CPIM Academy

2016

CPIM
CENTER FOR PUBLIC INVESTMENT MANAGEMENT

THE SEAL OF THE TREASURER OF THE STATE OF OHIO
WITH GOD ALL THINGS ARE POSSIBLE

A PROGRAM BROUGHT TO YOU BY:
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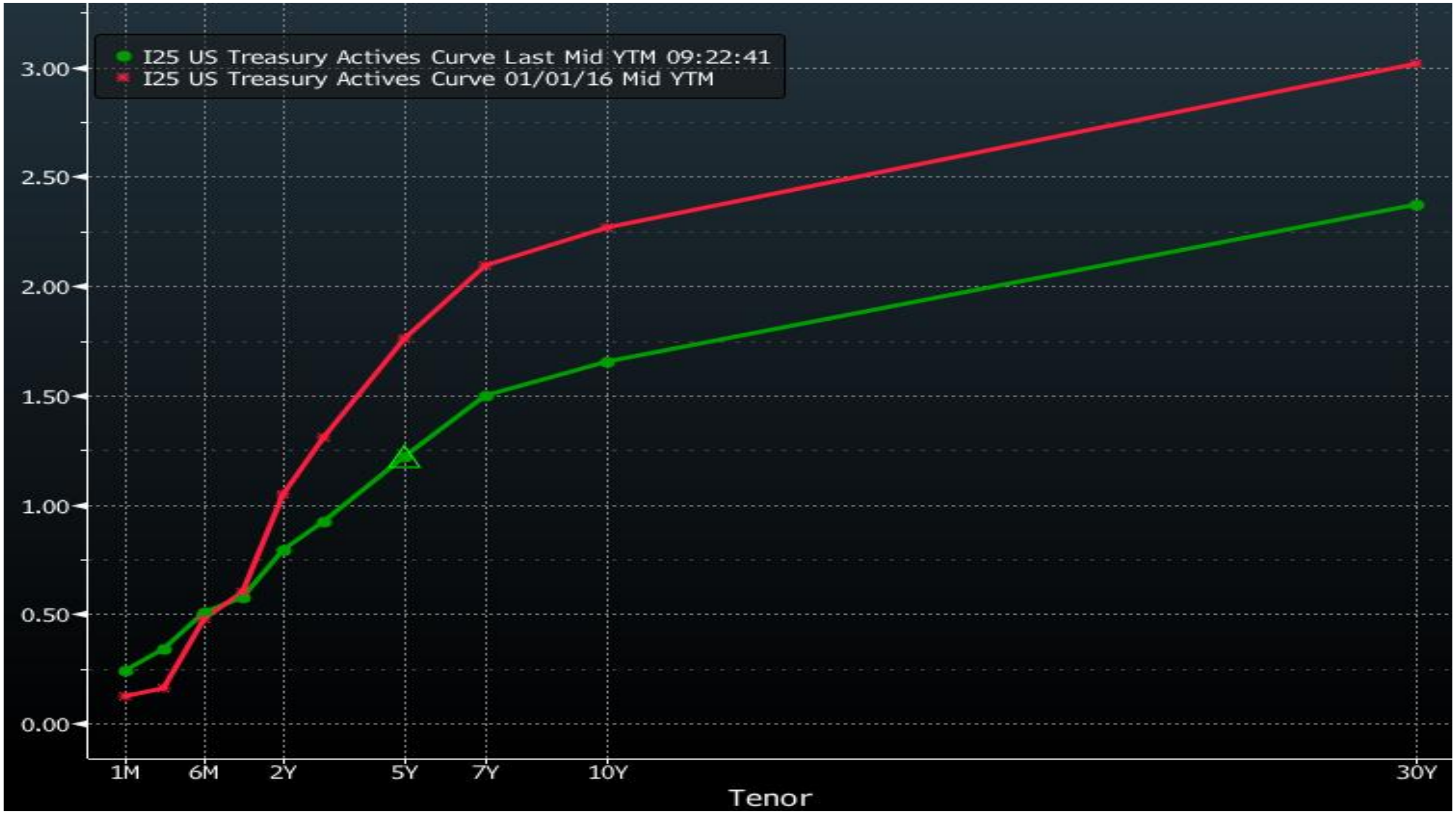
TREASURER OF OHIO

General Session & Market Update

Interest Rate Environment

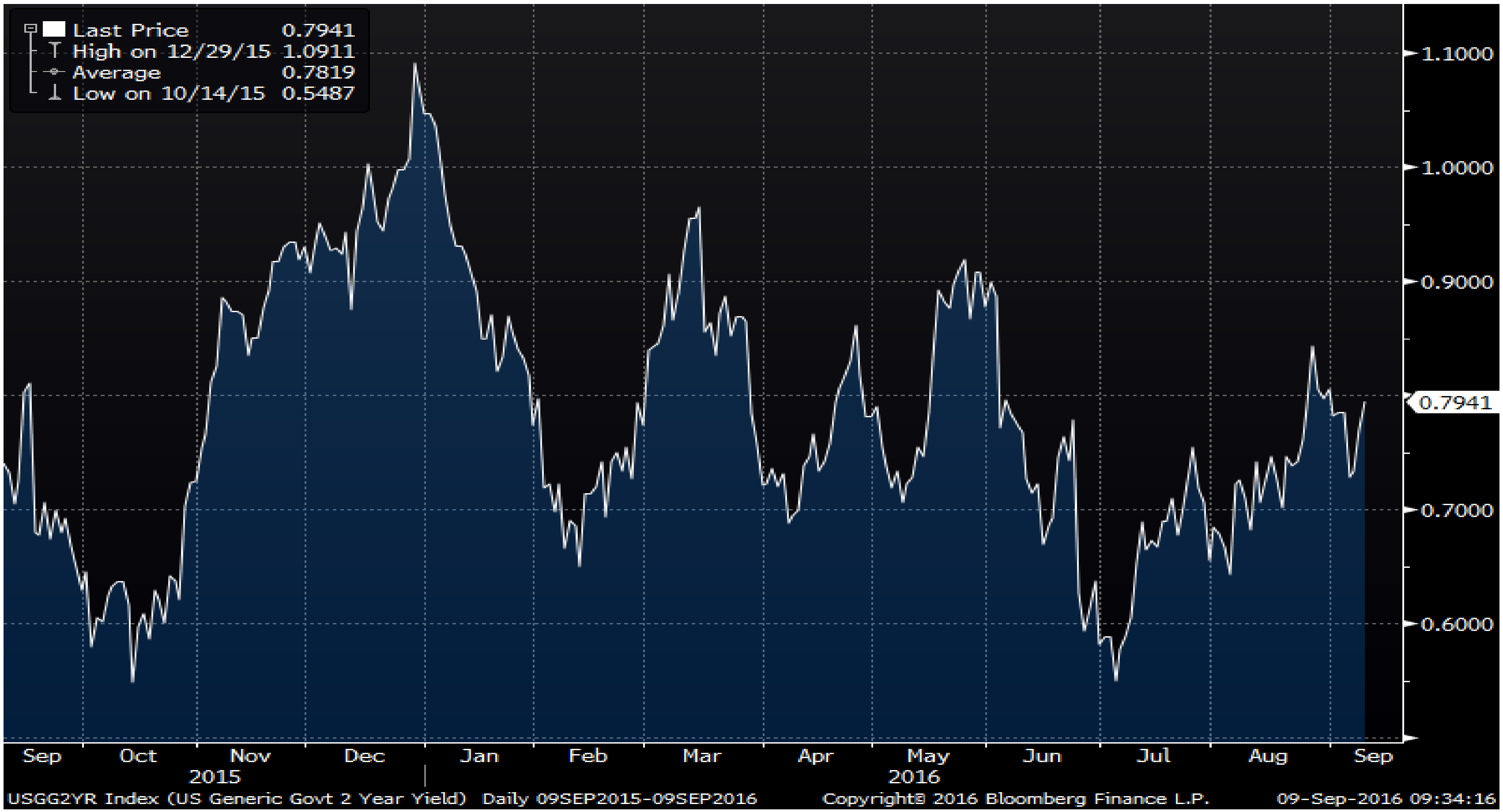
YTD the Yield Curve has Flattened



Source: Bloomberg as of 9/9/16

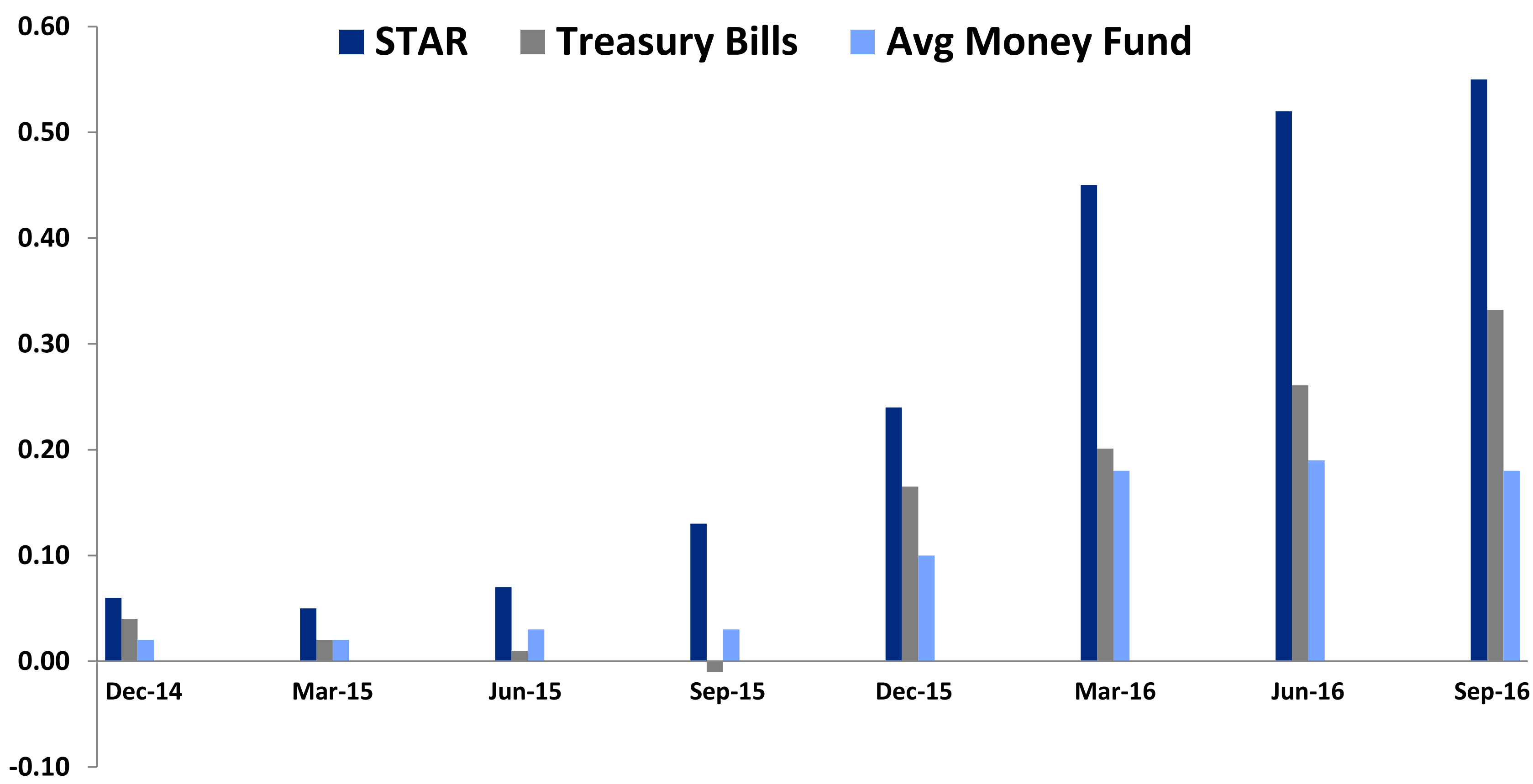
2-Year T-Note

What does it tell us?

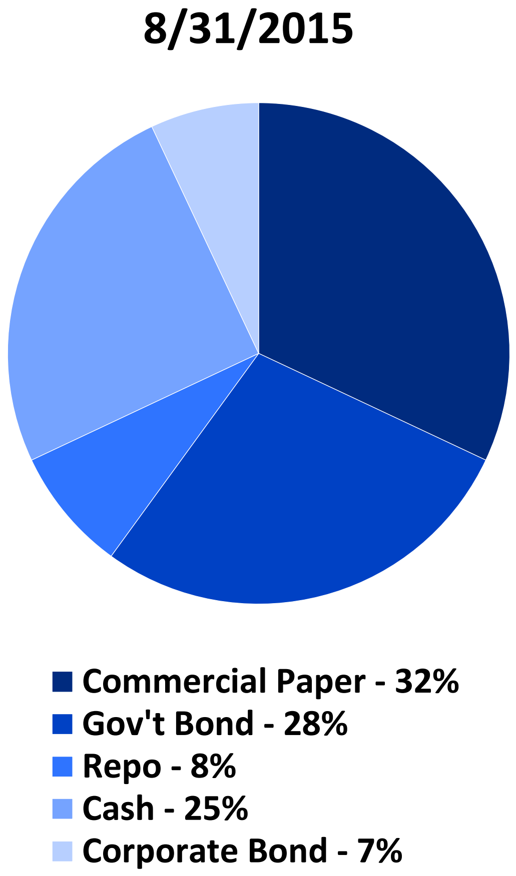


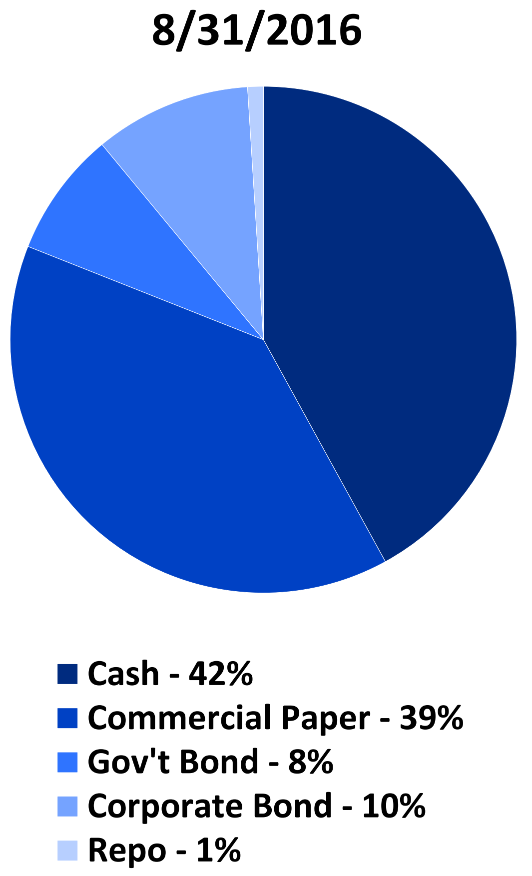
Source: Bloomberg as of 9/9/16

Yield Comparison
STAR Ohio vs. Treasury vs. Avg Money Fund



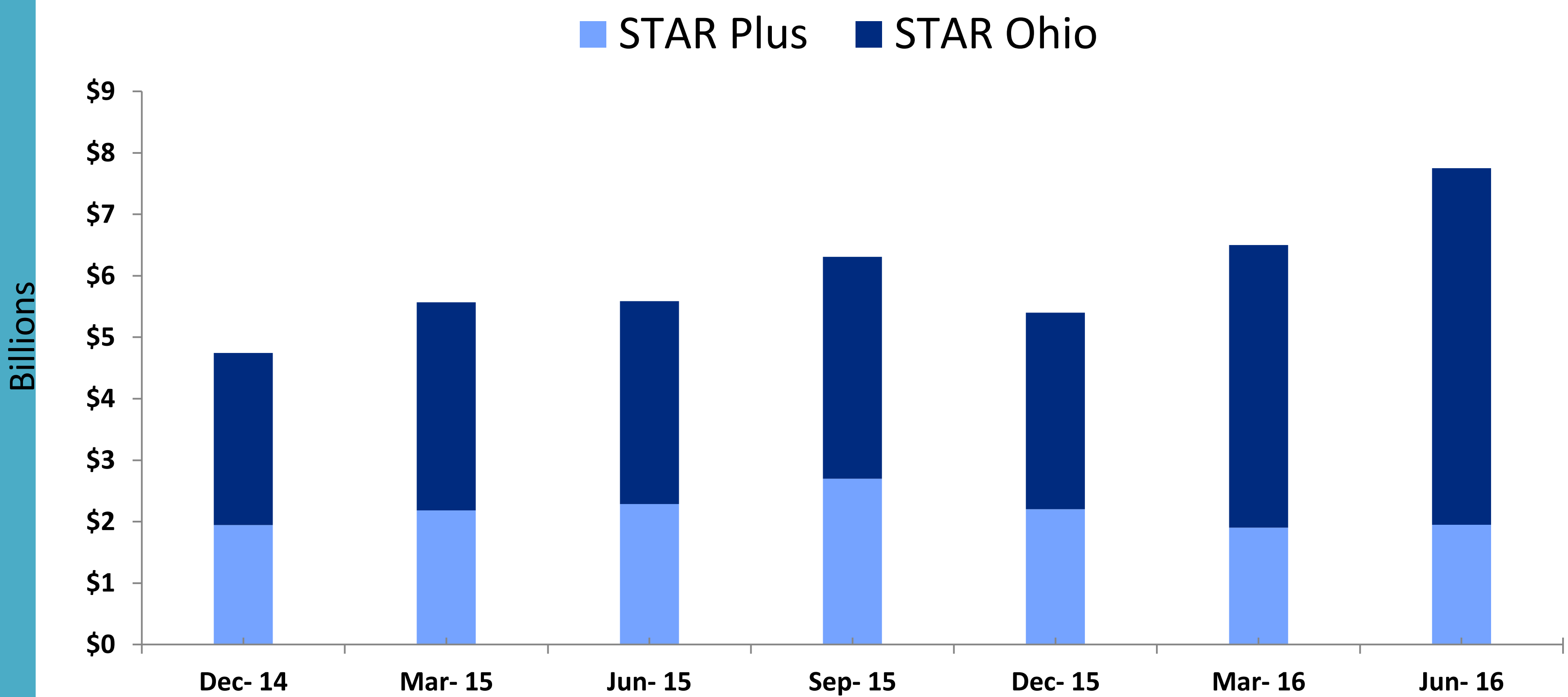
Over $5 billion in Deposits
Composition





Program Assets

$3.00 Billion Added in 18 months



Data as of 6/30/2016

STAR Ohio vs. STAR Plus

STAR Ohio

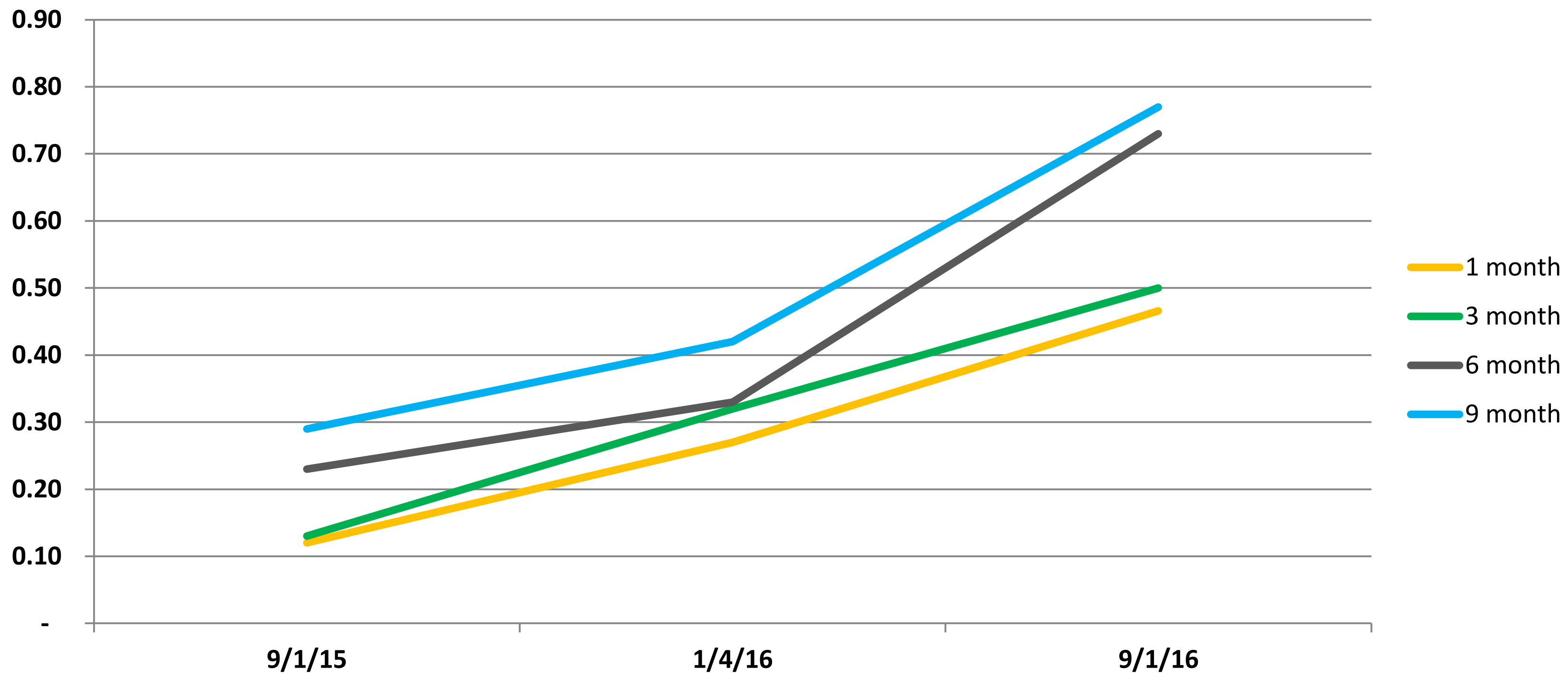
- Yield is based on portfolio of underlying securities
- Yield of securities is largely based on economic factors and expectations for interest rates, as well as credit risk
- As securities mature, the rate at which they can be reinvested depends on economic conditions at that time
- Current securities include: US Treasuries, US Government Agencies, Commercial Paper, Corporate Bonds, Repurchase Agreements, and Money Market Funds

STAR Plus

- Yield is based on underlying bucket of bank deposit account
- Yield of bank deposit accounts is based upon each banks current desire for deposits
- As banks demand for deposits increase, the bank will increase the rate it pays in order to attract deposits
- As banks demand for deposits decreases, the bank will decrease the rate it pays in order to push deposits out of the bank
- Economic outlook has less affect on bank rates

Money Market Spreads
Commercial Paper vs. Agency Discount Notes

- Market requiring greater premium for risk assets
- Demand shifting to the front end of the curve due to regulations



Source: Bloomberg

Driving Forces Behind Fed Policy

U.S. economy is betting on the consumer

- The labor market is nearing full employment
- Personal earnings and consumption growth holding up
- GDP growing at a moderate pace

Global economy has the attention of the Fed

- Weakness in China and other emerging markets creating headwinds
- Global volatility remains elevated
- ECB and BOJ continue to expand accommodative monetary policy

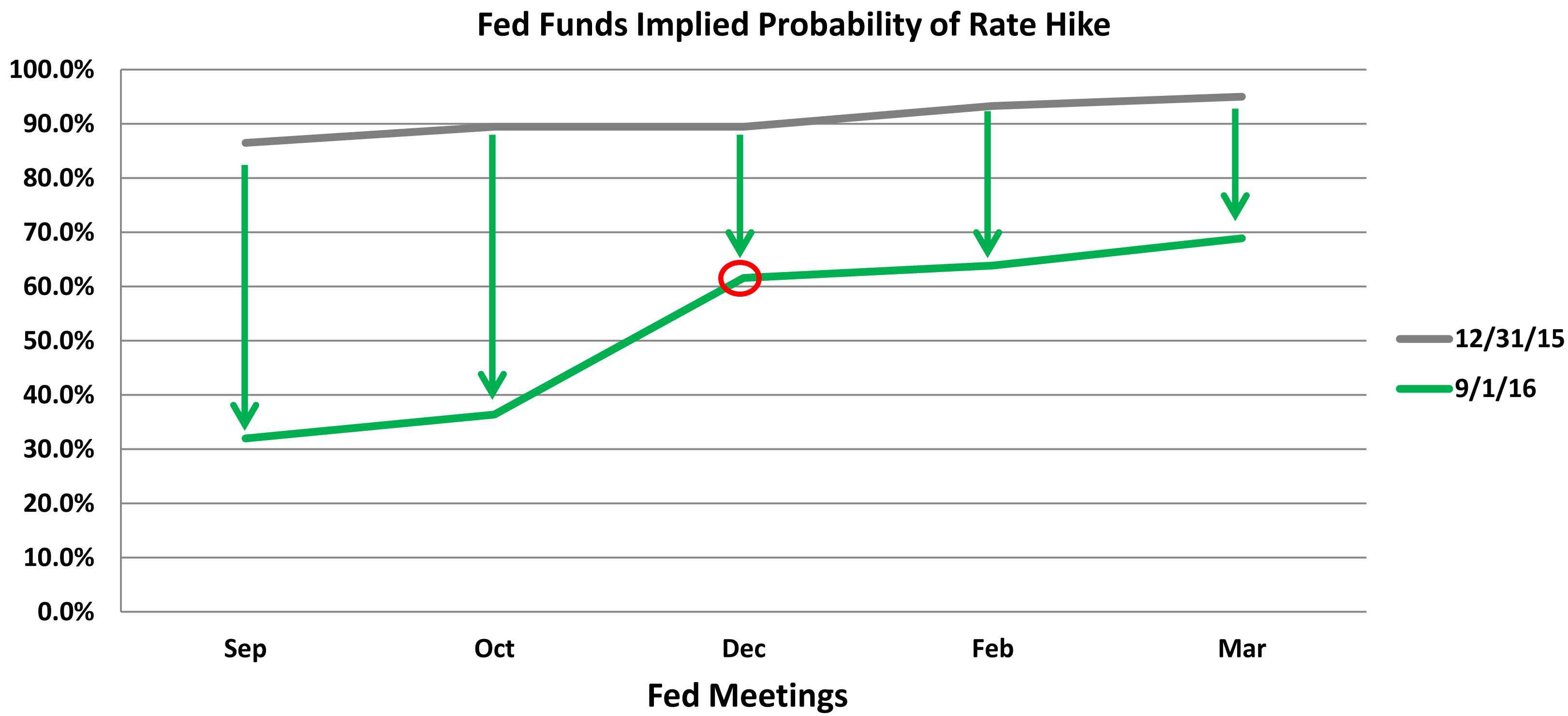
Fed guidance has shifted

- Decision to raise rates will be data dependent
- Focus on global economy as well as domestic economic targets
- Guidance suggests 1 rate hike in 2016 (62% probability in December)

Fed Funds

Implied Probability of Rate Hike

- The Fed Funds implied probability of a rate increase in September is 32%
- Probability of rate hike in 2016 is 62%



Source: Bloomberg

U.S. Economic Factors

- Employment
  - August unemployment rate at 4.9%
  - Slight increase from previous month
  - Participation rate remains low

- Inflation
  - July 2016 Core PCE was 1.6%
    - Continues to be below the FOMC threshold of 2%
- Other
  - Retail Sales figures have been mixed
  - Manufacturing in U.S. is contracting

U.S. Economic Data

- Upcoming economic data releases
  - 09/15 Retail Sales
  - 09/21 FOMC Rate Decision
  - 09/29 GDP Annualized QoQ
  - 09/30 PCE Core YoY

Negative Interest Rate Policy

Current Global Rates

- 5 central banks have implemented NIRP
- Motivation is to stimulate economic growth by increasing credit
- Effectiveness and consequences yet to be determined

Country	2 year	3 year	5 year	7 year	10 year	15 year	30 year
US	0.79	0.93	1.22	1.51	1.67		2.40
Canada	0.58	0.60	0.72	0.88	1.16		1.77
UK	0.17	0.17	0.30	0.52	0.86	1.23	1.50
France	-0.60	-0.55	-0.36	-0.19	0.30	0.61	1.10
Germany	-0.65	-0.64	-0.49	-0.38	0.01	0.16	0.60
Sweden	-0.61		-0.24	-0.11	0.27		
Switzerland	-1.08	-1.02	-0.85	-0.68	-0.49	-0.30	-0.03
Japan	-0.22	-0.20	-0.17	-0.17	-0.03	0.17	0.50
Australia	1.54	1.52	1.63	1.80	1.96	2.34	

As of 5/9/2016

Source: Bloomberg

Bank Regulations

Basel III

- Represents the most complete overhaul of U.S. bank capital standards since the U.S. adoption of Basel I in 1989.
- Requires banks to meet increased capital ratio targets, risk weighted asset requirements, and liquidity standards (LCR, NSFR).

Volcker

- Part of Dodd Frank Act prohibiting banks from engaging in impermissible proprietary trading and covered fund purchases.
- Eliminates the capacity for banks to engage in risky, proprietary trading funded by FDIC insured bank deposits.

Money Market Reform

- Institutional municipal and prime money market mutual funds moving to floating NAV and instituting redemption gates and fees to bolster liquidity.
- Government money market funds will be investment vehicle of choice for operating funds.

Prime Money Market Funds

What are they

- Traditional money market funds are a type of mutual fund developed in the 1970s as an option for investors to purchase a pool of securities that generally provided higher returns than interest-bearing bank accounts.
- Prime money market funds invests generally in floating/variable rate debt and commercial paper of corporations and securities of the US government and agencies.

Reform

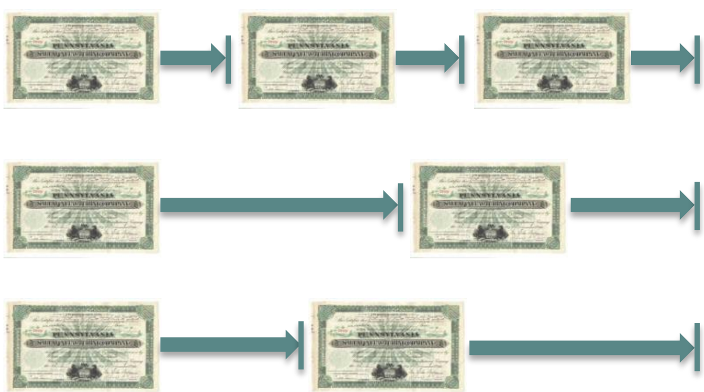
- New rules would require institutional prime and municipal money market funds to move from a stable $1.00 price per share to a floating net asset value.
- Prime money market funds are required to comply with these elements by October 14, 2016.

Bond Investment Strategies

Ladder vs. Barbell

Ladder Strategy / Asset-Liability Match

Staggers maturities of bonds in a portfolio and sets a schedule for reinvestment of proceeds

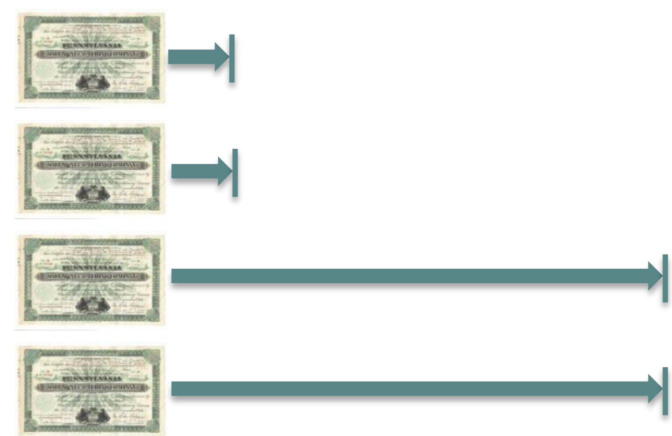


Benefits:

- Periodic maturities allow for more investing flexibility and control over liquidity
- Interest rate volatility reduced as portfolio is spread across maturities and coupons
- Proceeds from the maturing investment can be used for the scheduled draw, or reinvested in another investment

Barbell Strategy

Utilizes only short-term investments and longer term bonds



Benefits:

- Longer-term bonds provide higher rates
- Shorter-term bonds provide liquidity
- Shorter-term bonds can offset impacts of a rising rate environment as the maturing bonds can be reinvested at higher rates