

State of Michigan Retirement Systems

# FIXED INCOME REVIEW

Investment Advisory Committee Meeting

March 9, 2017



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## EXECUTIVE SUMMARY

### Performance

| MPSERS Plan            | 1-Year | 3-Years | 5-Years | 7-Years | 10-Years |
|------------------------|--------|---------|---------|---------|----------|
| Long-Term Fixed Income | 5.7%   | 4.3%    | 3.6%    | 4.7%    | 5.4%     |
| Barclays Aggregate     | 2.7%   | 3.0%    | 2.2%    | 3.6%    | 4.3%     |
| Peer Median Return     | 4.8%   | 3.6%    | 3.4%    | 4.9%    | 5.0%     |
| Rank vs. Peers         | 41     | 34      | 40      | 59      | 24       |

- Long-Term Fixed Income Division (LTFID) outperformed both the Barclay's Aggregate Index and its peer group over recent time periods. The portfolio's allocation to high yield credit, emerging market debt, and investment grade corporate bonds helped to generate this outperformance on a one-year basis. An overweight to structured securities also helped to generate outperformance over longer time periods.

### Strategy Update

- Allocation to LTFID has increased by \$223 million over the past twelve months. This increase has been invested primarily in high yield strategies.
- The Division continues to look to increase the overall rate of return by allocating to securities with attractive risk-adjusted yields when the market allows. The portfolio currently maintains an out-of-benchmark exposure to high yield credit managers (9.7% of portfolio assets) and securitized credit mandates (13.1% of portfolio assets). The portfolio also has a modest allocation to a global bond strategy (2.7% of portfolio assets). These strategies increase the credit risk of the portfolio, however, this risk is offset by relatively lower interest rate risk due to the portfolio's lower duration.
- The portfolio addresses liquidity concerns by maintaining an allocation to U.S. Treasuries and U.S. TIPS (20.2% of portfolio assets). The portfolio also had a 1.7% allocation to cash at the end of the quarter.
- The Division has increased its allocation to floating rate securities, including AAA CLO investments and investment grade floating rate corporate bonds. This allocation accounts for roughly 10% of the total portfolio and will protect the portfolio from rising short-term interest rates.
- As opportunities present themselves, the Division will look to diversify from Barclay's Aggregate and Barclay's Investment Grade Credit focused investment strategies. This is due to the relatively lower yields and longer durations of these benchmarks when compared with historical levels. These changes will occur at the margin as the overall characteristics of the fund will continue to meet the diversification requirements of a core bond portfolio.

### Market Environment and Outlook

- The year-over-year (YOY) change in U.S. Treasury yields was relatively small despite large interest rate movements during the 2016 calendar year. The yield movement of the

10-year U.S. Treasury highlights this volatility as it started the year with a yield of 2.27%, reached an all-time low of 1.36% in July, and ended the year at 2.45%. The slope of the yield curve was also volatile as the spread between the 2-year and 10-year Treasuries flattened by 47 bps during the first half of the year before ending up 3 bps higher on a YOY basis.

- The Federal Reserve increased short-term interest rates as they tightened monetary policy by 25 bps during their December 2016 FOMC meeting. The market projects two additional rate hikes during the 2017 calendar year.
- Investment grade credit spreads in the U.S. continued to narrow during the fourth quarter. Spreads ended the year at 123 bps. These levels have tightened by 43 bps YTD.
- High-yield spreads have decreased by 251 bps YTD, overcoming initial weakness during the first six weeks of the calendar year. Spreads ended the quarter at 409 bps after reaching a level of 830 bps in February. Energy spreads continued to drive the market, narrowing by 867 bps YTD to 430 bps.
- The BBB CMBS spreads remain elevated despite recent strong performance. Spreads ended the quarter 10 bps tighter at 473 bps. These spreads are 41 bps higher on a YOY basis.
- Inflation expectations remained contained in global developed markets but have increased from lower levels earlier in the year. The breakeven inflation expectation implied by the yield of the 10-year U.S. TIPS ended the quarter at 1.97%, in line with the 2% inflation target of the Federal Reserve. These inflation expectations bottomed at 1.2% earlier in the year. This increase in expectations has led to relative outperformance for TIPS over recent quarters.
- Interest rates in the U.S. continued to trade at higher levels than those in many developed markets. This has been driven by the relative strength of the U.S. economy as well as monetary tightening by the Federal Reserve. This tightening has been contrasted by quantitative easing and lower interest rates by many of the major global central banks. This relative yield pickup is highlighted by 10-year yields of 0.05% in Japan and 0.21% in Germany.
- The portfolio remains defensively positioned for interest rate increases. The duration remains short of the benchmark as we focus on intermediate securities. We have offset this short position by holding a larger allocation to securitized and corporate debt securities in order to increase the interest income of the portfolio.

## **Conclusion**

Given the current level and shape of the yield curve, it seems appropriate to focus on intermediate duration securities. This area of the yield curve offers the best risk-adjusted return in this environment. We will continue to target investments that offer attractive yield pick-up for the portfolio as we believe that price appreciation opportunities are limited in a low yield environment. We will also look to maintain our overweight to securitized assets and high yield bonds within the portfolio.

# SMRS

## Long-Term Fixed Income

12/31/16

| Markets                       | Amount  | Total          | % of Total   |
|-------------------------------|---------|----------------|--------------|
| <b>Core</b> (in millions)     |         |                |              |
| LTFID Internal                | \$4,993 |                |              |
| Dodge & Cox                   | 232     |                |              |
| <b>Total Core</b>             |         | <b>\$5,225</b> | <b>65.5%</b> |
| <b>Credit</b>                 |         |                |              |
| Prudential                    | \$219   |                |              |
| <b>Total Credit</b>           |         | <b>\$219</b>   | <b>2.7%</b>  |
| <b>Securitized Debt</b>       |         |                |              |
| Met West Securitized Ops      | \$414   |                |              |
| Principal CMBS                | 490     |                |              |
| Napier Park ABS Income        | 138     |                |              |
| <b>Total Securitized Debt</b> |         | <b>\$1,042</b> | <b>13.1%</b> |
| <b>High Yield</b>             |         |                |              |
| Columbia Management           | \$455   |                |              |
| Prudential High Yield         | 318     |                |              |
| <b>Total High Yield</b>       |         | <b>\$773</b>   | <b>9.7%</b>  |
| <b>Tactical</b>               |         |                |              |
| Pyramis                       | \$283   |                |              |
| Loomis Core Plus              | 215     |                |              |
| <b>Total Tactical</b>         |         | <b>\$498</b>   | <b>6.2%</b>  |
| <b>Global</b>                 |         |                |              |
| T. Rowe Global Multi-Sector   | \$214   |                |              |
| <b>Total Global</b>           |         | <b>\$214</b>   | <b>2.7%</b>  |

**TOTAL**

**\$7,971**

**100.0%**

Note: All dollar amounts are expressed in millions.

# SMRS

## Fixed Income Holdings Portfolio Characteristics

Benchmark: Barclays Aggregate

12/31/16

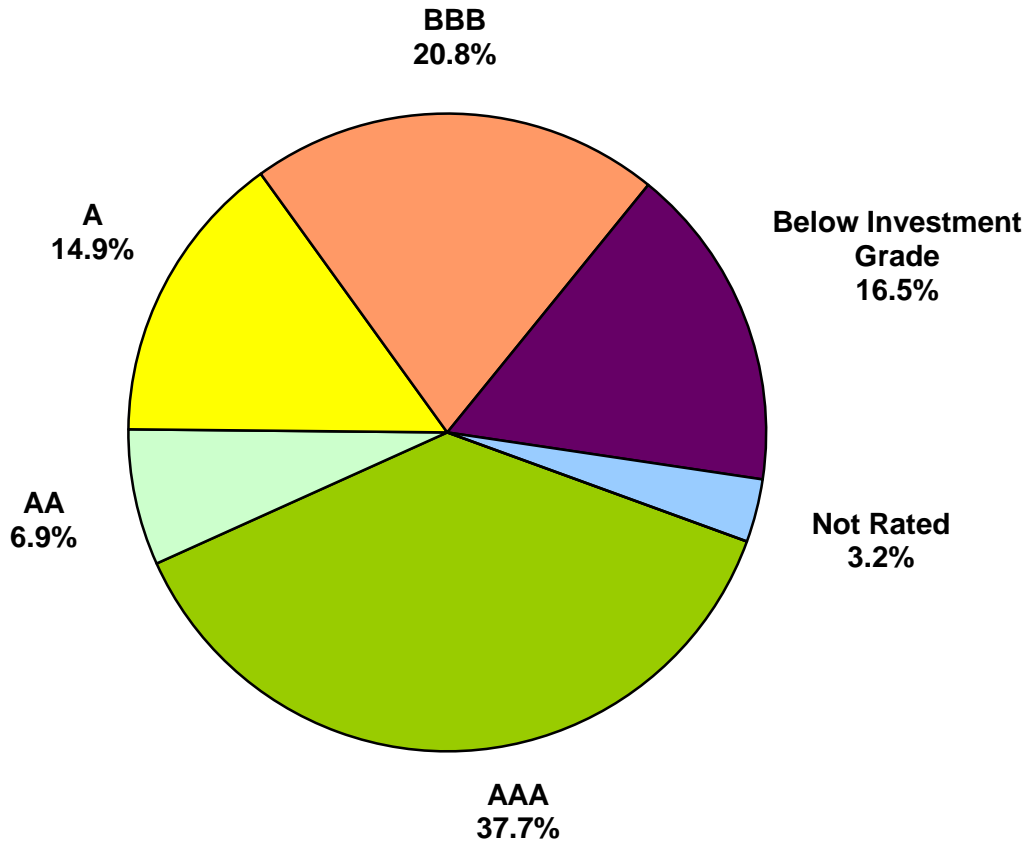
| <u>Characteristic</u>        | <u>Portfolio</u> | <u>Benchmark</u> |
|------------------------------|------------------|------------------|
| Average Life                 | 6.9              | 8.6              |
| Average Life w/Cash Equiv.   | 6.8              | 8.6              |
| Duration (Yrs)               | 5.1              | 5.9              |
| Duration (Yrs) w/Cash Equiv. | 5.0              | 5.9              |
| Coupon (%)                   | 3.4              | 3.2              |
| Yield to Maturity (%)        | 3.6              | 2.6              |
| Credit Rating                | A3/BBB+          | Aa2/AA-          |
| Volatility (%)               | 2.9              | 3.4              |
| Tracking Error               | 178bp            | 0                |
| Beta (vs S&P 500)            | -0.03            | -0.08            |

# SMRS

## Fixed Income By Rating

### Total U.S. Long-Term Fixed Income

#### 12/31/16



| <b>Market Value in Millions</b> |                       |                      |                      |                   |
|---------------------------------|-----------------------|----------------------|----------------------|-------------------|
| <b>12/31/16</b>                 |                       |                      |                      |                   |
|                                 | <u>Assets</u>         | <u>Percent</u>       | <u>Benchmark</u>     | <u>Difference</u> |
| AAA                             | \$3,003               | 37.7%                | 69.9%                | -32.2%            |
| AA                              | 547                   | 6.9%                 | 5.5%                 | 1.4%              |
| A                               | 1,188                 | 14.9%                | 11.0%                | 3.9%              |
| BBB                             | 1,658                 | 20.8%                | 11.9%                | 8.9%              |
| Not Rated                       | 258                   | 3.2%                 | 1.6%                 | 1.6%              |
| * Below Investment Grade        | 1,317                 | 16.5%                | 0.1%                 | 16.4%             |
| <b>Total Investments</b>        | <b><u>\$7,971</u></b> | <b><u>100.0%</u></b> | <b><u>100.0%</u></b> |                   |

\* Comprised of approximately 12.1% High Yield Credit and 4.4% High Yield RMBS/ABS

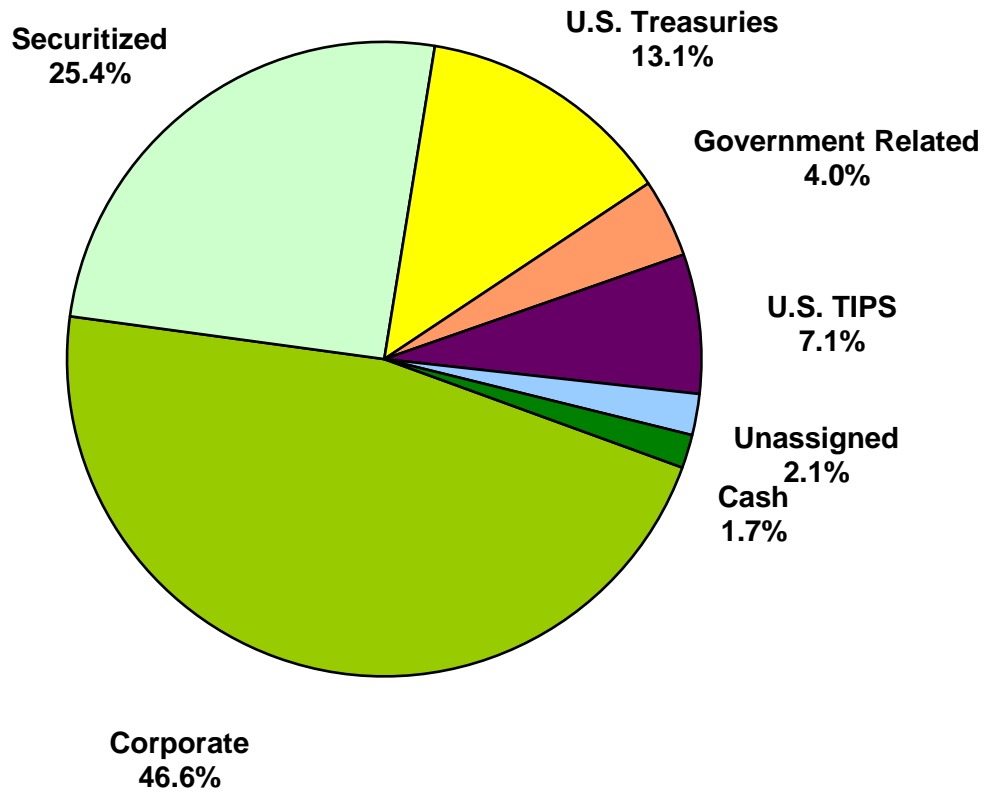
Benchmark: Barclays US Aggregate

# SMRS

## Fixed Income By Asset Type

### Total U.S. Long-Term Fixed Income

#### 12/31/16



| <b>Market Value in Millions</b> |                       |                      |                      |                   |
|---------------------------------|-----------------------|----------------------|----------------------|-------------------|
| <b>12/31/16</b>                 |                       |                      |                      |                   |
|                                 | <u>Assets</u>         | <u>Percent</u>       | <u>Benchmark</u>     | <u>Difference</u> |
| Corporate                       | \$3,714               | 46.6%                | 25.7%                | 20.9%             |
| Securitized                     | 2,026                 | 25.4%                | 30.4%                | -5.0%             |
| U.S. Treasuries                 | 1,047                 | 13.1%                | 36.2%                | -23.1%            |
| Government Related              | 316                   | 4.0%                 | 7.7%                 | -3.7%             |
| U.S. TIPS                       | 566                   | 7.1%                 | 0.0%                 | 7.1%              |
| Unassigned                      | 166                   | 2.1%                 | 0.0%                 | 2.1%              |
| Cash                            | 136                   | 1.7%                 | 0.0%                 | 1.7%              |
| <b>Total Investments</b>        | <b><u>\$7,971</u></b> | <b><u>100.0%</u></b> | <b><u>100.0%</u></b> |                   |

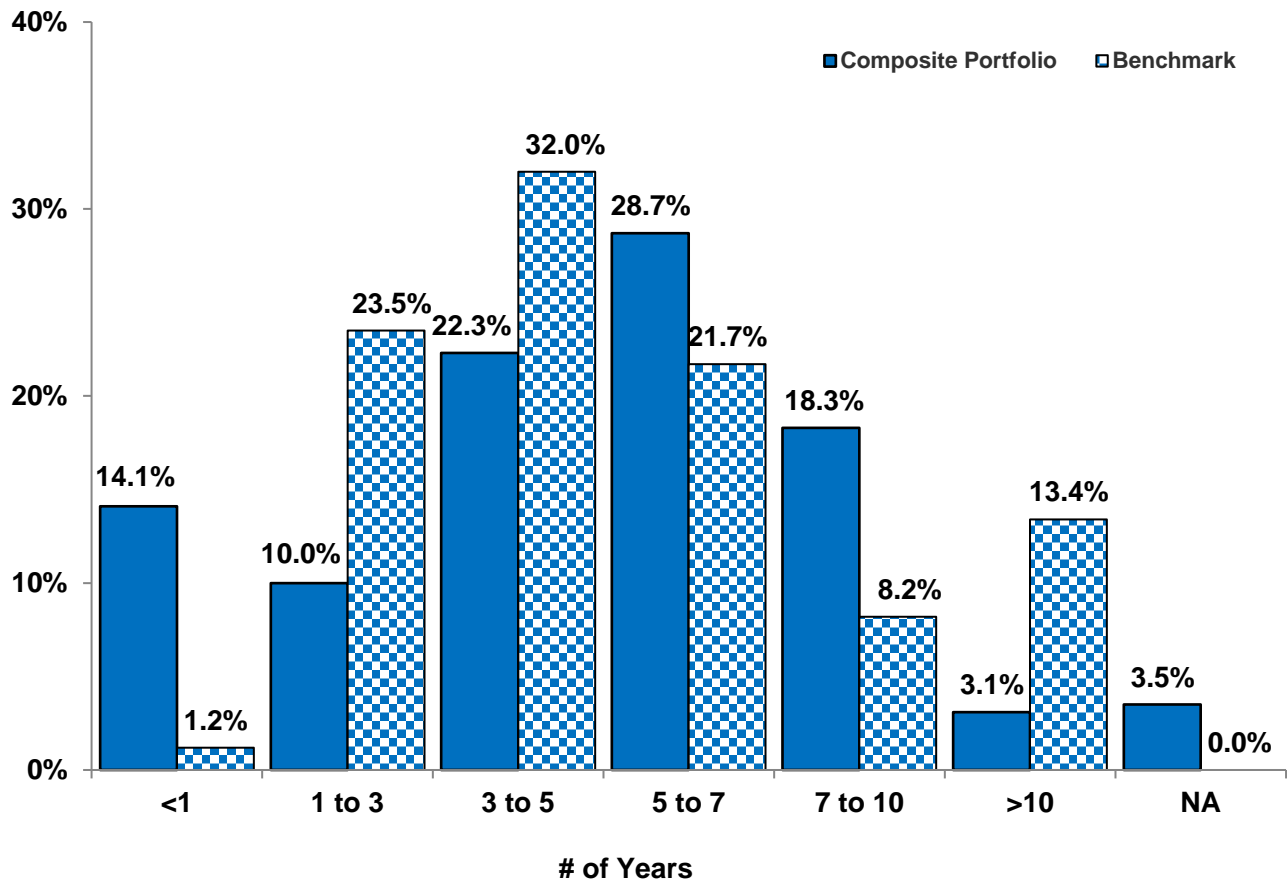
Benchmark: Barclays US Aggregate

# SMRS

## Duration Distribution

### Fixed Income Composite Versus Benchmark

#### 12/31/16



Source: Factset

| Market Value in Millions |                |                  |                  |                     |                     |
|--------------------------|----------------|------------------|------------------|---------------------|---------------------|
| Duration                 | Assets         | Portfolio Weight | Benchmark Weight | Portfolio Duration* | Benchmark Duration* |
| <1                       | \$1,124        | 14.1%            | 1.2%             | 0.2                 | 0.9                 |
| 1 to 3                   | 798            | 10.0%            | 23.5%            | 2.2                 | 2.0                 |
| 3 to 5                   | 1,782          | 22.3%            | 32.0%            | 4.3                 | 4.1                 |
| 5 to 7                   | 2,285          | 28.7%            | 21.7%            | 6.1                 | 5.8                 |
| 7 to 10                  | 1,456          | 18.3%            | 8.2%             | 8.0                 | 8.1                 |
| >10                      | 244            | 3.1%             | 13.4%            | 13.3                | 15.8                |
| NA                       | 282            | 3.5%             | 0.0%             | 0.0                 | 0.0                 |
| <b>Total</b>             | <b>\$7,971</b> | <b>100.0%</b>    | <b>100.0%</b>    | <b>4.8</b>          | <b>5.5</b>          |

\* Effective Duration



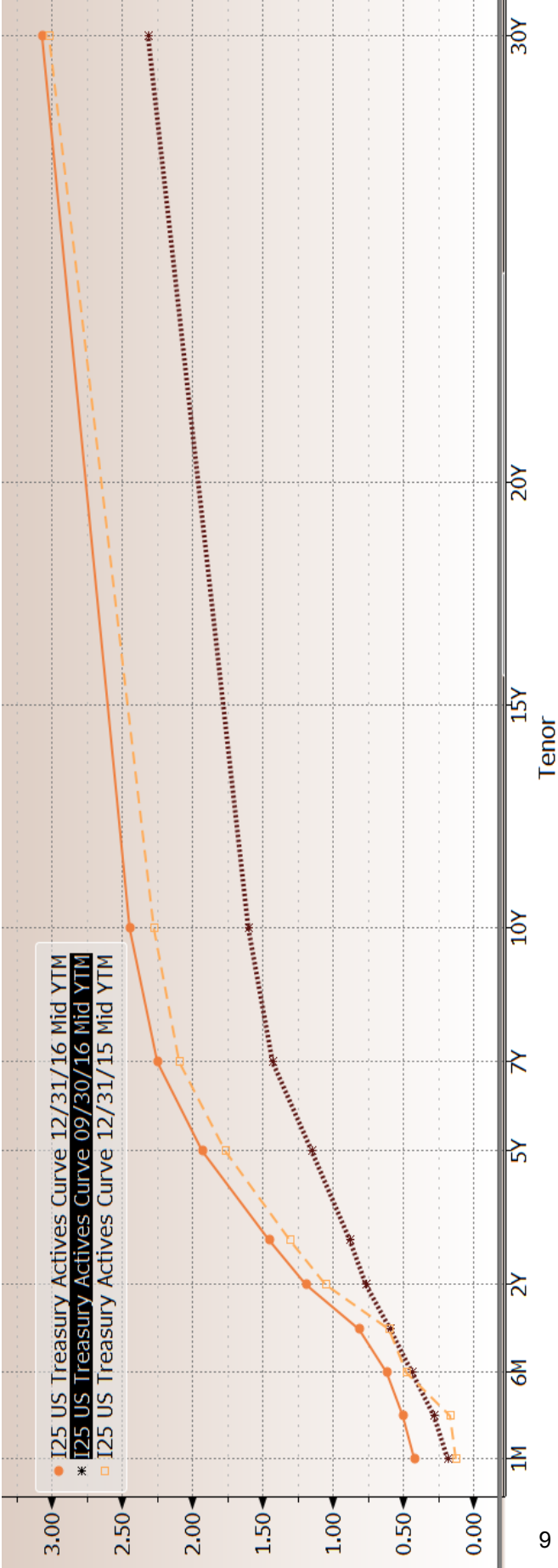
## SMRS Internal/External Manager Performance – Net of Fees

12/31/16

### Total Fixed Income Performance, Net of Fees (MPSERS)

|  | <u>Market Value</u>    | <u>1-Year</u> | <u>3-Years</u> | <u>5-Years</u> | <u>7-Years</u> | <u>10-Years</u> |
|--|------------------------|---------------|----------------|----------------|----------------|-----------------|
| <b>Total Fixed Income</b>                | <b>\$7,970,921,488</b> | <b>5.5%</b>   | <b>4.1%</b>    | <b>3.5%</b>    | <b>4.6%</b>    | <b>5.3%</b>     |
| <i>Barclays Aggregate Bond Index</i>     | <i>N/A</i>             | <i>2.7%</i>   | <i>3.0%</i>    | <i>2.2%</i>    | <i>3.6%</i>    | <i>4.3%</i>     |
| <b>Internal Fixed Income</b>             | <b>\$4,992,749,705</b> | <b>4.2%</b>   | <b>3.9%</b>    | <b>3.0%</b>    | <b>4.2%</b>    | <b>5.2%</b>     |
| <b>External Fixed Income</b>             | <b>\$2,978,171,783</b> | <b>7.7%</b>   | <b>4.4%</b>    | <b>4.2%</b>    | <b>5.2%</b>    | <b>5.2%</b>     |
| <b>MetWest Securitized Opportunities</b> | 414,157,966            | 4.4%          | 2.9%           | --             | --             | --              |
| <b>Principal CMBS</b>                    | 489,837,315            | 3.6%          | 4.7%           | 9.5%           | 14.2%          | --              |
| <b>Pyramis Tactical Bond Fund</b>        | 282,866,819            | 10.3%         | --             | --             | --             | --              |
| <b>Prudential Investment Grade</b>       | 219,198,690            | 6.8%          | 4.6%           | 4.7%           | 5.8%           | 6.4%            |
| <b>Dodge &amp; Cox Core</b>              | 232,403,484            | 5.7%          | 3.8%           | 3.9%           | 4.6%           | 5.3%            |
| <b>Loomis Sayles CorePlus</b>            | 214,800,292            | 7.1%          | 3.4%           | --             | --             | --              |
| <b>Napier Park ABS Income</b>            | 138,070,260            | 10.4%         | --             | --             | --             | --              |
| <b>T. Rowe Global Multi-Sector</b>       | 214,368,742            | N/A           | --             | --             | --             | --              |
| <i>Barclays Aggregate Bond Index</i>     | <i>N/A</i>             | <i>2.7%</i>   | <i>3.0%</i>    | <i>2.2%</i>    | <i>3.6%</i>    | <i>4.3%</i>     |
| <b>Columbia Management High Yield</b>    | 454,568,774            | 11.6%         | 5.3%           | --             | --             | --              |
| <b>Prudential High Yield</b>             | 317,899,441            | 13.3%         | 5.2%           | --             | --             | --              |
| <i>Barclays US HY BA/B 2% Cap</i>        | <i>N/A</i>             | <i>14.1%</i>  | <i>4.7%</i>    | <i>--</i>      | <i>--</i>      | <i>--</i>       |

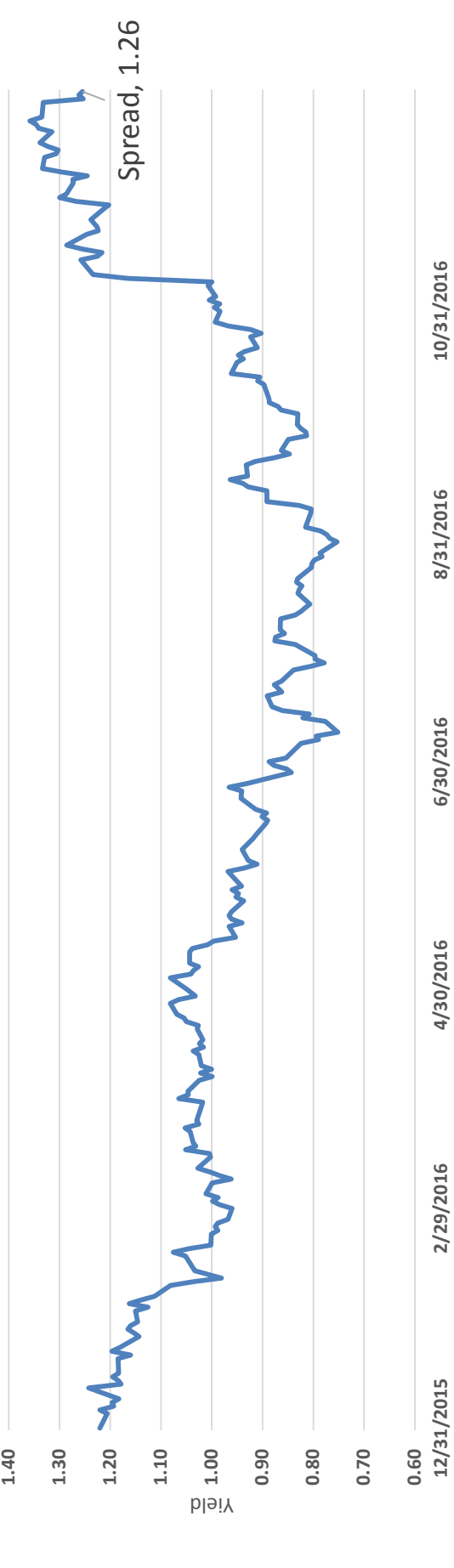
# U.S. Yield Movement



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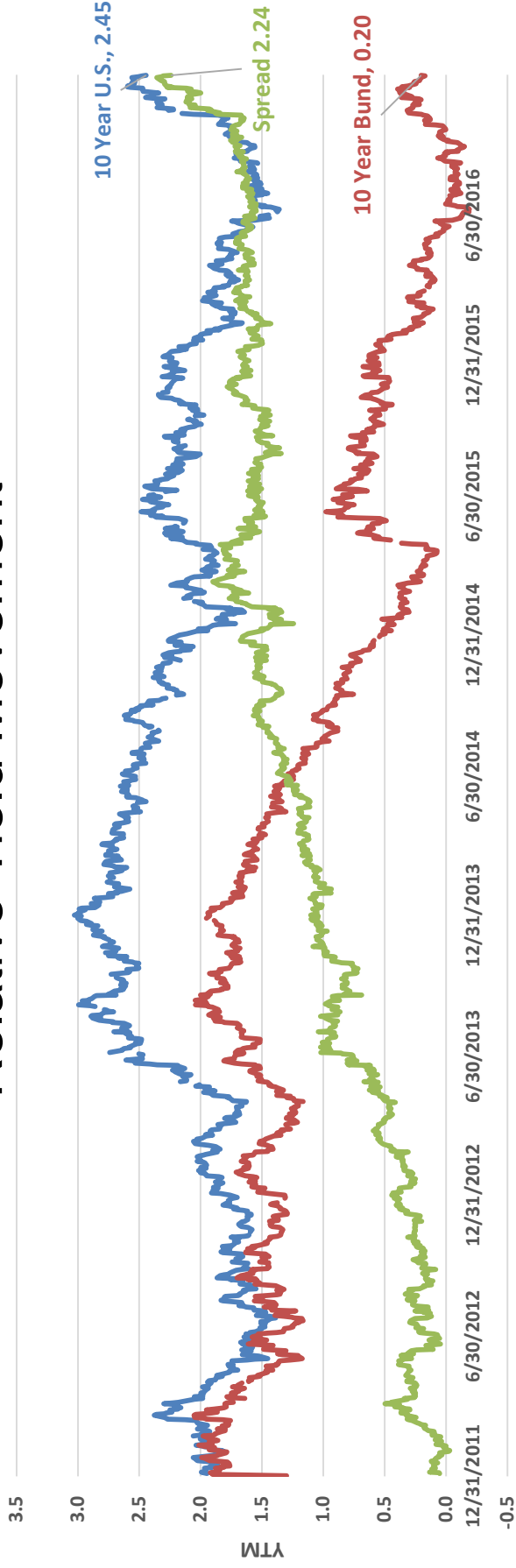
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# 2-Year/10-Year Yield Spread

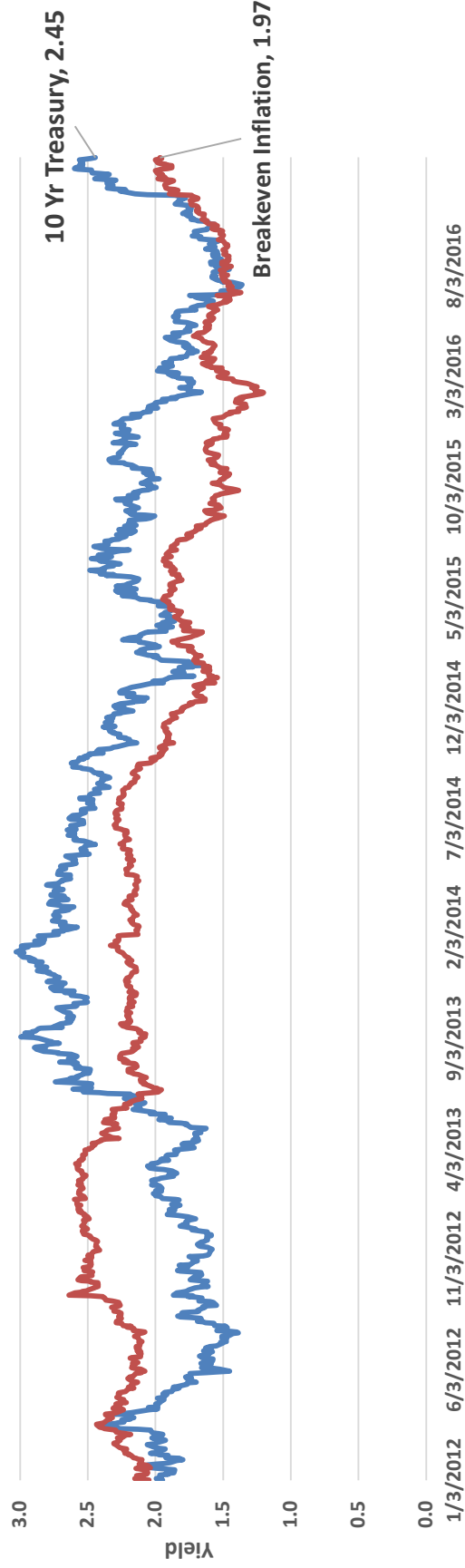


Source: Factset, Bloomberg

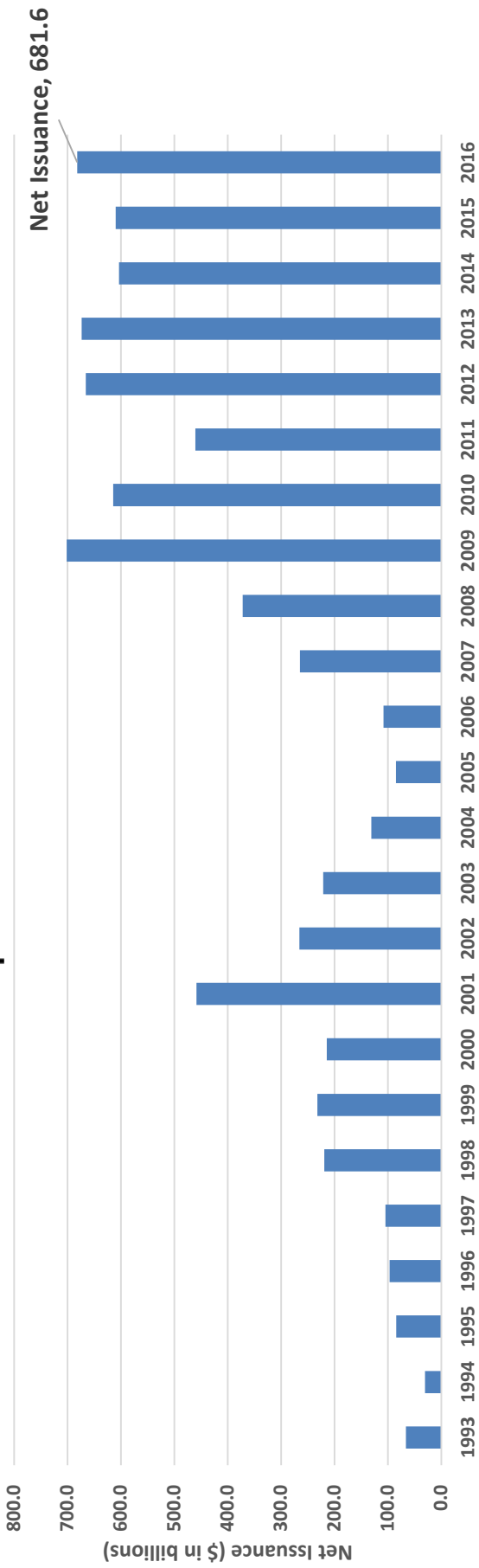
# Relative Yield Movement



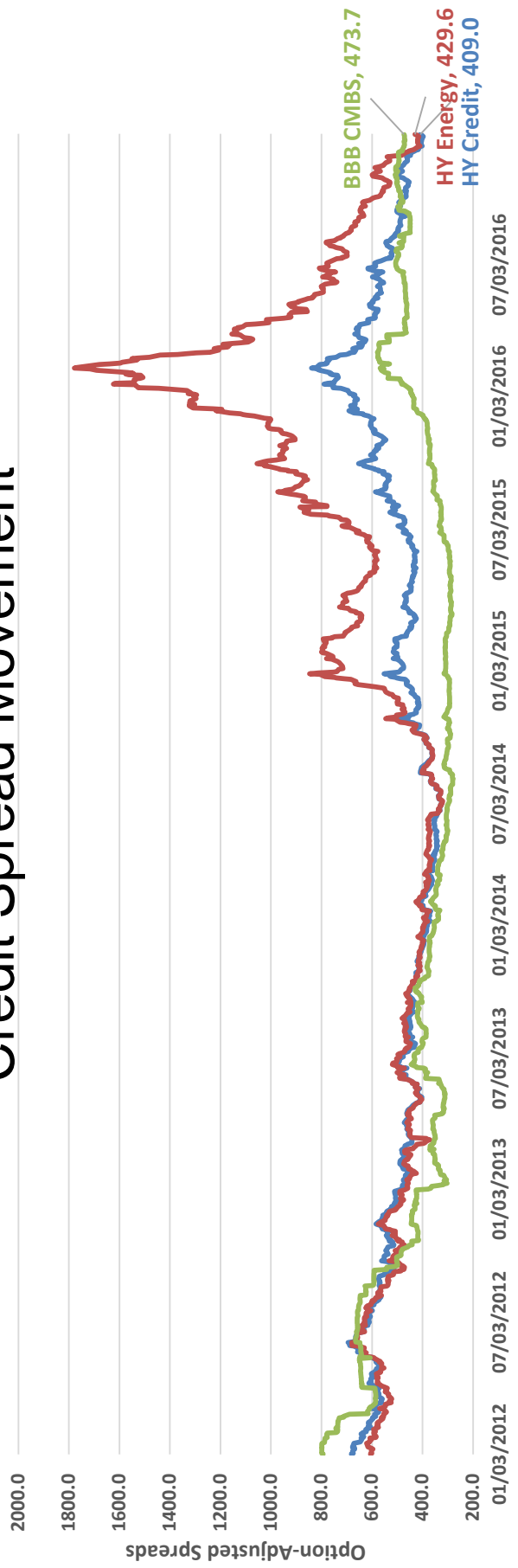
# Treasury Yield and Inflation Expectations



# U.S. Corporate Bond Net Issuance

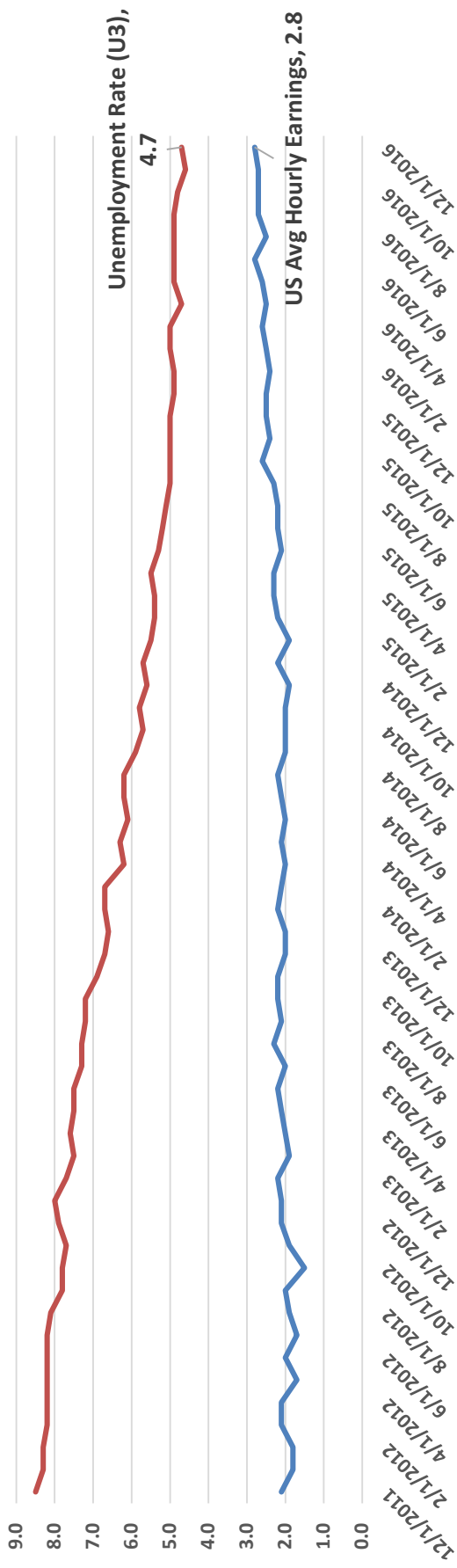


# Credit Spread Movement

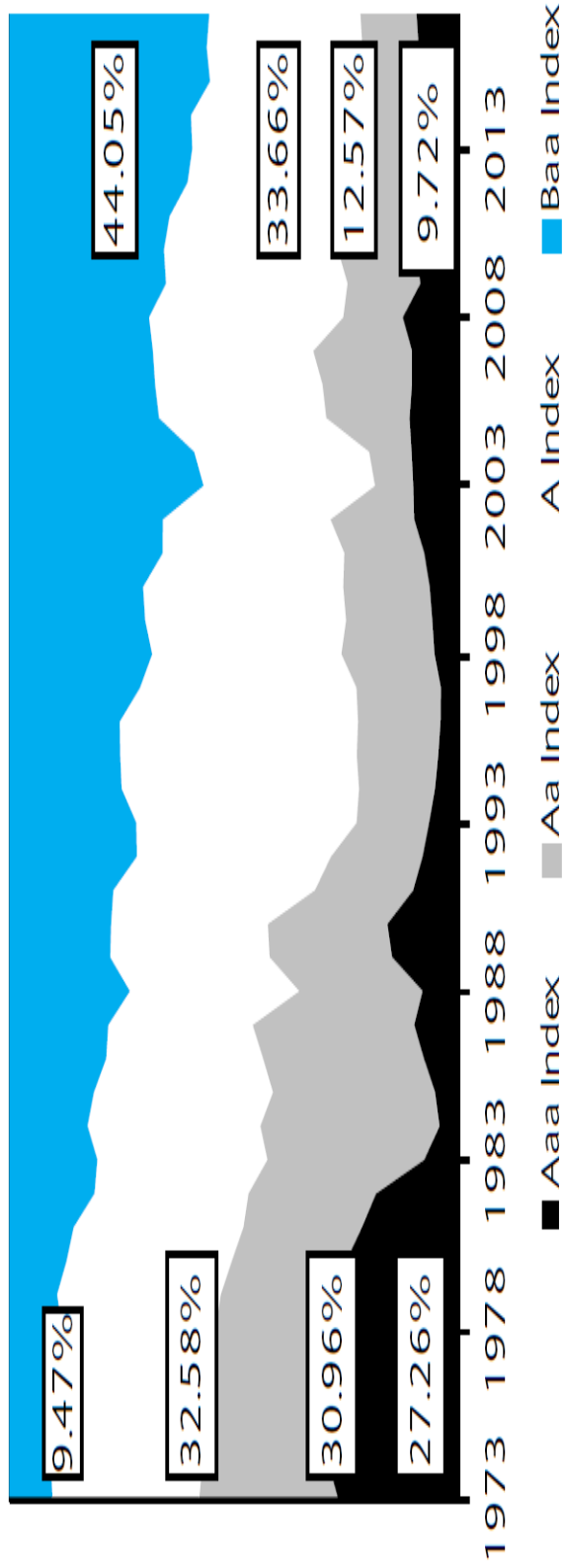


Source: Barclay's

# Unemployment Trends



# Quality Analysis of Barclays Credit Index, 1973-2017



Source: Bloomberg Barclays Indices, Barclays Research  
Sources: Bloomberg