

## Bond Market Watch September 30, 2016

After a volatile beginning of 2016, corporate credit spreads have stabilized significantly. Strength in emerging markets and commodity-related sectors have helped stabilize credit markets after oil prices largely contributed to the first quarter turmoil. Spreads have been helped as well by a decline in overall market volatility. Liquidity has improved recently as demand for corporate credit has been strong from both domestic and international buyers. Global central banking policy remains easy. For example, the BOJ surprised investors by setting a 0% target for their 10-yr bonds yield. OPEC's late September announcement to cap production triggered a slight boost in the price of oil though there are questions around member agreements and execution. Oil has recovered from its February lows and is currently trading above \$50 as we write this. Despite the volatility in the credit markets for much of the year, year-to-date issuance in the investment-grade corporate debt market was up 5.7% relative to the issuance at this time last year. In corporates, earnings growth has been flat yet has exceeded depressed analyst expectations while leverage remains higher than a few years ago. Despite this, corporate management has been able to take advantage of the low cost of capital environment to continue to access the debt markets. In mortgage credit, after widening out alongside the fallout in energy in the first quarter, CMBS spreads tightened substantially after digesting the shock to the markets of "Brexit". Credit curves remain steep compared with a year ago. However, BBB names have lagged higher quality bonds such as AAA last cash flows and AA credit. ABS remains very well bid as investors ride front-end higher quality yield and have been largely unperturbed by future Fed rate hike possibilities. With low or negative rates overnight rates throughout much of the developed world, there has been a large cash bid for any wider trading ABS.

The 10-year Treasury yielded 2.26% at the end of 2015 and decreased to 1.59% in September of 2016. The yield on 30-year Treasury was 2.32% at the end of September compared to the 2015-year end yield of 3.01%. As we write this, the yield on the 30-year Treasury is at 2.45% and the yield on the 10-year is 1.73%. The current probability of a Fed rate hike by December is about 61%, which is more hawkish than a few months ago. In August, the Treasury futures market was only implying a 45% rate hike by December.

Within high-grade fixed income, credit spreads in the Barclays Aggregate Index widened to 200 bps in February from 155 bps at the end of 2015. By the end of September, spreads tightened back to 131 bps retracing all of their widening. Spreads ended 2011 at 217 bps, 2012 at 131 bps, 2013 at 111bps, and widened to 125 bps at 2014 before widening further in 2015. The year-to-date excess return for the Barclays Credit Index was positive 285 bps along with longer duration credit outperforming duration neutral treasuries by 504 bps.

The Barclays Corporate IG Index produced a positive 141 bps return for the quarter and positive 305 bps excess return over duration neutral Treasuries year-to-date. At the sector level, spreads on Industrial credit tightened by 19 bps to 140 bps, from 159 bps off Treasuries at the Q2 2016. Year-to-date, the sector produced a positive 411 bps of excess return. Spreads on financial credit tightened by 15 bps to 137 bps from the previous quarter end, and the sector produced a positive 108 bps of excess return YTD. Utilities also saw spreads tighten by 10 bps to 132 bps from 142 bps in June and posted positive 260 bps of excess return YTD.

Spreads in the MBS sector tightened by 5bps to 16 bps at the end of Q3 from 29 bps at Q2 2016. Year-to-date the sector delivered a positive 26 bps of excess return. Agency MBS continues to trade at very tight OAS spreads and 30 year fixed rate mortgage rates remain among the lowest level in history. Consumer credit quality has largely remained strong despite some modest deterioration. This has helped auto loan and residential credit quality. ABS spreads tightened by 6 bps from 61 bps in June to 55 bps, and the sector produced a positive 93 bps of excess return. CMBS spreads tightened from 121 bps in 2015 to 84 bps at quarter-end. The sector produced a positive 194 bps of excess return. The Barclays Aggregate Index posted a positive 0.46% total return for the Q3 2016 and a total return of 5.80% for the year.

| Yield and Total Returns  |              |              |              |                  |                           |             |              |              |                  |
|--------------------------|--------------|--------------|--------------|------------------|---------------------------|-------------|--------------|--------------|------------------|
| Ryan Labs Indexes        | YTW          | QTD          | YTD          | 12M <sup>1</sup> | Ryan Labs Indexes         | YTW         | QTD          | YTD          | 12M <sup>1</sup> |
| <b>RL 2 Year Indexes</b> |              |              |              |                  | <b>RL 10 Year Indexes</b> |             |              |              |                  |
| <b>TIPS</b>              | <b>-0.63</b> | <b>0.29</b>  | <b>3.02</b>  | <b>2.49</b>      | <b>TIPS</b>               | <b>0.10</b> | <b>1.00</b>  | <b>8.43</b>  | <b>7.50</b>      |
| <b>Treasury (OTR)</b>    | <b>0.77</b>  | <b>-0.09</b> | <b>1.24</b>  | <b>0.75</b>      | <b>Treasury (OTR)</b>     | <b>1.61</b> | <b>-0.77</b> | <b>7.14</b>  | <b>5.60</b>      |
| <b>Financials</b>        | <b>1.79</b>  | <b>0.49</b>  | <b>2.94</b>  | <b>2.91</b>      | <b>Financials</b>         | <b>3.37</b> | <b>1.66</b>  | <b>8.96</b>  | <b>9.35</b>      |
| <b>Industrials</b>       | <b>1.64</b>  | <b>0.41</b>  | <b>3.39</b>  | <b>3.03</b>      | <b>Industrials</b>        | <b>3.16</b> | <b>1.49</b>  | <b>12.76</b> | <b>12.75</b>     |
| <b>Utilities</b>         | <b>1.86</b>  | <b>0.57</b>  | <b>3.87</b>  | <b>3.09</b>      | <b>Utilities</b>          | <b>3.32</b> | <b>1.52</b>  | <b>12.81</b> | <b>11.34</b>     |
| <b>AAA Corporate</b>     | <b>1.14</b>  | <b>-0.02</b> | <b>2.06</b>  | <b>1.64</b>      | <b>AAA Corporate</b>      | <b>2.48</b> | <b>0.33</b>  | <b>8.62</b>  | <b>8.29</b>      |
| <b>AA Corporate</b>      | <b>1.36</b>  | <b>0.02</b>  | <b>2.27</b>  | <b>2.11</b>      | <b>AA Corporate</b>       | <b>2.77</b> | <b>0.76</b>  | <b>9.07</b>  | <b>8.97</b>      |
| <b>A Corporate</b>       | <b>1.58</b>  | <b>0.27</b>  | <b>2.88</b>  | <b>2.75</b>      | <b>A Corporate</b>        | <b>2.84</b> | <b>0.90</b>  | <b>11.06</b> | <b>11.73</b>     |
| <b>BBB Corporate</b>     | <b>1.99</b>  | <b>0.85</b>  | <b>4.18</b>  | <b>3.68</b>      | <b>BBB Corporate</b>      | <b>3.72</b> | <b>2.50</b>  | <b>12.82</b> | <b>11.67</b>     |
| <b>RL 5 Year Indexes</b> |              |              |              |                  | <b>RL 30 Year Indexes</b> |             |              |              |                  |
| <b>TIPS</b>              | <b>-0.30</b> | <b>0.60</b>  | <b>5.89</b>  | <b>4.91</b>      | <b>TIPS</b>               | <b>0.61</b> | <b>3.46</b>  | <b>18.05</b> | <b>18.39</b>     |
| <b>Treasury (OTR)</b>    | <b>1.15</b>  | <b>-0.38</b> | <b>3.96</b>  | <b>2.52</b>      | <b>Treasury (OTR)</b>     | <b>2.33</b> | <b>0.17</b>  | <b>17.12</b> | <b>14.67</b>     |
| <b>Financials</b>        | <b>2.39</b>  | <b>1.05</b>  | <b>6.04</b>  | <b>5.98</b>      | <b>Financials</b>         | <b>4.15</b> | <b>2.34</b>  | <b>12.49</b> | <b>12.87</b>     |
| <b>Industrials</b>       | <b>2.26</b>  | <b>1.04</b>  | <b>7.13</b>  | <b>6.59</b>      | <b>Industrials</b>        | <b>4.07</b> | <b>2.59</b>  | <b>18.35</b> | <b>17.47</b>     |
| <b>Utilities</b>         | <b>2.43</b>  | <b>1.26</b>  | <b>9.05</b>  | <b>7.18</b>      | <b>Utilities</b>          | <b>3.95</b> | <b>1.58</b>  | <b>17.09</b> | <b>15.27</b>     |
| <b>AAA Corporate</b>     | <b>1.63</b>  | <b>0.14</b>  | <b>4.66</b>  | <b>3.66</b>      | <b>AAA Corporate</b>      | <b>3.32</b> | <b>1.25</b>  | <b>15.21</b> | <b>15.93</b>     |
| <b>AA Corporate</b>      | <b>1.87</b>  | <b>0.41</b>  | <b>5.54</b>  | <b>5.40</b>      | <b>AA Corporate</b>       | <b>3.57</b> | <b>1.49</b>  | <b>15.23</b> | <b>15.54</b>     |
| <b>A Corporate</b>       | <b>2.07</b>  | <b>0.72</b>  | <b>6.24</b>  | <b>6.05</b>      | <b>A Corporate</b>        | <b>3.82</b> | <b>1.86</b>  | <b>15.72</b> | <b>15.36</b>     |
| <b>BBB Corporate</b>     | <b>2.73</b>  | <b>1.73</b>  | <b>8.27</b>  | <b>7.43</b>      | <b>BBB Corporate</b>      | <b>4.61</b> | <b>3.58</b>  | <b>20.11</b> | <b>18.01</b>     |
| <b>Barclays Indexes</b>  |              |              |              |                  | <b>Barclays Indexes</b>   |             |              |              |                  |
| <b>BC Aggregate</b>      | <b>1.96</b>  | <b>0.46</b>  | <b>5.80</b>  | <b>5.19</b>      | <b>BC ABS</b>             | <b>1.40</b> | <b>0.19</b>  | <b>2.74</b>  | <b>2.16</b>      |
| <b>BC Credit Long</b>    | <b>4.04</b>  | <b>2.26</b>  | <b>16.50</b> | <b>15.73</b>     | <b>BC MBS</b>             | <b>2.06</b> | <b>0.60</b>  | <b>3.73</b>  | <b>3.63</b>      |
| <b>BC High Yield</b>     | <b>6.17</b>  | <b>5.55</b>  | <b>15.11</b> | <b>12.73</b>     | <b>BC CMBS</b>            | <b>2.13</b> | <b>0.59</b>  | <b>6.55</b>  | <b>5.23</b>      |

See disclosures on the next page.

The material presented and calculated here is based on information considered reliable. Ryan Labs does not represent that it is accurate or complete.

| Ryan Labs TIPS |                    |                   |                          |                           |
|----------------|--------------------|-------------------|--------------------------|---------------------------|
|                | Yield To Worst (%) | MDuration (Years) | Year To Date Returns (%) | Last 12 Month Returns (%) |
| 2 Year TIPS    | <b>-0.63</b>       | 2.22              | 3.02                     | 2.49                      |
| 5 Year TIPS    | <b>-0.30</b>       | 5.15              | 5.89                     | 4.91                      |
| 10 Year TIPS   | 0.10               | 9.10              | 8.43                     | 7.50                      |
| 30 Year TIPS   | 0.61               | 22.64             | 18.05                    | 18.39                     |
| RL TIPS Index  | <b>-0.09</b>       | 8.46              | 7.61                     | 6.93                      |

| Market Implied Breakeven Inflation Expectation |                       |              |                  |                      |
|--|-----------------------|--------------|------------------|----------------------|
|  | Yield To Worst (%)    |              | Inflation (%)    |                      |
|  | Nominals <sup>1</sup> | TIPS         | BEI <sup>2</sup> | Current <sup>3</sup> |
| CPI (1 Month Lag)                              |                       |              |                  | n/a                  |
| 2 Year   | 0.77                  | <b>-0.63</b> | 1.40             |                      |
| 5 Year   | 1.15                  | <b>-0.30</b> | 1.45             |                      |
| 10 Year  | 1.61                  | 0.10         | 1.50             |                      |
| 30 Year  | 2.33                  | 0.61         | 1.72             |                      |
| RL Index                                       | 1.47                  | <b>-0.09</b> | 1.55             |                      |

1) Nominals represent conventional U.S. Treasury Bonds and Notes.

2) BEI = Breakeven Inflation Rate (Nominal yields minus TIPS yields). Widening BEI indicates that TIPS are outperforming nominal bonds. When realized inflation is greater than implied inflation, TIPS also outperform.

3) Current Inflation = Bureau of Labor Statistics, Year over Year Consumer Price Index (non-seasonally adjusted, all items, 1 month lag)

The material presented is intended for the use of institutional investors. Returns are unadjusted for fees or costs. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The views and strategies described may not be suitable for all investors. This material has been prepared for informational purposes only, and is not intended to provide, and should not be relied on for, accounting, legal or tax advice.

## ABOUT RYAN LABS ASSET MANAGEMENT

Ryan Labs Asset Management is an institutional fixed income manager that provides custom and market index strategies tailored to the unique needs of institutional clients since 1988. Our diversified, disciplined, and structured investment process is employed versus popular market indexes as well as custom liability indexes.

Ryan Labs employs a disciplined investment process that seeks to add value through issue selection and sector rotation, not through interest rate anticipation. All of our strategies are actively managed in a total return framework.