



# MSBO School Finance Services Committee – Northern Michigan Workshop

**Presented by PFM Asset Management LLC**  
**Brian Quinn, Managing Director**

September 14, 2018

---

PFM Asset Management LLC

---

555 Briarwood Circle  
Suite 333  
Ann Arbor, MI 48108

---

734-994-9700  
[pfm.com](http://pfm.com)



# GFOA Best Practice

## Investment Program for Public Funds

Governments have a **fiduciary responsibility** in managing their funds, including the ongoing management and monitoring of investment activity. Developing a public funds investment program is essential to effective financial management, and it sets the foundation for creating protocols and internal controls, constructing and managing the portfolio, navigating changing economic conditions, and communicating information to stakeholders. While different types and sizes of governments require differing levels of complexity in their investment programs, all governments need to recognize their fiduciary responsibility. Having an established public funds investment program provides the structure to effectively set policy, make decisions, and **safeguard a government's financial assets.**

Reference: Government Finance Officer Association Best Practice – January 2017



## Table of Contents

- I. Current Market Conditions
- II. Cash Management: Big Picture
- III. Case Study: Cash Management in Practice
- IV. Cash Management / Investment Platform

Important Disclosures

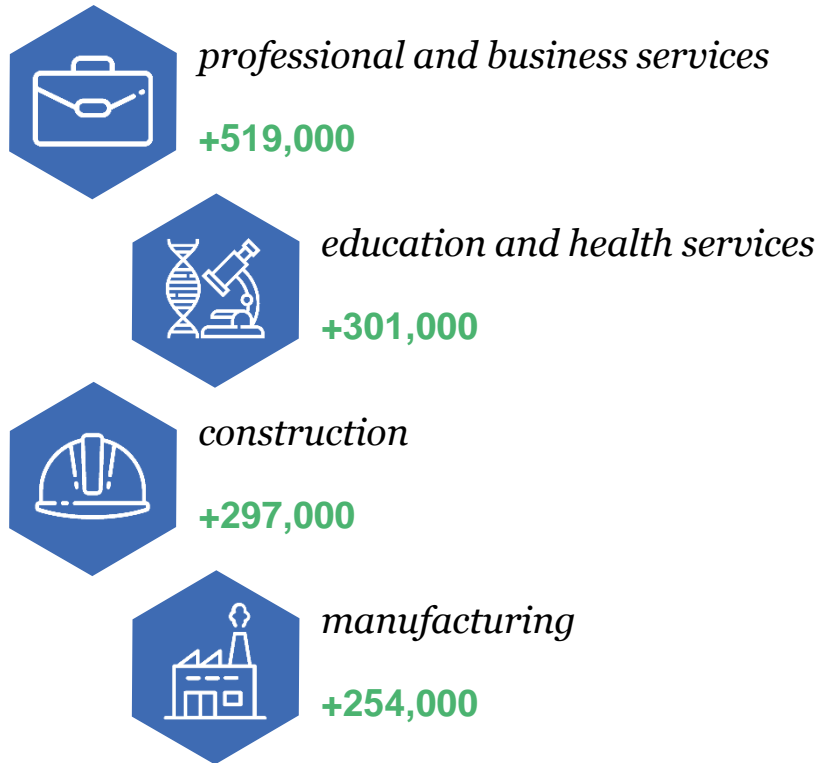


# Current Market Conditions



## Employment Update: Sector Changes over the Last 12 Months

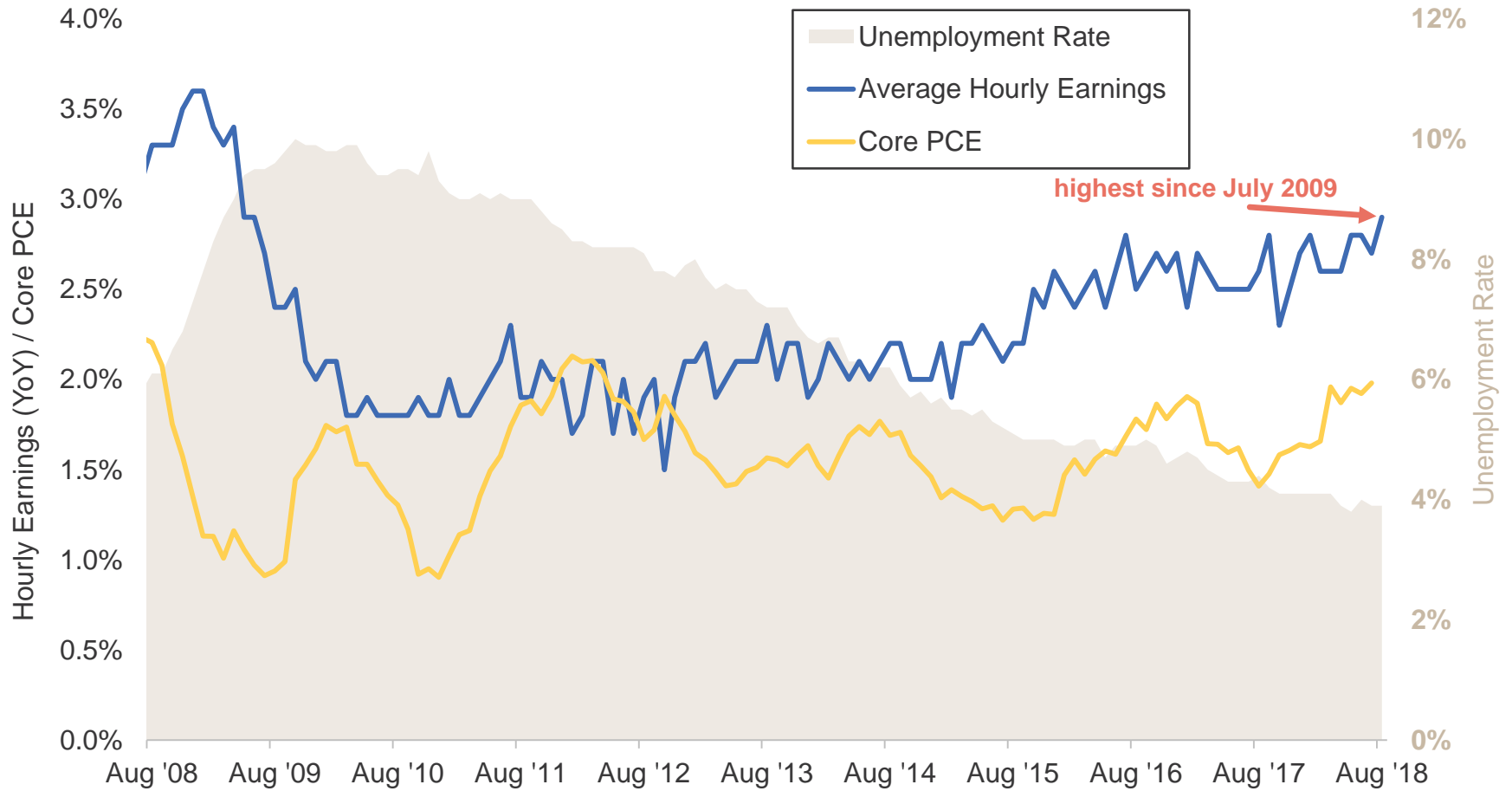
### WINNERS



Source: Bureau of Labor Statistics, as of September 7, 2018.



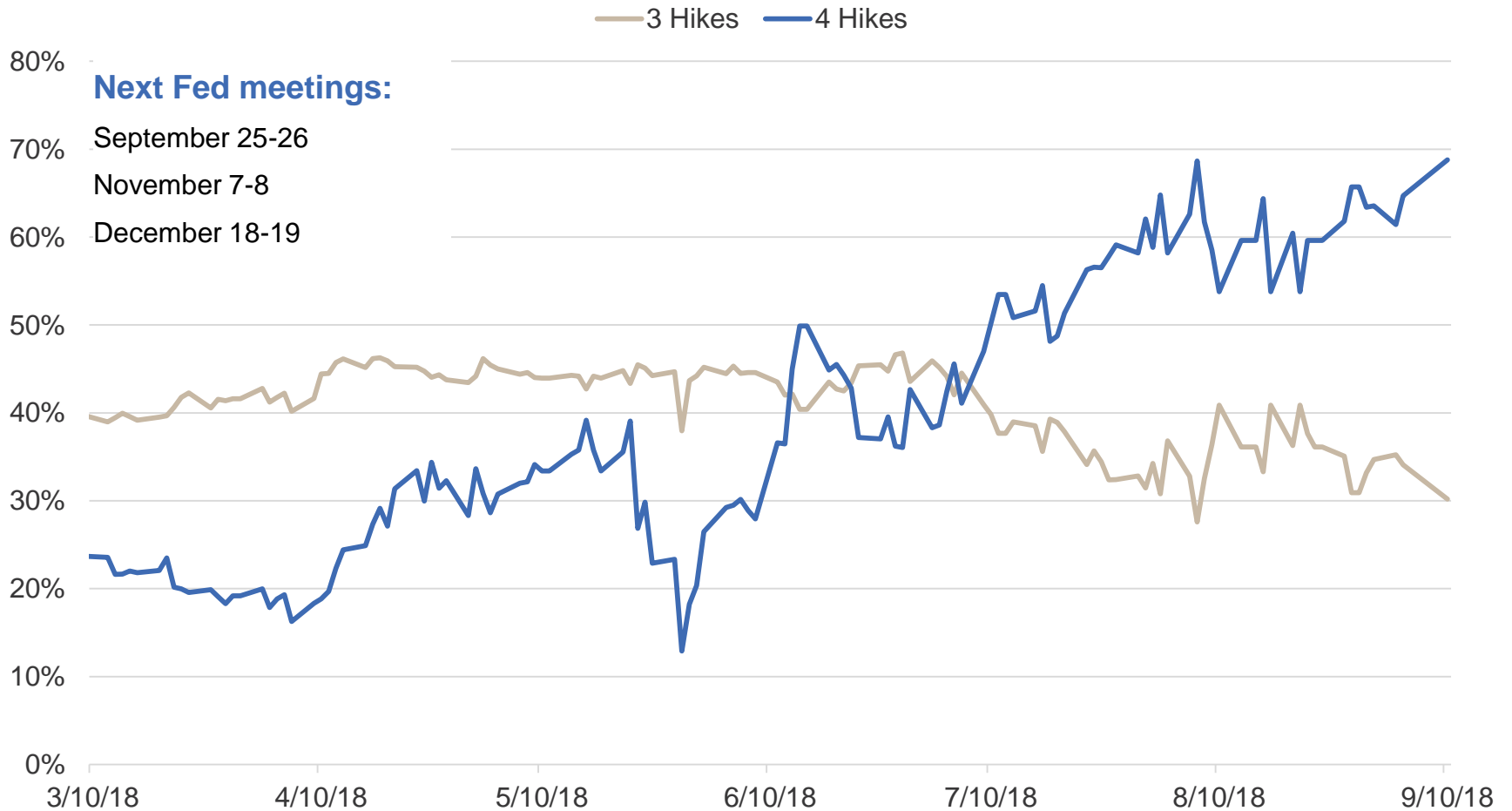
## Wage Growth Starting to Pick Up



Source: Bloomberg, latest data available as of 9/7/2018.



## Expected Trajectory of Fed Rate Hikes in 2018



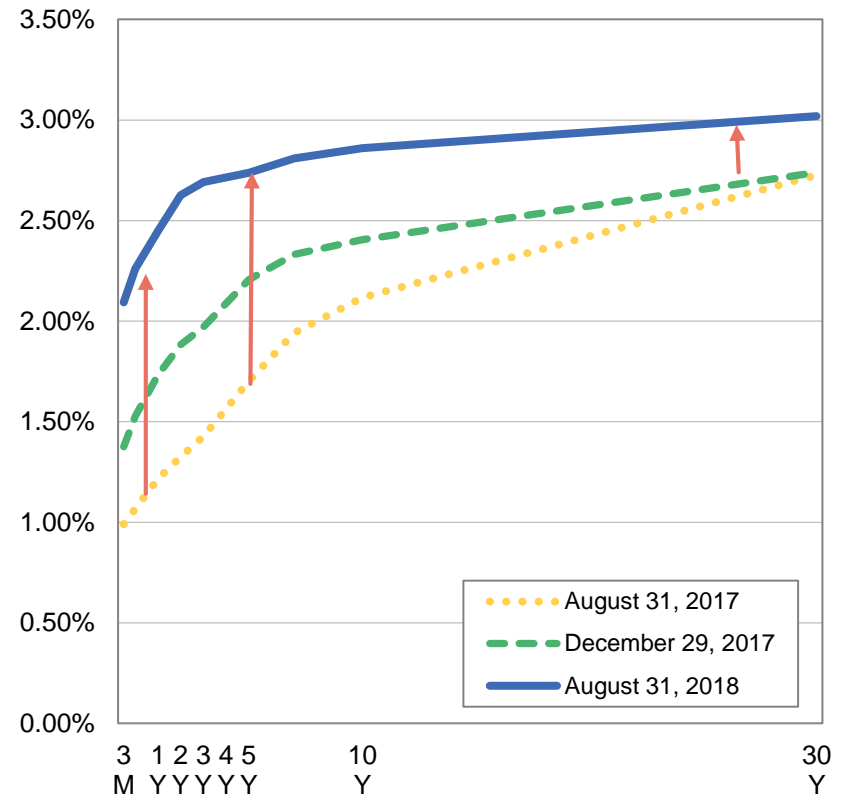
Source: Bloomberg, as of 9/10/2018



## Shorter-Term Yields Continue Outpacing the Longer-End

Tenor	Current 8/31/18	Year-End 12/29/2017	Year-End 8/31/17
3 month	<b>2.09%</b>	1.38%	0.99%
6 month	<b>2.26%</b>	1.53%	1.07%
1 year	<b>2.45%</b>	1.73%	1.22%
2 year	<b>2.63%</b>	1.88%	1.33%
3 year	<b>2.69%</b>	1.97%	1.43%
5 year	<b>2.74%</b>	2.21%	1.70%
10 year	<b>2.86%</b>	2.41%	2.12%

U.S. Treasury Yield Curve

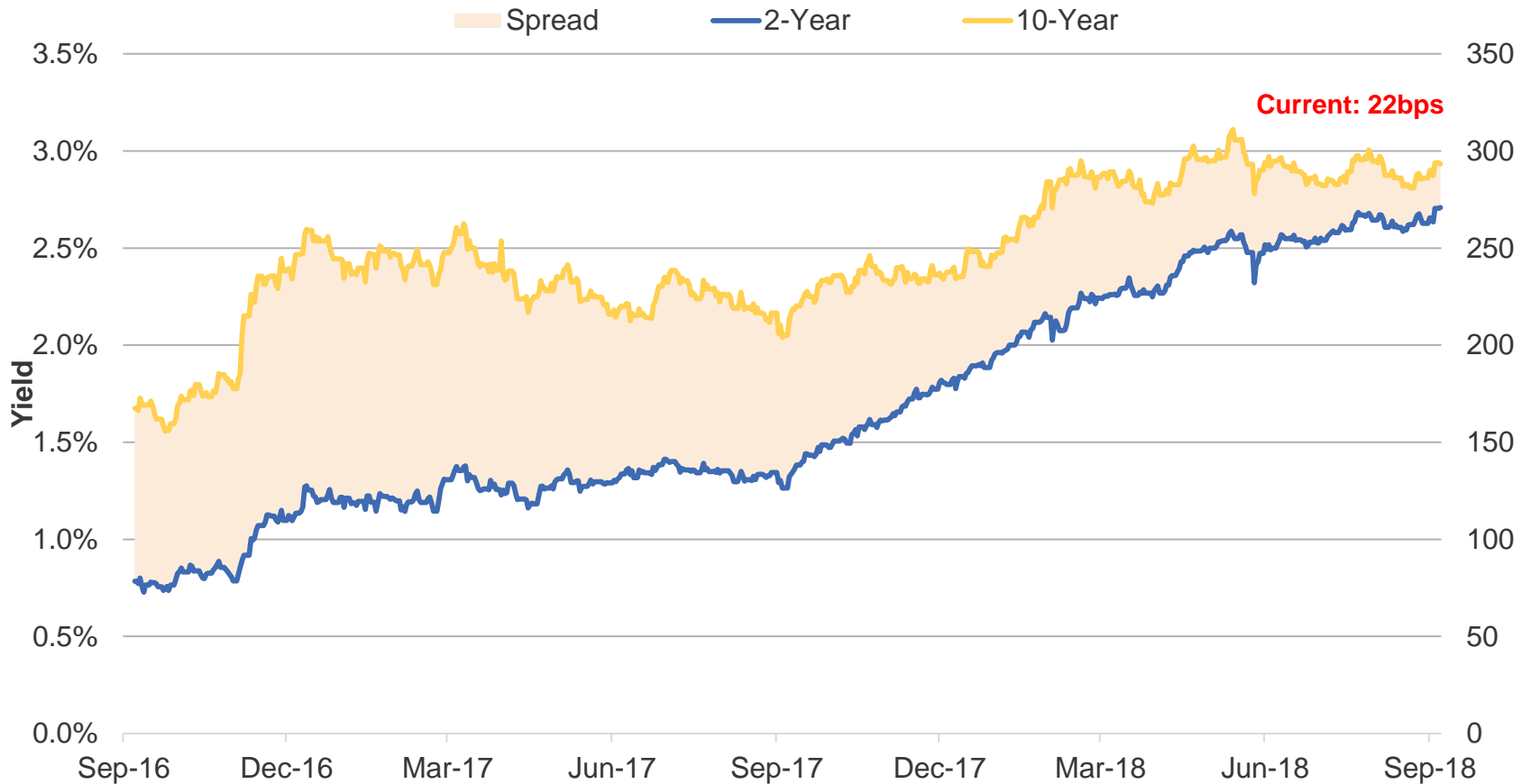


Source: Bloomberg, as of 8/31/2018.





## Spread Between 10-yr and 2-yr Treasury Continues Tightening



Source: Bloomberg, as of 9/10/2018.



# Cash Management: Big Picture



# Cash Management

## Definition

Cash management may be defined as all activities undertaken to ensure maximum cash availability and maximum investment yield on a government's idle cash. Cash management is concerned with the efficient management of cash from the time revenue is earned to the time a check or disbursement clears the bank.

## Basic Elements

Cash mobilization: get the cash in as quickly as possible.

Controlled disbursement: release cash at the last possible moment.

Investment program: make the cash work in the meantime.





## Cash Management & Investment Objectives

### ◆ Safety

- Protect principal
- High quality investments

### ◆ Liquidity

- Provide necessary liquidity to cover both ongoing and unexpected cash needs
- Cash flow analysis

### ◆ Return

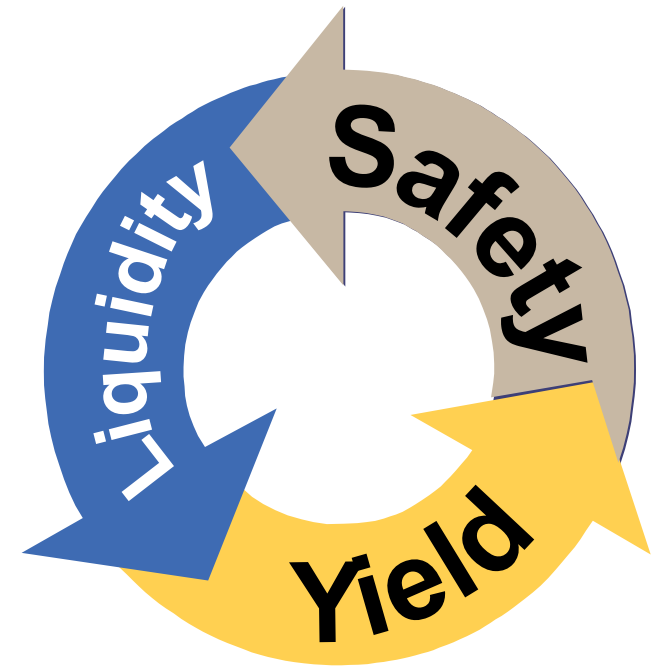
- Provide necessary recognizing need for safety and liquidity, and subject to restrictions specified by the state statutes and the local governing body

### ◆ Compliance with legal restrictions/regulations

### ◆ Accountability and Transparency

### ◆ Stability (Limited Volatility)

### ◆ Simplicity





# **Case Study: Cash Management.. In Practice**



## Banking Math

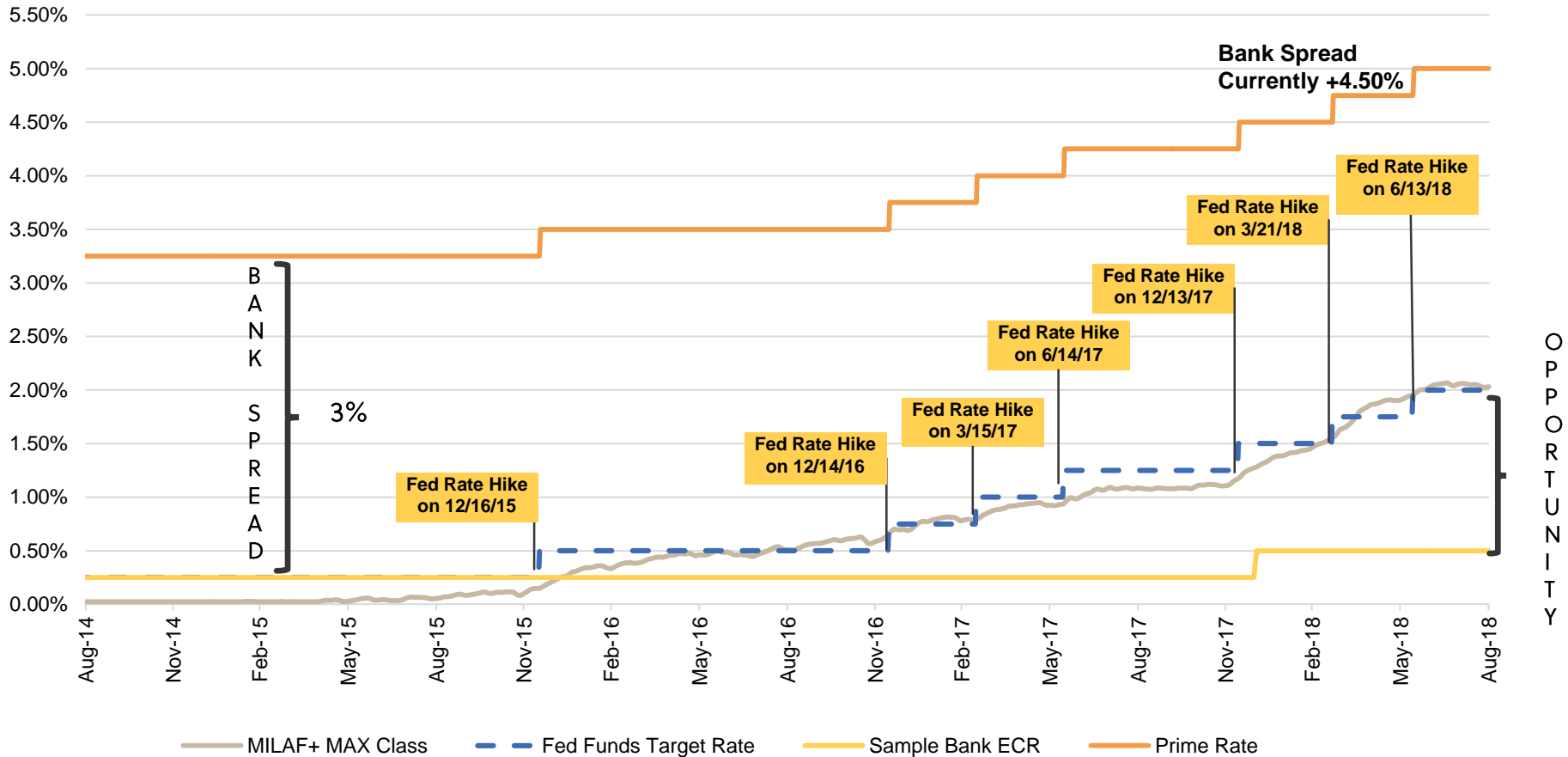
### ◆ Banks make most of their income through spread

$$\text{Loan Rate} - \text{Deposit Rate} = \text{Spread}$$

- Interest Spread was compressed when Fed Funds went to 0%. Deposit rates bottomed at 0% while loan rates continued spiral down = compression
- Banks focused on service fees and ancillary revenue areas (brokerage, wealth management, etc) to bolster revenues
- Although Fed Funds have been increased 7 times in 30 months, bank deposit rates have not moved in step with the Fed.



# Historical Rates – 7 rate hikes but banks barely budge



Source: Bloomberg



## Banking Analysis Review

### ◆ Bank ECR Math

*Investible Balance \* ECR Rate / 365 days in year \* 28 days in month*

*\$828,592 \* .00375 ECR rate / 365 \* 28 = \$238 earnings credit to offset fees*

### ◆ Net ECR Identification

*Earnings Credit Rate      0.375%      (Store Credit)*

*Deposit Admin Fee      0.110%      (aka FDIC Charge)*

*Net ECR      0.265%*

### ◆ IMPORTANT NOTE: EXCESS ECR DEFAULTS TO BANK





## Opportunity Cost: Leaving Money at Bank

Description	Current	Reduce Bank Balances	Invest Excess in Money Market	Net Advantage
Investable Balance	\$9,861,174	1,861,174	\$8,000,000	0
Earnings Credit	1,249	535	0	(714)
- Deposit Fee	(1,085)	(157)	0	928
- Other Bank Fees	(1,804)	(1,804)	0	0
Net Bank Fees	(1,640)	(1,426)		214
+Interest Earned	1,479	0	12,090	10,611
Monthly Net Benefit	(161)	(1,426)	12,397	10,971
Projected Annual	(2,099)	(18,589)	161,600	145,110
	Almost \$10mm and still pay net fees to bank	Lower bank balances reduce fees	Difference in Yield is Substantial	Cash Management Matters!

### Summary of Benefits

- Increased Interest earnings of \$157,600 annually & do not give up liquidity
- Reduce bank fees by nearly \$12,000 annually
- Reduce credit risk associated with single bank depository (Footnote 3 – uninsured deposit)
- Increase diversification through AAAM rated fund
- No money left on the table through excess ECR



## Opportunity Cost: Leaving Money at Bank – Sample 2

<u>Description</u>	<u>\$ Amounts</u>	<u>MILAF+ Option</u>	<u>Difference</u>
Average Collected Balance	3,000,000	3,000,000	
Banking Fees	0.00	0.00	
Interest Paid	247	4,981	4,734
Calculated Yield *	0.10%	2.02%	
Annualized Interest	3,000	60,600	57,600
Note: * Interest rate calculated based on sample bank April 2018 statement			
MILAF+ Interest rate based on 7 day yield as of September 11, 2018			

### Summary of Benefits

- Increased Interest earnings of \$57,600 annually & do not give up liquidity
- Reduce credit risk associated with single bank depository (Footnote 3 – uninsured deposit)
- Increase diversification through AAAM rated fund
- Every dollar invested earns interest



## Banking Optimization

### ◆ Strategies to Reduce Fees / Increase Efficiency

- Reduce bank balances to minimize “Deposit Charge”.
- Utilize MILAF+ as State Aid Depository – move money to bank as needed to cover payroll and payables.
- Based on Cash flows, invest available funds in TERM to increase return

### ◆ Utilize Bank for what they do best – transactions and data

- Look for opportunities to become more efficient / enhance internal controls through bank services (positive pay, reconciliation services, data exports, etc.)
- Evaluate usage of banking services to determine which services could be eliminated or replaced with more inexpensive services
- Review bank analysis statement with banker at least annually to eliminate unnecessary services and creepage.



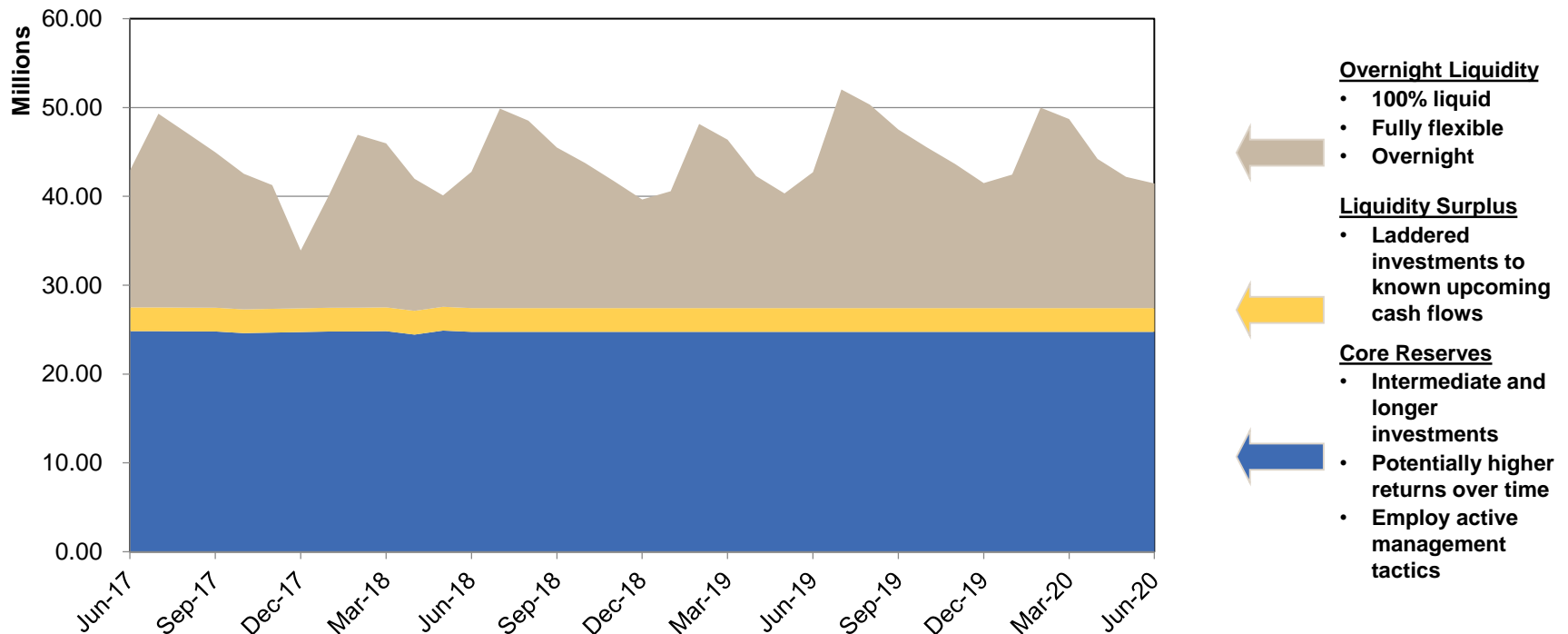
# Cash Management Platform



## Cash Flow Segmentation

- Excess liquidity in an investment management program can be an opportunity cost
- Detailed cash flow analysis can help prudently define fund balances that can be invested in intermediate – to longer-term investments at potentially higher yields.

**Sample Cash Flow Analysis**  
*June 2017 through June 2020*



For illustrative purposes only



## Basics of a Cash Management Program

### Overnight Liquidity

**GOAL:** meet daily operating expenses

**Key Components:**

- Safety and 100% liquidity
- Low cost banking relationship
- Online banking
- Transaction functionality
- ACH/Wire capability
- Daily fund balances and monthly statements

**Proposed Investment Strategy:**

- Bank deposits
- LGIP
- Money market funds

### Liquidity Surplus

**GOAL:** match assets to future liabilities

**Key Components:**

- Safety and liquidity
- Understanding of known cash flow dates
- Ladder investments with maturities aligned to known future payment dates
- Enhance earnings potential

**Typical Investment Types:**

- MILAF+ TERM
- Treasury Bills/Notes
- Federal Agency Securities
- Certificates of Deposit

### Core Reserves

**GOAL:** actively manage reserve fund to provide long-term growth

**Key Components:**

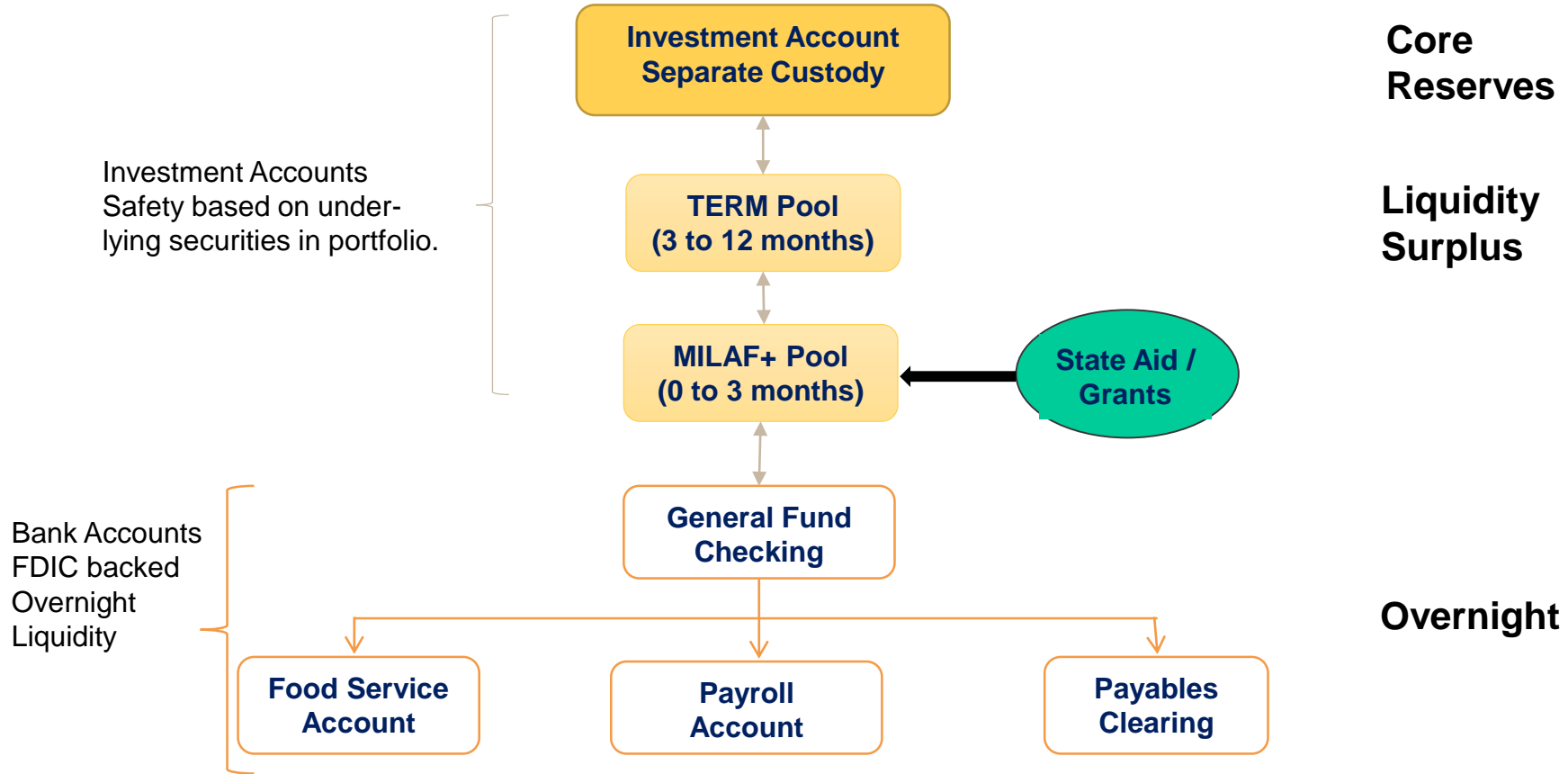
- Safety, liquidity, and return
- Prudent reserve balance should not be anticipated to withdrawn on for at least 1-5 years
- Total return strategy
- Understanding of historical cash needs and month-end balances

**Typical Investment Types:**

- Treasury Notes
- GNMA MBS
- Agency Notes
- Corporate Securities



# Sample Bank Structure





# Investment Rates

As of September 11, 2018

MILAF+ TERM RATES		
Maturity	Date	Net Rate
60 Days	November	*
90 Days	December	2.19%
120 Days	January	2.25%
150 Days	February	2.32%
180 Days	March	2.39%
210 Days	April	2.37%
240 Days	May	2.42%
270 Days	June	2.52%
300 Days	July	2.34%
330 Days	August	2.37%
365 Days	September	2.41%

MILAF+ CD PURCHASE PROGRAM		
Maturity	Date	Net Rate
180 Days	March	2.30%
270 Days	June	2.40%
365 Days	September	2.55%
Current 7 Day Yields		
MILAF+ Cash Management Class		1.85%
MILAF+ MAX Class		2.02%

Please contact the **MILAF+** Client Services Group

*Amber Cannegeiter*  
Key Account Manager

1.877.GO.MILAF x3  
(1.877.466.4523 x3)

*Melissa Rodgers*  
Client Service Representative

*Scott Bilheimer*  
Client Consultant

[www.milaf.org](http://www.milaf.org)



# Questions?



**Brian Quinn**  
**Managing Director**  
**PFM Asset Management, LLC**

**616-304-5200**  
**quinnb@pfm.com**

**MILAF+**  
**877-GO-MILAF**  
**milaf.org**





# Appendix



## ASBO Best Practices – Cash Management & Investing

### ◆ The school business official understands and demonstrates the ability to:

- Select professional advisors/contractors such as bond counsel, rating agencies, financial advisors, and underwriters.
- Use lease purchasing and partner with other jurisdictions such as municipalities, counties, and other school districts.
- Develop/recommend investment policies for the governing board to include investment objectives such as maximizing investment income and preserving the investment principal.
- Develop specifications for the selection of banking and other financial services.
- Apply the concept of compensating balances.
- Comprehend procedures and legal constraints for cash collection and disbursement.
- Calculate the yields and understand the risks of various investment options legally available to a school district.
- Apply various methods of cash forecasting.
- Apply appropriate types of short-term debt financing instruments available to school districts.
- Analyze monthly internal transfers and loans.
- Analyze the legal constraints and methods of issuing long-term general obligation bonds, including the bond rating process and the role of the bonding attorney and rating services.
- Analyze the implication of arbitrage rules that may apply to the issuance of long-term general obligation bonds; provide for arbitrage payable when appropriate.
- Prepare a cash flow analysis, including a fund balance report, for the board of education.
- Review accrued receivables and understand permitted collection processes.



## Bank Cash Management Tools

- Banks offer multiple Cash Management Tools to make your job more efficient, increase security and earnings.

Deposit	Payment	Data Services	Security
Employee Courier	Check	Online Reporting	Positive Pay
Armored Service	ACH	Prior / Same Day	ACH Positive Pay
ACH	Wire		ACH Block
Wire	Purchasing Card	Account Reconciliation	Dual Authentication
Remote Deposit	File Transfer	Check Imaging	Notifications
Lockbox		Deposit Imaging	
Merchant Processing		ZBA / Sweeps	



## Disclosures

MILAF+ TERM and MILAF+ CD Purchase Program rates are market rates, subject to change and the rates shown are net of applicable advisory fees and other expenses. They are quoted on an actual day basis, interest is simple and payable at maturity. Actual rates, availability, and minimum investment amounts may vary at the time of purchase and are subject to change. Once you place an investment, the rate is fixed for the full term of your investment and there may be a penalty for early redemption. The minimum investment for MILAF+ TERM is \$100,000. The minimum investment for purchasing Certificates of Deposit in the MILAF+ CD Program is \$95,000; the maximum investment is an amount such that the total value of the CD (including interest) will not exceed the applicable FDIC insurance limits per institution. Certificates of Deposit can be purchased through the MILAF+ Purchase Program only by executing a separate investment advisory agreement with PFM Asset Management LLC, the Investment Adviser for MILAF+ (the "Fund"). Certificates of Deposit purchased through the MILAF+ CD Purchase Program are not issued, guaranteed or insured by the Fund or the Investment Adviser or any of its affiliates. A description of MILAF+ TERM and the MILAF+ CD Purchase Program are contained in the MILAF+ Information Statement. The Information Statement contains important information and should be read carefully before investing. Past performance is not indicative of future results.

Rates for MILAF+ Cash Management Class, MILAF+ Max Class, and GovMIC Portfolio represent current seven-day SEC yield(s) as of the date indicated. The current seven-day yield, also referred to as the current annualized yield, represents the net change, exclusive of capital changes and income other than investment income, in the value of a hypothetical account with a balance of one share (normally \$1.00 per share) over a seven-day base period expressed as a percentage of the value of one share at the beginning of the seven-day period. This resulting net change in account value is then annualized by multiplying it by 365 and dividing the result by 7. Past performance is not indicative of future results and yields may vary. Past performance is not indicative of future results and yields may vary. The yields shown above may reflect fee waivers by service providers that subsidize and reduce the total operating expenses of the Fund. Fund yields would be lower if there were no such waivers.



## Disclosures

This information is for institutional investor use only, not for further distribution to retail investors, and does not represent an offer to sell or a solicitation of an offer to buy or sell any fund or other security. Investors should consider the investment objectives, risks, charges and expenses before investing in any of the Michigan Liquid Asset Fund Plus' ("MILAF+ or the "Trust") series. This and other information about the Trust's series is available in the Trust's current Information Statement, which should be read carefully before investing. A copy of the Trust's Information Statement may be obtained by calling 1-877-GOMILAF or is available on the Trust's website at [www.milaf.org](http://www.milaf.org). While the Cash Management Class, MAX Class and GovMIC Class seek to maintain a stable net asset value of \$1.00 per share and the Michigan Term series seeks to achieve a net asset value of \$1.00 per share at its stated maturity, it is possible to lose money investing in the Trust. An investment in the Trust is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Shares of the Trust's portfolios are distributed by PFM Fund Distributors, Inc., member Financial Industry Regulatory Authority (FINRA) ([www.finra.org](http://www.finra.org)) and Securities Investor Protection Corporation (SIPC) ([www.sipc.org](http://www.sipc.org)). PFM Fund Distributors, Inc. is a wholly owned subsidiary of PFM Asset Management LLC.

This material is based on information obtained from sources generally believed to be reliable and available to the public, however PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some but not all of which are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.