













# Credit Market Overview: Performance

December 31, 2018

	Total Returns (%)		Excess Returns (%)	
	3 Month	YTD	3 Month	YTD
<b>U.S. Corporate Investment Grade</b>	<b>-0.18</b>	<b>-2.51</b>	<b>-3.10</b>	<b>-3.15</b>
U.S. Corporate High Yield	-4.53	-2.08	-6.75	-3.58
EM USD Aggregate	-0.18	-2.46	-2.91	-3.45
1-5 Year Credit	0.76	0.95	-0.94	-0.59
5-10 Year Credit	0.49	-1.55	-2.76	-2.56
10+ Year Credit	-1.80	-7.24	-5.97	-6.51
AA+	1.08	-0.52	-1.49	-1.35
A	0.27	-2.50	-2.66	-3.15
BBB	-0.82	-2.85	-3.77	-3.47
BB	-2.91	-2.41	-5.27	-3.80
B	-4.35	-1.31	-6.47	-2.86
CCC	-9.28	-3.84	-11.27	-5.47
Industrial	-0.46	-2.81	-3.50	-3.34
Financial	0.27	-1.68	-2.33	-2.62
Utility	0.20	-3.75	-3.25	-3.94
Non-Corporate	1.02	-0.08	-1.52	-1.01
EM USD Corporate Investment Grade	-0.23	-1.83	-2.51	-2.04
EM USD Corporate: High Yield	-0.98	-5.16	-3.36	-6.00

Source: Bloomberg Barclays.

Excess returns measure relative performance versus a duration-neutral basket of U.S. Treasuries

**Past performance is not indicative of future returns.** The performance shown is for illustrative purposes and is not intended to represent the performance of any account or investment strategy managed by William Blair. A direct investment in an unmanaged index is not possible.

# MBS Market Overview

December 31, 2018

## U.S. Mortgage Backed Securities – Treasury OAS



- The mortgage-backed securities (MBS) Index earned negative excess returns QTD and YTD.
- 30-year pools with coupons of 6.0% and 6.5% generated positive total returns and excess returns QTD and YTD. 30-year pools with coupons of 5.5% and lower experienced negative excess returns QTD and YTD.
- Excess returns measure relative performance versus a duration-neutral basket of U.S. Treasuries.

	Total Returns		Excess Returns	
	3 Month	YTD	3 Month	YTD
<b>MBS Fixed Rate Index</b>	<b>2.08</b>	<b>0.99</b>	<b>-0.53</b>	<b>-0.59</b>
Conventional 30 Year	2.18	0.97	-0.53	-0.60
3.0 Coupon	2.70	0.91	-0.30	-0.42
3.5 Coupon	2.49	0.96	-0.33	-0.67
4.0 Coupon	1.92	1.13	-0.67	-0.64
4.5 Coupon	1.36	0.95	-1.05	-0.85
5.0 Coupon	0.93	1.08	-1.29	-0.55
5.5 Coupon	0.55	0.85	-1.58	-0.52
6.0 Coupon	2.30	2.33	0.13	0.87
6.5 Coupon	2.24	2.47	0.15	0.99
Conventional 15 Year	1.82	1.00	-0.29	-0.49
2.5 Coupon	1.95	0.90	-0.23	-0.52
3.0 Coupon	1.87	1.06	-0.28	-0.44
3.5 Coupon	1.60	1.21	-0.44	-0.41
4.0 Coupon	1.14	1.56	-0.61	-0.29
4.5 Coupon	1.08	1.45	-0.26	-0.16

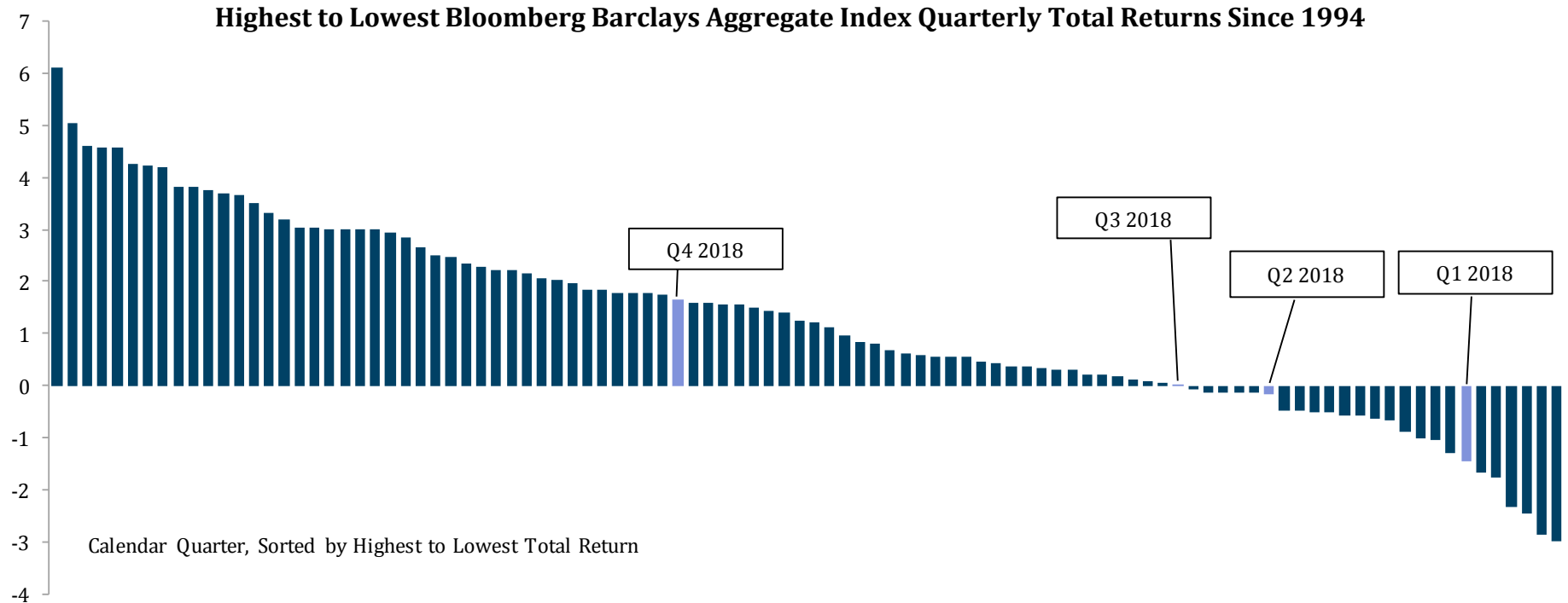
Source: Bloomberg Barclays.

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# Fixed Income Market Returns

December 31, 2018



	Total Returns	
	QTD	YTD
Bloomberg Barclays Aggregate Index	1.64	0.01
Bloomberg Barclays Treasury Index	2.57	0.86
Bloomberg Barclays U.S. TIPS Index	-0.42	-1.26
Bloomberg Barclays U.S. MBS Index	2.08	0.99
Bloomberg Barclays Corporate Index	-0.18	-2.51
Bloomberg Barclays U.S. High Yield Index	-4.53	-2.08
Bloomberg Barclays EM USD Aggregate Index	-0.18	-2.46

Source: Bloomberg Barclays.

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# William Blair Income Fund Performance

December 31, 2018

Performance %						
	Quarter	YTD	1 Year	3 Years	5 Years	10 Years
Income Fund (BIFIX) - Class I	0.04	-0.69	-0.69	1.25	1.51	3.36
Income Fund (WBRRX) - Class N	0.01	-0.86	-0.86	1.00	1.29	3.15
Bloomberg Barclays Int. Gov/Credit Bond Index	1.65	0.88	0.88	1.70	1.86	2.90
Morningstar Short-Term Bond Category	0.45	0.92	0.92	1.66	1.25	2.65

**Performance cited represents past performance. Past Performance does not guarantee future results and current performance may be lower or higher than the data quoted. Results shown are average annual returns, which assume reinvestment of dividends and capital gains. Investment returns and principal will fluctuate with market and economic conditions and you may have a gain or loss when you sell shares. For the most current month end performance information, please call 1-877-962-5247, or visit our Web site at [www.williamblairfunds.com](http://www.williamblairfunds.com). Class N shares are available to the general public without a sales load. Class I Shares are available only to investors who meet certain eligibility requirements.**

Income Fund Expense Ratios:

	Gross	Net
Class I Shares	0.62%	0.62%
Class N Shares	0.88%	0.85%

Expenses shown are as of the most recent prospectus. The Fund's Adviser has contractually agreed to waive fees and/or reimburse expenses to limit fund operating expenses until 4/30/19. Class I inception: 10/1/1999, Class N inception: 10/1/1990.

*The Bloomberg Barclays Intermediate Government/Credit Bond Index indicates broad intermediate government/corporate bond market performance. A direct investment in an index is not possible.*

The Morningstar Short-Term Bond Category represents the average annual composite performance of all mutual funds listed in the Short-Term Bond Category by Morningstar.

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# William Blair Income Fund Performance Analysis

December 31, 2018

## QTD Contributors

- The portfolio experienced positive impacts from positions in bonds issued by companies in the emerging markets. Holdings in bonds issued by Vale contributed.

## QTD Detractors

- Interest rate positioning detracted from performance, as the portfolio had less duration than the Index and interest rates declined.
- Sector allocation detracted from results, as the portfolio was underweight to fixed-rate Treasuries.
- High-coupon agency mortgage-backed securities underperformed Treasury alternatives in the Index and detracted from performance.
- An allocation to U.S. TIPS hindered results.

## YTD Contributors

- The portfolio experienced positive impacts from positions in bonds issued by companies in the emerging markets. Holdings in bonds issued by Vale contributed.

## YTD Detractors

- An underweight allocation to U.S. Treasuries detracted from performance.
- High-coupon agency mortgage-backed securities underperformed Treasury alternatives in the Index and detracted from performance.
- An allocation to U.S. TIPS hindered results.
- Positions in bonds issued by Toll Brothers and Abbvie hindered results.

Holdings are subject to change at any time. References to specific securities and their issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities. William Blair may or may not own the securities referenced and, if such securities are owned, no representation is being made that such securities will continue to be held. The above securities do not represent all of the securities purchased, sold or recommended for all William Blair clients.

# William Blair Income Fund Attribution

Through December 31, 2018

## Quarter to Date

Description	Market Value Weight			Total Return			Total Return Contribution			Active Contribution		
	Port	Bench	Active	Port	Bench	Active	Port	Bench	Active	Rates	Sector Allocation	Security Selection
<b>Total Fund</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>21</b>	<b>165</b>	<b>-144</b>	<b>21</b>	<b>165</b>	<b>-144</b>	<b>-45</b>	<b>-86</b>	<b>-13</b>
Treasuries	2.9%	59.4%	-56.5%	-5	224	-230	0	133	-133	-120	-35	-12
Agencies	0.0%	2.2%	-2.2%	0	162	-162	0	4	-4	-4	-1	0
Residential Mortgages	48.4%	0.0%	48.4%	16	0	16	8	0	8	93	-56	0
ABS	3.3%	0.0%	3.3%	46	0	46	2	0	2	2	2	0
IG Corps	32.0%	36.7%	-4.8%	28	78	-50	9	29	-20	-24	5	-4
Emerging Markets	3.0%	1.5%	1.5%	37	0	38	1	0	1	2	-3	3
Cash Securities	10.3%	0.1%	10.3%	0	0	0	0	0	0	6	1	0

## Year to Date

Description	Market Value Weight			Total Return			Total Return Contribution			Active Contribution		
	Port	Bench	Active	Port	Bench	Active	Port	Bench	Active	Rates	Sector Allocation	Security Selection
<b>Total Fund</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>9</b>	<b>88</b>	<b>-79</b>	<b>9</b>	<b>88</b>	<b>-79</b>	<b>-2</b>	<b>-68</b>	<b>-9</b>
Treasuries	2.8%	58.3%	-55.5%	-81	141	-222	-2	85	-87	-84	-29	-7
Agencies	0.0%	2.6%	-2.6%	0	164	-164	0	3	-4	-4	-1	0
Residential Mortgages	49.7%	0.0%	49.7%	40	0	40	17	0	17	81	-38	0
ABS	2.1%	0.0%	2.1%	199	0	199	4	0	4	4	2	0
IG Corps	33.0%	37.4%	-4.3%	-54	5	-59	-18	0	-18	-16	3	-8
Emerging Markets	4.0%	1.6%	2.4%	81	-78	159	-1	-1	1	0	-3	5
Cash Securities	8.3%	0.1%	8.2%	0	0	0	0	0	0	16	-10	0

Source: BlackRock Solutions.

**Past performance is not indicative of future returns.** The attribution analysis contained herein is calculated by BlackRock Solutions and is intended to provide an estimate as to which elements of a strategy contributed (positively or negatively) to the Fund's performance. Attribution analysis is not a precise measure and should not be relied upon for investment decisions. Holdings are subject to change at any time. Not intended as investment advice. A direct investment in an index is not possible.

# William Blair Income Fund Strategy

December 31, 2018

Decision Factor	Positioning	Strategy
Interest Rates & Yield Curve	Neutral	<ul style="list-style-type: none"> <li>Strategy risk discipline to maintain benchmark-like duration and yield curve exposures</li> </ul>
Treasuries & Agencies	Underweight	<ul style="list-style-type: none"> <li><u>Allocation to TIPS</u>. We find the embedded option that benefits from unexpected inflation an appealing feature versus owning nominal Treasury notes and bonds.</li> <li><u>Underweight agencies</u>. We view agency MBS as a more attractive alternative</li> </ul>
Securitized Sectors	Overweight	<ul style="list-style-type: none"> <li><u>Overweight agency MBS</u>. We find valuations of higher-coupon pools comprised of low loan balances attractive as such pools offer superior spreads within the MBS sector, defensive duration posture, and manageable prepayment experiences</li> <li>We avoid the lower-coupon MBS that dominate the MBS Index because we find that valuations are unappealing due to the Fed's targeting of the securities during their large-scale asset purchase programs, most recently "FedTrade."</li> <li><u>Overweight ABS</u>. We find certain floating-rate ABS to offer attractive yields and protection against rising interest rates</li> <li><u>Underweight CMBS</u>. We favor owning corporate REITs instead, as both are characterized by the same collateral but REITs are actively-managed</li> </ul>
Credit Sectors	Neutral	<ul style="list-style-type: none"> <li><u>Overweight investment-grade financials</u>. We emphasize bonds issued by financial institutions with competitive operating performance, sound balance sheet metrics, and strong management teams.</li> <li><u>Underweight investment-grade industrials</u>. We find valuations of high-quality, intermediate maturity corporate bonds to be unappealing</li> <li><u>Overweight corporations domiciled in emerging markets</u>. Within the sector, we have found value in Global Leaders—large, multinational companies with a market leadership position and strong management teams</li> </ul>

Information subject to change without notice. Not intended as investment advice.

# William Blair Income Fund Characteristics

	Income Fund												Bloomberg Barclays Gov't/Credit Intermediate Index
	Global Financial Crisis				European Debt Crisis		Taper Tantrum						
	12/31/07	12/31/08	12/31/09	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18	12/31/18
Effective Duration	3.71	3.74	3.83	3.68	3.50	3.47	3.69	3.26	3.18	3.38	3.24	2.86	3.88
Convexity	-0.04	0.05	0.04	0.02	-0.14	0.08	-0.22	0.01	-0.04	0.04	0.00	0.11	0.21
<b>Sector Composition</b>													
Nominal Treasuries	25.8%	17.3%	3.3%	5.2%	3.9%	0.7%	0.8%	0.9%	1.0%	0.9%	0.0%	0.0%	60.2%
TIPS	0.0%	0.0%	1.5%	3.8%	4.1%	7.5%	6.0%	5.1%	4.7%	5.4%	2.7%	3.1%	0.0%
Agency	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%
MBS	28.1%	25.0%	29.2%	26.9%	42.1%	37.2%	52.1%	49.7%	53.8%	49.9%	54.5%	49.8%	0.0%
CMBS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ABS	12.3%	4.2%	5.9%	9.1%	5.3%	3.6%	7.0%	9.6%	8.8%	9.8%	3.3%	3.5%	0.0%
Credit	31.9%	52.5%	60.0%	53.1%	43.5%	50.0%	33.0%	33.4%	26.3%	33.7%	38.6%	33.7%	37.7%
Cash	-1.0%	1.0%	0.1%	1.9%	1.1%	1.0%	1.1%	1.3%	5.4%	0.3%	0.8%	10.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Rating Categories*</b>													
TSY/AGY/AAA	55.8%	44.5%	38.6%	44.8%	44.8%	53.3%	80.9%	90.6%	91.3%	64.7%	61.4%	66.3%	66.6%
AA	6.8%	9.2%	12.9%	11.8%	11.8%	7.1%	19.1%	9.4%	8.7%	3.5%	1.9%	4.9%	6.7%
A	26.9%	35.3%	39.9%	33.9%	33.9%	30.3%	0.0%	0.0%	0.0%	22.0%	28.7%	21.3%	14.6%
BBB	9.1%	11.0%	8.3%	8.3%	8.5%	8.4%	0.0%	0.0%	0.0%	9.8%	8.0%	7.6%	12.0%
<BBB	1.4%	0.0%	0.3%	0.3%	1.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Credit Composition</b>													
DM IG Industrial	16.7%	28.1%	35.1%	30.4%	30.2%	23.1%	11.1%	8.5%	10.2%	13.5%	14.2%	12.1%	17.3%
DM IG Financial	6.0%	15.2%	16.3%	15.5%	9.8%	19.0%	18.2%	16.8%	12.7%	15.4%	19.0%	18.4%	12.4%
DM IG Utilities	1.9%	4.3%	4.0%	3.1%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%
Emerging Markets	5.9%	4.9%	4.6%	4.1%	2.0%	7.9%	3.7%	8.1%	3.4%	4.9%	5.4%	3.2%	0.0%
DM High Yield	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Corp	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%
	31.9%	52.5%	60.0%	53.1%	43.5%	50.0%	33.0%	33.4%	26.3%	33.7%	38.6%	33.7%	37.7%

Sources: BlackRock Solutions, Bloomberg Barclays, CMS BondEdge. Information is for illustrative purposes only and is not intended as investment advice. Subject to change without notice.  
 \*The credit quality of securities in the Income Fund is sourced through BlackRock Solutions and derived from Fitch Ratings, Moody's Investors Service, Inc. and Standard & Poor's. In cases where the credit rating agencies have assigned different credit ratings to the same security, the higher rating is used. In cases where only one rating agency has assigned a credit rating to a security, that rating is used. The credit quality of a particular security or group of securities does not ensure the stability or safety of an overall portfolio.

# Capital Markets Outlook

December 31, 2018

We believe that the Federal Open Market Committee (FOMC) will be measured in its decisions to increase the target range of the federal funds rate in 2019. The U.S. economy is growing; forecasters predict a real GDP growth rate of approximately 3.0% during 2018. In addition, the U.S. labor market is adding jobs and the unemployment rate is at 3.8%. Estimates of wage inflation are roughly 3.9%, while estimates of core personal consumption expenditures (PCE) have been roughly 1.9%. Macroeconomic theory predicts that a robust labor market creates wage inflation, which in turn spurs broader inflation. We believe that the FOMC will not raise rates if inflationary pressures deteriorate.

We believe that the FOMC's plans to reduce the size of the Fed's balance sheet will continue to be executed with little disruption to the markets. We believe this is attributable, in part, to strong communication efforts, adequate advance notice, and the absence of security sales to reduce the balance sheet. However, we believe the lower-coupon MBS that was purchased by the Fed will underperform higher-coupon alternatives when the FOMC ends their campaign of purchasing agency MBS.

U.S. Treasury Inflation-Protected Securities (TIPS) have market-implied breakeven inflation rates that are below the FOMC's stated target range of 2.0%–2.5%. We believe TIPS are an attractive alternative to fixed-rate Treasuries to mitigate the effects of rising rates driven by accelerating inflationary pressures.

We believe that spread sectors remain attractive relative to Treasuries over the intermediate-to-long term. Corporate risk premiums are at levels above their longer-term averages, and we believe there are attractive opportunities after risk spreads increased during the year. Risk premiums of higher-coupon segments of the agency MBS market remain attractive. In addition, we believe Treasuries are likely to struggle as the FOMC tightens the federal funds rate and reduces the scale of their asset purchases.

We believe that higher-coupon segments (30-year MBS coupon rates of 5.0% and above) of the agency MBS market offer compelling value. These segments of the agency MBS market offer attractive spreads and a defensive duration profile. The key risk of these securities is that the underlying borrowers are in-the-money to refinance their loan. We believe this risk can be mitigated by focusing on pools comprised of borrowers that do not have the economic incentive to refinance their loans: low-loan balance pools.

We believe that there are opportunities in the corporate bond market as risk spreads increased to levels above the Index's longer-term average. We remain concerned about company-specific risks, including shareholder-friendly activities such as leveraged finance mergers and acquisitions, large share repurchases, and special dividends. Importantly, we do not believe the market will enter a period of excessive LBO activity.

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# Index Definitions

**BofA Merrill Lynch 1-Year U.S. Treasury Note Index:** Comprised of a single U.S. Treasury Note issue purchased at the beginning of the month and held for a full month. Each month the index is rebalanced and the issue selected is the outstanding U.S. Treasury Note that matures closest to, but not beyond, one year from the rebalancing date.

**Bloomberg Barclays Aggregate Bond Index:** Composed of securities from the Barclays Aggregate Government/Corporate Bond Index, Mortgage-Backed Securities Index, and Asset-Backed Securities Index.

**Bloomberg Barclays U.S. Corporate Index:** measures the investment grade, fixed-rate, taxable corporate bond market.

**Bloomberg Barclays Corporate High Yield Bond Index:** Composed of fixed-rate, publicly issued, non-investment grade debt.

**Bloomberg Barclays U.S. Credit Index:** measures the investment grade, U.S dollar-denominated, fixed rate, taxable corporate and government-related bond markets. It is composed of the U.S. Corporate Index and a non-corporate component that includes non-U.S. agencies, sovereigns, supranationals and local authorities.

**Bloomberg Barclays Emerging Market Bond Index:** An unmanaged index that tracks total returns for external-currency-dominated debt instruments for emerging markets.

**Bloomberg Barclays Intermediate Govt./Credit Bond Index:** Fixed-rate government and corporate bonds rated investment grade or higher.

**Bloomberg Barclays U.S. MBS Index:** Measures the performance of investment grade fixed-rate mortgage-backed pass-through securities of GNMA, FNMA, and FHLMC.

**Bloomberg Barclays U.S. TIPS Index:** Includes all publicly issued U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have \$250 million or more of outstanding face value.

**Bloomberg Barclays U.S. Treasury Index:** measures U.S. dollar-denominated fixed-rate, nominal debt issued by the U.S. Treasury.

**MSCI EAFE IMI Index:** a free float-adjusted market capitalization index that is designed to measure equity market performance in the developed markets outside the United States.

**MSCI Emerging Markets IMI Index:** a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

**S&P 500 Index:** A measure of domestic equity market performance published by Standard & Poor's. It consists of 400 leading industrial issues, 20 transportation issues, 40 utilities and 40 finance issues weighted on a market capitalization basis. The S&P 500 is a broad-based index composed of domestic stocks representing 80% of the market value of all stocks traded on the New York Stock Exchange.

Indices are unmanaged, do not incur fees or expenses, and cannot be invested in directly.