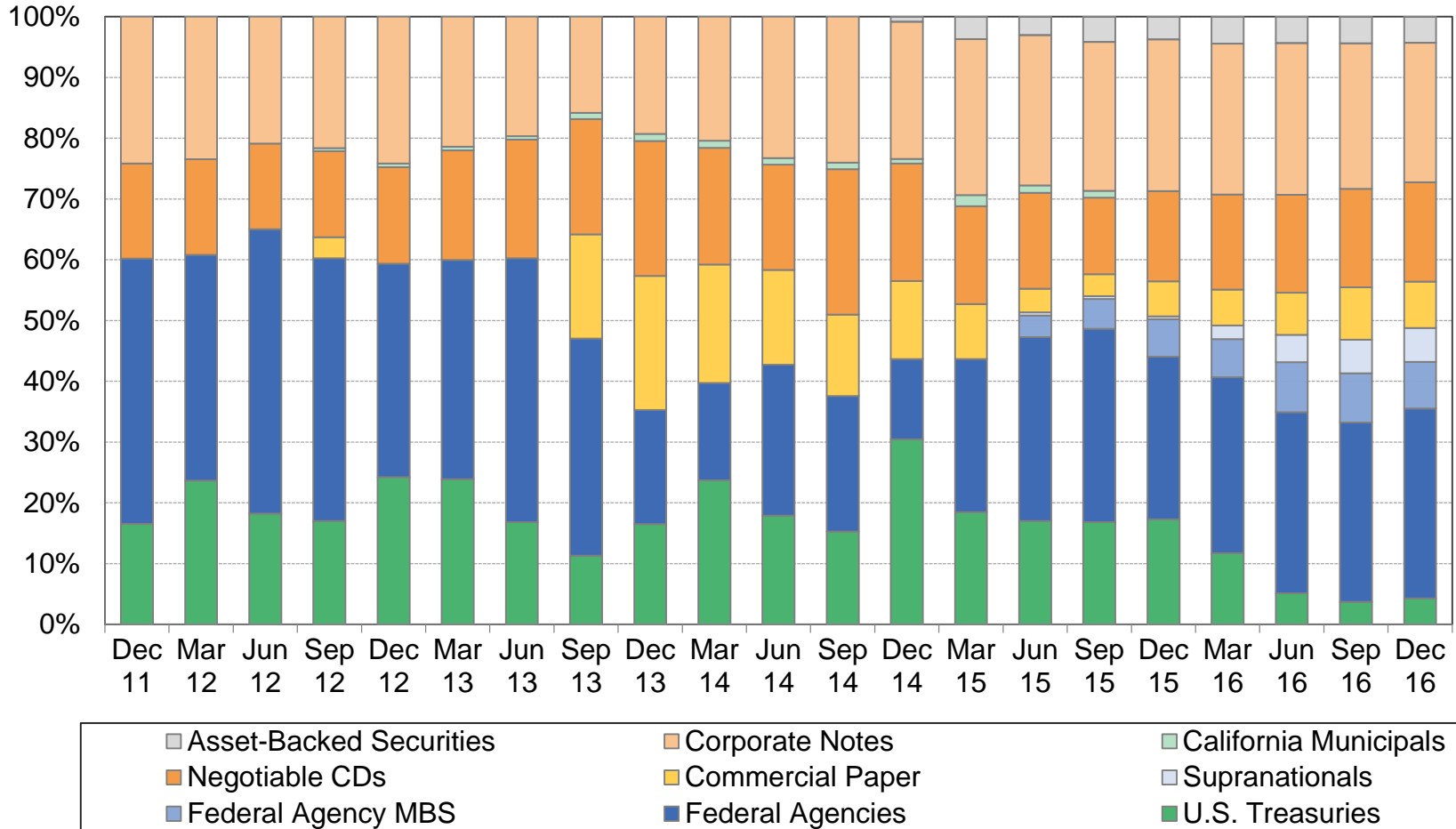
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
8.16%	8.73%	6.95%	5.43%	3.66%	2.81%	1.24%	2.06%	1.51%	1.32%
7.30%	7.66%	5.56%	3.61%	3.36%	1.63%	0.41%	1.30%	1.20%	1.12%
7.27%	5.65%	2.47%	3.02%	3.36%	1.38%	0.03%	1.30%	0.98%	1.09%
5.00%	4.41%	0.23%	1.85%	2.44%	0.91%	-0.19%	1.24%	0.97%	0.16%

<b>1-5 Year U.S. Treasury</b>	<b>1-5 Year Corporate AAA-A</b>	<b>1-5 Year Municipal</b>	<b>1-5 Year Federal Agency</b>
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Source: BofA (Bank of America) Merrill Lynch Indices.



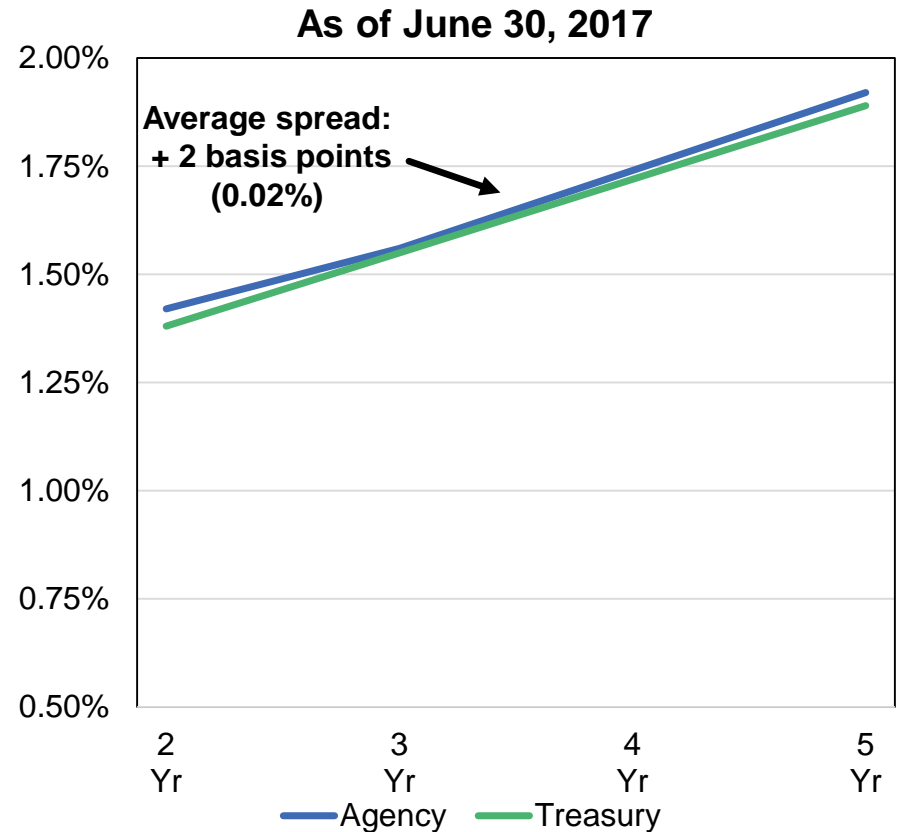
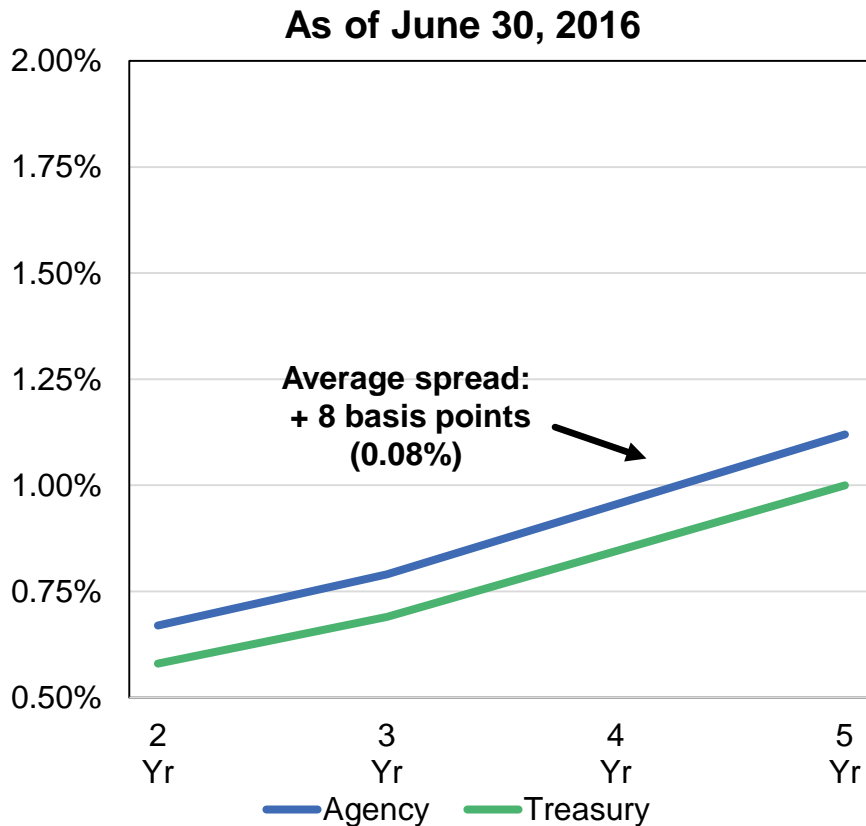
## Sector Allocation Changes Over Time



*This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation.*



## U.S. Treasury and Agency Yield Spreads



Source: Bloomberg BVAL yield curves for Treasury, TradeWeb for Federal Agency yields.



## Competitive Shopping

### Actual Trade on 2/1/17

Issuer: FHLMC  
Coupon: 1.50%  
Maturity: 01/17/20  
Par Amount: \$16,230,000

	Dealer	Yield	Price	Principal
1	BAML	1.569%	99.802	16,197,835
2	UBS	1.588%	99.747	16,188,883
3	MS	1.591%	99.739	16,187,671
4	JEFF	1.591%	99.738	16,187,485
5	NOMX	1.591%	99.738	16,187,485
6	RBC	1.593%	99.732	16,186,553
7	BMO	1.594%	99.729	16,186,087
8	C	1.595%	99.728	16,185,854
9	HSBC	1.595%	99.728	16,185,854
10	BARX	1.598%	99.718	16,184,223
11	GS	1.598%	99.718	16,184,223
12	WFS	1.598%	99.718	16,184,223
13	TD	1.600%	99.713	16,183,477

Difference:  
\$14,358

Above is an actual trade made on 2/1/17. It is not a trade recommendation and is only for illustrative purposes.





# Reporting



## Important Codes Related to Investments and Reporting

- ◆ California Government Code (CGC or Code)
  - Investment of Surplus (53600-53610)
  - Deposit of Funds (53630-53686)



## Delegation of Authority (53607)

- ◆ Board may delegate to Treasurer for one-year period
- ◆ Must be renewed annually
- ◆ Must make monthly report of transactions when authority is delegated\*\*

\*\*Commonly missed reporting requirement



## Reporting Requirements (53646)

- ◆ Quarterly reporting requirements are optional
- ◆ If providing quarterly reports, they must:
  - Be submitted within 30 days after quarter end
  - Include: investment type, issuer, maturity date, par amount, purchase price, description of funds being managed by an outside party, market value and source for any securities managed by an outside party that is not a local agency or LAIF
  - State that the portfolio is in compliance with the Investment Policy or manner in which it is out of compliance
  - State the ability of the agency to meet its pool's expenditure requirements for the next six months or explain why it cannot



# Reporting Requirements (53646) - Example



## Managed Account Detail of Securities Held

For the Month Ending March 31, 2017

Investment Type

U.S. Treasury Bond / Note

Issuer

US TREASURY NOTES

Maturity Date

05/31/2017

Par Amount

3,000,000.00

Purchase Price

6,034,414.06

Market Value

1,861,597.50

Security Type/Description Dated Date/Coupon/Maturity	CUSIP	Par	S&P Rating	Moody's Rating	Trade Date	Settle Date	Original Cost	YTM at Cost	Accrued Interest	Amortized Cost	Market Value
<b>U.S. Treasury Bond / Note</b>											
US TREASURY NOTES DTD 06/30/2015 0.625% 06/30/2017	912828X04	4,500,000.00	AA+	Aaa	12/09/15	12/10/15	4,481,718.75	0.89	7,070.10	4,497,067.85	4,497,889.50
US TREASURY NOTES DTD 07/15/2014 0.875% 07/15/2017	912828WT3	3,000,000.00	AA+	Aaa	07/16/15	07/17/15	3,011,601.56	0.68	5,511.05	3,001,695.72	3,000,234.00
US TREASURY NOTES DTD 10/31/2012 0.750% 10/31/2017	912828TW0	4,500,000.00	AA+	Aaa	06/08/15	06/09/15	4,488,398.44	0.86	14,171.27	4,497,165.86	4,494,726.00
US TREASURY NOTES DTD 12/31/2012 0.750% 12/31/2017	912828UE8	5,175,000.00	AA+	Aaa	04/23/15	04/28/15	5,169,541.99	0.79	9,756.73	5,173,463.34	5,164,489.58
US TREASURY NOTES DTD 05/31/2013 1.000% 05/31/2017	912828VE7	3,500,000.00	AA+	Aaa	04/23/15	04/28/15	3,508,886.72	0.92	11,730.77	3,503,380.37	3,495,079.00
US TREASURY NOTES DTD 04/15/2016 0.875% 04/15/2019	912828Q52	2,500,000.00	AA+	Aaa	02/22/17	02/22/17	2,479,589.84	1.26	10,096.15	2,480,576.53	2,479,687.50
US TREASURY NOTES DTD 04/15/2016 0.875% 04/15/2019	912828Q52	3,000,000.00	AA+	Aaa	05/12/16	05/13/16	2,998,593.75	0.89	12,115.38	2,999,018.31	2,975,625.00
US TREASURY NOTES DTD 04/30/2014 1.625% 04/30/2019	912828D23	2,480,000.00	AA+	Aaa	11/10/16	11/14/16	2,513,906.25	1.06	16,921.55	2,508,712.75	2,497,146.72
US TREASURY NOTES DTD 12/01/2014 1.500% 11/30/2019	912828G61	6,025,000.00	AA+	Aaa	12/01/16	12/05/16	6,034,414.06	1.45	30,290.52	6,033,421.32	6,035,122.00
US TREASURY NOTES DTD 02/02/2015 1.250% 01/31/2020	912828H52	2,500,000.00	AA+	Aaa	12/29/16	12/30/16	2,478,710.94	1.53	5,179.56	2,480,426.98	2,483,887.50
US TREASURY NOTES DTD 02/28/2013 1.250% 02/29/2020	912828U01	1,875,000.00	AA+	Aaa	01/31/17	02/06/17	1,860,498.04	1.51	2,038.04	1,861,188.51	1,861,597.50
US TREASURY NOTES DTD 04/01/2013 1.125% 03/31/2020	912828UV0	3,700,000.00	AA+	Aaa	03/13/17	03/16/17	3,637,128.91	1.70	113.73	3,638,021.26	3,657,220.60
<b>Security Type Sub-Total</b>		<b>42,755,000.00</b>					<b>42,662,989.25</b>	<b>1.11</b>	<b>124,994.85</b>	<b>42,674,138.80</b>	<b>42,642,704.90</b>
<b>Federal Agency Bond / Note</b>											
FFCB NOTES DTD 06/27/2014 1.000% 06/27/2017	3133EDPC0	8,000,000.00	AA+	Aaa	06/26/14	06/27/14	8,021,200.00	0.91	20,888.89	8,001,941.76	8,002,672.00

PFM Asset Management LLC



## Summing it All Up . . . It *IS* Worth It!

	Individual	Public Entity
Amount to Invest	\$10,000	\$25,000,000
Incremental Earnings Rate	0.50%	0.50%
Annual Incremental Earnings	\$50	\$125,000

### Common Fallacies

- It is too much work
- We don't have enough staff (or time!)
- The additional income is not enough

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**"I'm a fun-loving shopaholic trapped in the body of a prudent investor!"**



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# Thank You



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