



Investing In A Rising Rate Environment

ICCCFO FALL CONFERENCE

BRIAN HEXTELL
TOM LANZARA

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

October 18, 2018

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

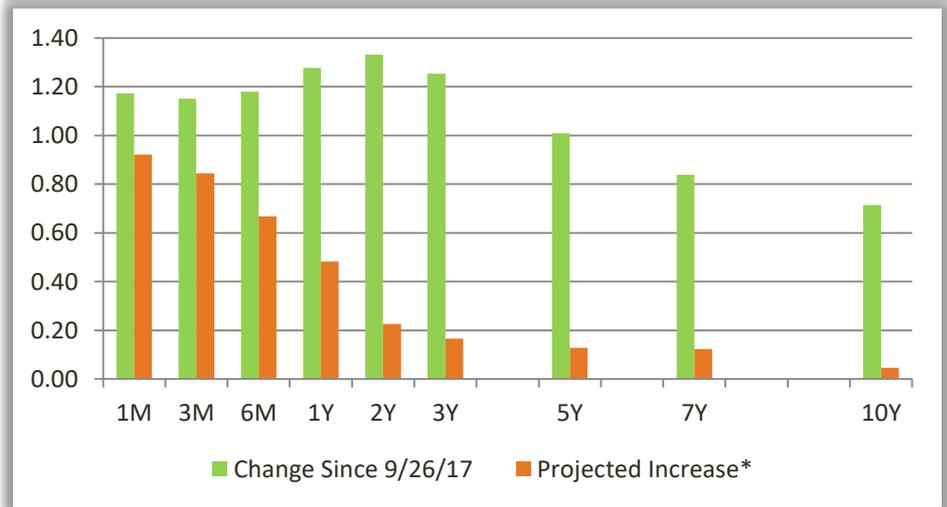
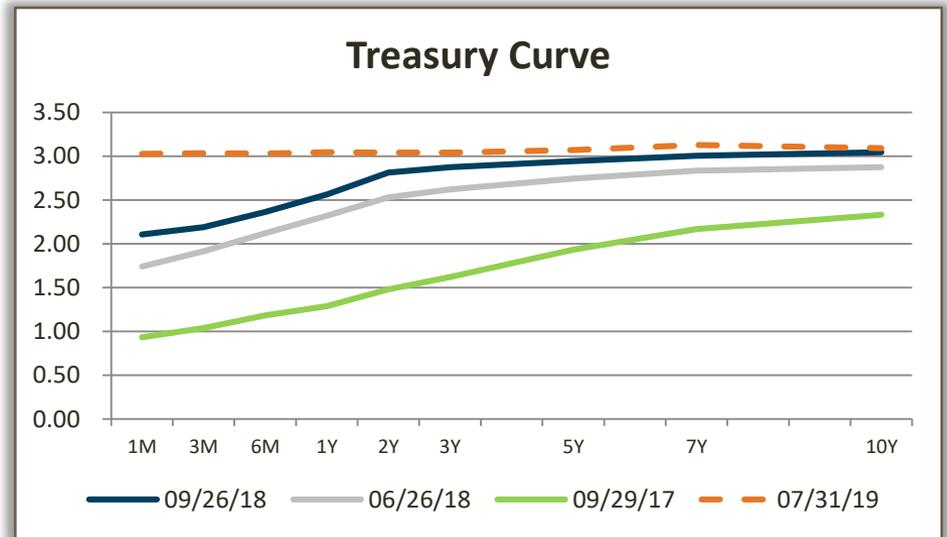
Probability Chart For Expectations of a Rate Hike

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



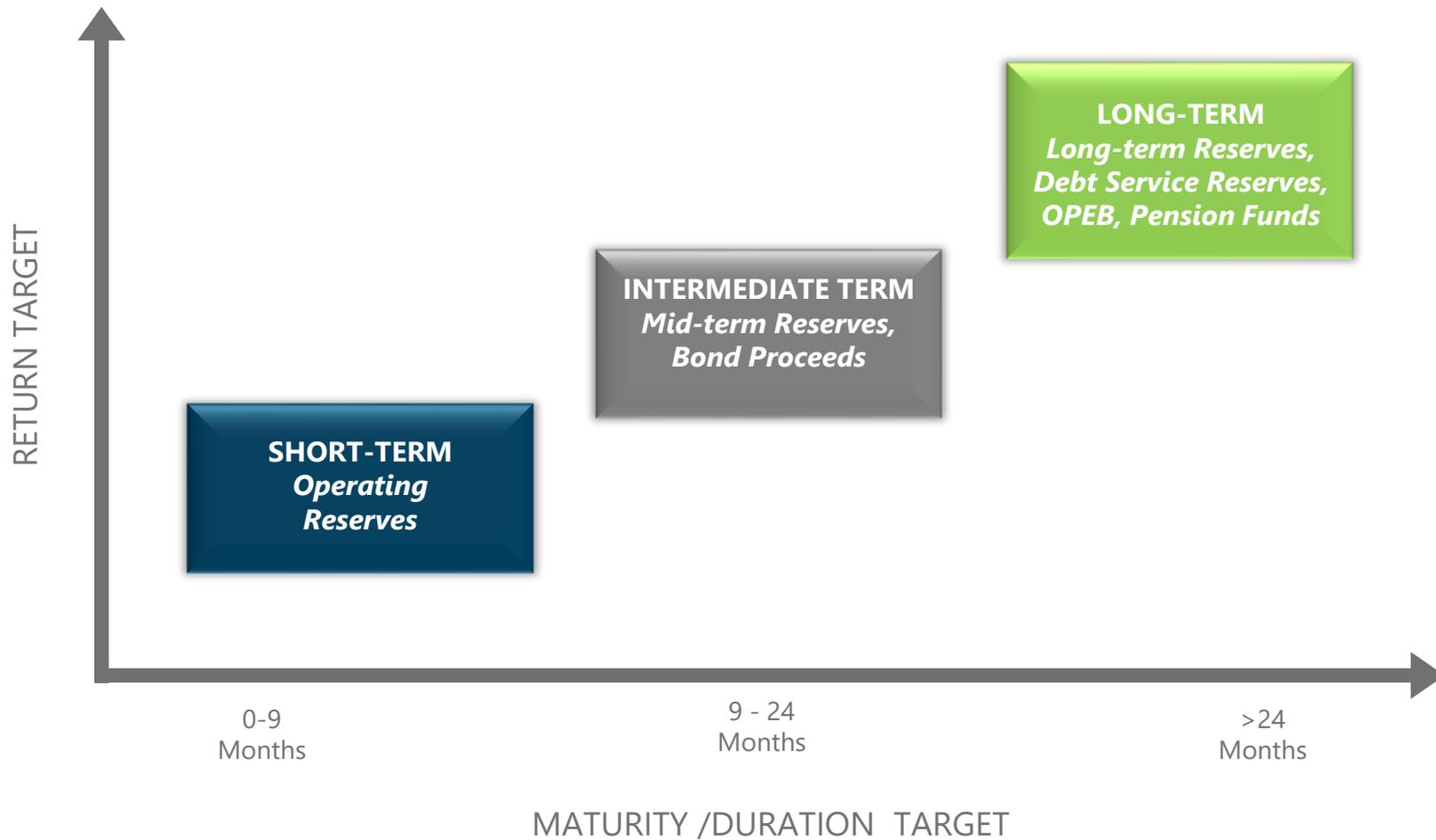
*Projection based on Treasury Futures as of 9/26/18

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

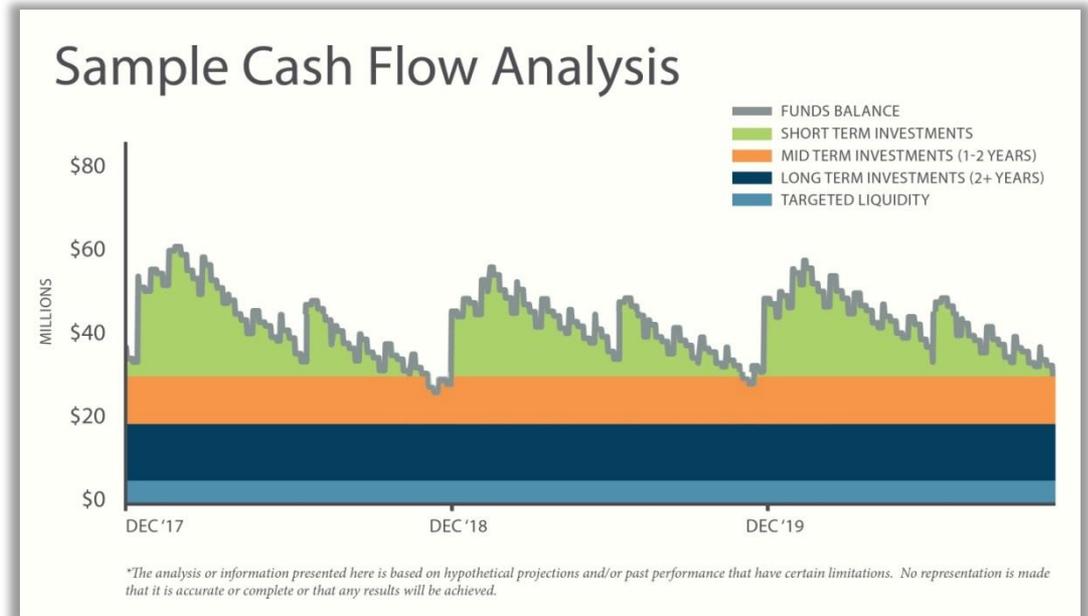
Example:

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

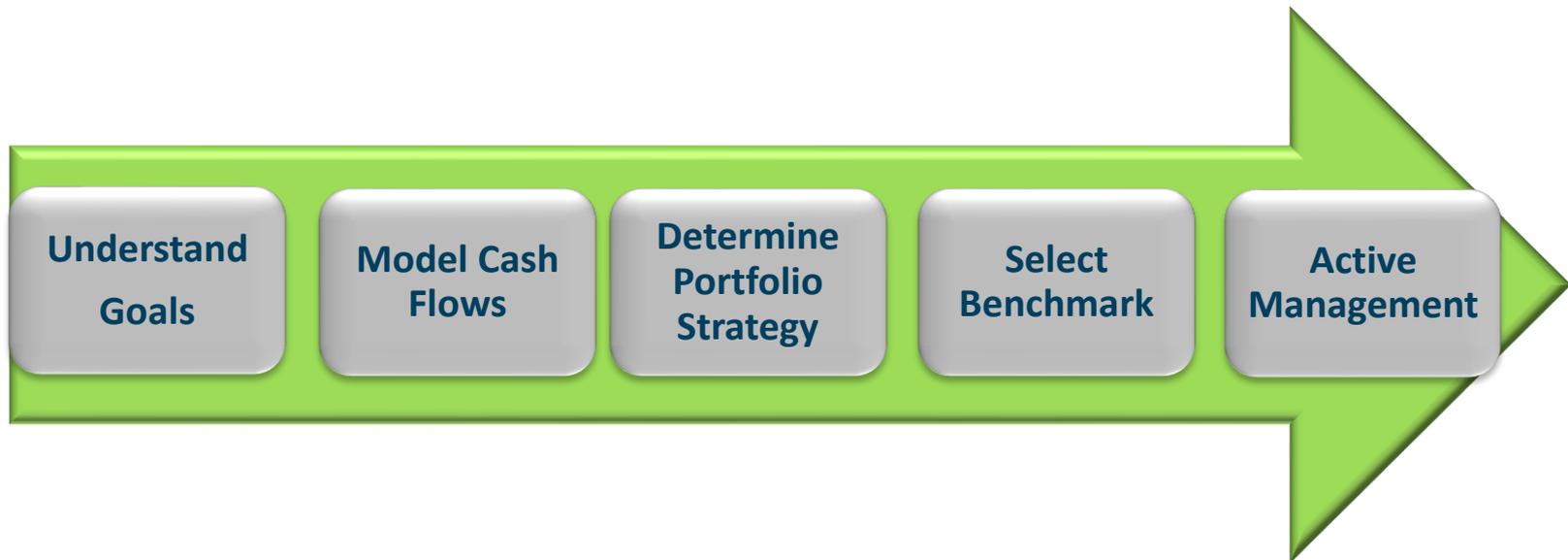
- Reinvest over time
- Similar to dollar cost averaging in stocks
- Works in different rate environments
 - Rates Fall: Locked in higher yields in longer maturities
 - Rates Stable: Longer maturities will enhance yield
 - Rates Rise: Reinvest at higher yields as bonds mature
- Invest with a PLAN

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
 - Duration/Curve positioning
 - Evaluate best duration fit for client objectives
 - Continuously evaluate yield curve for best return potential

INVESTING LONG-TERM RESERVES

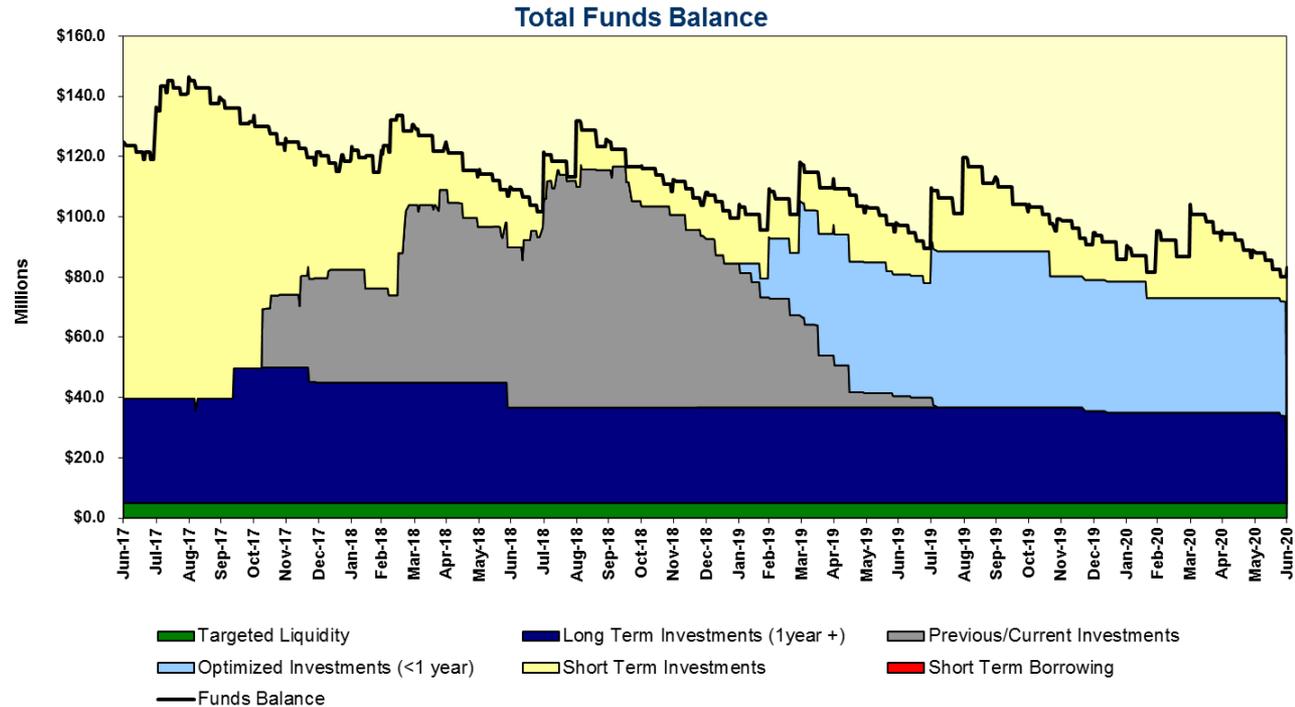
- Strategically diversify across allowable fixed income sectors
- Maintain high quality portfolio aligned with State Statute, Investment Policy and portfolio goals & objectives
- Do not time the market



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



DISCLAIMER

Prudent Man Advisors, Inc. ("Prudent Man") is an investment adviser registered with the U.S. Securities and Exchange Commission. The information presented herein is for general information purposes only and is not a specific/buy sell recommendation. The analysis or information presented in this presentation is based upon hypothetical projections and/or past performance that may have certain limitations and is solely intended to suggest/discuss potentially applicable financing applications or investment strategies with you. Any terms discussed herein are preliminary until confirmed in a definitive written agreement.

Investment in securities involves risks, including the possible loss of the amount invested. In addition, past performance is no indication of future performance and the price or value of investments may fluctuate. Asset allocation does not assure or guarantee better performance and cannot eliminate the risk of investment losses.

You should consider certain economic risks (and other legal, tax, and accounting consequences) prior to entering into any type of transaction with Prudent Man Advisors, Inc. Prudent Man and its employees do not offer tax or legal advice. You should consult with your tax and/or legal advisors before making any tax or legal related investment decisions.

Securities, public finance and institutional brokerage services are offered through PMA Securities, Inc. PMA Securities, Inc. is a broker-dealer and municipal advisor registered with the SEC and MSRB, and is a member of FINRA and SIPC. Prudent Man Advisors, Inc., an SEC registered investment adviser, provides investment advisory services to separately managed accounts and local government investment pools. All other products and services are provided by PMA Financial Network, Inc. PMA Financial Network, Inc., PMA Securities, Inc. and Prudent Man Advisors (collectively "PMA") are under common ownership. Securities and public finance services offered through PMA Securities, Inc. are available in CA, CO, FL, GA, IL, IN, IA, KS, MI, MN, MO, NE, OH, OK, PA, SD, TX and WI. This document is not an offer of services available in any state other than those listed above, has been prepared for informational and educational purposes and does not constitute a solicitation to purchase or sell securities, which may be done only after client suitability is reviewed and determined.

© 2018 Prudent Man Advisors, Inc. All rights reserved. For institutional use only.