



School District of Palm Beach County, Florida

Series 2017 TAN Sale

September 26, 2017

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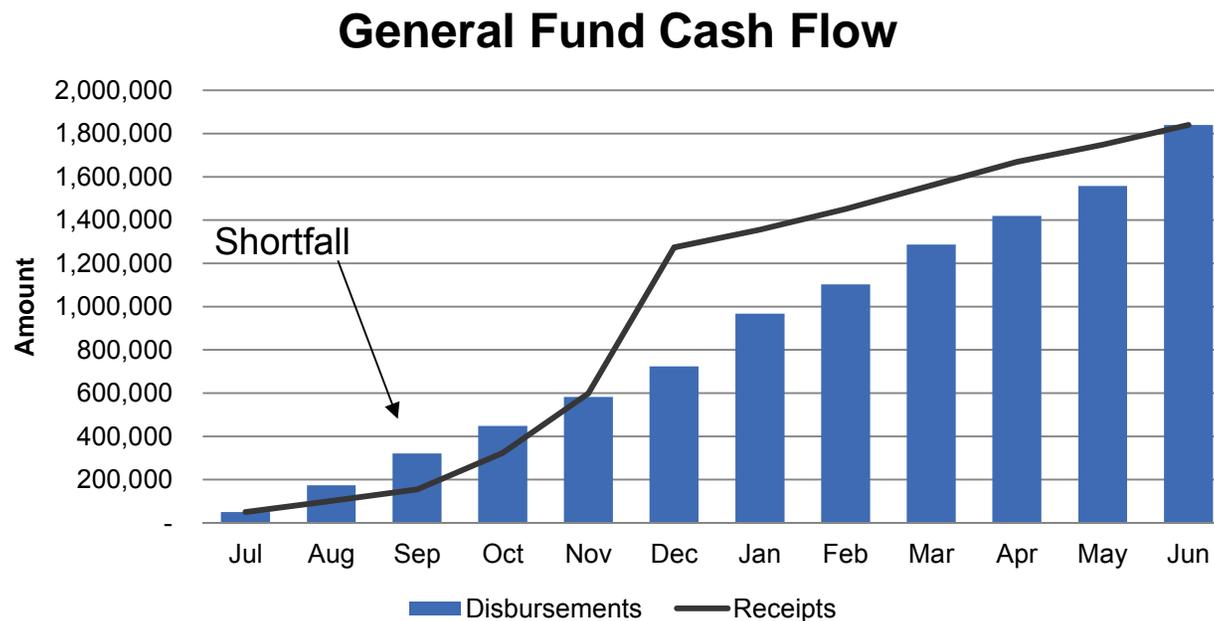
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Palm Beach County School District – TAN Cash Flow

- ◆ Tax Anticipation Notes are short-term financings that allow the District to pay operating expenses prior to receiving tax revenue. Since most of the money received is from property taxes and state funds, there is not a constant source of funding that exists throughout the year.





Summary of TAN Issuance

Summary of Tax Anticipation Note Sales 2008-2016

Series	Maturity	Issue Amount	Net Interest Rate	Costs ⁽¹⁾	Net Interest Cost ⁽²⁾	Interest Earned ⁽³⁾	Difference
2008	09/23/09	\$ 85,000,000	2.13%	\$ 67,792	\$ 1,624,846	\$ 2,938,040	\$ 1,245,403
2009	02/01/10	\$ 85,000,000	0.31%	\$ 58,029	\$ 68,638	\$ 301,311	\$ 174,645
2010	02/01/11	\$ 115,000,000	0.26%	\$ 70,467	\$ 82,225	\$ 174,942	\$ 22,250
2011	01/26/12	\$ 115,000,000	0.13%	\$ 79,483	\$ 48,875	\$ 105,828	\$ (22,530)
2012	02/01/13	\$ 115,000,000	0.13%	\$ 79,455	\$ 53,411	\$ 92,636	\$ (40,230)
2013	02/01/14	\$ 115,000,000	0.13%	\$ 86,122	\$ 49,450	\$ 114,695	\$ (20,877)
2014	02/01/15	\$ 115,000,000	0.09%	\$ 78,568	\$ 26,648	\$ 77,465	\$ (27,751)
2015	02/01/16	\$ 115,000,000	0.08%	\$ 90,805	\$ 29,756	\$ 53,219	\$ (67,341)
2016	08/31/17	\$ 115,000,000	0.65%	\$ 94,655	\$ 697,667	\$ 1,058,630	\$ 266,308

Notes:

- ⁽¹⁾ Costs include Source Media (Bond Buyer), Bond and Note Counsel, Financial Advisory Services, Rating Services, and Printing
- ⁽²⁾ Interest Expense for the 2016 TAN is estimated at 0.65%
- ⁽³⁾ Interest Earnings for the 2016 TAN is estimated at 1%.



Capital Markets





What are the “Capital Markets”

- ◆ The Capital Market (securities markets) is where companies and the government can raise long-term funds.
- ◆ The capital markets include both the stock market and the bond market.
- ◆ The capital markets consist of the primary market, where new issues are distributed to investors, and the secondary market, where existing securities are traded.
- ◆ The capital markets can be contrasted with other financial markets such as the money market which deals in short term liquid assets, and the derivatives market which deals in derivative contracts.



What is the role of the “Capital Markets”?





Public Finance (Government Finance)

- Public finance (government finance) deals with budgeting the revenues and expenditures of a public sector entity, such as a school district, city or county.
- Florida School Districts, like any other legal entity, can take out loans, issue debt (with limitations) and invest. Schools in Florida generally issue debt called “Certificates of Participation” (COPs), while most other governments issue Bonds (Revenue or General Obligation).
- A bond issued by a public sector entity may give tax advantages to its owners, with interest earnings not subject to federal income tax.



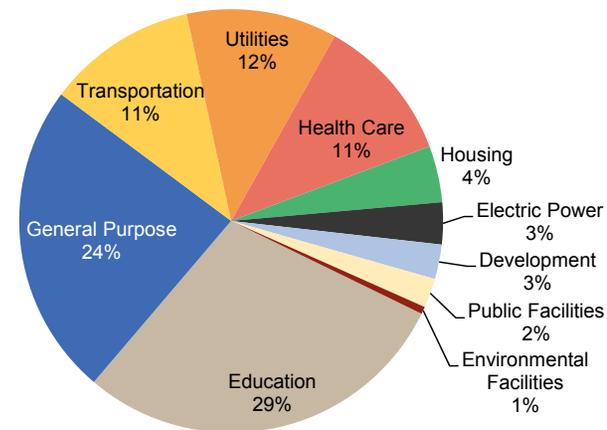
Public Use of Debt

- ◆ Cities – libraries, parks, roads, water and sewer plants, solid waste
- ◆ Counties – many of the same plus courthouses and jails
- ◆ States – roads, colleges, economic development (SCRIPPS), environmental land (SFWMD Everglades restoration)
- ◆ Not for Profit – hospitals, nursing homes, low income housing developments
- ◆ Education – capital construction and operating expenses

Dollar Amount Issued in 2016 (\$ mil)

Education	\$ 128,997.1
General Purpose	\$ 106,599.1
Transportation	\$ 50,895.2
Utilities	\$ 51,146.2
Health Care	\$ 49,592.0
Housing	\$ 19,186.5
Electric Power	\$ 14,210.0
Development	\$ 11,768.2
Public Facilities	\$ 9,949.4
Environmental Facilities	\$ 2,455.7
Total (\$ mil)	\$ 444,799.4

Dollar Amount Issued in 2016



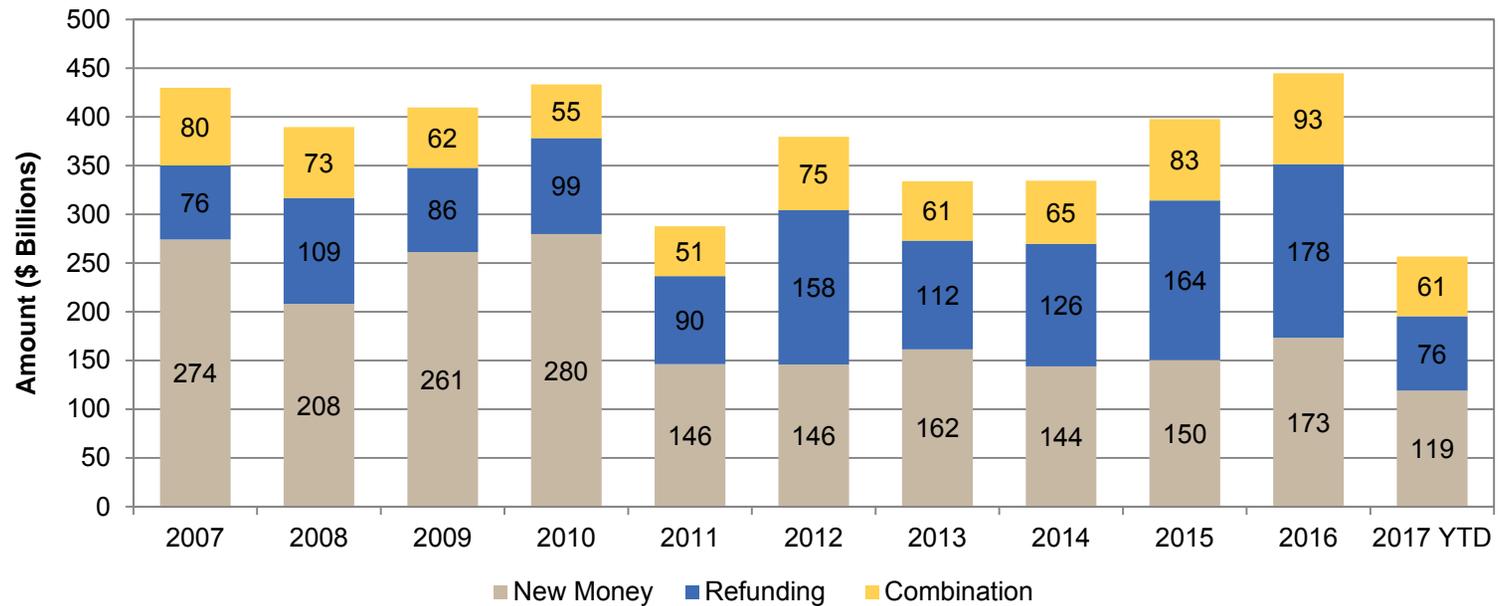


Municipal Bond Finance

◆ Competitive Sale

- Bonds are sold through a competitive bidding process to the underwriter (or group of underwriters) providing the lowest borrowing cost

Decade of Municipal Bond Finance





Funding Options for School Districts

• The combination of decreased capital funding and growing capital needs have resulted in significant increase in the number of school districts requesting voter approved alternatives

• General Obligation Bond programs:

- Significant capital requirements
- Increase in ad valorem taxes
- Usually for longer-life assets (new buildings)

• Sales tax referendums:

- Most popular
- No increase in ad valorem taxes
- Significant percentage of taxes may be paid by non-county residents
- Generally for pay-as-you go programs

County Sales Surtax				
District	Effective Date	Tax Rate	District Share	Expiration
Clay	2/1/2005	1 cent	10%	2039
Lake	1/1/2018	1 cent	50%	2032
Pasco	1/1/2015	1 cent	45%	2024
Seminole	1/1/2015	1 cent	25%	2024

G.O. Bond Programs		
District	Referendum Passed	Total Authorized
Miami-Dade	11/6/2012	\$1,200,000,000
Broward	11/4/2014	\$800,000,000

School Sales Surtax			
District	Effective Date	Tax Rate	Expiration
Bay	1/1/2011	1/2 cent	2020
Brevard	1/1/2015	1/2 cent	2020
Calhoun	1/1/2009	1/2 cent	2018
Escambia	1/1/2018	1/2 cent	2027
Flagler	1/1/2013	1/2 cent	2022
Hernando	1/1/2016	1/2 cent	2025
Jackson	7/1/2016	1/2 cent	2025
Leon	1/1/2013	1/2 cent	2027
Liberty	1/1/2012	1/2 cent	2020
Monroe	1/1/2016	1/2 cent	2025
Orange	1/1/2016	1/2 cent	2025
Polk	1/1/2004	1/2 cent	2018
St. Johns	1/1/2016	1/2 cent	2025
St. Lucie	1/1/2006	1/2 cent	2026
Santa Rosa	10/1/1998	1/2 cent	2018
Volusia	1/1/2017	1/2 cent	2032



“One County One Penny”

◆ The School District of Palm Beach County – “One County One Penny”

- Sales Tax Referendum
- Schools (50%)/County (30%)/Cities (20%)
- Expires in 2026 or until \$2.7 billion is raised

◆ Capital Budget Cuts

- **\$865** million since 2008

◆ Need \$1.35 billion to improve technology and security:

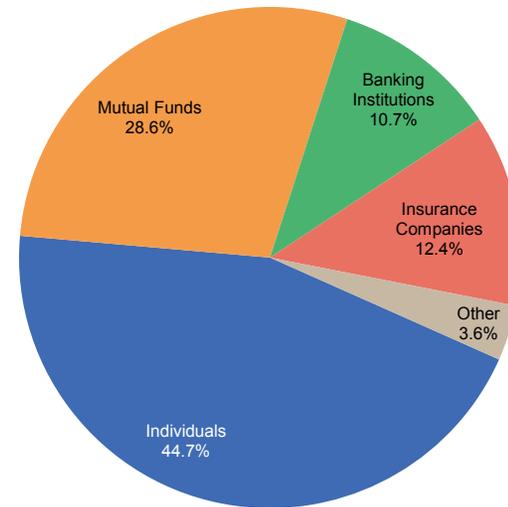
- Facility Renewal Projects (\$997,000,000)
- Technology (\$133,880,000)
- School buses (\$90,976,000)
- School Police and support vehicles (\$12,000,000)
- Construction Projects (\$60,000,000)
- Other (\$51,000,000)



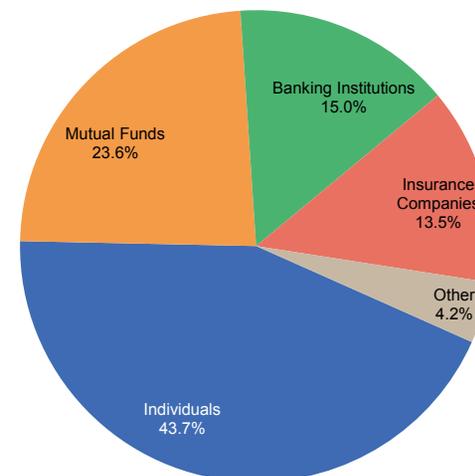
Who buys tax-exempt bonds?

- Three classes of investors dominate the municipal market
 - Households, consisting of **individuals** acting directly or through investment counsel
 - Household proxies – bond funds such as **mutual funds**, money market funds, bank personal trusts and investment trusts
 - Institutions, particularly commercial **banks** and property and casualty **insurance companies**.

Holders of U.S. Municipal Securities - 2012



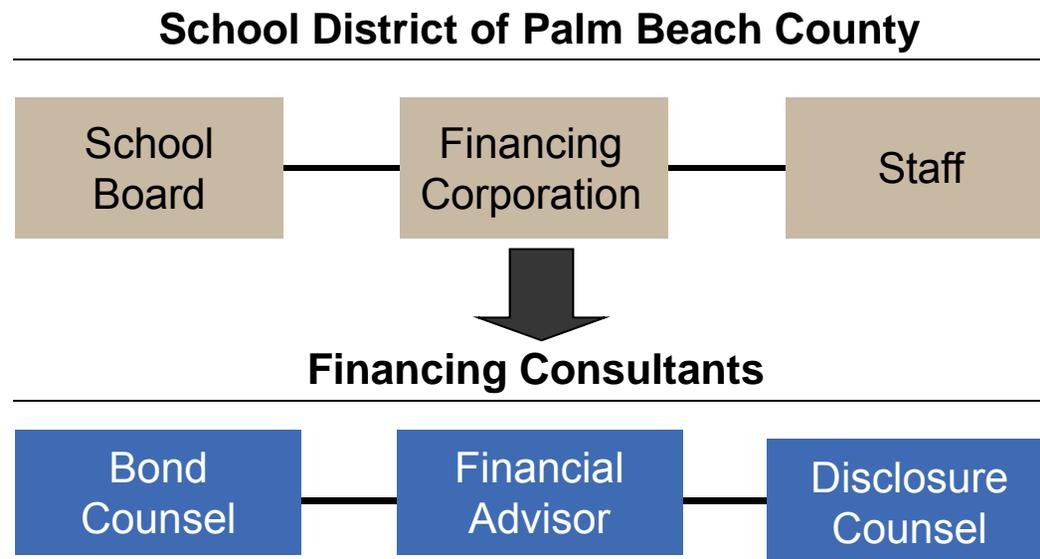
Holders of U.S. Municipal Securities - 2016





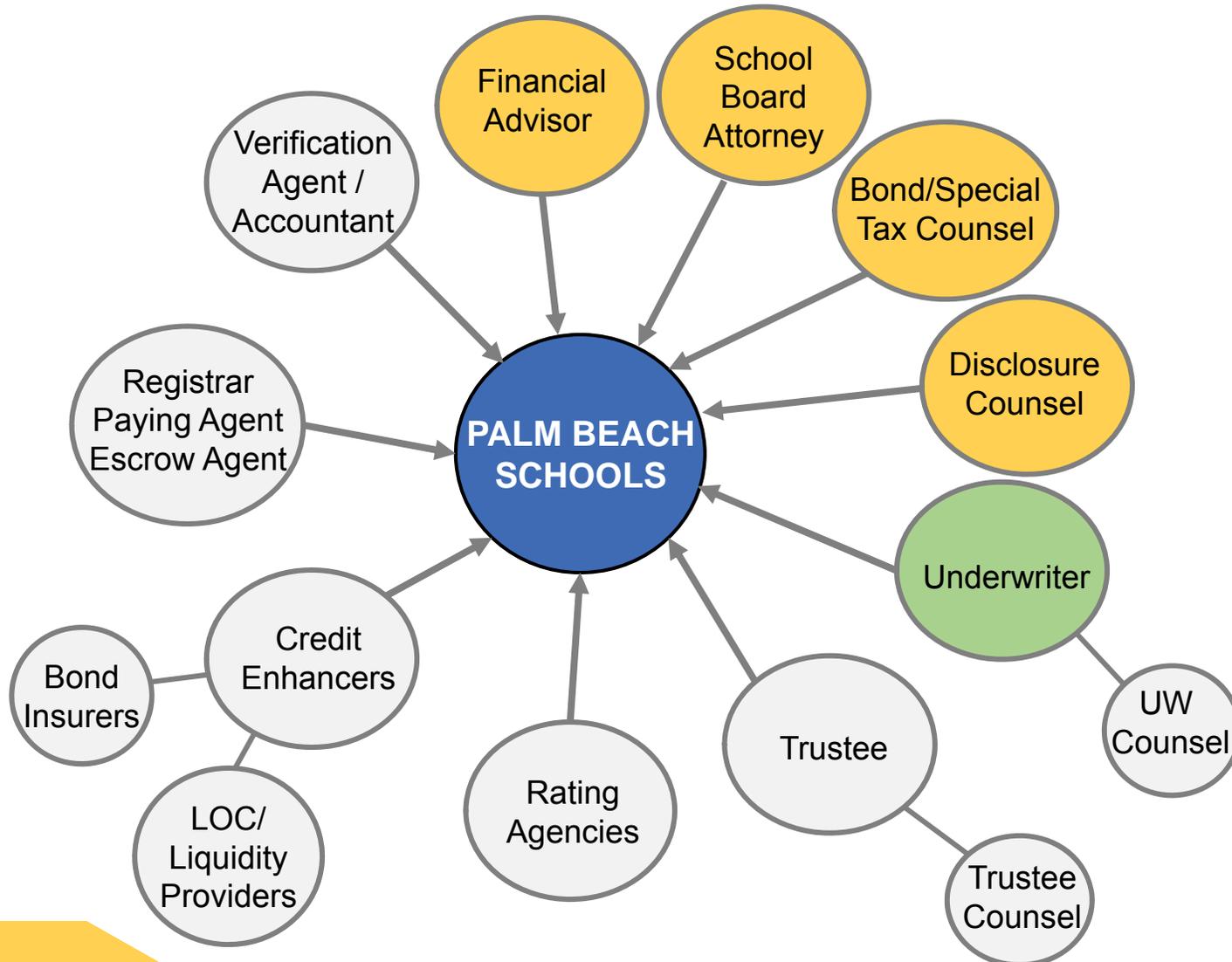
Core Financing Team

- ◆ All financings require a core team that supports and advises the District
- ◆ Depending on the specific plan of finance, the team may need to be large





Potential Financing Team Members





Different and Opposing Financial Objectives





Is the Battle Really Between “Good” and “Evil”





Trading Desk





Pre-sale Rush and Submitting the Bid

- Initially the underwriter puts out a preliminary pricing wire to their sales force and traders.
- Initial coupons and yields are adjusted to reflect feedback from the sales force and traders.
- Pre-sale orders are entered from investors.
- With less than a minute to go, the underwriter finalizes the bid and submits it via the online system.
- At sale time the bidders are ranked in order of lowest to highest interest cost to the bidder.
 - The sales results of a previous TAN sale are shown to the right. PNC Capital Markets.
- The underwriter who buys the loan is called the “highest” bidder(i.e. best bid to the issuer).

Sales Results Report
\$115,000,000
Due: 8/31/2017
Palm Beach Co SD, FL
Tax Anticipation Notes, Series 2016
Sale Date: 9/21/2016 11:00 AM EDST

Delivery Date: 10/11/2016
First Int. Date: 8/31/2017

Dated Date: 10/11/2016
Int Accrue Date: 10/11/2016

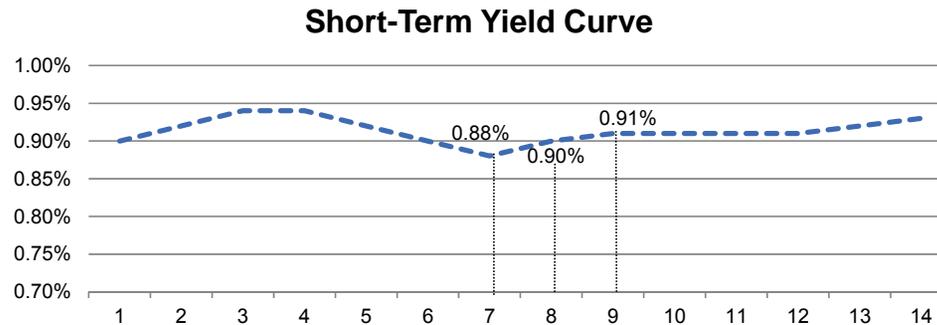
The results stated below show only bids submitted by BiDCOMP users

<u>Firm</u>	<u>Bid Amount</u>	<u>NIC</u>
PNC Capital Markets	115,000M	0.814250%
J.P. Morgan Securities LLC	115,000M	0.917750%
Wells Fargo Bank, National 'Association	115,000M	0.928750%
Bank of America Merrill Lynch	115,000M	0.937625%
Citigroup Global Markets Inc.	115,000M	0.953625%
Jefferies LLC	115,000M	0.953750%
Morgan Stanley & Co, LLC	115,000M	0.957125%
Oppenheimer & Co., Inc.	115,000M	0.960500%
Stifel Nicolaus & Company, Inc.	115,000M	1.018875%
Raymond James & Associates, Inc.	115,000M	1.041375%



Miami-Dade Schools 2017 TAN Example

Where would your bid be? Above or below J.P. Morgan's?



Sales Results Report
\$270,000,000
Due: 2/27/2018
School Board of Miami-Dade County, FL
Tax Anticipation Notes, Series 2017
Sale Date: 7/11/2017 11:00 AM EDST

Delivery Date: 7/27/2017

Dated Date: 7/27/2017

First Int. Date: 2/27/18

Int Accrue Date: 7/27/2017

The results stated below show only bids submitted by BiDCOMP users

<u>Firm</u>	<u>Bid Amount</u>	<u>NIC</u>	<u>Difference</u>	<u>PV Cost Difference</u> ¹
J.P. Morgan Securities LLC	\$270,000M	0.902857%		Lowest Cost
Wells Fargo Bank, National Association	\$270,000M	0.923429%	0.020571%	+ 2,057
Bank of America Merrill Lynch	\$270,000M	0.954857%	0.052000%	+ 5,200
Barclays Capital Inc.	\$270,000M	0.966286%	0.063429%	+ 6,343
PNC Capital Markets	\$270,000M	0.968000%	0.065143%	+ 6,514
Morgan Stanley & Co, LLC	\$270,000M	0.980571%	0.077714%	+ 7,771
Citigroup Global Markets Inc.	\$270,000M	0.996000%	0.093143%	+ 9,314

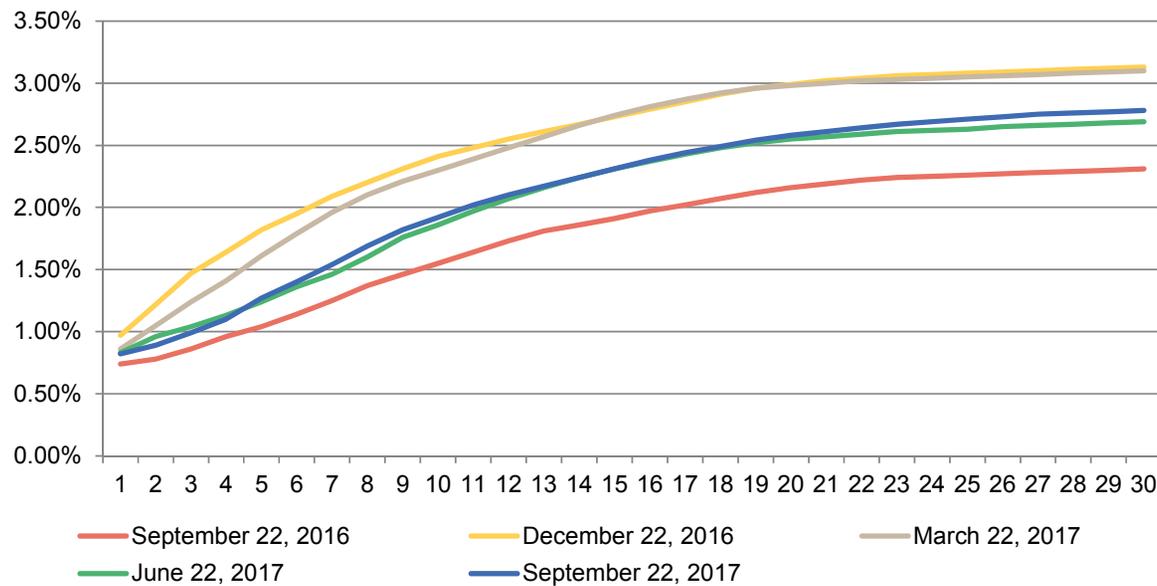
¹The Present Value of 1 bps is: \$10,000



Interest Rates

- ◆ Proxy for high quality governmental bonds
- ◆ Interest rates change daily and change based on the duration of the debt

Historical AAA G.O. MMD Yield Curve





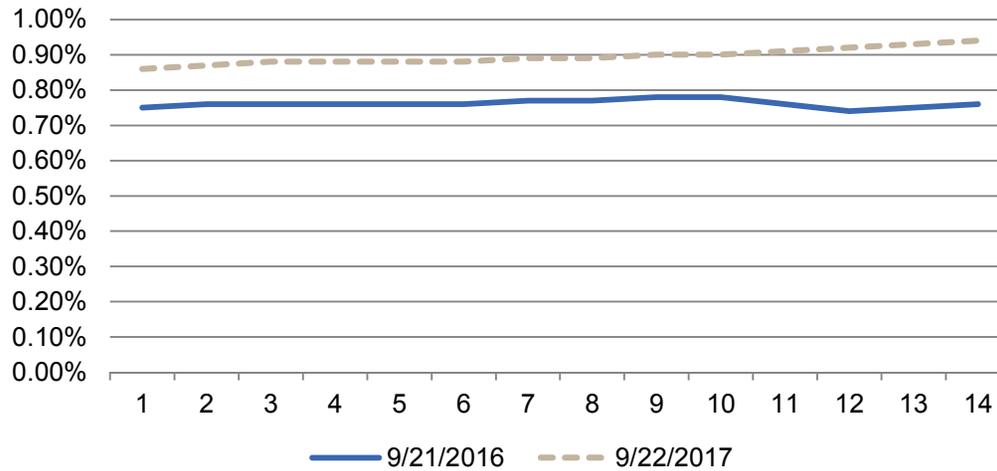
MIG1 Yield Curve

Bond Pricing
 The School District of Palm Beach County
 Tax Anticipation Note, Series 2016

 FINAL NUMBERS
 Sale Date: September 21, 2016
 Winning Bidder: PNC Capital Markets

Bond Component	Maturity Date	Amount	Rate	Yield	Price
Maturity:	8/31/2017	115,000,000	2.000%	0.800%	101.059
		115,000,000			

Short-Term Yield Curve





Pricing Lingo Quiz

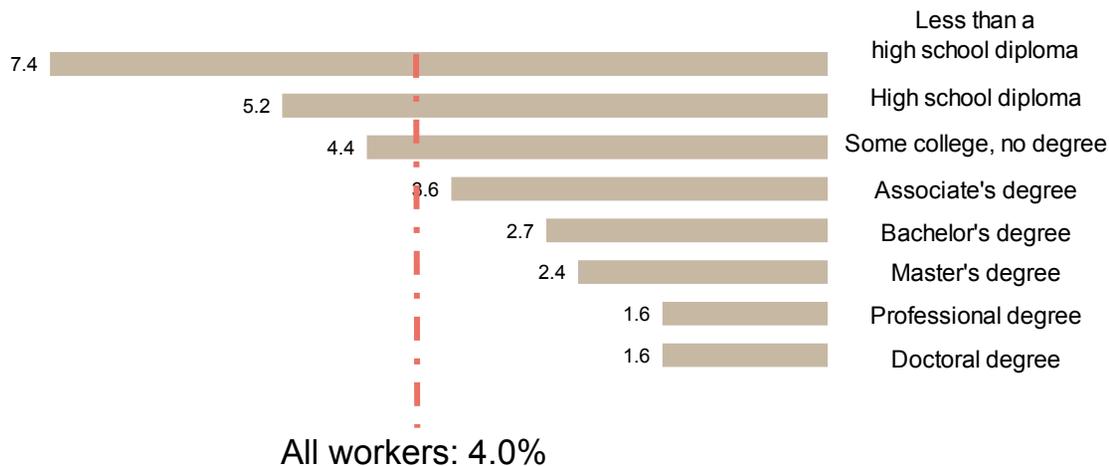
- | | | |
|---------------------|---|--------------------------------------|
| 1. A BP bump | → | 5% coupon |
| 2. A BP cut | → | Order to a buy and hold investor |
| 3. A 5 handle | → | To subtract a basis point in yield |
| 4. Block size | → | Lower the yields |
| 5. Going away order | → | Raise the yields |
| 6. Tighten | → | Prices are too cheap/Yields too high |
| 7. Loosen | → | 5 basis points |
| 8. Nickel | → | To add a basis point in yield |
| 9. Sloppy | → | Size of maturity or order |



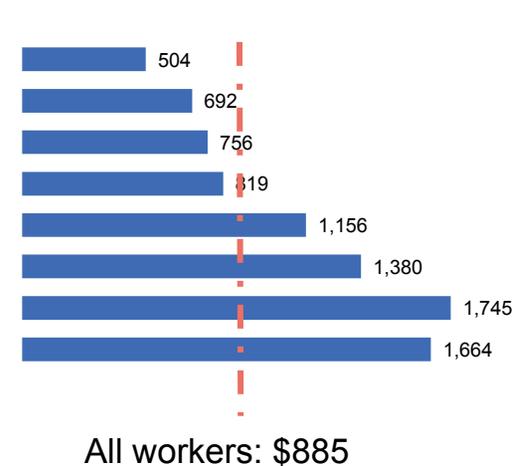
Less Education Results in Higher Unemployment

- The headline unemployment rate of 4.0% doesn't tell the entire story of the state of the labor force in America. While unemployment in all of the categories presented below has declined since peaking in August 2009, those with less education are being hit the hardest.
- Jobs that require more education remain in fairly high demand; unemployment for those with a bachelor's degree reached just 2.7% in 2016. On the other hand, the unemployment rate for those with less than a high school degree is at a staggering 7.4%.

Unemployment Rate in 2016 (%)



Median Weekly Earnings in 2016 (\$)







Market Overview

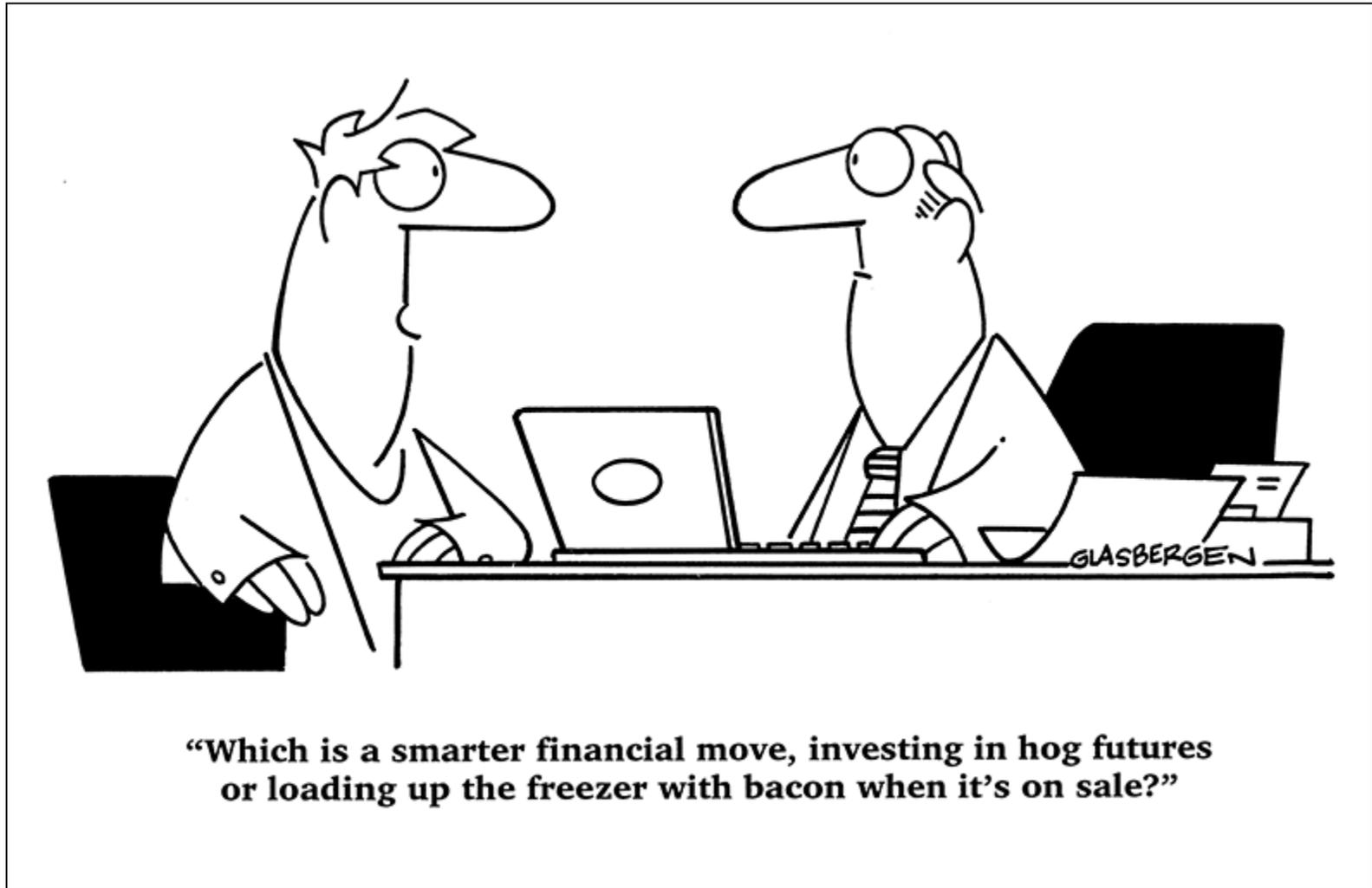






Current Market Themes

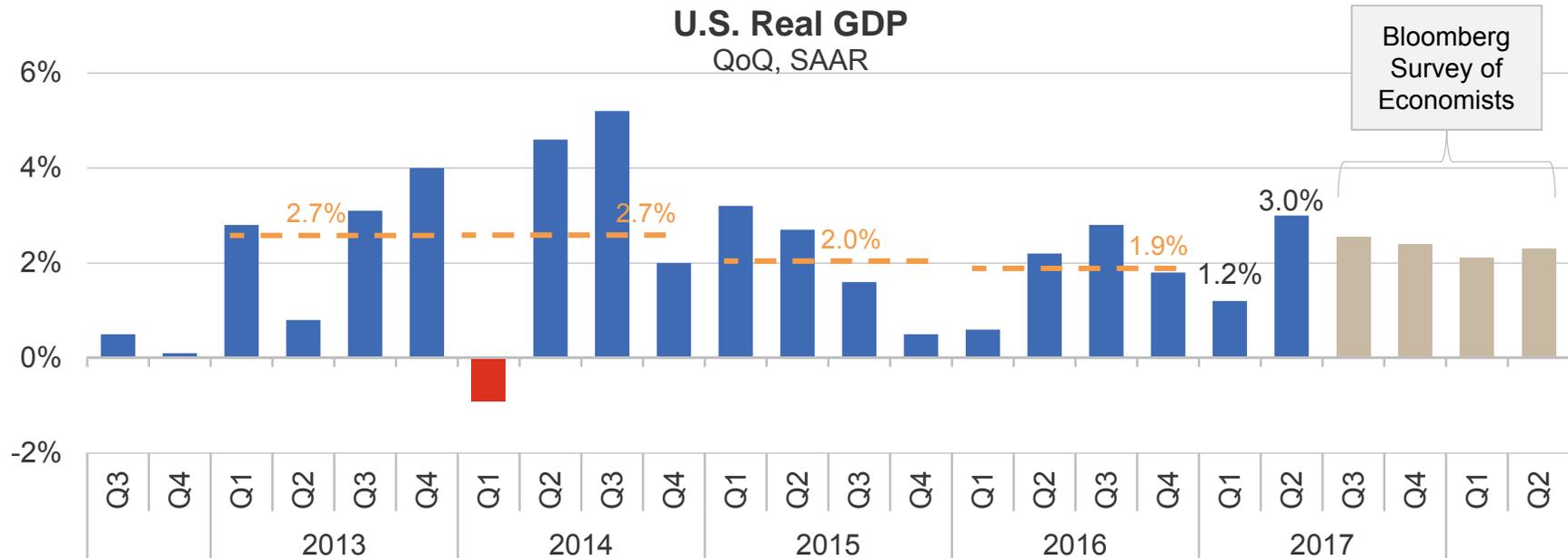
- ◆ U.S. economic conditions are characterized by:
 - Moderate economic growth despite a rebound in GDP growth in Q2.
 - Continuing labor market strength, but with only modest wage growth.
 - Muted inflation pressures.
- ◆ Short-term U.S. Treasury yields react to debt ceiling uncertainty.
- ◆ Short Treasury rates (2 years and under) moved higher following the Federal Reserve's rate hikes in March and June, but longer-term yields fell due to moderating inflation expectations.
 - Fed officials still forecast one more rate hike in 2017, according to the June "dot plot", although the recently weakening inflation data is making the case less compelling.
 - Market participants expect an announcement on a change in the FOMC balance sheet reinvestment plan soon.
- ◆ Geopolitical risks, with headlines from North Korea, have caused volatility to return to markets.
- ◆ The global growth outlook is brightening, led by the Euro-area.





U.S. Economy in 2017

- Gross domestic product increased at an annualized rate of 3.0% in the second quarter of 2017, the fastest pace since 2015. Growth has averaged 2.2% over the last four quarters.
- The acceleration in Q2 GDP reflected positive contributions from personal consumption, nonresidential private investments, exports and federal government spending, offset by negative contributions from residential fixed investments, imports and state and local government spending.



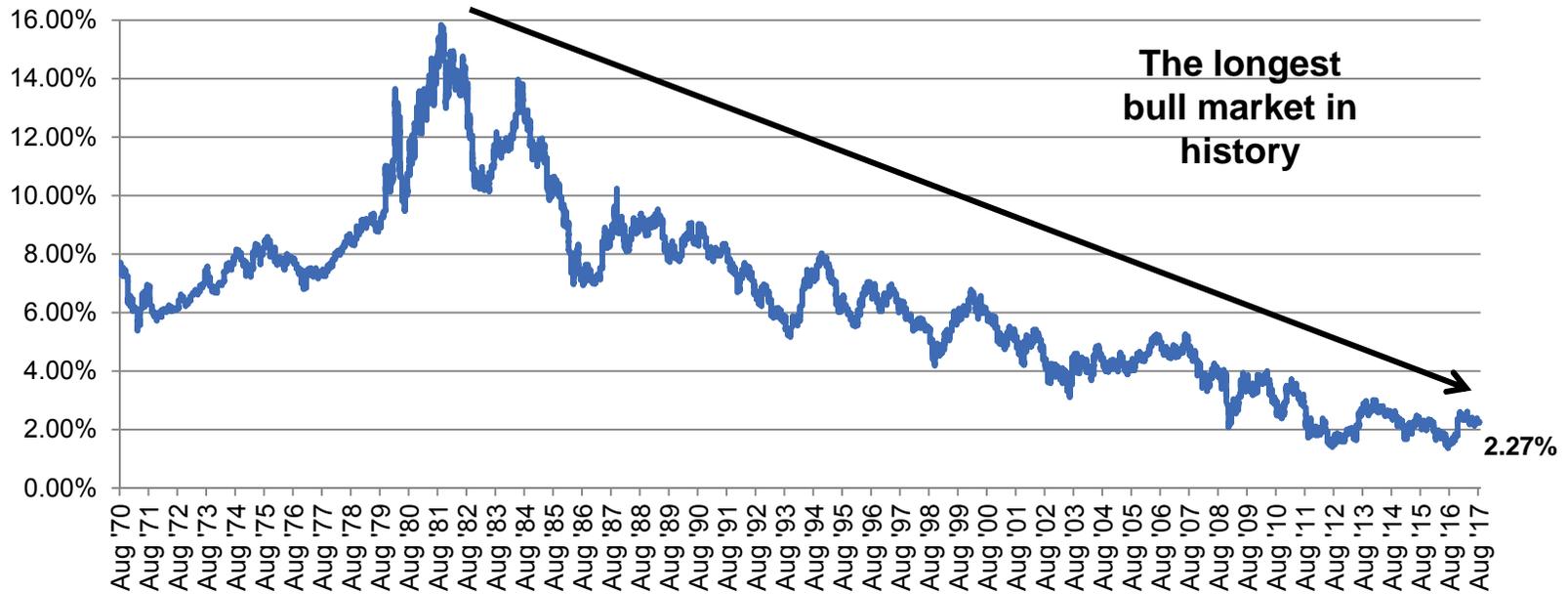
Source: Bloomberg, as of August 2017. SAAR is seasonally adjusted annualized rate. Orange denotes rolling four-quarter averages.

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Long-Term Rate History

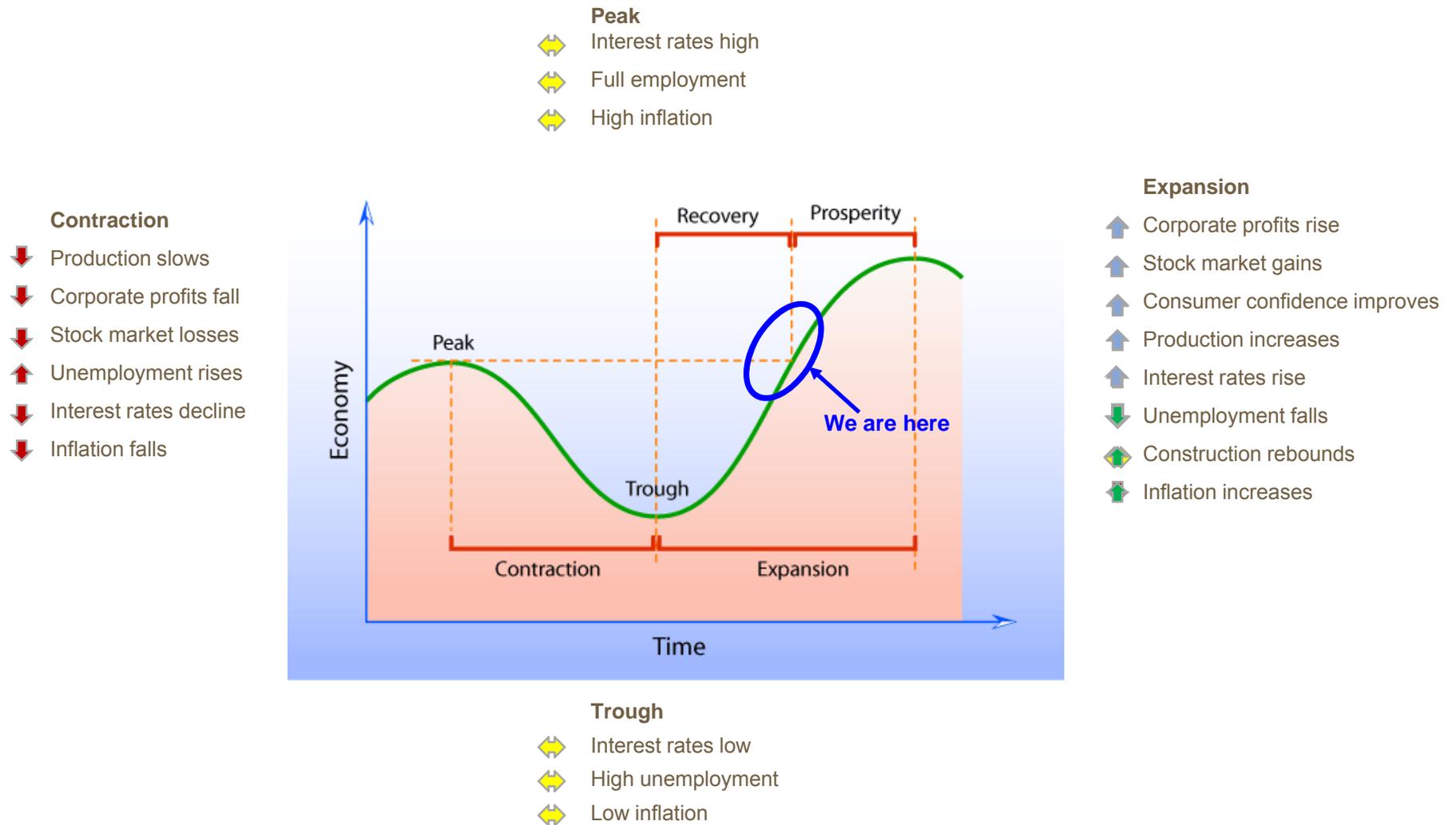
10- Year Treasury Yields August 1970 through August 2017



Source: Thomson Reuters



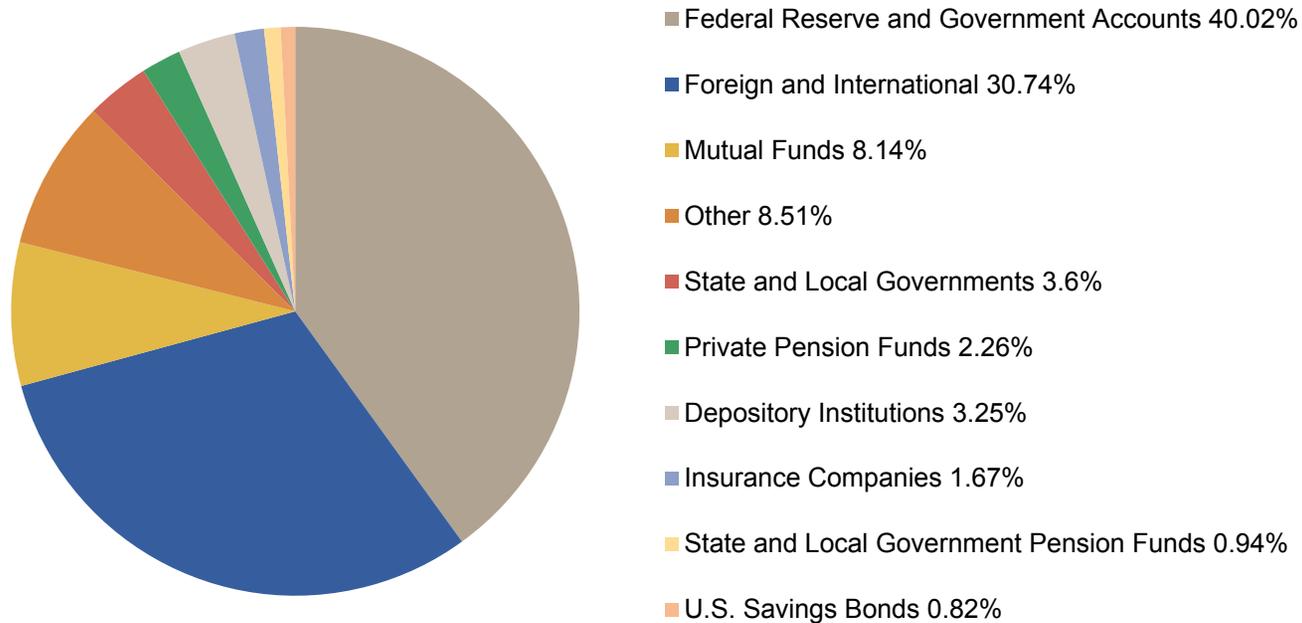
Current Economic Conditions and the Business Cycle





United States' National Debt

● The United States' national debt is \$20.1 trillion. With a population of over 318 million people, the debt burden is greater than \$63,200 per person. Below is a breakdown of the ownership of national debt by sector:

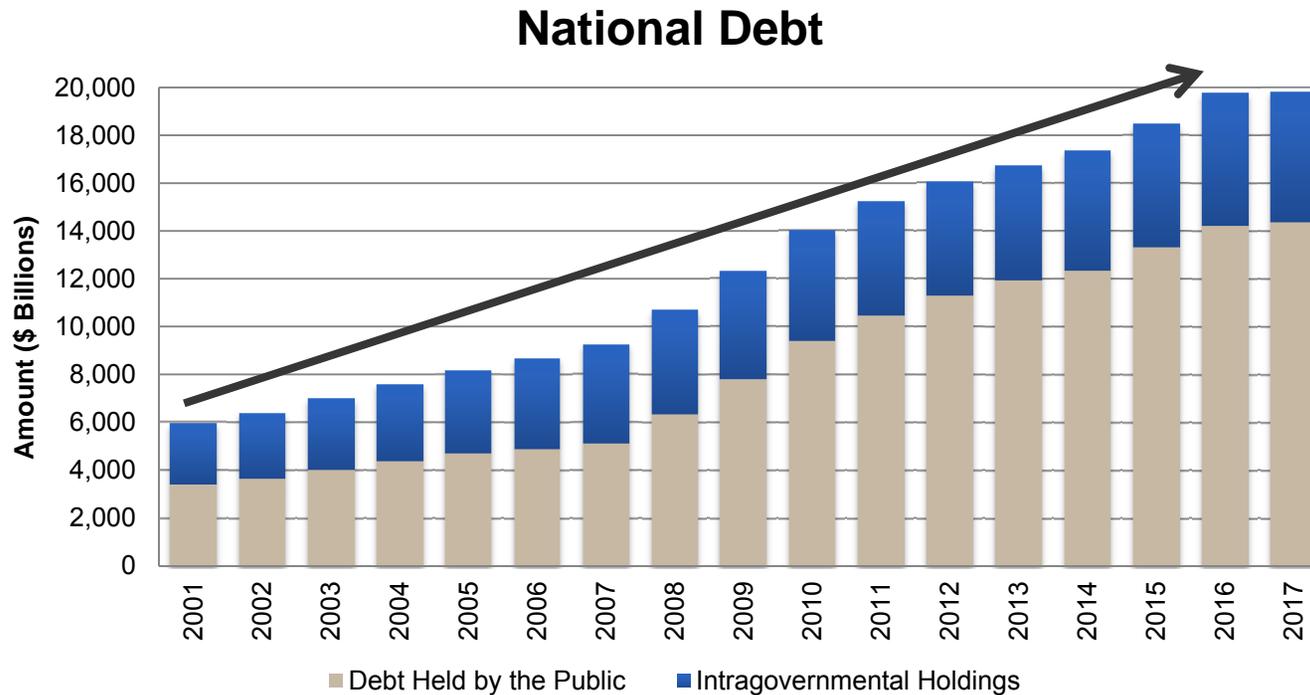


Source: Federal Reserve System



Preparing for the Next Challenges

- Ultimately, there will be a price for all the federal help
 - Drastically climbing federal debt and guarantees
 - Debt up 146% in the past 10 years



Source: Federal Reserve System



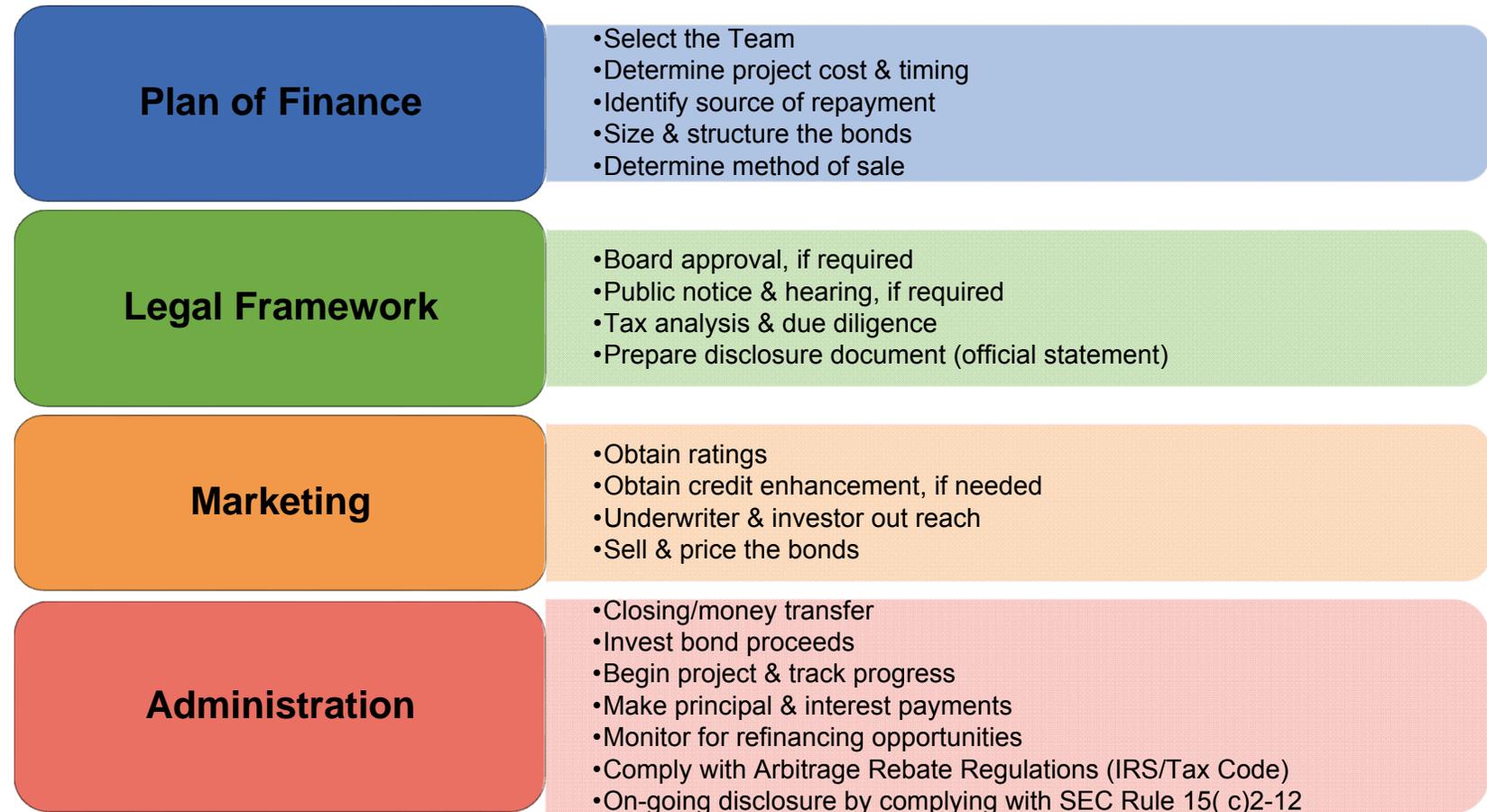


Debt Issuance Process





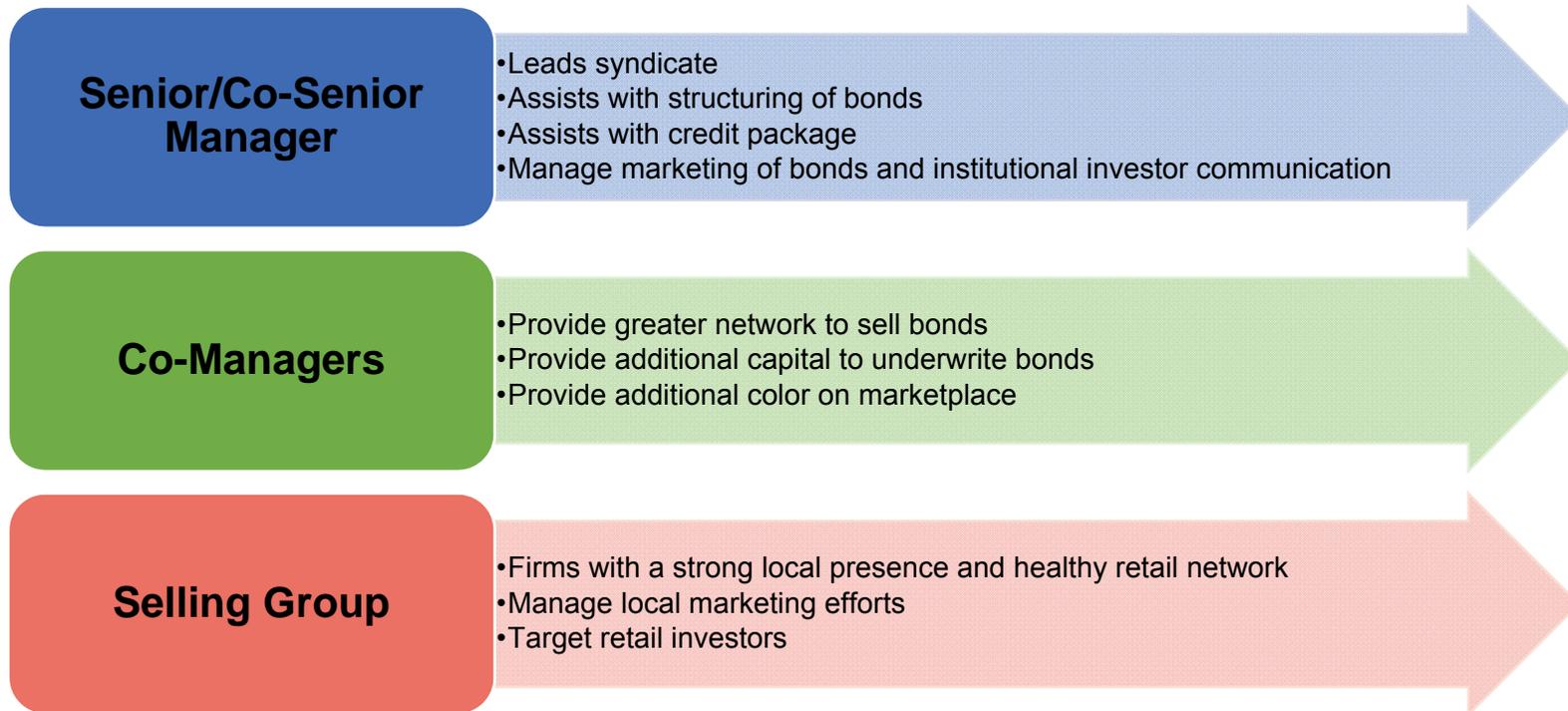
Overview of Debt Issuance Process





Syndicate of Underwriters

- ◆ Using a syndicate of underwriters can greatly improve the sale of bonds
 - Individual firms may lack the ability to underwrite entire transactions on their own
 - Multiple firms can be strategically organized to garner broader retail interest





Rating Agencies

• Credit rating agencies are firms that analyze the probability of the debt instrument returning all of the principal to the investor

• Credit considerations may include:

- Management, governance and business strategy
- Market position
- Service area
- Financial position
- Debt and capital plan
- Legal framework

INVESTMENT GRADE RATINGS		
MOODY'S	S&P	FITCH
Aaa	AAA	AAA
Aa1	AA+	AA+
Aa2	AA	AA
Aa3	AA-	AA-
A1	A+	A+
A2	A	A
A3	A-	A-
Baa1	BBB+	BBB+
Baa2	BBB	BBB
Baa3	BBB-	BBB-



Methods of Selling Bonds

Competitive Sale

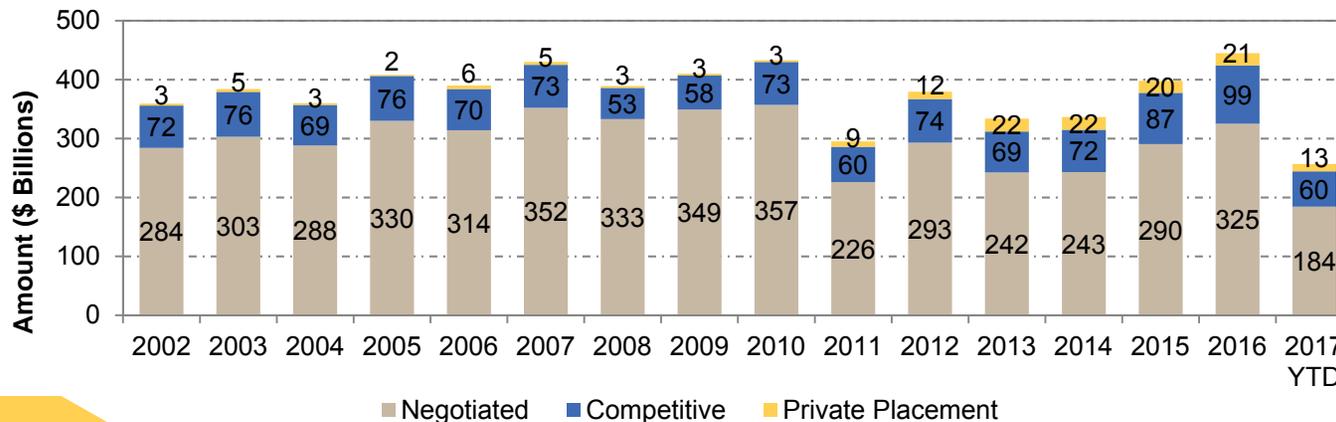
- Bonds are sold through a competitive bidding process to the underwriter (or group of underwriters) providing the lowest borrowing cost

Negotiated Sale

- Bonds are sold through negotiations directly with one or more underwriting firms (investment banks)

Private placement

- Bonds are sold directly to an investor (typically a commercial bank), without involving an underwriting firm



Questions?



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