CPIM Academy

2016

CPIM

Center For Public Investment Management

A PROGRAM BROUGHT TO YOU BY:

Josh Mandel

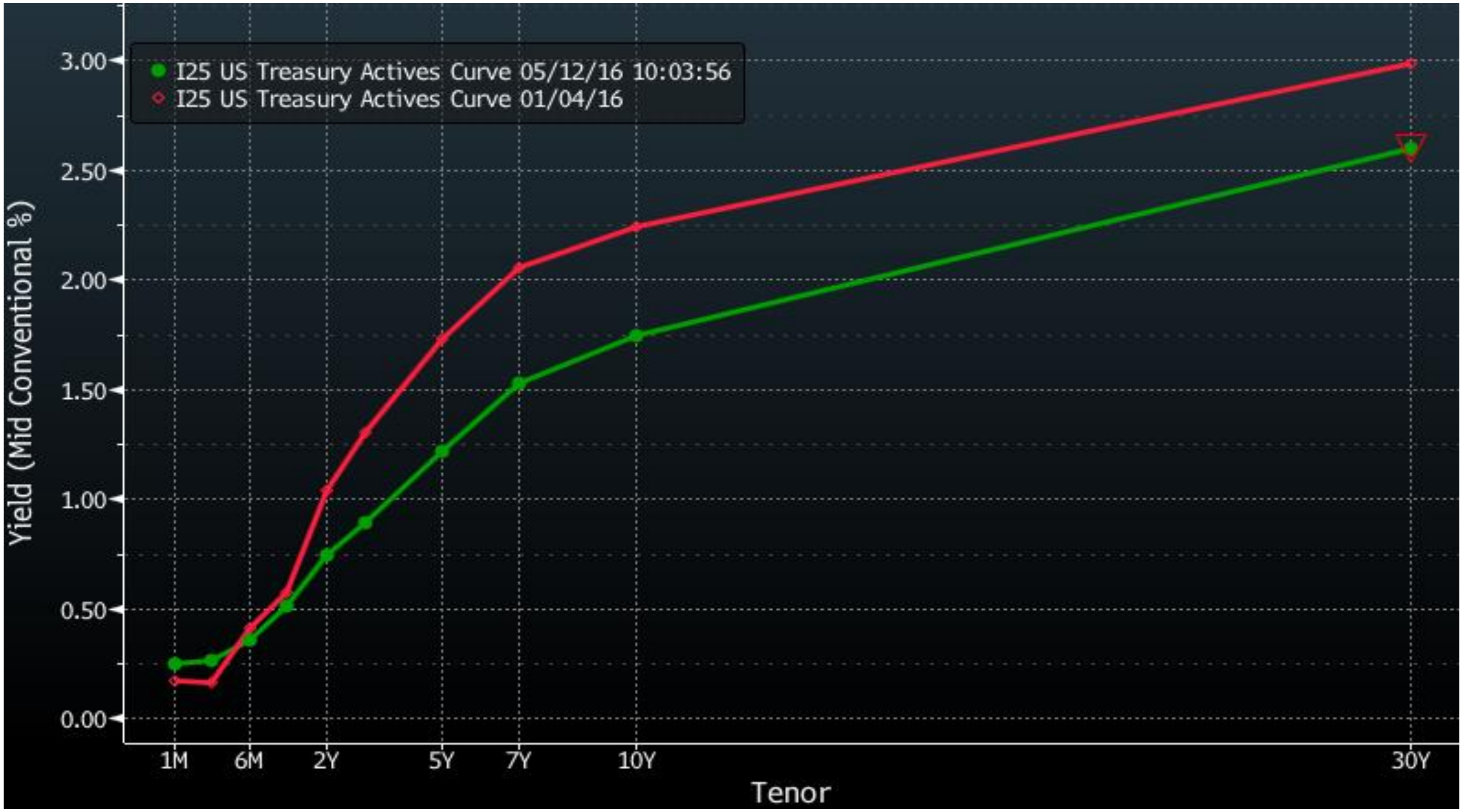
Treasurer of Ohio

General Session & Market Update

Ohio Market Access Program

- A credit enhancement program for local government notes up to 1 year maturities
- Receive an 'SP-1+' credit rating
- Local governments have reduced annual debt service expenses by about 50% on average
- Recent issues have priced tight to 'AAA' muni rates
- Visit www.tos.ohio.gov/OMAP for more info

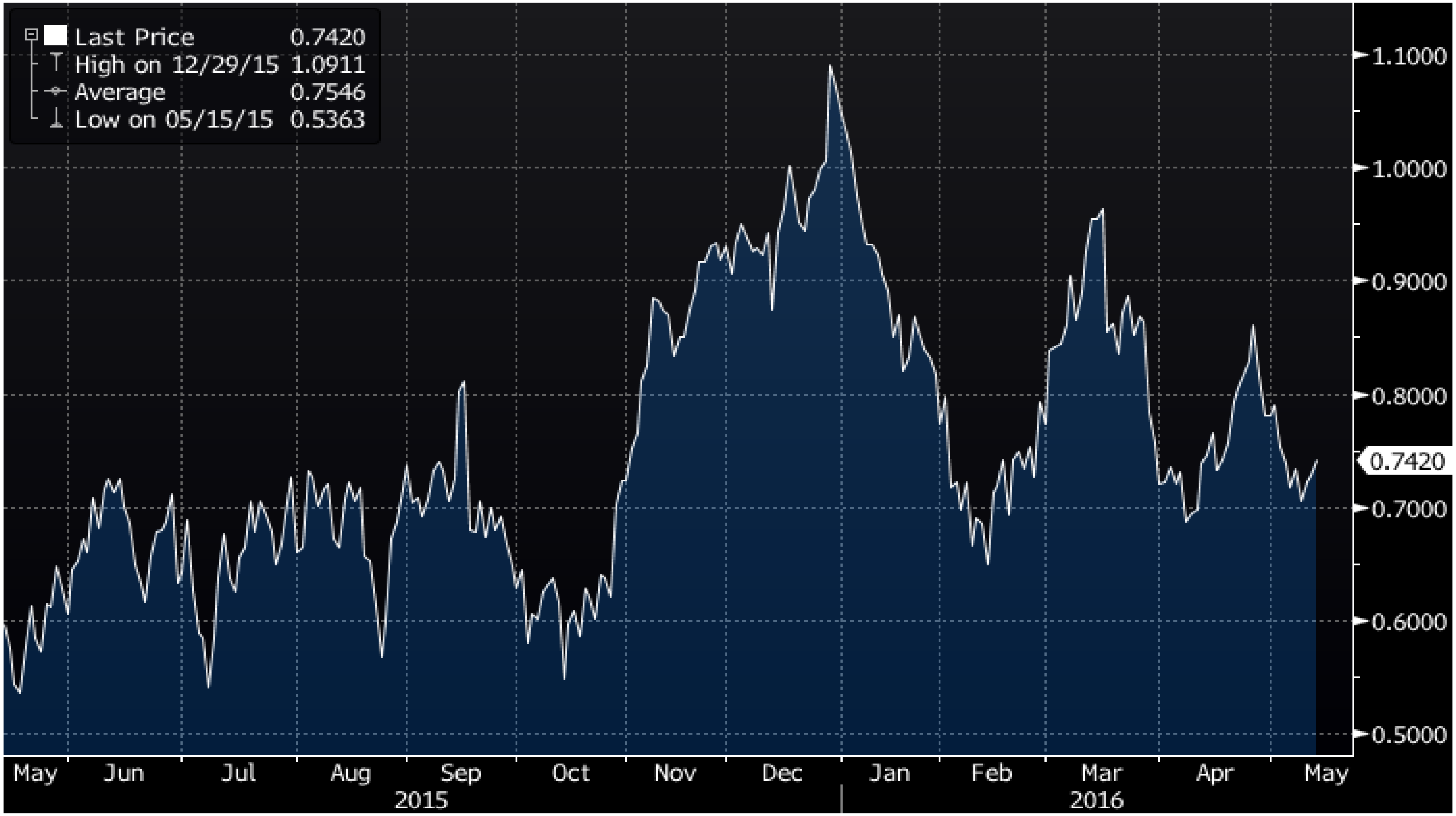
Interest Rate Environment
YTD the Yield Curve has Flattened



Source: Bloomberg as of 5/12/16

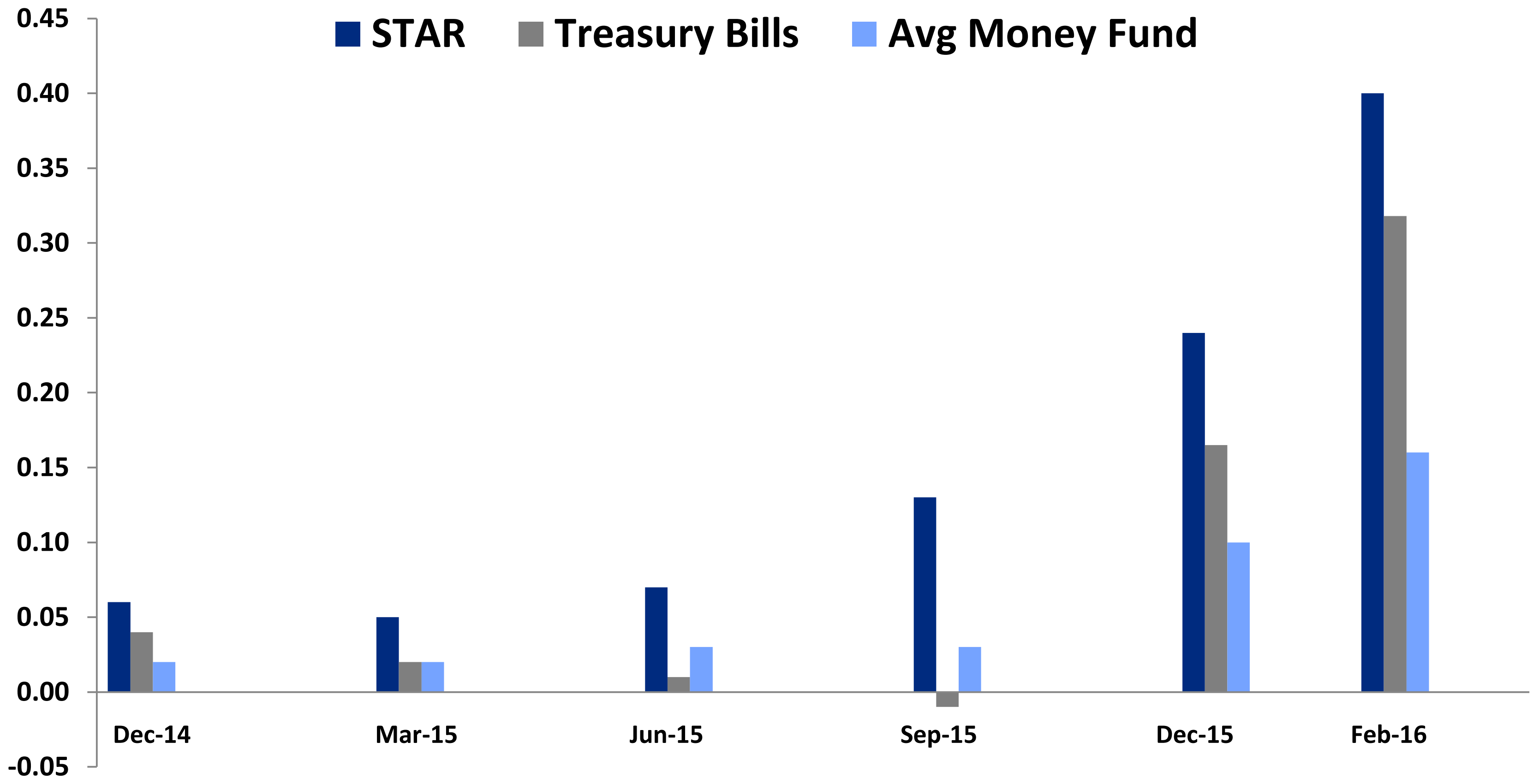
2-Year T-Note

What does it tell us?

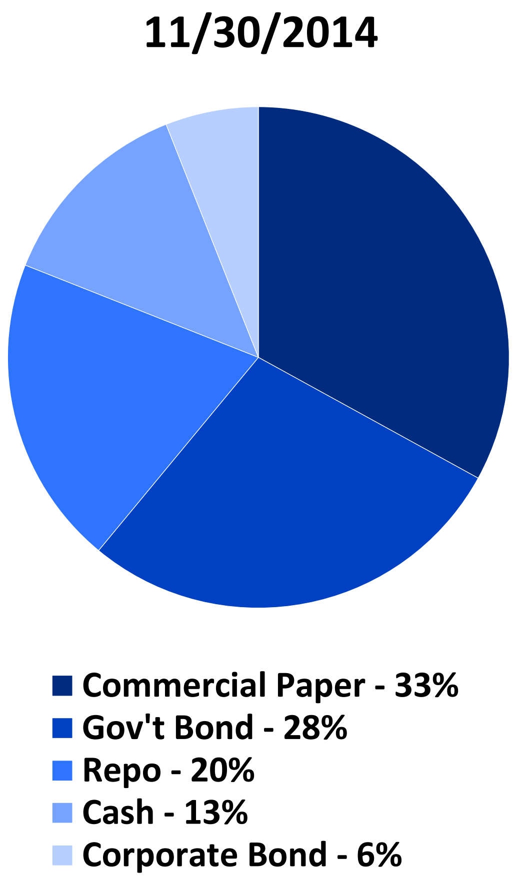


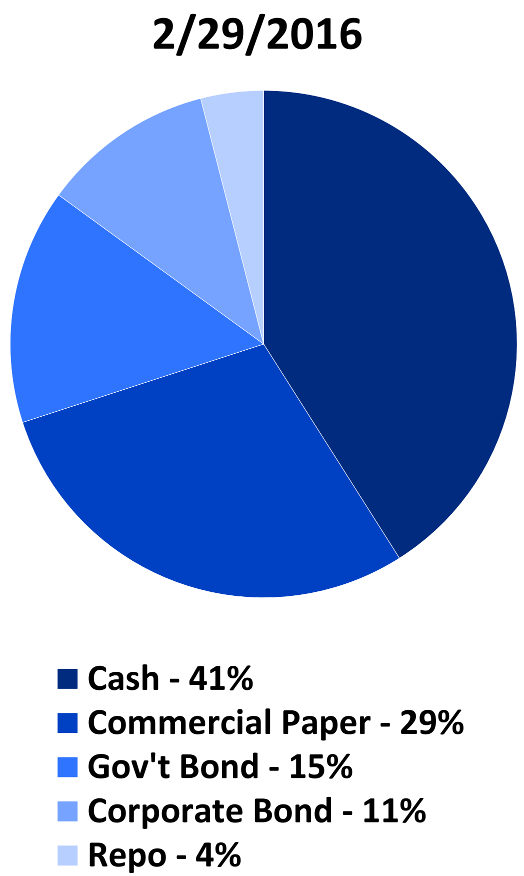
Source: Bloomberg as of 5/12/16

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



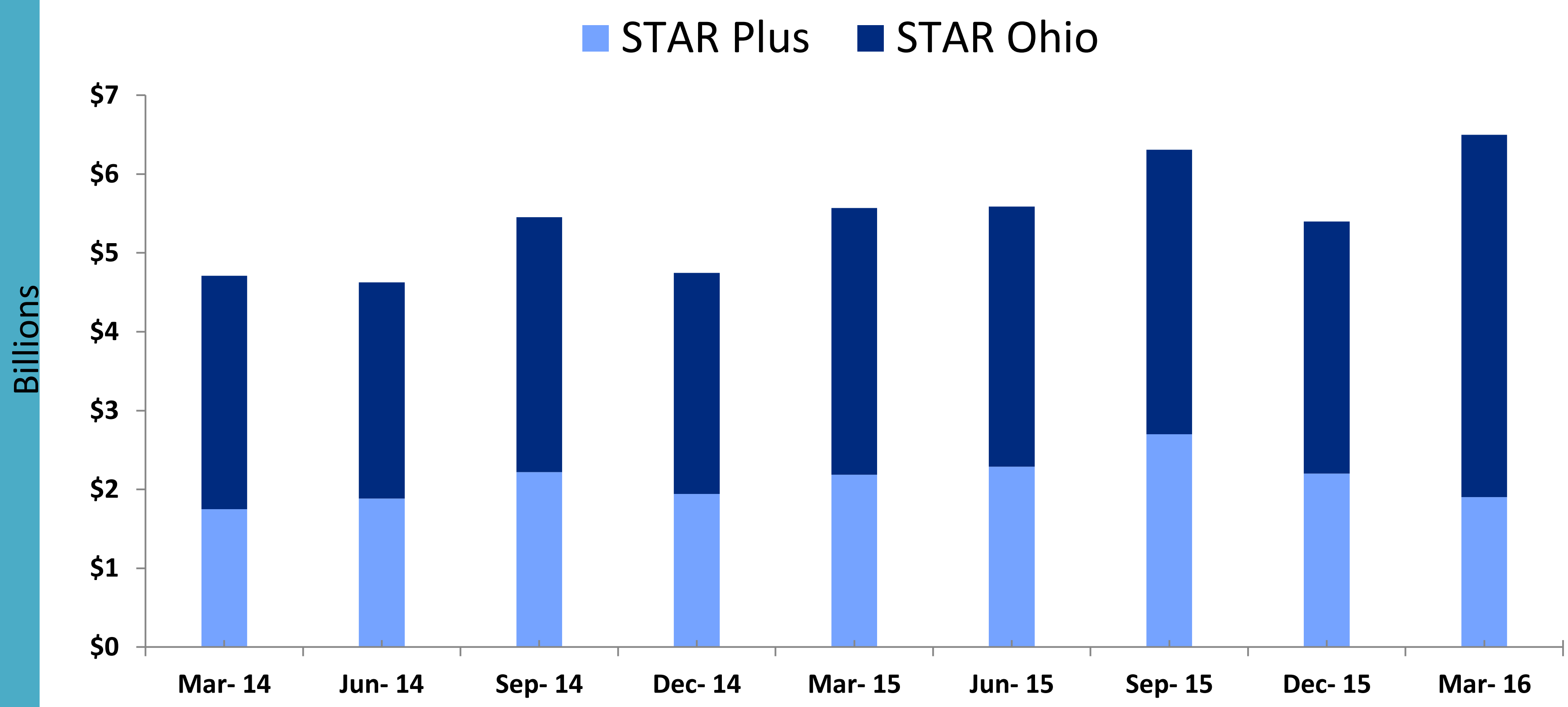
Over $5 billion in Deposits
Composition





Program Assets

$1.16 Billion Added in 18 months



Data as of 2/29/2016

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

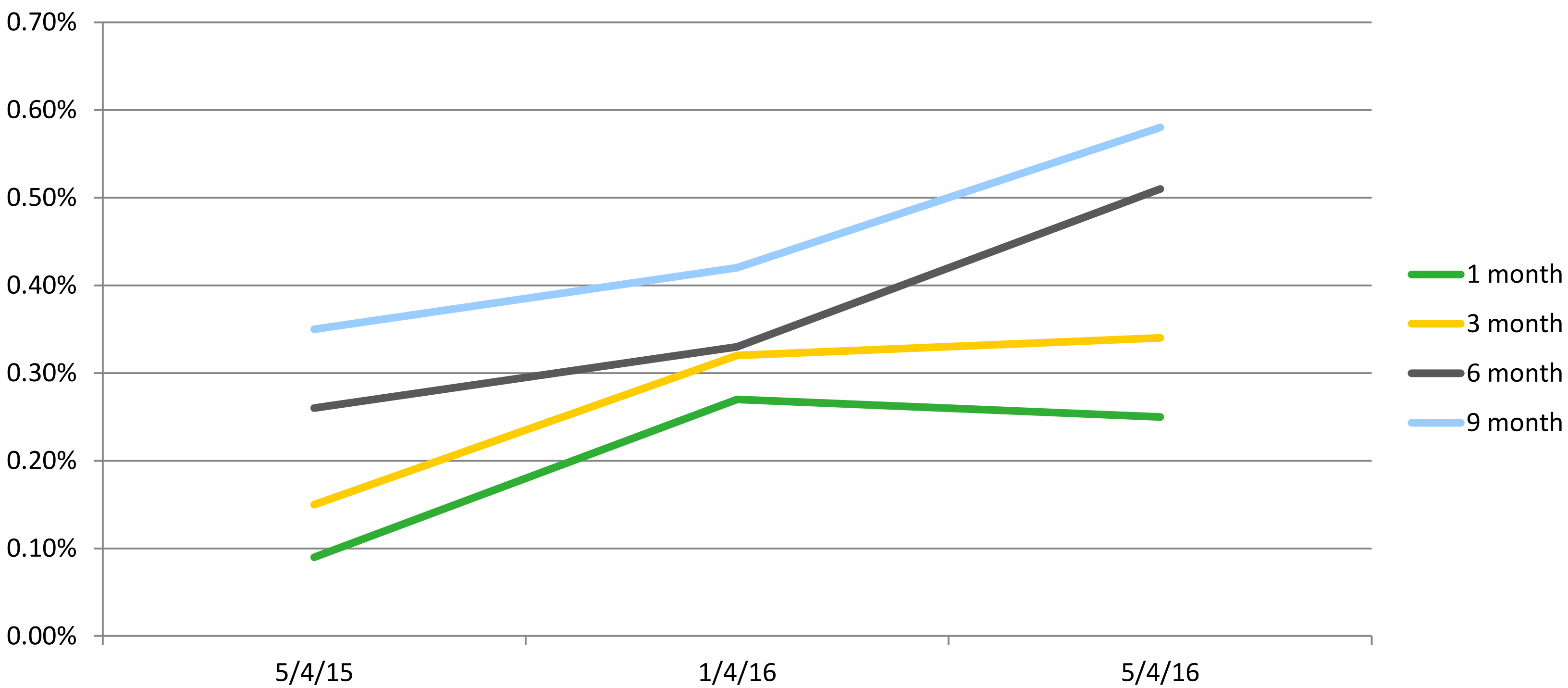
STAR Plus

- Yield is based on underlying bucket of bank deposits
- Yield of bank deposit accounts is based upon each bank's current desire for deposits
- As a bank's demand for deposits increase, the bank will increase the rate it pays in order to attract deposits
- As a bank's 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

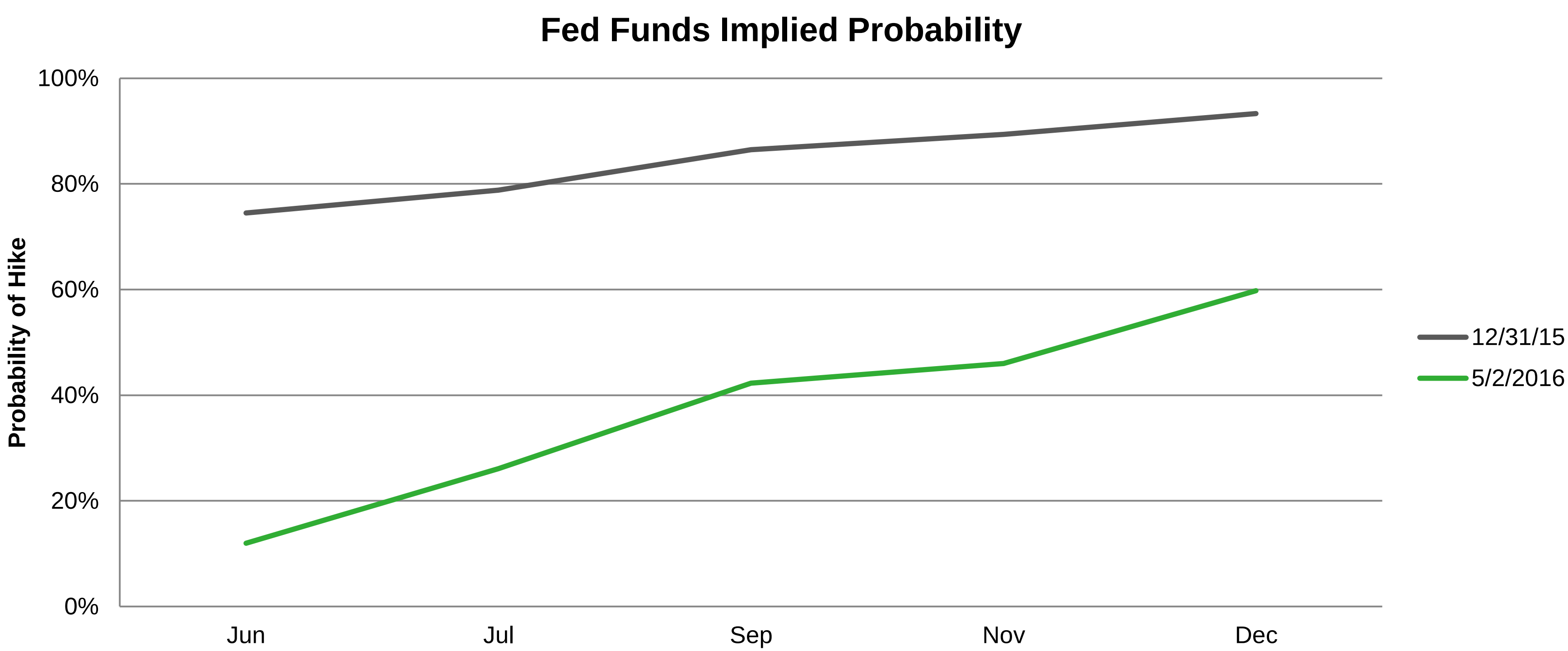
Fed guidance has shifted

- Decision to raise rates will be data dependent
- Focus on global economy as well as domestic economic targets
- Guidance suggests 2 rate hikes in ’16 – Fed futures suggests 1

Fed Funds

Implied Probability of Rate Hike

- The Fed Funds implied probability of a rate rise in June is 12%.
- Probability of rate hike in 2016 has dropped to 60%.



Source: Bloomberg

U.S. Economic Factors

- Employment
  - April unemployment rate at 5.0%
  - No change from the previous month
  - Participation rate has decreased
- Inflation
  - March 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
  - 05/24 Existing Home Sales
  - 05/27 GDP Annualized QoQ
  - 05/31 Core PCE YoY
  - 06/15 FOMC Rate Decision

Negative Interest Rate Policy

Current Global Rates

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

Country	2 year	3 year	5 year	7 year	10 year	15 year	30 year
US	0.71	0.86	1.20	1.51	1.75		2.61
Canada	0.53	0.52	0.70	0.99	1.32		1.97
UK	0.40	0.56	0.82	1.17	1.42	1.97	2.28
France	-0.44	-0.39	-0.17	0.03	0.49	0.96	1.45
Germany	-0.52	-0.53	-0.39	-0.24	0.13	0.29	0.83
Sweden	-0.60		-0.16	0.17	0.53		
Switzerland	-0.78	-0.88	-0.75	-0.57	-0.29	-0.07	0.19
Japan	-0.24	-0.24	-0.23	-0.21	-0.1	0.05	0.29
Australia	1.55	1.54	1.78	2.02	2.28	2.51	

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.

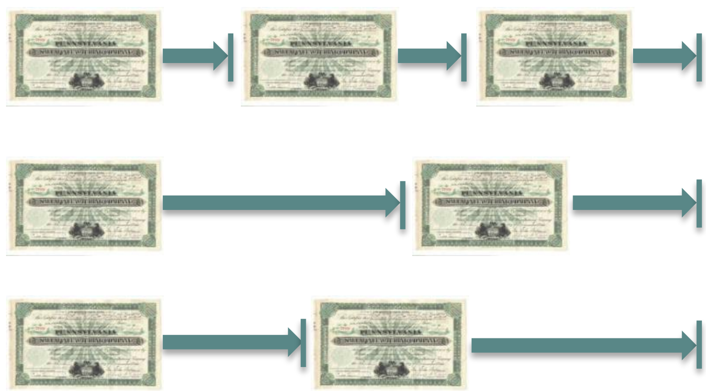
Prime Money Market Funds

- 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

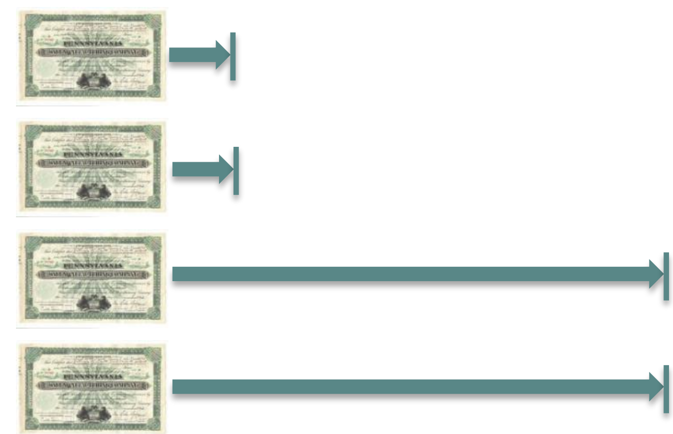


Benefits:

- 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