

# Asset/Liability Watch

## October, 2016

| Index                          | Estimated Weights (%) | Total Return |         |                    |
|--------------------------------|-----------------------|--------------|---------|--------------------|
|                                |                       | QTD (%)      | YTD (%) | Last 12 Months (%) |
| Ryan Labs Cash                 | 5                     | 0.03         | 0.55    | 0.53               |
| Barclays Aggregate Index       | 30                    | -0.76        | 4.99    | 4.37               |
| S&P 500                        | 60                    | -1.82        | 5.87    | 4.51               |
| MSCI EAFE Int'l                | 5                     | -2.04        | 0.10    | -2.75              |
| Asset Allocation Model         | 100                   | -1.42        | 5.16    | 4.01               |
| Ryan Labs Liability (PPA)      | 100                   | -2.91        | 14.70   | 13.35              |
| Assets – Liabilities (PPA)     |                       | 1.48         | -9.54   | -9.34              |
| Ryan Labs Liability (FAS 158)  | 100                   | -4.09        | 10.80   | 10.31              |
| Assets – Liabilities (FAS 158) |                       | 2.66         | -5.64   | -6.29              |
| Ryan Labs Liability (TSY)      | 100                   | -4.94        | 11.05   | 10.13              |
| Assets – Liabilities (TSY)     |                       | 3.51         | -5.90   | -6.12              |

| 50 Year Equal Par Weighted Cash Flows<br>by RL PPA Corp A to AAA Index (PPA) |                      |                   |                 |                           |
|--|----------------------|-------------------|-----------------|---------------------------|
|  | YTW <sup>1</sup> (%) | MDuration (Years) | YTD Returns (%) | Last 12 Month Returns (%) |
| 2 Year   | 1.79                 | 1.94              | 2.00            | 1.85                      |
| 5 Year   | 2.01                 | 4.91              | 5.60            | 5.45                      |
| 10 Year  | 3.16                 | 9.80              | 12.66           | 12.30                     |
| 30 Year  | 4.28                 | 29.33             | 24.63           | 24.88                     |
| RL PPA Index <sup>2</sup>  | 3.27                 | 16.09             | 14.70           | 13.35                     |

| 50 Year Equal Par Weighted Cash Flows<br>by RL FAS 158 Corp AA to AAA Index (PPA-FAS158) |                      |                   |                 |                           |
|--|----------------------|-------------------|-----------------|---------------------------|
|  | YTW <sup>1</sup> (%) | MDuration (Years) | YTD Returns (%) | Last 12 Month Returns (%) |
| 2 Year   | 1.44                 | 1.94              | 1.73            | 1.48                      |
| 5 Year   | 1.87                 | 4.91              | 4.76            | 4.44                      |
| 10 Year  | 2.90                 | 9.81              | 11.67           | 11.51                     |
| 30 Year  | 4.15                 | 29.35             | 12.43           | 5.47                      |
| RL FAS 158 Index <sup>2</sup>  | 3.08                 | 16.23             | 10.80           | 10.31                     |

1. Effective Annualized Yield to Worst
2. Equal Weighted Index

| Index                    | Weights | '03 | '04 | '05 | '06 | '07 | '08 | '09 | '10 | '11 | '12 | '13 | '14 | '15 | 10/16 |
|--------------------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Ryan Labs Cash           | 5%      | 1   | 1   | 3   | 5   | 5   | 3   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1     |
| Barclays Aggregate       | 30%     | 4   | 4   | 2   | 4   | 7   | 5   | 6   | 7   | 8   | 4   | -2  | 6   | 1   | 5     |
| S&P 500                  | 60%     | 29  | 11  | 5   | 16  | 5   | -37 | 26  | 15  | 2   | 13  | 30  | 11  | -1  | 6     |
| MSCI EAFE Int'l          | 5%      | 39  | 21  | 14  | 27  | 12  | -43 | 32  | 8   | -12 | 18  | 23  | -4  | 0   | 0     |
| Asset Allocation Model   | 100%    | 20  | 9   | 5   | 12  | 6   | -24 | 19  | 12  | 3   | 11  | 18  | 8   | 0   | 5     |
| RL PPA Liability         |         | 7   | 11  | 6   | 2   | 2   | 10  | 6   | 14  | 21  | 9   | -7  | 14  | -3  | 15    |
| Return Difference        |         | 13  | -2  | -1  | 10  | 4   | -35 | 13  | -2  | -18 | 2   | 25  | -6  | 3   | -10   |
| Funding Ratio (RL PPA)   |         | 93  | 91  | 90  | 98  | 102 | 70  | 78  | 77  | 66  | 67  | 85  | 81  | 83  | 76    |
| Liabilities (TSY)        |         | 2   | 10  | 10  | 1   | 11  | 42  | -26 | 9   | 31  | 3   | -15 | 28  | -2  | 11    |
| Return Difference        |         | 18  | -1  | -5  | 11  | -4  | -67 | 45  | 2   | -28 | 8   | 33  | -20 | 2   | -6    |
| Funding Ratio (Economic) |         | 77  | 76  | 72  | 80  | 77  | 41  | 66  | 67  | 53  | 57  | 79  | 67  | 68  | 65    |

Notes: RL PPA liability curve is the spot curve of the replication of IRS PPA curve (US credit A to AAA).  
 RL Treasury liability curve is the proxy for economic liabilities.

Assumptions: Normal costs = annual contributions  
 No benefit enhancements  
 Assets portfolio rebalanced monthly

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## 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.