A presentation to:
Illinois Community College CFOs

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Famous quote relevant for describing the Bond Market this year:

This is a new year. A new beginning. And things will change.

Taylor Swift
Confusing times in the Financial Markets

- Strong US Dollar
- Slowing World Economies
- Falling Oil Prices
- War on ISIS
- Shifting Power in Congress
- Problems in Europe

The US Bond markets have recently been impacted by non-domestic issues.
I. 2015 Economic Projections and Yield Curve Forecasts
2015 Monetary Policy Expectations

1. The FOMC formally ended the QE 3 bond buying program in October 2014. The market expects reinvestment of MBS pay downs to continue for at least 6-months after the first Fed Funds rate hike occurs.

2. The Fed Funds Futures market is pricing in the first **Fed Funds rate hike** in Q1 2016. Economists now expect the first hike to occur at the September 2015 FOMC meeting.

3. Uncertainty remains about the FOMC’s concern about the lack of success in obtaining the **2% PCE Core Inflation goal** before raising rates. Chair Yellen describes the current deviation as “transitory”.

4. The composition of the FOMC board changed this year and is now believed to contain **more dovish voting members** vs. 2014.

5. Republican control of the Congress increases the likelihood that Chair Yellen will increase rates this year. In recent years the GOP has sought to curtail the current independence of the Fed (i.e. the **audit the Fed** movement). Increased Republican clout also lessens the possibility of a potential QE 4 should the US economy soften.
Length of time with unchanged Fed Funds rate

The FOMC has kept the Fund Rates unchanged for a record 76 months

Source: Bloomberg 4-2-15
Economists are now expecting an initial Fed Funds hike in September 2015, and then a measured subsequent 25 bp hike at every other FOMC meeting (December) this year. This would put the Fed Funds rate at 0.75% by year-end which is roughly consistent with the FOMC’s “dot plot median” of 0.625%.

Fed Fund Futures are pricing in the first Fed Funds rate hike in 1st Qtr 2016.

### Consensus 2015 Interest Rate and Yield Curve Forecast

<table>
<thead>
<tr>
<th>Rate/Date</th>
<th>Q1 2015</th>
<th>Current</th>
<th>Q2 2015</th>
<th>Q3 2015</th>
<th>Q4 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fed Funds -Target</td>
<td>0.25%</td>
<td>0.25%</td>
<td>0.30%</td>
<td>0.55%</td>
<td>0.80%</td>
</tr>
<tr>
<td>3-Mo LIBOR</td>
<td>0.27%</td>
<td>0.27%</td>
<td>0.42%</td>
<td>0.64%</td>
<td>0.91%</td>
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<tr>
<td>2-Yr Treasury</td>
<td>0.56%</td>
<td>0.55%</td>
<td>0.88%</td>
<td>1.11%</td>
<td>1.38%</td>
</tr>
<tr>
<td>10-Yr Treasury</td>
<td>1.92%</td>
<td>1.90%</td>
<td>2.17%</td>
<td>2.38%</td>
<td>2.57%</td>
</tr>
<tr>
<td>30-Yr Treasury</td>
<td>2.54%</td>
<td>2.52%</td>
<td>2.82%</td>
<td>2.99%</td>
<td>3.18%</td>
</tr>
<tr>
<td>2-10 Yr Spread</td>
<td>+136 bp</td>
<td>+135 bp</td>
<td>+129 bp</td>
<td>+127 bp</td>
<td>+119 bp</td>
</tr>
<tr>
<td>10-30 Yr Spread</td>
<td>+62 bp</td>
<td>+62 bp</td>
<td>+65 bp</td>
<td>+61 bp</td>
<td>+61 bp</td>
</tr>
</tbody>
</table>

Source: Bloomberg on 4-2-15
Consensus 2015 Economic Forecast

<table>
<thead>
<tr>
<th>Forecasting Party</th>
<th>Real GDP (YoY %)</th>
<th>Core PCE (YoY %)</th>
<th>Unemployment %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consensus</td>
<td>3.00%</td>
<td>1.40%</td>
<td>5.4%</td>
</tr>
<tr>
<td>FOMC</td>
<td>2.50%</td>
<td>1.35%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>3.30%</td>
<td>1.20</td>
<td>5.1%</td>
</tr>
<tr>
<td>JP Morgan</td>
<td>2.70%</td>
<td>-</td>
<td>5.2%</td>
</tr>
<tr>
<td>Goldman Sachs</td>
<td>2.90%</td>
<td>1.10%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Deutsche Bank</td>
<td>3.30%</td>
<td>1.60%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Barclays</td>
<td>2.70%</td>
<td>1.50%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

Source: Bloomberg on 4-2-15

• Most forecasters are expecting a moderately growing economy during 2015 with low inflation and continuing improvement in the unemployment rate.

• Most economists are now cutting their Q1 2015 Real GDP forecasts to reflect the recent flurry of weaker than expected numbers, combined with poor weather in many parts of the country. Expectations now range between +0.2%–+2.2%.
Q1 Real GDP Economic Projections

The Street is expecting Q1 Real GDP to remain steady vs. last quarter.

<table>
<thead>
<tr>
<th>Current US Real GDP Forecasts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 2015</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Street Consensus</td>
</tr>
<tr>
<td>Bank of America</td>
</tr>
<tr>
<td>Barclays</td>
</tr>
<tr>
<td>Goldman Sachs</td>
</tr>
<tr>
<td>JP Morgan</td>
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<tr>
<td>Wells Fargo</td>
</tr>
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</table>

Source: Bloomberg on 3-25-15

Wall Street Economists are forecasting a mean Real GDP growth rate of 2.2% (quarter over quarter) for Q1 2015. This would match the growth rate experienced during Q4 2014.
The new Atlanta Fed’s GDPNow model is intended to provide a “nowcast” of their official updated estimate of Real GDP after each official economic release. Their estimate of Real GDP for Q1 has fallen sharply from 2.3% in early February to 0.2% currently.
II. Bond Market Themes for 2015
1) Position for flatter yield curve

- Last time the FOMC tightened monetary policy in 2004, the 2-Year sold off by 100 bp during the 6-month period before the first rate hike, and the 2s/10s curve flattened by 47 bp (from +237 to +190).

- We recommend investors carefully monitor the 2-Year Treasury yield during this current cycle. The current strong 10-Year technical factors could cause the upcoming yield curve flattening to be greater than the 2004-06 rate hike cycle.

Source: Bloomberg on 4-2-15
1) Position for flatter yield curve (continued)

**Portfolio Bullet, Ladder, or Barbell Strategies:**

Portfolio strategy and bond level composition are, of course, a function of a variety of factors including desired portfolio duration, investment guidelines, and overall risk tolerance. However, here are some general thoughts on this topic.

- **Short-Duration Accounts** (<=3-Yr Duration)- despite the recent curve flattening, the short-end remains steep, and therefore according to Yield Book analysis 12-month returns run to the forward curve still favor Bullet portfolios over Laddered (equally weighted 1-5 ladders) and Barbells (50% weighting of 1 and 5-Year bonds).

- **Intermediate Duration Accounts** (5-Yr Duration)-the same analysis shows Barbell portfolios (50% 1 and 50% 10-Year Bonds) outperforming both Laddered (equally weighted 1-10 Ladders) and 5-Year Bullet portfolios.

Accounts with uncertain views on yield curve positioning may want to pursue Laddered strategies since they generate intermediate level returns (that is the returns fall between those of the bullet and barbelled portfolios) across a variety of yield curve scenarios.

Source: Yield Book on 1/22/15
2) US Dollar & Inflation important in 2015

G-10 Interest rate differentials favor US Bonds

- Strong $
  - Reduces US Export Sales
  - Cuts imported Good Prices

- Lower exports could raise US unemployment

- A Strong US Dollar could impact the timing of the 1st FOMC rate hike

- Lowers US Inflation Expectations

- Reduces US Real GDP

- Ongoing below target inflation could result in the FOMC delaying their first Fed Funds rate move.

- Falling Equity prices due to reduced earnings from declining exports sales can result in lower interest rates due to a slower economic growth, which stems-from “flight to quality” buying of the US Dollar and US Treasuries.
3) The New “normal” = lower long-term rates?

Given the post Credit Crisis decline in 10-Yr Real Rates, an economy which has grown at a modest (sub 3%) rate and low expected future inflation, combined with strong demand from overseas (carry trade) buyers and long-duration domestic pension fund (LDI) investors, the new normal for the long-end may be 3-4% rather than the historical 5-6%.

Source: Bloomberg on 1/22/15
4) Expect more interest rate & spread volatility

Merrill Lynch Interest Rate Option Volatility Index (MOVE)

• Despite rising from mid-2014 lows (around the time of the global oil price drop) the MOVE index remains at relatively low levels. Pundits expect interest rate volatility to increase as the FOMC gets closer to making a rate move.

• Additionally, the Volcker Rule and the new bank LCR rules prevents broker dealers from carrying large non—liquid trading inventories. Thus, liquidity concerns could be exaggerated during any prolonged market sell-off.
5) MBS Convexity could worsen this year

The Obama Administration and FHA Chief Mel Watt are trying to ease Mortgage Credit Standards as a way of stimulating US Housing demand.

Recent proposals include the following:
1. Decreasing the annual Mortgage Insurance Premium (MIP) on FHA/GNMA (GSE) loans from 1.35% annually to 0.85%. The intent is to attract more first time home borrowers.
2. Lowering the minimum acceptable down payment on Fannie Mae/Freddie Mac loans from 5% to 3%.
3. Attempting to limit the mortgage lender risk of GSE “put-backs” option due to minor loan errors or omissions.

The potential impact of these proposals is higher loan issuance and refinancing volumes, and an MBS market with a less favorable convexity profile.
III. Municipal Bond Market Relative Value & Outlook
4 Recent Municipal Bond Market Trends
1) Muni Market Yield Curve Flattening

AAA (GO) Yield Curve (30-Years- 1-Year) flattening trend continues

The Municipal Bond Yield Curve has flattened significantly over the past year, and may begin to look less attractive to Retail Investors this year.
1) Muni Curve Flattening

The Muni curve has flattened less than the Treasury curve, and the 10-20 year part of the curve has cheapened most vs. Treasuries.
1) Muni Curve Flattening: Supply Impact

Higher supply in the 11-20 year maturities has led to a relative cheapening on this part of the Muni curve.

Source: JP Morgan
2) Current Market Technical factors supportive

Mutual Fund (retail) inflows have been consistently positive since Mid-2014

Source: ICI.org 3-30-15
Muni Bond issuance has been modest since 2012.
2) Current Market Technical factors supportive

Muni Bond Sector Net Issuance $ Billions

Issuance over the last year is net negative after adjusting for maturities & calls.

Source: Bloomberg 3-30-15
3) Credit Trends are Solid

According to Citicorp data, the majority of the Muni Bond universe is rated Single-A and more than 98% is of high-quality or IG rated.
3) Credit Trends are Solid

Muni Bonds have a better credit track record with less defaults and fewer downgrades than Corporate Bonds.
4) Municipal Bond Total Returns Attractive

The S&P Municipal Bond Index has outperformed the broad taxable bond index (Citigroup Broad Investment-Grade or BIG Index) during 3 of the past 4 years.

Source: Citigroup, S&P
IV. 4 Potential Muni Bond Sector Concerns
1) Underperformance due to higher rates

• During last Rate Hike Cycle Municipal Bond Yields fell

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Change in Fed Funds Rate</th>
<th>Change in BBB Muni Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2004-June 2006</td>
<td>+ 4.25%</td>
<td>-0.42%</td>
</tr>
</tbody>
</table>

Source: Bloomberg

In the last tightening cycle, the Muni curve flattened and the Muni Bond market outperformed the broad taxable indices.
1) Underperformance due to higher rates

- **Muni Market has a high % of high-coupon Premium-Priced Bonds**

Muni Bond Market Coupon Distribution

High-Coupon bonds have shorter durations than par or discount bonds and often outperform when interest rates rise
2) Tax Reform reducing Muni Bond deductibility

President Obama proposed cutting the Muni deduction in his last three budget proposals. However, given the current political divide, most pundits don’t expect any tax reform to pass Congress before 2017.

Democrats don’t have the votes to reform the Muni market, and Republicans don’t have enough votes to reform the tax code without Democratic support since the GOP doesn’t have enough votes in the Senate to override a Presidential veto.
3) Concerns about Credit Risk – Bankruptcies & Pensions

Very few credits have been impacted by these issues:

**Bankruptcy Credits:**
- Stockton, CA
- San Bernardino, CA
- Detroit, MI
- Jefferson Cnty, AL
- Central Falls, RI

**Pension Problem Credits:**
- City of Chicago
- State of Illinois
- State of New Jersey
- Puerto Rico

Many investors take any widening on the above “headline risk” publicity as a buying opportunity to add to high-quality Municipal Bond exposure.
4) Risk of housing based double-dip recession

Flat to rising home prices are important for Muni credit since property taxes are a key source of revenue for many Municipal credits.

Case-Shiller 20-City Home Price Index

Housing prices have been in recovery over the last 24-36 months and could continue to be supported by an expanding job market and low interest rates.
V. Final Thoughts - Municipal Bonds
Muni-Treasury Ratios currently attractive

Muni-Treasury Ratios have cheapened across the curve since 2014.
What does 100% Muni-Treasury Ratio Mean?

- Assume 10-Yr US Treasury yields 1.90%
- AAA rated Muni Bond also yields 1.90%

- Investor in 28% bracket after tax yield - Trsy: 1.37%
- Investor in 33% bracket after tax yield - Trsy: 1.27%
- Investor in 39.6% bracket after tax yield - Trsy: 1.15%
- AAA Muni Bond after tax yield: 1.90%

- AAA Muni Bond tax equil. yield - 33% bracket: 2.83%
- AAA Muni Bond tax equil. Yield - 39.6% bracket: 3.15%
Buying Your Own Bonds

Kyle W. Harding
Partner
Chapman and Cutler LLP
Public Funds Investment Act

- Investments of public funds by non-home rule units in Illinois, including community college districts, are generally limited to those securities and investments enumerated in the Public Funds Investment Act.

- The Investment Act authorizes the following five categories of investments:

  1. bonds, notes, certificates of indebtedness, treasury bills or other securities guaranteed by the full faith and credit of the United States of America as to principal and interest;

  2. bonds, notes, debentures, or other similar obligations of the United States of America or its agencies;

  3. interest-bearing savings accounts, interest-bearing certificates of deposit or interest-bearing time deposits;

  4. short term obligations of corporations organized in the United States with assets exceeding $500,000,000 if (i) such obligations are rated at the time of purchase at one of the 3 highest classifications established by at least 2 standard rating services and which mature not later than 270 days from the date of purchase, (ii) such purchases do not exceed 10% of the corporation’s outstanding obligations and (iii) no more than one-third of the governmental unit’s funds are invested in short term obligations of corporations; or

  5. money market mutual funds registered under the Investment Company Act of 1940, provided that the portfolio of any such money market mutual fund is limited to obligations described in paragraph (1) or (2) above.
Public Funds Investment Act – 30 ILCS 235/2(a-1)

- (a-1) In addition to any other investments authorized under this Act, a municipality, park district, forest preserve district, conservation district, or a county may invest its public funds in interest bearing bonds of any county, township, city, village, incorporated town, municipal corporation, or school district, of the State of Illinois, of any other state, or of any political subdivision or agency of the State of Illinois or of any other state, whether the interest earned thereon is taxable or tax-exempt under federal law. The bonds shall be registered in the name of the municipality, park district, forest preserve district, conservation district, or county or held under a custodial agreement at a bank. The bonds shall be rated at the time of purchase within the 4 highest general classifications established by a rating service of nationally recognized expertise in rating bonds of states and their political subdivisions.

- Public Act of 098-0390.

- Effective 8/16/13.
Public Funds Investment Act – 30 ILCS 235/2(a-1) (continued)

- (a-1) In addition to any other investments authorized under this Act, a municipality, park district, forest preserve district, conservation district, county, or other governmental unit may invest its public funds in interest bearing bonds of any county, township, city, village, incorporated town, municipal corporation, or school district, of the State of Illinois, of any other state, or of any political subdivision or agency of the State of Illinois or of any other state, whether the interest earned thereon is taxable or tax-exempt under federal law. The bonds shall be registered in the name of the municipality, park district, forest preserve district, conservation district, county, or other governmental unit, or held under a custodial agreement at a bank. The bonds shall be rated at the time of purchase within the 4 highest general classifications established by a rating service of nationally recognized expertise in rating bonds of states and their political subdivisions.

- “Governmental unit” has the same meaning as in the Local Government Debt Reform Act and includes community college districts.

- Public Act 098-0297.

- Effective 1/1/14.
Investment of Municipal Funds Act – 50
ILCS 340/1

- Every county, park district, sanitary district, or other municipal corporation, by resolution or ordinance may use the money in the special funds in the purchase of municipal bonds issued by the county, park district, sanitary district, or other municipal corporation, possessing the funds and representing an obligation and pledging the credit of that county, park district, sanitary district, or other municipal corporation, or bonds and other interest bearing obligations of the United States, of the State of Illinois, or of any other state or of any political subdivision or agency of the State of Illinois or of any other state, whether the interest earned thereon is taxable or tax-exempt under federal law.

- All interest upon these bonds or obligations and all money paid in redemption of these bonds or obligations or realized from the sale thereof, if afterwards sold, shall at once be credited to and placed in the particular fund used to purchase the specified bonds or obligations.

- This Act does not apply to cities, villages, and incorporated towns.
1. Issue Debt Certificates purchased by the District’s Educational Fund.
2. Debt Certificate proceeds are deposited in the Project Fund and used to pay costs of the Project.
3. Money from the District’s O&M Fund repays the Educational Fund (principal and interest on the Debt Certificates).
INVESTMENT POLICY

- The Investment Act requires each governmental unit to develop and implement a written investment policy for the investment of public funds.

- The policy must include or address the following:
  - a listing of authorized investments;
  - investment guidelines that are appropriate to the nature of the funds, the purpose for the funds, and the amount of the public funds within the investment portfolio;
  - a policy regarding diversification of the investment portfolio that is appropriate to the nature of the funds, the purpose for the funds, and the amount of the public funds within the investment portfolio;
  - identification of the chief investment officer who is responsible for establishing the internal controls and written procedures for the operation of the investment program;

- The policy must be adopted by the corporate authority of each governmental unit and made available to the public at the Public Agency’s main administrative office.
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<table>
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<th>Are Not FDIC Insured</th>
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<tr>
<td>Are Not Insured By Any Federal Government Agency</td>
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