



Investing In A Rising Rate Environment

ICCCFO FALL CONFERENCE

BRIAN HEXTELL
TOM LANZARA

PMA FINANCIAL NETWORK, INC.
PRUDENT MAN ADVISORS, INC.
PMA SECURITIES, INC.

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ANDY WILLIAMS
OAKTON COMMUNITY COLLEGE

- Gain insight into various investment strategies
- Learn how investment planning can help reduce risks
- Review examples from a CFO about how active management can improve investment income

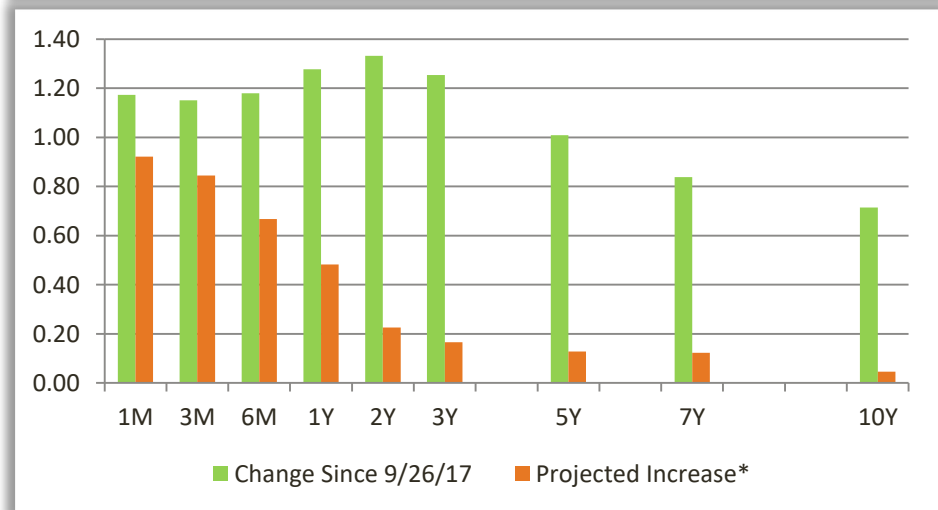
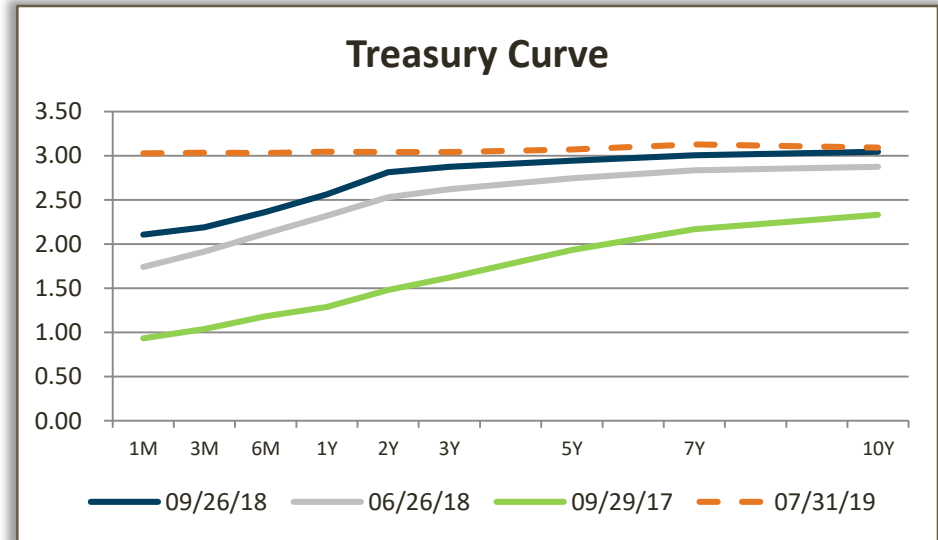
Probability Chart For Expectations of a Rate Hike

99) Export Data		World Interest Rate Probability										
United States		Instrument		Futures: Fed Funds - Effective						Fed Effective Rate		1.93
1) Overview		2) Future Implied Probability										
Current Implied Probabilities										3) Add/Remove Rates		
Dates		<input checked="" type="radio"/> Meeting <input type="radio"/> Calculation		Calculated		09/26/2018		Based on rate				2.00-2.25
Meeting	Hike Prob	Cut Prob	2-2.25	2.25-2.5	2.5-2.75	2.75-3	3-3.25	3.25-3.5	3.5-3.75	Fwd Rate		
11/08/2018	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.18		
12/19/2018	77.5%	0.0%	22.5%	77.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2.37		
01/30/2019	78.9%	0.0%	21.1%	74.1%	4.8%	0.0%	0.0%	0.0%	0.0%	2.38		
03/20/2019	90.8%	0.0%	9.2%	44.2%	43.9%	2.7%	0.0%	0.0%	0.0%	2.52		
05/01/2019	92.1%	0.0%	7.9%	39.2%	43.9%	8.7%	0.4%	0.0%	0.0%	2.57		
06/19/2019	95.7%	0.0%	4.3%	25.1%	41.8%	24.6%	4.1%	0.2%	0.0%	2.69		
07/31/2019	96.1%	0.0%	3.9%	23.0%	40.1%	26.3%	6.2%	0.6%	0.0%	2.71		
09/18/2019	97.1%	0.0%	2.9%	18.2%	35.8%	29.7%	11.2%	2.0%	0.2%	2.77		
10/30/2019	97.2%	0.0%	2.8%	17.4%	34.9%	30.0%	12.1%	2.4%	0.2%	2.79		

Source: Bloomberg; As of 9/26/18

BOND MARKET OUTLOOK

- The market has already priced in multiple Fed increases for 2018 & 2019
 - Rates have risen significantly across the yield curve since last year
- Treasury futures markets project little additional increase in yields over the next year in the 2-10yr part of the curve
- Interest rates are more attractive than they have been in the past decade
- Short rates directly impacted by Fed Policy
- Long rates based on long term growth and inflation expectations and may be impacted by Fed balance sheet wind-down



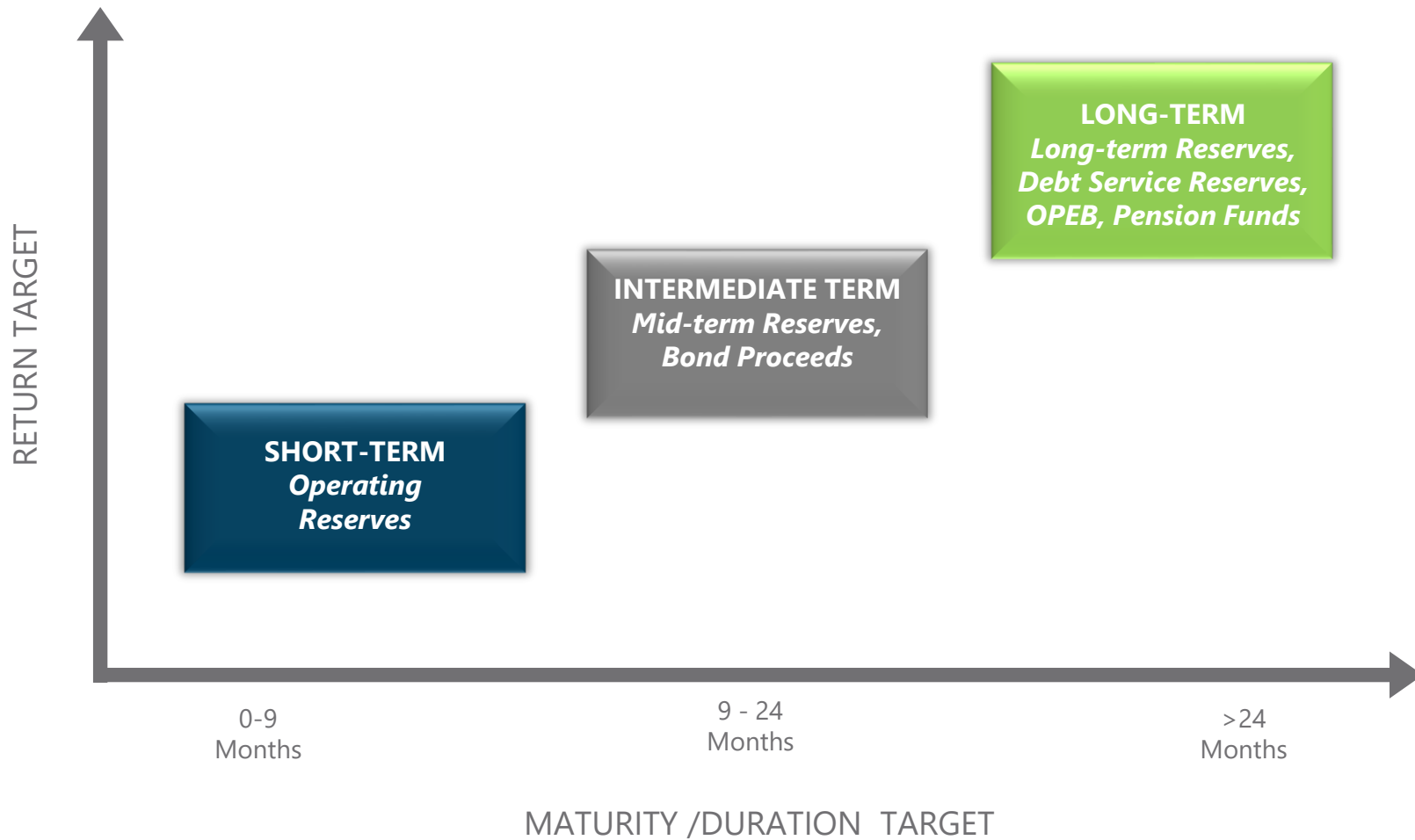
*Projection based on Treasury Futures as of 9/26/18

Source: Bloomberg

GUIDING PRINCIPLES

- **Safety**
 - “The individual investor should act consistently as an investor and not as a speculator.” - Benjamin Graham
 - “Risk comes from not knowing what you’re doing.” - Warren Buffett
- **Liquidity**
 - “True liquidity is how easily you can sell an asset and at what price—when you’re forced to.” - Howard Marks
- **Maximize Return Potential**
 - “Far more money has been lost by investors preparing for corrections, or trying to anticipate corrections, than has been lost in corrections.” - Peter Lynch

DIFFERENTIATING INVESTMENTS



A SUCCESSFUL INVESTMENT PLAN ALIGNS STRATEGY TO PURPOSE

- **Operating Funds: (<12 months)**
 - Treasury Bills
 - Agency Discount Notes
 - CDs
 - LGIPs
- **Intermediate-Term Reserves: (1-5 Years)**
 - CDs
 - Treasury Notes
 - Agency Notes
 - Taxable Municipal Bonds
 - Agency Mortgage-Backed Securities
 - Corporate Notes
- **Long-Term Reserves:(>5 Years)**
 - Treasury Notes
 - Agency Notes
 - Taxable Municipal Bonds
 - Agency Mortgage-Backed Securities
 - Corporate Bonds
 - *Equity Securities*
 - *Mutual Funds*
 - *Exchange Traded Funds (ETFs)*

DON'T LEAVE MONEY ON THE TABLE



Consider this:

- Don't pay for liquidity you don't need
- Do my investments closely match my liabilities?
- Does my current investment strategy optimize results in different economic and market scenarios?

INVESTING STRATEGIES – OPERATING RESERVES

- Analysis
 - Cash flow review – analyze cash flow need dates to identify short- and long-term investment opportunities
 - Time *in* the market is more important than *timing* the market

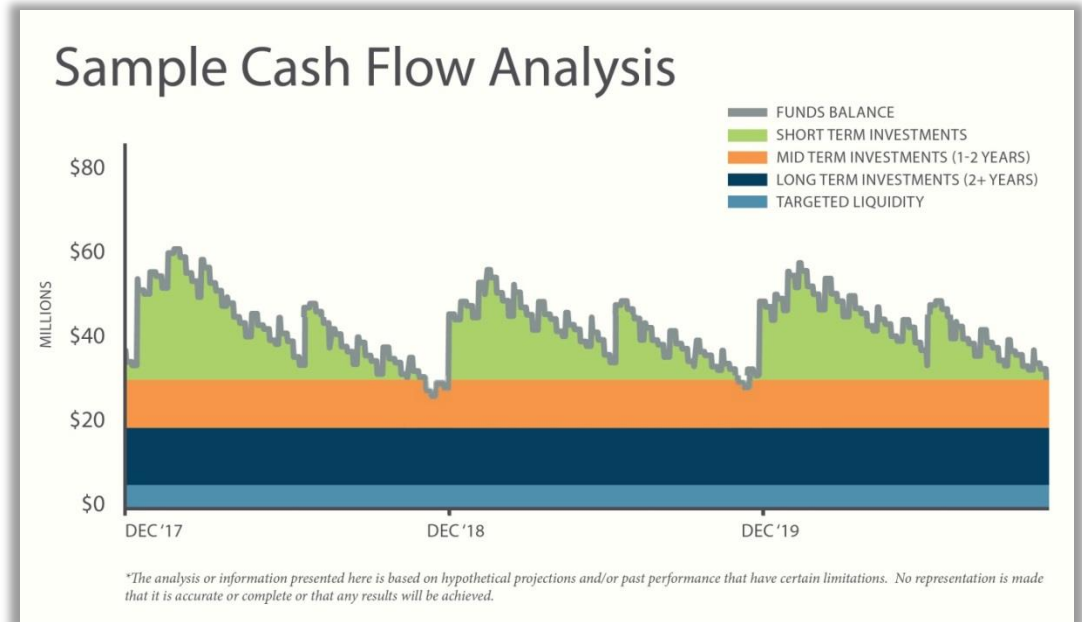
Example:

INVESTMENT AMOUNT		\$ 10,000,000
		INCOME
1-YEAR RATE	2.60%	\$ 260,000
6-MONTH RATE	2.35%	\$ 117,200
BREAK EVEN RATE	2.86%	\$ 142,800
		\$ 260,000

HOW CAN INVESTMENT PLANNING REDUCE RISKS?

INVESTMENT PLANNING

- Cash Flow Investing
 - Match all liabilities with an investment maturity
 - Extend investments to benefit from higher rates
 - Plan for cash shortfalls
 - Identify long-term investment potential
 - Maximize interest income



POWER OF A LADDERED APPROACH

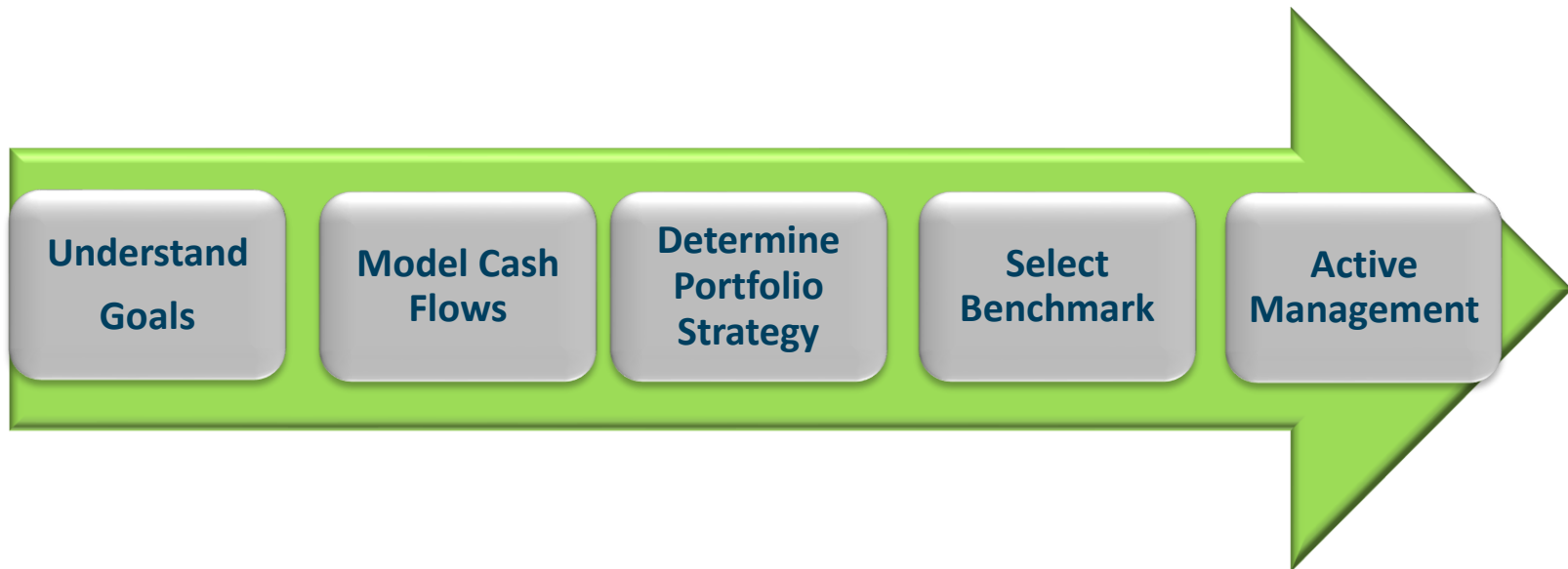
- Reinvest over time
- Similar to dollar cost averaging in stocks
- Works in different rate environments
 - Rates Fall: Locked in higher yields in longer maturities
 - Rates Stable: Longer maturities will enhance yield
 - Rates Rise: Reinvest at higher yields as bonds mature
- Invest with a PLAN

BUY AND HOLD VERSUS ACTIVE MANAGEMENT

- Buy and Hold: Hold to maturity investments such as CD's.
- Active Management: Continuous review of best alternatives
 - Hold to maturity
 - Sell security as it ages and rolls to a lower yield (higher price)
 - Roll down the yield curve
 - What has value today?
 - Determine if we are getting paid to take credit risk
 - Diversification
 - Credit Quality
 - Evaluate best duration fit for client objectives
 - Continuously evaluate yield curve for best return potential
 - Duration/Curve positioning

INVESTING LONG-TERM RESERVES

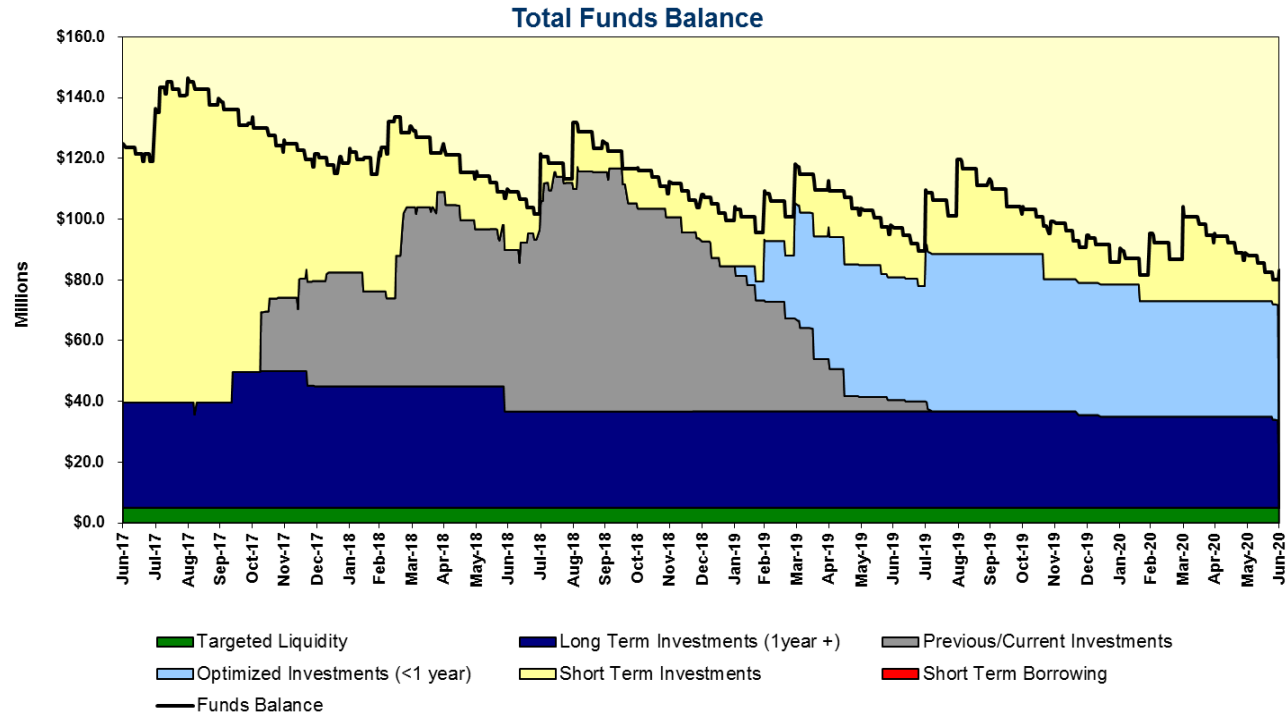
- Strategically diversify across allowable fixed income sectors
- Maintain high quality portfolio aligned with State Statute, Investment Policy and portfolio goals & objectives
- Do not time the market



OAKTON COMMUNITY COLLEGE EXAMPLE

CASH FLOW ANALYSIS

- Cash Flow Investing
 - Sufficient liquidity
 - Fund operating needs just in time
 - Go long-term as feasible
 - Use your advisor
 - Part of gap closing in FY2019 for operating



INVESTMENT PLANNING

- Why a mix of investment tools works for the College
 - Liquid deposit accounts, LGIPs, CDs, Treasury obligations, Agencies (GNMAs, FNMAAs)
 - Diversified by investment type and time to maturity
 - Actively re-invest to increase returns
 - Investment policy follows the Investment Act (reviewed annually)
 - Capital improvement plan drives investments based on when dollars are needed
 - Investment results reported to our Board quarterly

KEY TAKEAWAYS

- In general, the economy is strong and economists project further growth
- Interest rates are the most attractive they have been in a decade
- The market projects additional rate hikes by the Federal Reserve
- Market immediately prices in these expected changes in interest rates
- Analyze cash flow needs to maximize investment horizon
 - Do my investments match my liabilities?
 - Resist the temptation to have excess liquidity beyond cash flow needs
- Diversify your investment portfolio



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