

Asset Allocation Ideas

Major asset class return analysis (%)

Higher

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD 10/18
	US Agg 5.24	Emerging Markets 78.51	Small-Cap 26.85	Municipal 10.70	Emerging Markets 18.22	Small-Cap 38.82	S&P 500 13.69	Municipal 3.30	Small-Cap 21.31	Emerging Markets 37.28	Bank Loan 4.00
	Municipal -2.47	High Yield 57.51	Emerging Markets 18.88	US Agg 7.84	International 17.32	S&P 500 32.39	Municipal 9.05	S&P 500 1.38	High Yield 17.49	International 25.03	S&P 500 3.01
	High Yield -26.39	Bank Loan 51.62	Commodities 16.83	High Yield 4.38	Small-Cap 16.35	International 22.78	US Agg 5.97	US Agg 0.55	S&P 500 11.96	S&P 500 21.83	High Yield 0.84
	Asset Allocation -26.69	International 31.78	High Yield 15.19	S&P 500 2.11	S&P 500 16.00	Asset Allocation 13.83	Small-Cap 4.89	Bank Loan -0.69	Commodities 11.77	Small-Cap 14.65	Small-Cap -0.60
	Bank Loan -29.10	Small-Cap 27.17	S&P 500 15.06	Bank Loan 1.52	High Yield 15.58	High Yield 7.42	Asset Allocation 4.28	International -0.81	Emerging Markets 11.19	Asset Allocation 14.02	Municipal -1.01
	Small-Cap -33.79	S&P 500 26.46	Asset Allocation 12.91	Asset Allocation -0.35	Asset Allocation 11.91	Bank Loan 5.29	High Yield 2.50	Asset Allocation -2.03	Bank Loan 10.16	High Yield 7.48	Asset Allocation -2.00
	Commodities -35.65	Asset Allocation 26.35	Bank Loan 10.13	Small-Cap -4.18	Bank Loan 9.66	US Agg -2.02	Bank Loan 1.60	Small-Cap -4.41	Asset Allocation 8.61	Municipal 5.45	US Agg -2.38
	S&P 500 -37.00	Commodities 18.91	International 7.75	International -12.14	Municipal 6.78	Municipal -2.55	Emerging Markets -2.19	High Yield -4.64	US Agg 2.65	Bank Loan 4.12	Commodities -4.14
	International -43.38	Municipal 12.91	US Agg 6.54	Commodities -13.32	US Agg 4.21	Emerging Markets -2.60	International -4.90	Emerging Markets -14.92	International 1.00	US Agg 3.54	International -9.28
	Emerging Markets -53.33	US Agg 5.93	Municipal 2.38	Emerging Markets -18.42	Commodities -1.06	Commodities -9.52	Commodities -17.01	Commodities -24.66	Municipal 0.25	Commodities 1.70	Emerging Markets -15.72

Lower

Source: Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. S&P 500 represented by the S&P 500 Index. International represented by MSCI EAFE Index. Emerging Markets represented by MSCI Emerging Markets Index. Small-Cap represented by Russell 2000 Index. US Aggregate represented by the Bloomberg Barclays Capital US Aggregate Bond Index. Municipal represented by Bloomberg Barclays Municipal Bond Index. High Yield represented by ICE BofA ML US High Yield Index. Bank Loan represented by S&P/LSTA Leveraged Loan Index. Commodity represented by Bloomberg Commodity Index. The Asset Allocation portfolio assumes the following weights: 25% in the S&P 500 Index, 15% in the MSCI EAFE Index, 5% in the MSCI Emerging Markets Index, 10% in the Russell 2000 Index, 25% in the Bloomberg Barclays Capital US Aggregate Bond Index, 5% in the Bloomberg Barclays Municipal Bond Index, 5% in the Bloomberg Barclays US Corporate High Yield Index, 5% in the S&P/LSTA Leveraged Loan Index, and 5% in the Bloomberg Commodity Index.

Monthly Market Monitor

November 2018

Trends &
Takeaways

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Eaton Vance Monthly Market Monitor presents a concise review of economic and asset class data through clear and impactful charts. Providing timely information across a broad array of markets and investment topics, this guide serves as a helpful resource in providing connectivity between changing market events and implications for investor portfolios. Use Eaton Vance Monthly Market Monitor as a critical desk reference that enables more informed discussion and understanding of financial markets.

Trends & Takeaways	Fixed Income	Equities	Alternatives	Asset Allocation Ideas	Additional Information
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Viewpoints: connecting timely insights to market data

Select Viewpoints from Eaton Vance Advisory Blog (eatonvance.com/blog)



Scott Page, CFA, Co-Director of Floating-Rate Loan Group

Bond prices fall as interest rates rise, and this year has proven to be a downright case study. The Federal Reserve has remained on its unwavering course to normalize interest rates from their still-low levels. The resulting performance picture hasn't been pretty for fixed-income positions, with deteriorating net asset values subtracting from investor total returns. The market for senior, secured, floating-rate corporate loans has proven to be a bright spot in capital markets ([see page 8](#)). The main driver of year-to-date loan market performance has been the combination of high coupon income, limited credit situations and healthy supply/demand equilibrium.



Lewis Piantedosi, Director of Growth Equity

The month of October was not kind to equity investors, with the S&P 500 Index posting a monthly decline of nearly 7%. The recent sell-off has been blamed on a myriad of anxieties around global trade, inflation, interest rates and elections. Investors are adapting to higher volatility this year after an incredibly quiet 2017. While the CBOE Market Volatility Index (VIX) has spiked to levels we haven't seen in a few months, it still hasn't reached the levels experienced earlier this year ([see page 17](#)). Every market environment creates winners and losers, and this one is no different. We believe volatility will remain elevated and as such, active selection and diversification may offer the best defense for investors.



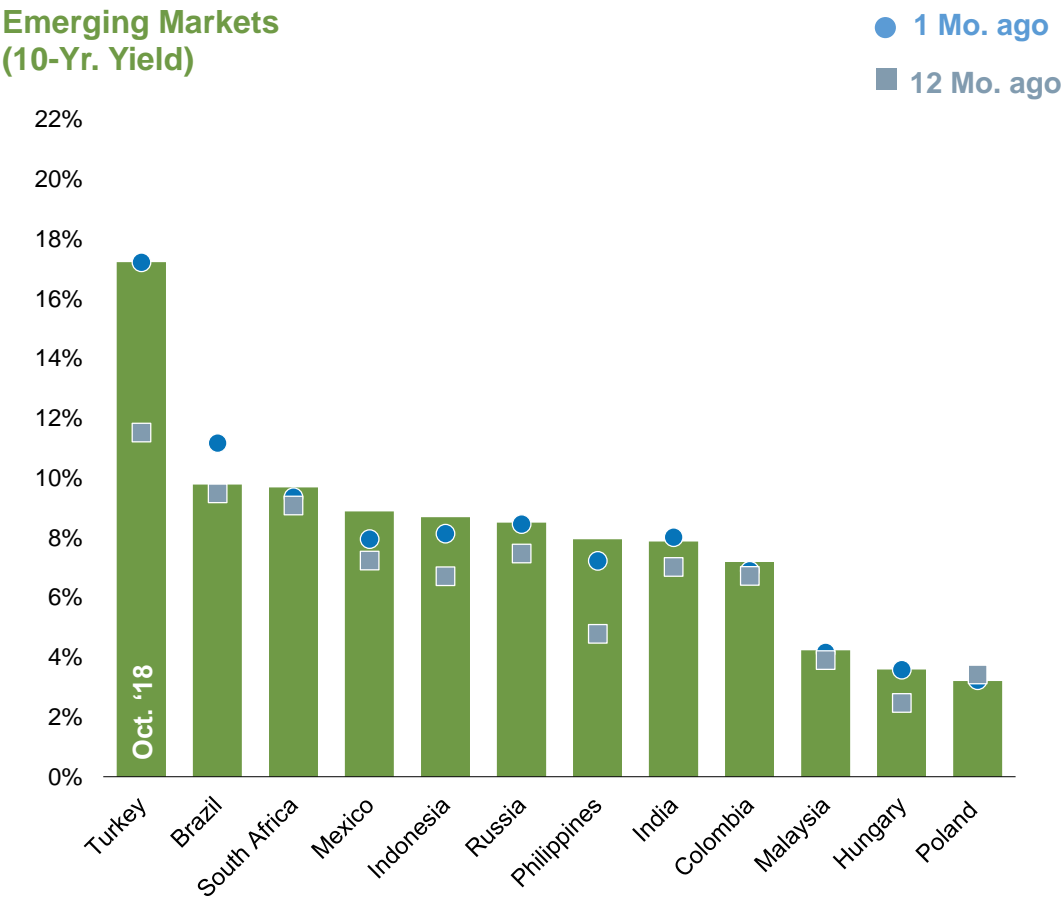
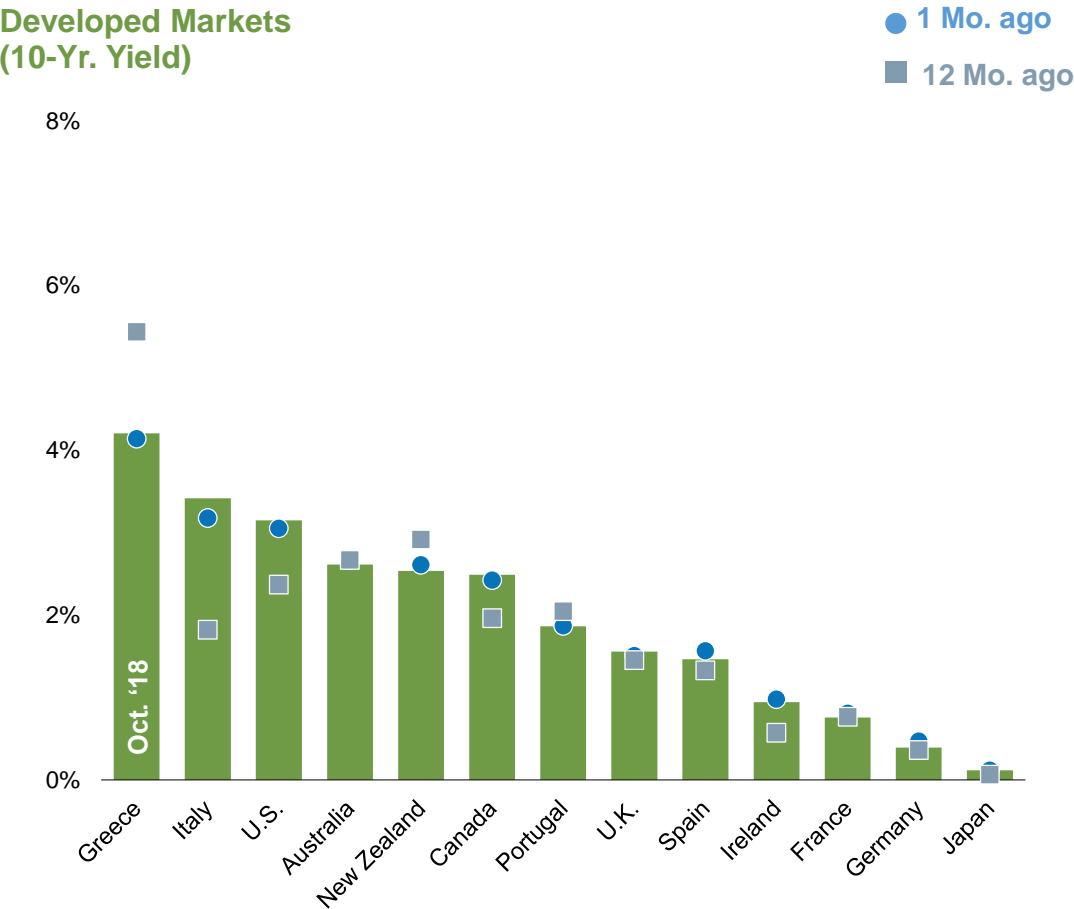
Kathleen Gaffney, CFA, Director of Diversified Fixed Income

Despite recent volatility and "contagion" talk, we still think EM deserves a place in diversified bond portfolios -- but with an important caveat. We believe investors who rely on benchmarks for exposure to EM debt may end up disappointed in coming years. Also, we think viewing EM bonds simply as an asset class or sector that can add value to traditional, developed-market indices may be a mistake. Instead, we favor a flexible approach that focuses on trying to identify the individual EM countries offering the best value -- for example, countries facing near-term challenges that may be distracting investors from their long-term potential ([see page 4](#)). In other words, relying solely on traditional benchmarks may be too restrictive to implement a new playbook for fixed-income investing.

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Fixed-Income

Sovereign bond yields



Source: Factset as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Fixed-Income

Key rates

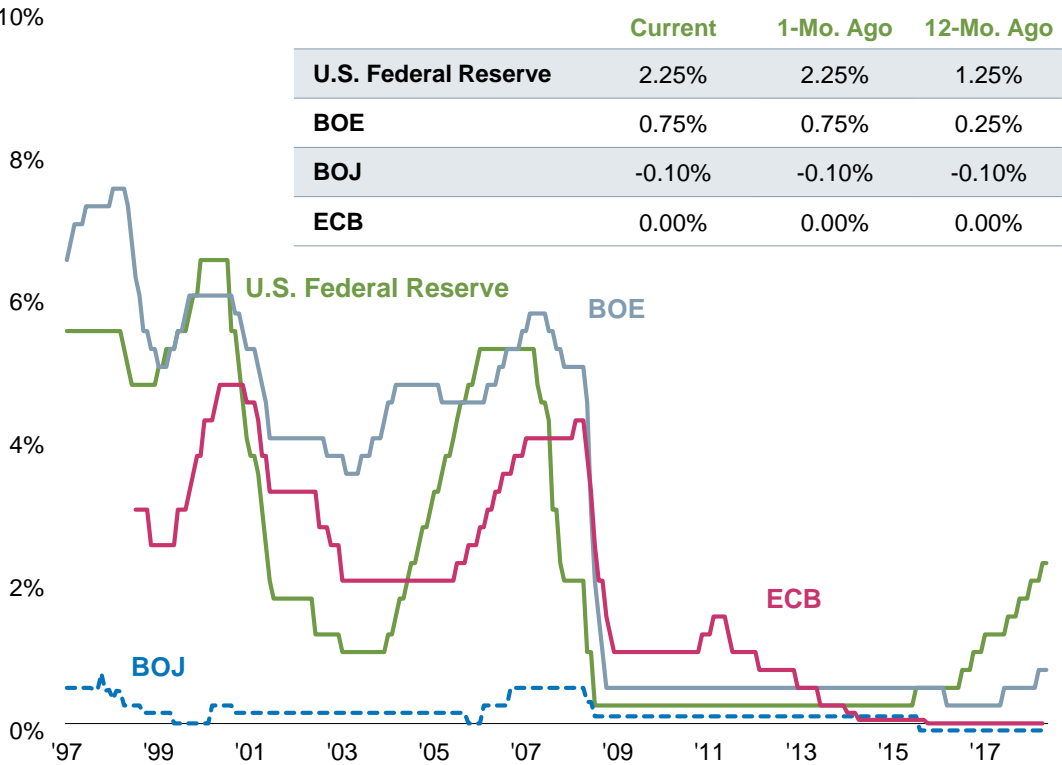
Security	Current	12-Mo. ago	Average	Minimum	Maximum
1-Week SIFMA	1.61	0.92	1.32	0.92	1.81
1-Mo LIBOR	2.31	1.24	1.86	1.24	2.31
3-Mo LIBOR	2.56	1.38	2.12	1.38	2.56
2-Yr Treasury	2.88	1.59	2.36	1.62	2.91
5-Yr Treasury	2.98	2.01	2.63	1.98	3.07
10-Yr Treasury	3.15	2.37	2.81	2.32	3.23
30-Yr Treasury	3.40	2.88	3.04	2.69	3.40
2-Yr Japan	-0.13	-0.17	-0.14	-0.21	-0.09
10-Yr Japan	0.12	0.06	0.06	0.02	0.16
2-Yr German Bund	-0.61	-0.76	-0.62	-0.77	-0.50
10-Yr German Bund	0.39	0.36	0.47	0.27	0.76
2-Yr UK Gilt	0.77	0.46	0.70	0.40	0.92
10-Yr UK Gilt	1.46	1.33	1.39	1.15	1.74
BbgBarc US Agg	3.59	2.60	3.17	2.58	3.61
BbgBarc Global Agg	2.22	1.61	1.92	1.58	2.26
BbgBarc US Corporate	4.28	3.15	3.78	3.15	4.28
BbgBarc US Long Corporate	4.98	4.15	4.48	3.99	4.98
BbgBarc US Municipal	4.43	3.74	4.03	3.62	4.43
BbgBarc US Long Municipal	3.71	3.02	3.29	2.79	3.73
US High Yield	6.89	5.52	6.18	5.51	6.90
US Loans	6.00	5.14	5.52	5.10	6.00

Source: Bloomberg, LCD, and Factset as of 10/31/18. Data provided is for informational use only. High Yield is represented by ICE BofAML US High Yield Index. Bank Loan is represented by S&P/LSTA Leveraged Loan Index. Bloomberg Barclays indices and ICE BofAML US HY index using yield to worst. S&P/LSTA Leverage Loan Index using yield to maturity. Past performance is no guarantee of future results. See end of report for important additional information.

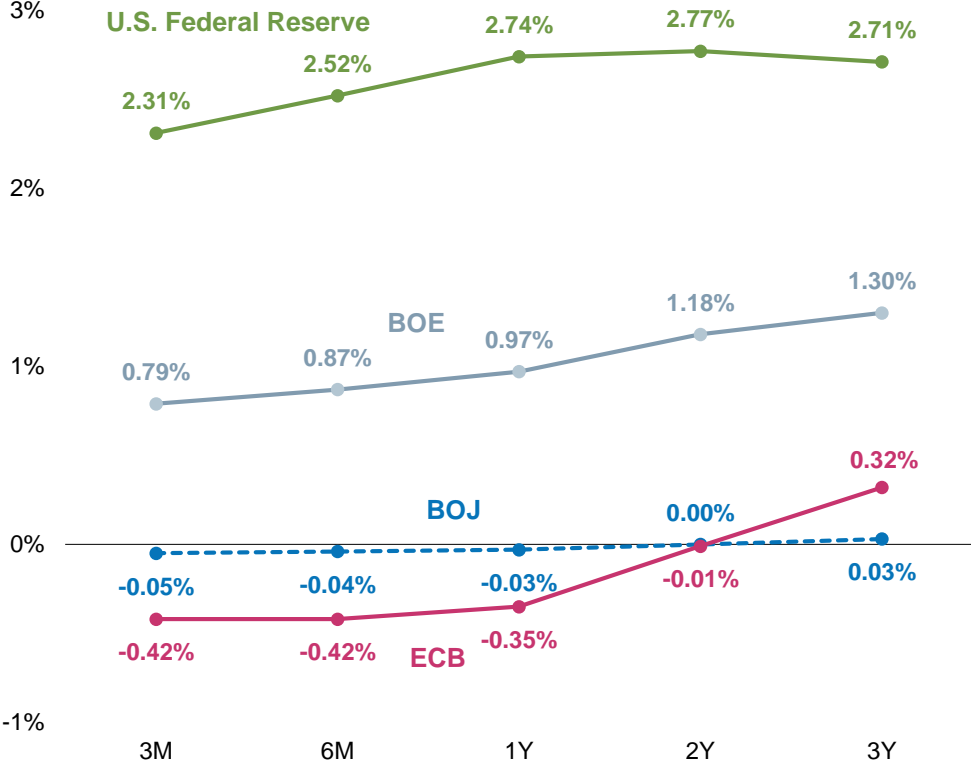
Fixed-Income

Monetary policy

Central Bank Policy Rates



Market Expectations for Future Central Bank Rates

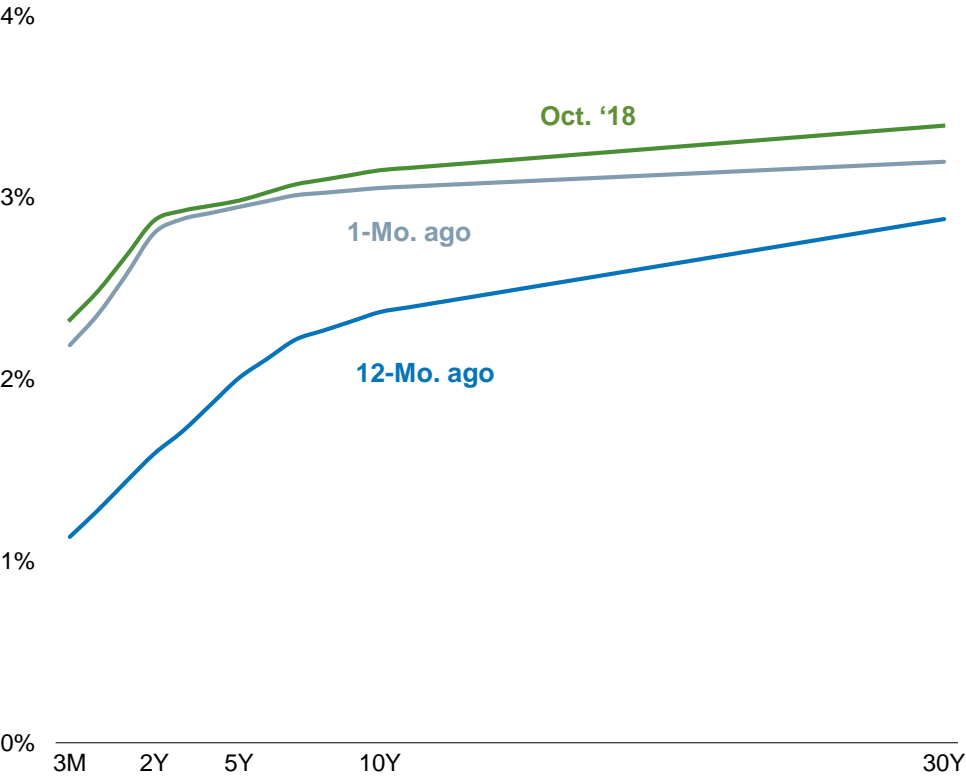


Fixed-Income

U.S. Treasury yields



U.S. Treasury Yield Curves



Yields & Performance

Security	Yield (%)			Total Return (%)	
	Current	1-Mo. ago	12-Mo. ago	1-Mo.	12-Mo.
3-mo. Treasury	2.33	2.19	1.13	0.17	1.68
6-mo. Treasury	2.49	2.36	1.28	0.19	1.68
2-yr. Treasury	2.88	2.81	1.59	0.15	0.07
3-yr. Treasury	2.93	2.88	1.71	0.11	-0.87
5-yr. Treasury	2.98	2.95	2.01	0.10	-1.71
10-yr. Treasury	3.15	3.05	2.37	-0.60	-4.37
30-yr. Treasury	3.40	3.20	2.88	-3.64	-7.14

Source: Factset, Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Fixed-Income

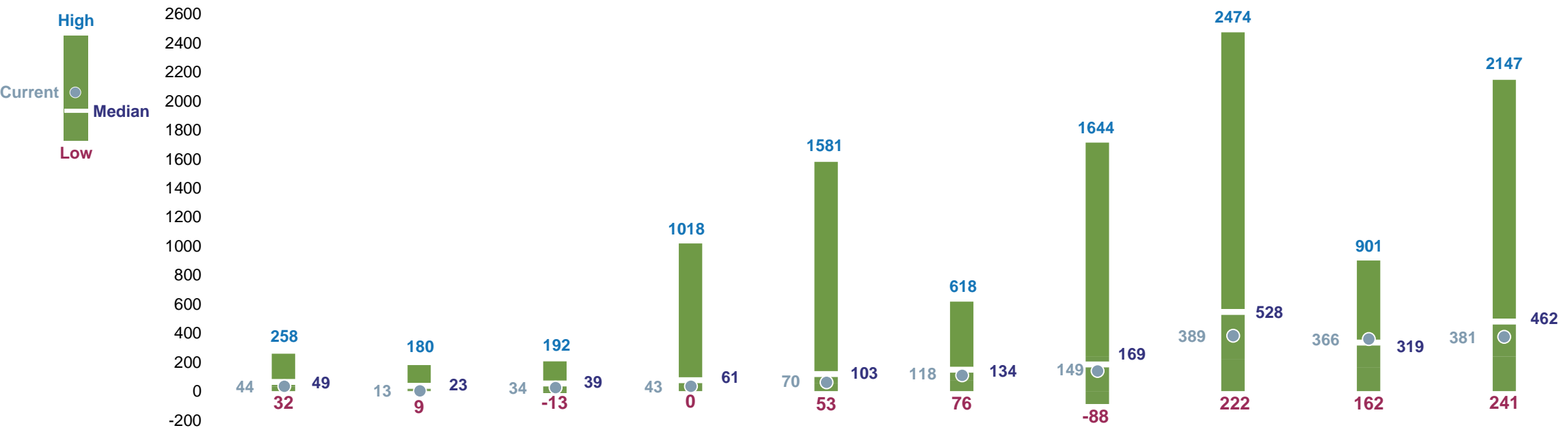
Characteristics and performance analysis

Index	Averages						Total Returns (%)						
	Coupon (%)	Price (\$)	Yield to Worst (%)	Spread (bps)	Maturity (yrs.)	Duration (yrs.)	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	10Y
Bloomberg Barclays U.S. Aggregate Index	3.18	98.2	3.59	44	8.4	6.0	-0.79	-0.79	-2.38	-2.05	1.04	1.83	3.94
U.S. Treasury	2.33	97.2	3.03	-	7.5	5.9	-0.48	-0.65	-2.14	-1.97	0.20	1.14	2.64
U.S. Agency	2.72	101.3	3.11	13	5.1	4.0	-0.15	0.01	-0.69	-0.72	0.74	1.34	2.56
U.S. Mortgage Backed Securities	3.58	98.8	3.74	34	8.0	5.4	-0.63	-0.64	-1.70	-1.52	0.74	1.75	3.40
U.S. Asset Backed Securities	2.57	98.8	3.30	43	2.3	2.2	0.07	0.47	0.59	0.52	1.27	1.46	4.33
U.S. Commercial Mortgage Backed Securities	3.38	98.0	3.74	70	6.0	5.3	-0.55	-0.07	-1.48	-1.52	1.34	1.95	6.66
U.S. Corp. Investment Grade	4.00	98.5	4.28	118	10.7	7.1	-1.46	-1.33	-3.76	-3.02	2.47	2.94	6.91
Bloomberg Barclays Municipal Bond Index	4.69	105.3	3.01	-	13.0	6.5	-0.62	-1.01	-1.01	-0.51	1.90	3.25	4.80
Bloomberg Barclays Taxable Municipal Bond	5.29	108.1	4.16	-	16.9	8.8	-1.02	-1.07	-2.43	-1.37	3.58	5.03	6.71
ICE BofA ML US Inflation-Linked Treasury Index	0.87	99.2	1.12	-	8.6	5.7	-1.52	-1.94	-2.50	-1.32	1.53	1.07	4.14
ICE BofA ML Preferred Index (Fixed Rate)	5.74	98.9	5.06	149	-	5.6	-1.62	-1.74	-1.39	-1.23	4.12	6.41	8.16
ICE BofA ML US High Yield Index	6.34	96.4	6.89	381	6.0	4.1	-1.64	-0.35	0.84	0.86	6.64	4.69	11.16
S&P / LSTA Leveraged Loan Index	L+3.32	98.1	6.00	389	5.26	-	-0.03	1.06	4.00	4.54	5.37	3.97	7.66
JPMorgan EM Bond Index (EMBI) Global Diversified	5.96	95.1	6.81	366	-	6.5	-2.16	-2.40	-5.13	-4.39	4.33	4.35	9.20
JPMorgan Corp. EM Bond Index (CEMBI) Broad Diversified	5.29	97.2	6.07	300	-	4.6	-0.60	-0.74	-2.19	-1.86	4.39	4.19	9.20
JPMorgan Govt. Bond Index-EM (GBI-EM) Global Diversified	6.20	-	6.76	-	-	5.1	-1.96	-5.54	-9.95	-6.58	2.95	-2.59	4.07
Bloomberg Barclays Global Aggregate Ex-U.S. Index	2.17	108.2	1.03	47	9.3	7.9	-1.39	-2.75	-4.38	-2.09	1.82	-0.82	2.52
ICE BofA ML U.K. Gilts Index	3.36	122.4	1.42	-	16.9	12.1	-1.05	-3.08	-6.02	-2.58	-2.51	0.11	3.26
ICE BofA ML European Union Government Bond Index	2.77	114.0	1.02	70	10.8	8.5	-2.23	-3.73	-6.14	-3.55	0.71	-0.25	3.28

Source: Bloomberg Barclays, JPMorgan, ICE BofAML, Factset, and Standard & Poor's as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Yield to maturity is shown for the S&P/LSTA Leveraged Loan Index. Loan Index coupon value includes LIBOR (shown as "L+"). Loan Index spread represents the three-year discounted spread over LIBOR.

Fixed-Income

Spread analysis (bps)



	Aggregate	Agency	MBS	ABS	CMBS	Corporate	Preferred	Floating-Rate Loans	Emerging Markets (USD)	High Yield
Max Spread Date	12/3/2008	11/20/2008	12/3/2008	1/6/2009	11/21/2008	12/3/2008	3/9/2009	12/19/2008	10/24/2008	12/15/2008
Min Spread Date	2/23/2005	3/12/2013	7/27/2010	10/1/2009	12/8/2004	3/11/2005	12/6/2017	3/31/2006	6/1/2007	6/1/2007
Spread on 12/31/17	36	14	25	36	62	93	-30	405	285	358
Spread on 12/31/16	43	21	15	59	75	123	213	465	342	422
Spread on 12/31/15	56	21	24	72	121	165	158	714	415	695

Source: Factset as of 10/31/18. Spread history measures past 15 years. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. All fixed-income spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries using daily data. Loan Index spread represents the three-year discounted spread over LIBOR. Aggregate represented by Bloomberg Barclays US Aggregate Index. Agency represented by Bloomberg Barclays U.S. Agency Index. MBS represented by Bloomberg Barclays U.S. Mortgage Backed Securities (MBS) Index. ABS represented by Bloomberg Barclays U.S. Asset Backed Securities (ABS) Index. CMBS represented by Bloomberg Barclays U.S. CMBS Investment Grade Index. Corporate represented by Bloomberg Barclays U.S. Corporate Investment Grade Index. Preferred represented by ICE BofA ML Fixed Rate Preferred Securities Index. Floating-Rate Loans represented by S&P/LSTA Leveraged Loan Index. Emerging Markets(USD) represented by JPMorgan Emerging Markets Bond Index (EMBI) Global Diversified. High Yield represented by ICE BofA ML US High Yield Index.

Fixed-Income

Corporate bond market update

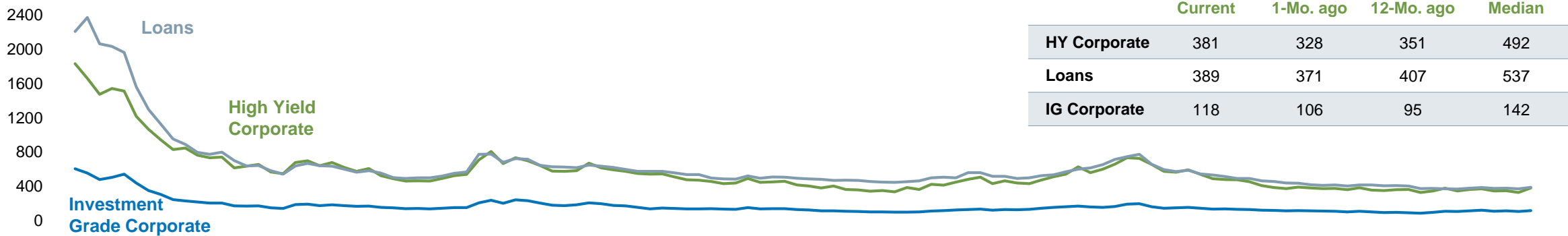
	Averages						Total Returns (%)						
	Coupon (%)	Price (\$)	Yield to Worst (%)	Spread (bps)	Maturity (yrs.)	Duration (yrs.)	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	10Y
Bloomberg Barclays U.S. Corp. Investment Grade Index	4.00	98.5	4.28	118	10.7	7.1	-1.46	-1.33	-3.76	-3.02	2.47	2.94	6.91
AAA Index	3.38	97.3	3.83	65	17.3	10.2	-2.05	-2.52	-5.43	-3.90	1.91	2.88	4.50
AA Index	3.16	98.1	3.69	65	8.9	6.1	-1.02	-0.85	-2.59	-2.16	1.72	2.39	5.06
A Index	3.77	98.7	4.06	96	10.5	7.1	-1.35	-1.33	-4.07	-3.33	1.93	2.69	6.56
BBB Index	4.35	98.3	4.58	147	11.0	7.1	-1.60	-1.35	-3.62	-2.86	3.11	3.26	8.03
ICE BofA ML US High Yield Index	6.36	96.6	6.86	371	6.0	3.9	-1.64	-0.35	0.84	0.86	6.64	4.69	11.16
BB Index	5.52	98.3	5.62	248	6.4	4.4	-1.36	-0.17	-0.82	-0.82	5.17	4.77	10.63
B Index	6.62	97.5	6.89	372	5.6	3.6	-1.58	-0.22	1.84	1.66	6.55	4.34	9.76
CCC Index	8.06	90.9	10.06	693	5.6	3.4	-2.81	-1.44	3.91	4.57	12.40	5.77	14.41
S&P/LSTA Leveraged Loan Index	L+3.32	98.1	6.00	389	5.26	-	-0.03	1.06	4.00	4.54	5.37	3.97	7.66
BBB Index	L+1.96	99.8	4.30	203	5.27	-	0.05	0.95	3.16	3.45	3.92	3.31	5.08
BB Index	L+2.59	99.5	5.01	273	5.46	-	-0.06	0.75	3.13	3.68	4.27	3.66	6.26
B Index	L+3.69	99.0	6.25	407	5.28	-	0.03	1.29	4.33	4.85	5.57	4.15	8.19
CCC Index	L+5.68	89.1	11.73	1,043	4.37	-	-0.66	1.46	7.63	8.82	12.79	8.77	12.65
D Index	-	65.6	-	-	-	-	-0.72	-2.80	-2.66	-8.43	3.78	-6.17	-0.75

Source: Bloomberg Barclays, JPMorgan, ICE BofA ML, Factset, and Standard & Poor's as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Yield to maturity is shown for the S&P/LSTA Leveraged Loan Index. Loan Index coupon value includes LIBOR (shown as "L+"). Loan Index spread represents the three-year discounted spread over LIBOR

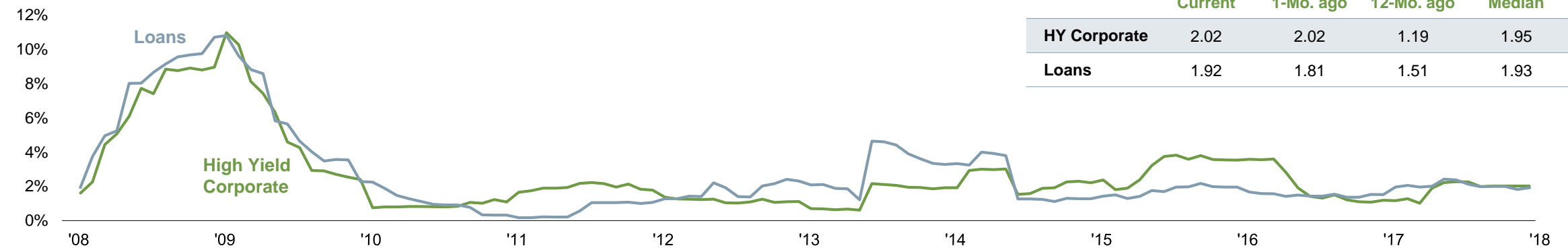
Fixed-Income

Corporate bond market update

Average Spread (bps)



Annual Default Rate



Source: JPMorgan, LCD as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Corporate spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries. Loan Index spread represents the three-year discounted spread over LIBOR

Fixed-Income

Municipal bond market update



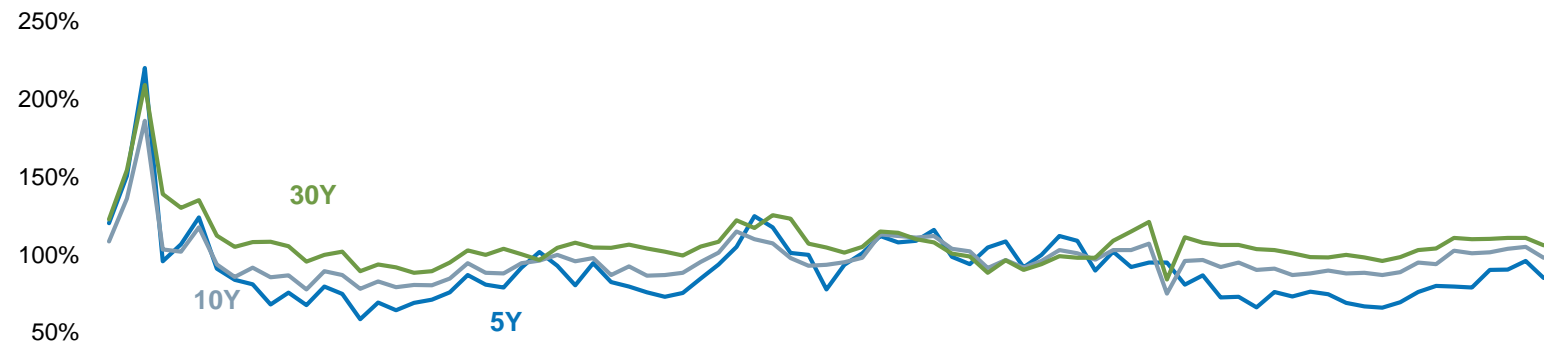
	Averages					Total Returns (%)						
	Coupon (%)	Price (\$)	Yield To Worst (%)	Maturity (yrs.)	Duration (yrs.)	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	10Y
Bloomberg Barclays Municipal Bond Index	4.69	105.3	3.01	13.0	6.5	-0.62	-1.01	-1.01	-0.51	1.90	3.25	4.80
AAA Index	4.62	106.5	2.76	10.6	6.1	-0.56	-1.02	-1.33	-1.01	1.21	2.30	3.76
AA Index	4.68	106.7	2.86	12.8	6.3	-0.58	-0.98	-1.09	-0.68	1.59	2.92	4.54
A Index	4.73	104.0	3.21	14.2	6.7	-0.65	-1.01	-0.91	-0.28	2.49	3.90	5.52
BBB Index	4.73	99.2	3.82	15.0	7.1	-0.81	-1.14	-0.21	0.82	3.38	5.13	6.03
5-Year Index	4.77	108.5	2.51	5.0	4.0	-0.19	-0.78	-0.09	-0.77	0.91	1.60	3.35
10-Year Index	4.69	108.5	2.90	9.9	5.9	-0.58	-0.89	-1.23	-0.93	1.85	3.14	4.94
22+ Year Index	4.66	102.2	3.71	26.6	10.6	-1.12	-1.62	-2.25	-0.53	2.85	4.98	6.66
Bloomberg Barclays High Yield Municipal Bond Index	5.10	64.3	5.12	20.0	8.9	-1.25	-0.85	3.14	4.74	5.42	5.96	7.45
Hospital	5.61	100.3	5.05	22.2	9.0	-0.92	-1.39	0.15	1.90	4.52	6.67	8.39
IDR/PCR	4.91	37.9	5.44	20.0	9.5	-2.10	-2.14	3.19	4.89	7.22	9.48	10.37
Tobacco	4.32	25.1	6.00	24.2	11.9	-3.31	-3.62	4.06	6.76	10.59	12.33	12.42
Puerto Rico	4.78	27.7	6.40	21.2	9.9	-0.44	7.14	34.88	32.85	5.55	-0.08	0.08

Source: Bloomberg Barclays, Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Fixed-Income

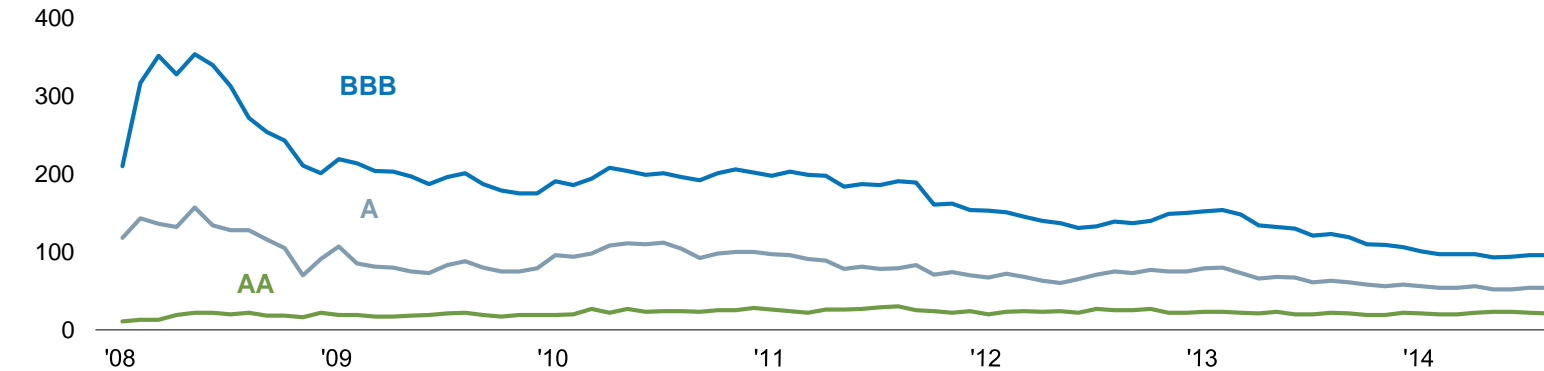
Municipal bond market update

AAA Muni-to-Treasury Yield Ratios



	Current	1-Mo. ago	12-Mo. ago	Median
5Y	77	75	71	81
10Y	86	84	85	94
30Y	99	100	98	102

Credit Quality Spreads vs. AAA (bps)



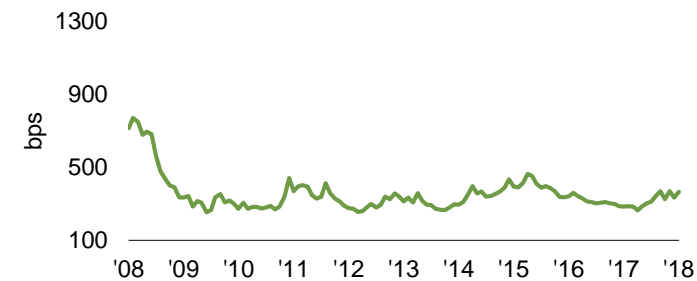
	Current	1-Mo. ago	12-Mo. ago	Median
AA	17	17	20	21
A	47	47	53	68
BBB	83	82	88	137

Source: Bloomberg Barclays as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. All spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries.

Fixed-Income

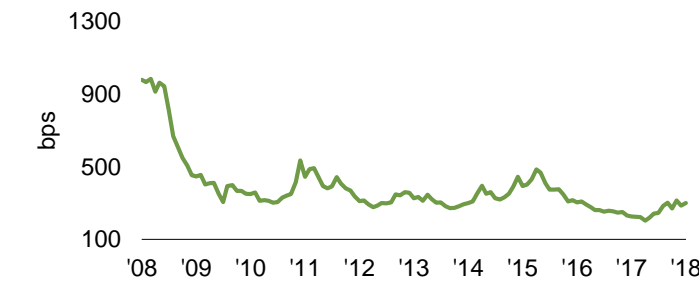
Emerging markets bond market update

Sovereign EMD Spreads (USD)



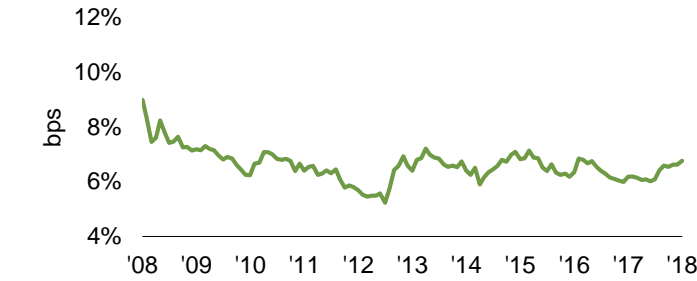
	Avg. Spread (bps)
Current	366
1-Mo. ago	335
12-Mo. ago	284
Median	333

Corporate EMD Spreads (USD)



	Avg. Spread (bps)
Current	300
1-Mo. ago	286
12-Mo. ago	226
Median	342

Local EMD Yields (%)



	Avg. Yield (%)
Current	6.76
1-Mo. ago	6.62
12-Mo. ago	6.17
Median	6.58

	Averages				Total Returns (%)						
	Coupon (%)	Price (\$)	Yield (%)	Duration	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	10Y
JPMorgan Emerging Markets Bond Index (EMBI) Global Diversified	5.96	95.5	6.81	6.5	-2.16	-2.40	-5.13	-4.39	4.33	4.35	9.20
JPMorgan Corporate Emerging Markets Bond Index (CEMBI) Broad Diversified	5.29	97.2	6.07	4.6	-0.60	-0.74	-2.19	-1.86	4.39	4.19	9.20
JPMorgan Government Bond Index-Emerging Markets (GBI-EM) Global Diversified	6.20	-	6.76	5.1	-1.96	-5.54	-9.95	-6.58	2.95	-2.59	4.07

Source: JPMorgan, Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. All spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries.

Fixed-Income

Asset class return analysis (%)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD 10/18
Higher	Treasury 13.74	High Yield 57.51	EM (Local Currency) 15.68	Municipal 10.70	EM (Local Currency) 16.76	High Yield 7.42	Municipal 9.05	Municipal 3.30	High Yield 17.49	EM (Local Currency) 15.21	Bank Loan 4.00
	MBS 8.34	Bank Loan 51.62	High Yield 15.19	Treasury 9.81	High Yield 15.58	Bank Loan 5.29	Investment Grade 7.46	MBS 1.51	Bank Loan 10.16	Global Agg Ex-U.S. 10.51	High Yield 0.84
	Global Agg Ex-U.S. 4.40	EM (Local Currency) 21.98	Bank Loan 10.13	Investment Grade 8.15	Investment Grade 9.82	MBS -1.41	MBS 6.08	Treasury 0.84	EM (Local Currency) 9.94	High Yield 7.48	Municipal -1.01
	Municipal -2.47	Investment Grade 18.68	Investment Grade 9.00	MBS 6.23	Bank Loan 9.66	Investment Grade -1.53	Treasury 5.05	Investment Grade -0.68	Investment Grade 6.11	Investment Grade 6.42	MBS -1.70
	Investment Grade -4.94	Municipal 12.91	Treasury 5.87	High Yield 4.38	Municipal 6.78	Municipal -2.55	High Yield 2.50	Bank Loan -0.69	MBS 1.67	Municipal 5.45	Treasury -2.14
	EM (Local Currency) -5.22	Global Agg Ex-U.S. 7.53	MBS 5.37	Global Agg Ex-U.S. 4.36	Global Agg Ex-U.S. 4.09	Treasury -2.75	Bank Loan 1.60	High Yield -4.64	Global Agg Ex-U.S. 1.49	Bank Loan 4.12	Investment Grade -3.76
	High Yield -26.39	MBS 5.89	Global Agg Ex-U.S. 4.95	Bank Loan 1.52	MBS 2.59	Global Agg Ex-U.S. -3.08	Global Agg Ex-U.S. -3.08	Global Agg Ex-U.S. -6.02	Treasury 1.04	MBS 2.47	Global Agg Ex-U.S. -4.38
Lower	Bank Loan -29.10	Treasury -3.57	Municipal 2.38	EM (Local Currency) -1.75	Treasury 1.99	EM (Local Currency) -8.98	EM (Local Currency) -5.72	EM (Local Currency) -14.92	Municipal 0.25	Treasury 2.31	EM (Local Currency) -9.95

Source: Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Investment Grade represented by Bloomberg Barclays U.S. Corporate Index. MBS represented by Bloomberg Barclays U.S. Mortgage Backed Securities (MBS) Index. Treasury represented by Bloomberg Barclays U.S. Treasury Index. High Yield represented by ICE BofA ML US High Yield Index. Municipal represented by Bloomberg Barclays Municipal Bond Index. Bank Loan represented by S&P/LSTA Leveraged Loan Index. Global Agg Ex-U.S. represented by Bloomberg Barclays Global Aggregate Ex-USD Index. EM(Local Currency) represented by JPMorgan Government Bond Index-Emerging Markets (GBI-EM) Global Diversified.

Equities

Performance: market barometer (%)

1-Month Returns

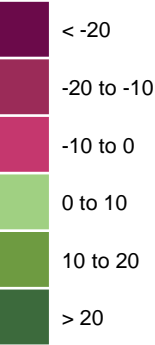
	Value	Core	Growth
Large Cap	-5.18	-7.08	-8.94
Mid Cap	-7.20	-8.31	-9.90
Small Cap	-8.95	-10.86	-12.65

1-Year Returns

Value	Core	Growth
3.03	6.98	10.71
0.16	2.79	6.14
-0.59	1.85	4.13

3-Year Returns

Value	Core	Growth
8.88	11.31	13.67
8.15	9.04	10.39
10.52	10.68	10.72



Global	US
-7.49	-6.84
International	Emerging Markets
-7.96	-8.71

Global	US
-0.52	7.35
International	Emerging Markets
-6.85	-12.52

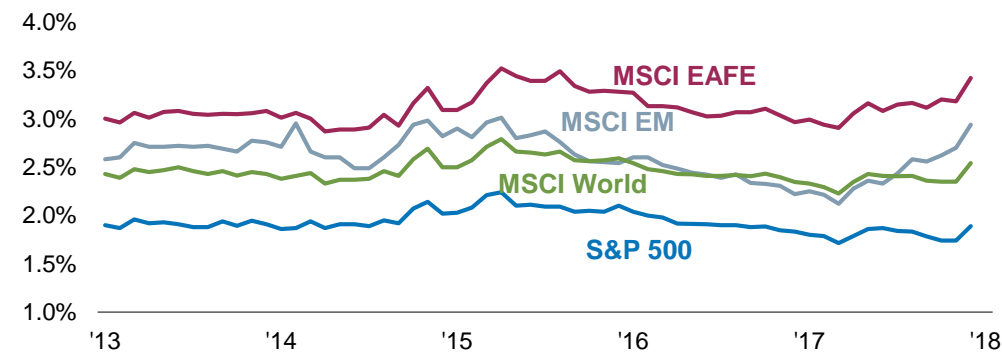
Global	US
7.74	11.52
International	Emerging Markets
3.62	6.52

Source: Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Returns over 1 year are annualized. Large Cap Value represented by Russell 1000 Value Index. Large Cap Core represented by Russell 1000 Index. Large Cap Growth represented by Russell 1000 Growth Index. Mid Cap Value represented by Russell Mid Cap Value Index. Mid Cap Core represented by Russell Mid Cap Index. Mid Cap Growth represented by Russell Mid Cap Growth Index. Small Cap Value represented by Russell 2000 Value Index. Small Cap Core represented by Russell 2000 Index. Small Cap Growth represented by Russell 2000 Growth Index. Global represented by MSCI ACWI Index. US represented by S&P 500 Index. International represented by MSCI EAFE Index. Emerging Markets represented by MSCI Emerging Markets Index.

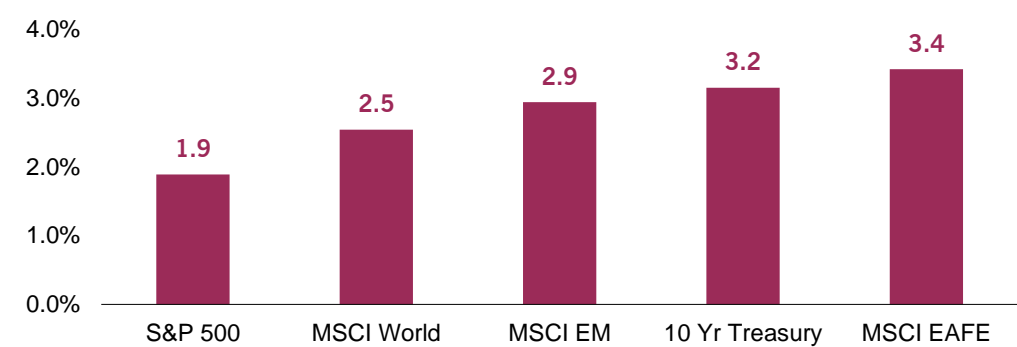
Equities

Dividend yields and volatility analysis

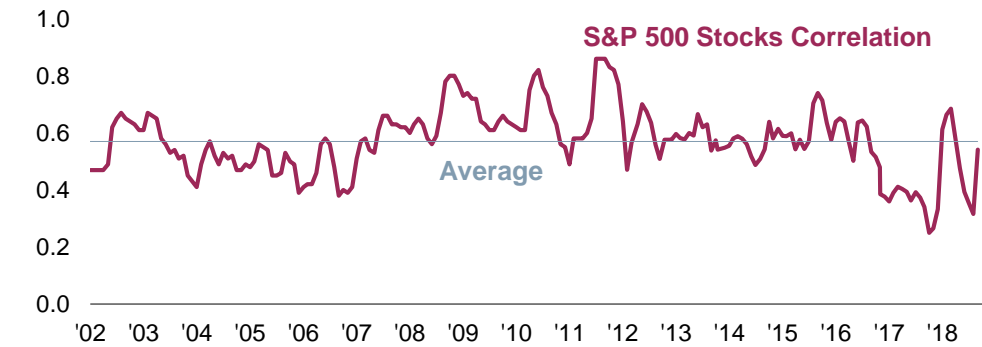
Historical Yields



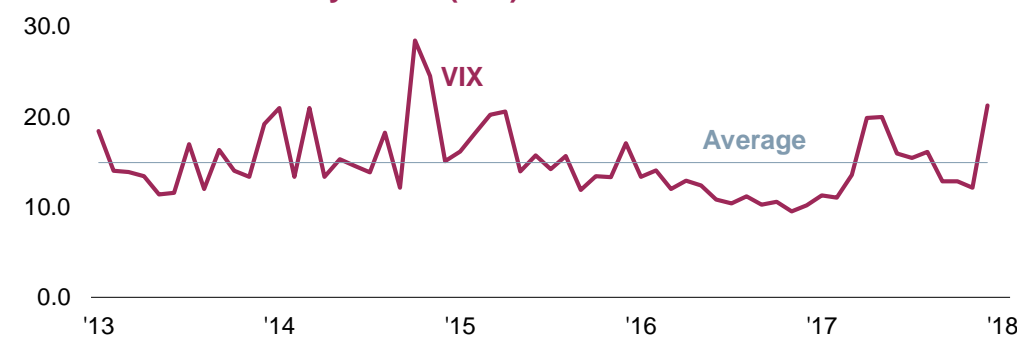
Current Yields



Correlation of S&P 500 Stocks



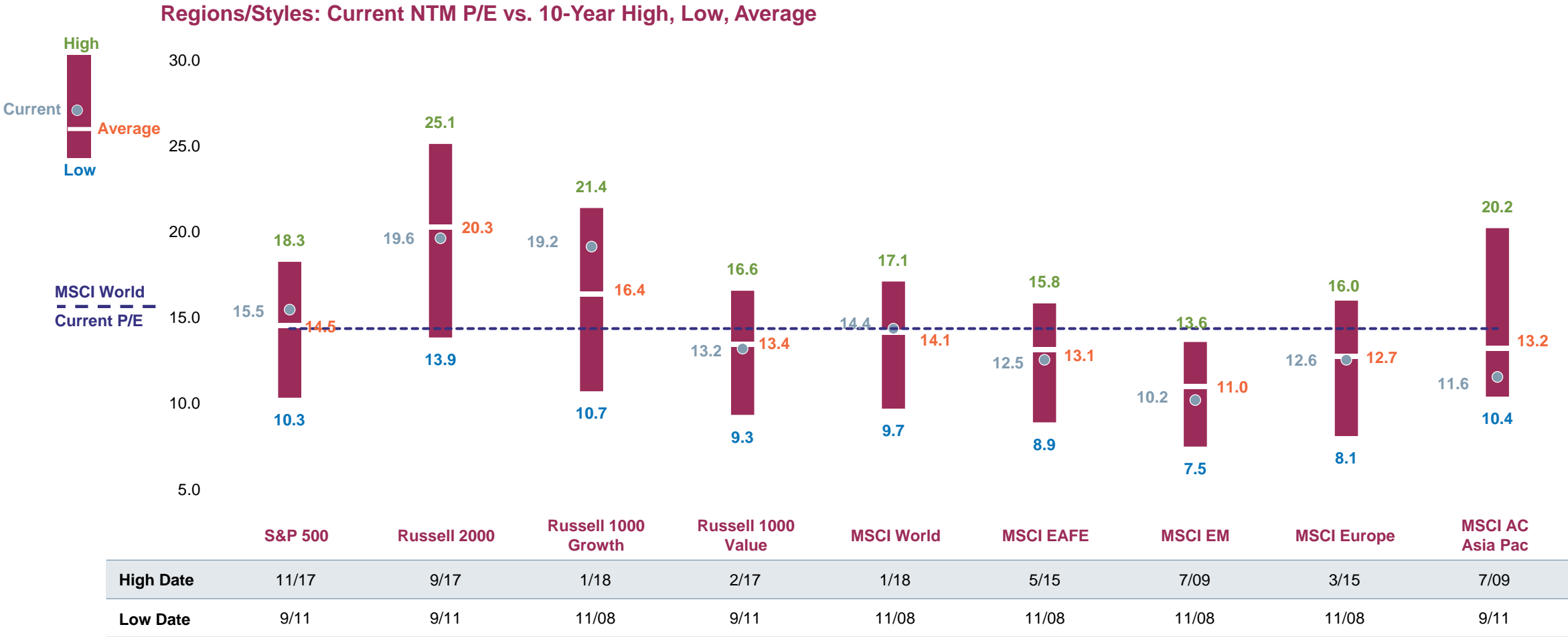
CBOE Market Volatility Index (VIX)



Source: FactSet and Ned Davis Research as of 10/31/18. Correlation of S&P 500 Stocks is measured by the median 63-day rolling correlation of one day returns. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Equities

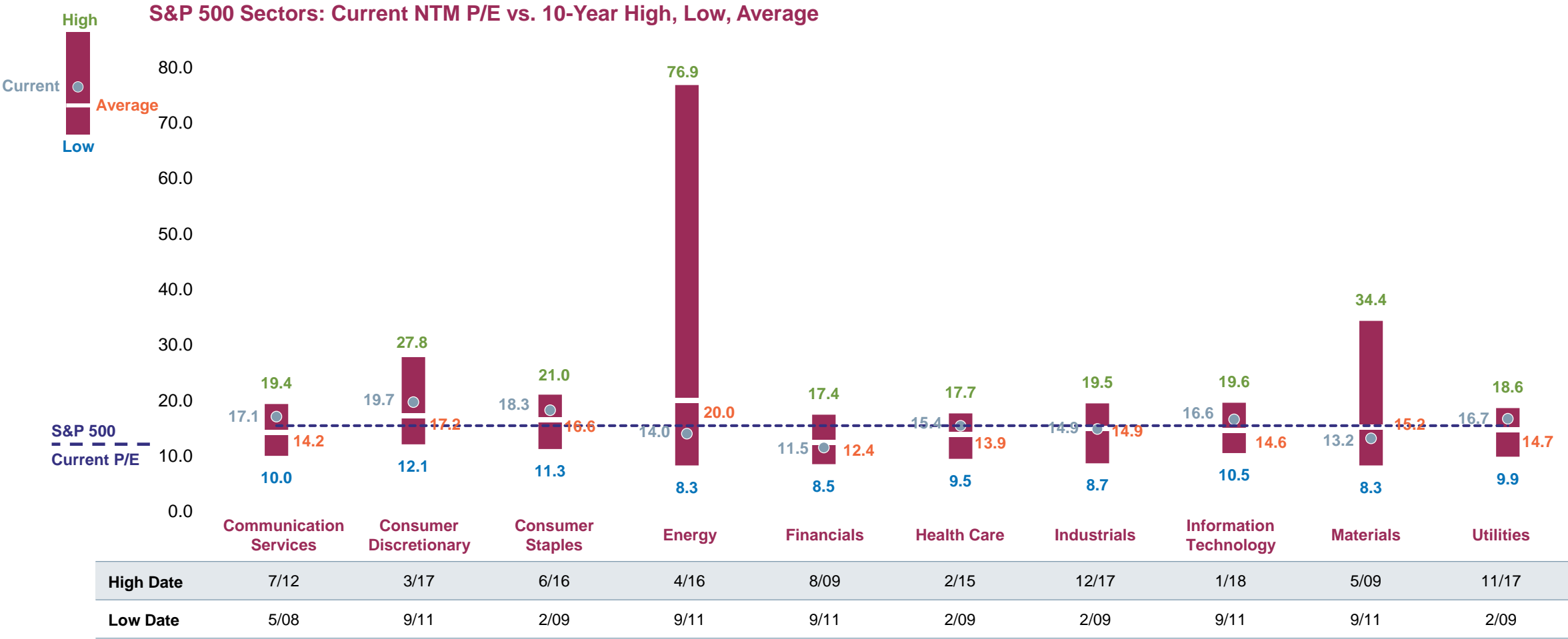
Valuation analysis



Source: FactSet as of 10/31/18. NTM P/E is market price per share divided by expected earnings per share over the next twelve months. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Equities

Valuation analysis

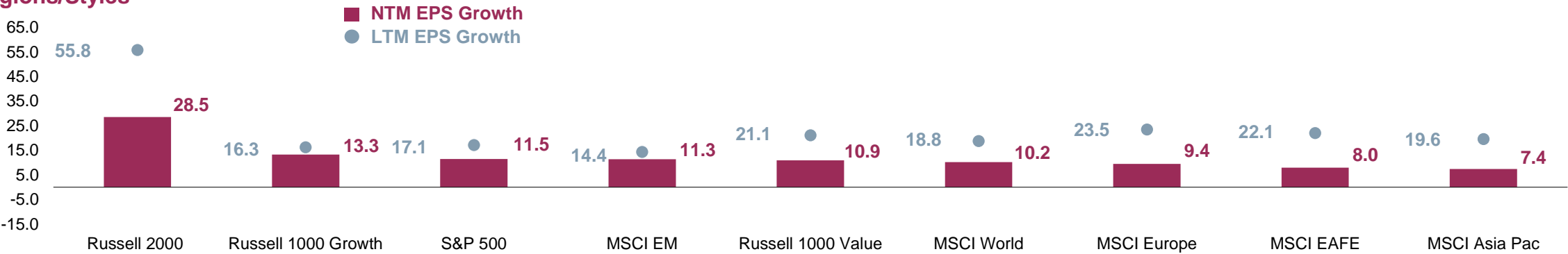


Source: FactSet as of 10/31/18. NTM P/E is market price per share divided by expected earnings per share over the next twelve months. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

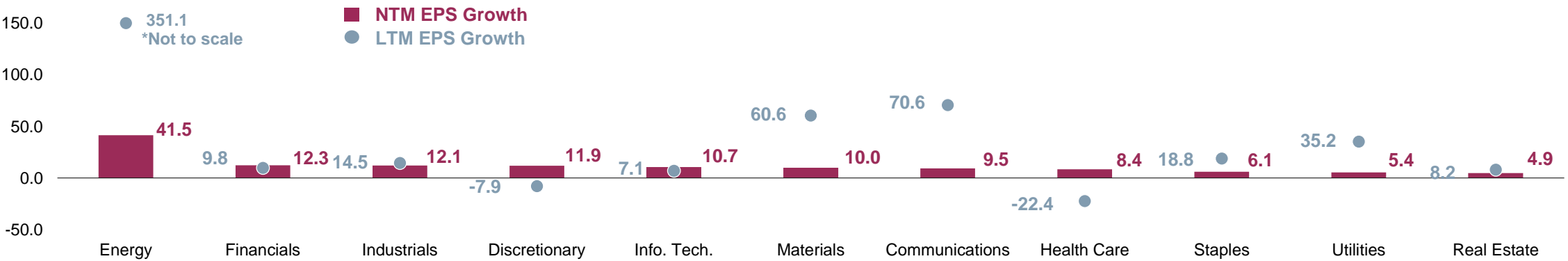
Equities

Corporate earnings growth

Regions/Styles



S&P 500 Sectors

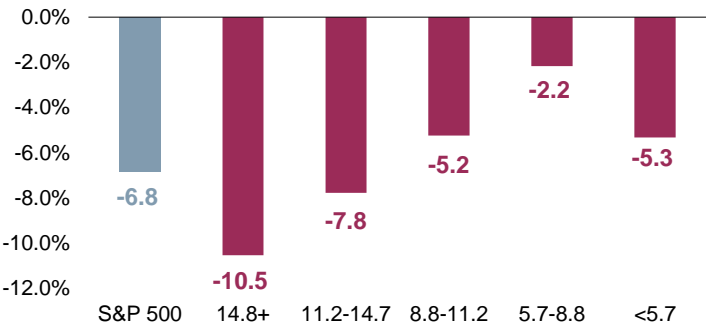


Source: FactSet as of 10/31/18. NTM EPS Growth is the % change in YOY EPS for the next 12 months. LTM EPS Growth is the % change in YOY EPS for last 12 months. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

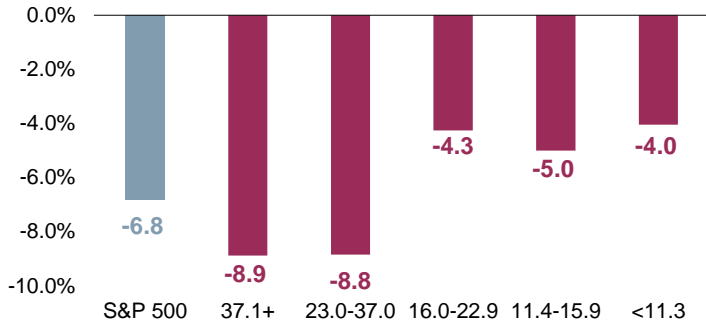
Equities

S&P 500 index: 1-month return analysis

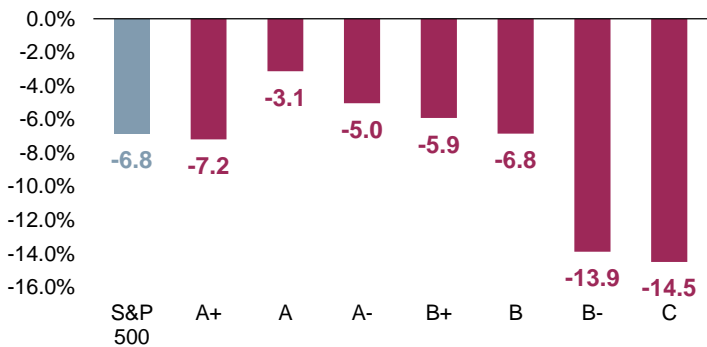
3-5 Year Earnings Growth



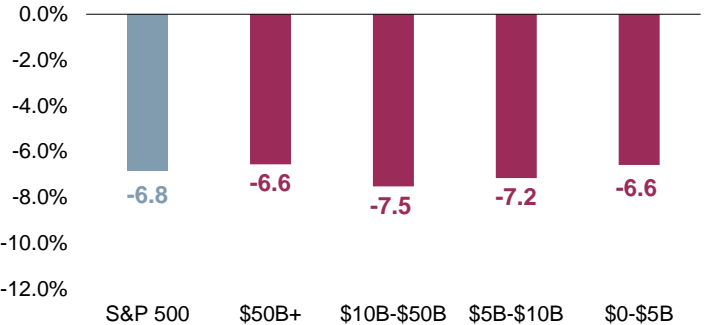
Trailing 12 Month P/E



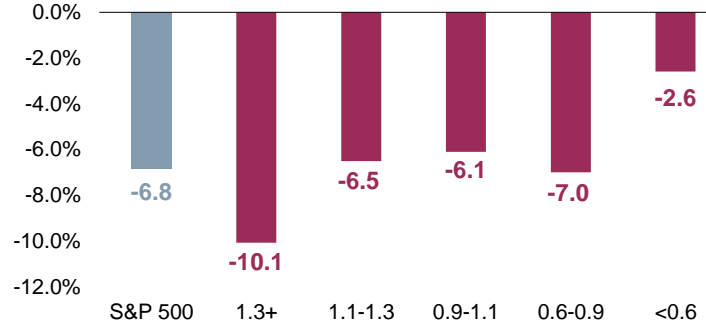
S&P 500 Quality Ranking



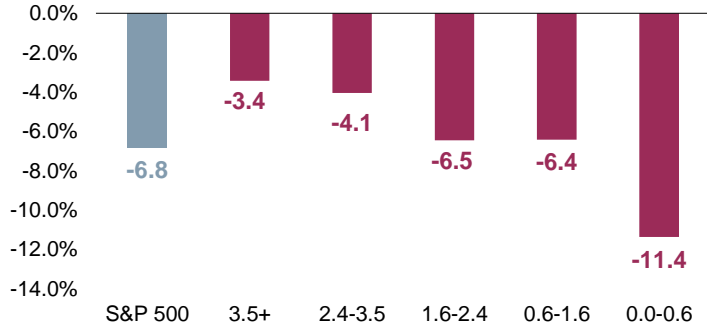
Market Cap



Beta



Dividend Yield

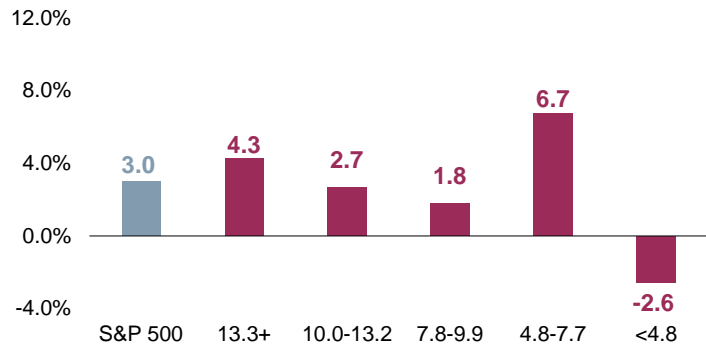


Source: FactSet as of 10/31/18.
Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

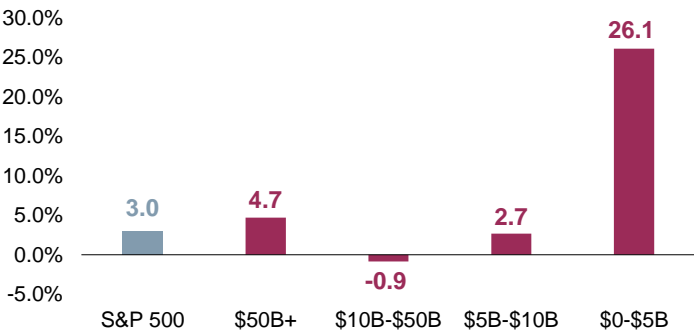
Equities

S&P 500 index: YTD analysis

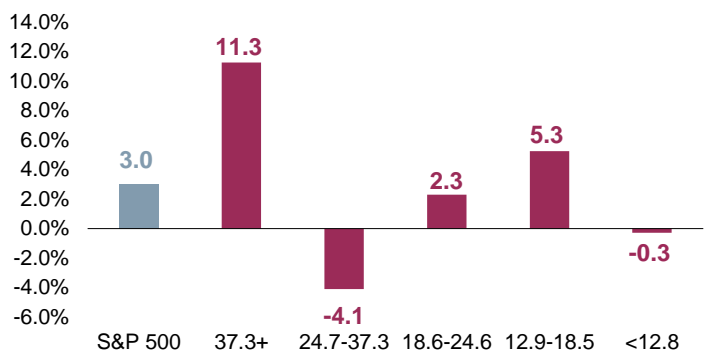
3-5 Year Earnings Growth



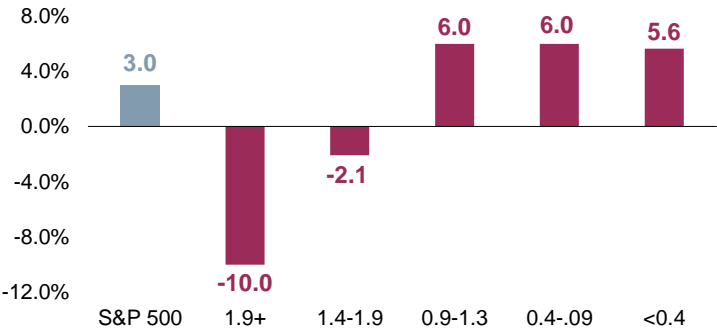
Market Cap



Trailing 12 Month P/E



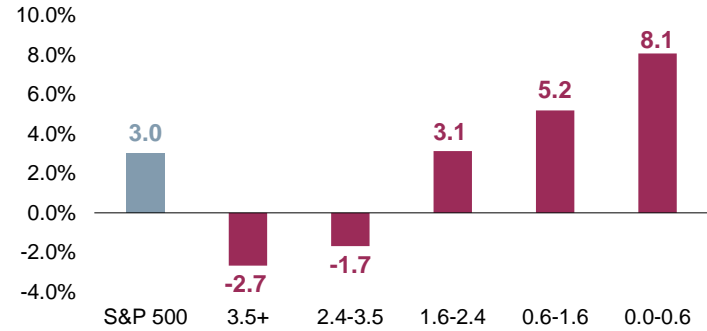
Beta



S&P 500 Quality Ranking



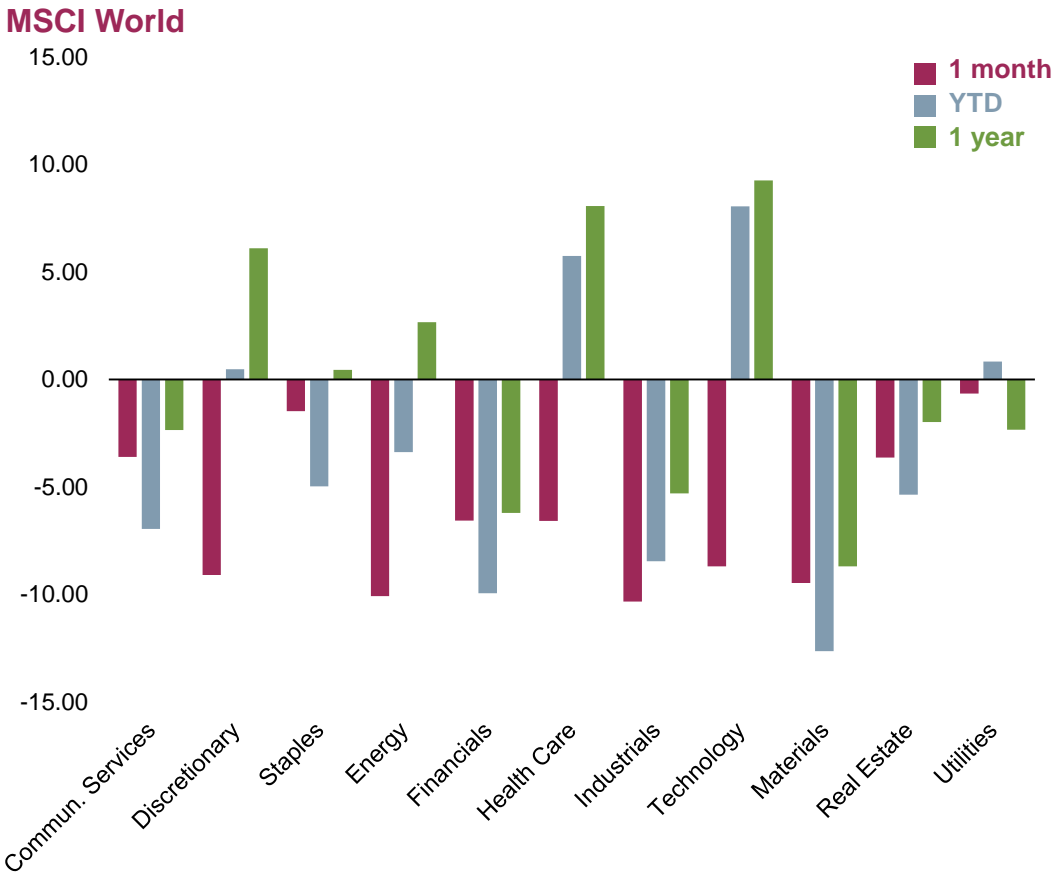
Dividend Yield



Source: FactSet as of 10/31/18.
Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Equities

Index sectors: return analysis

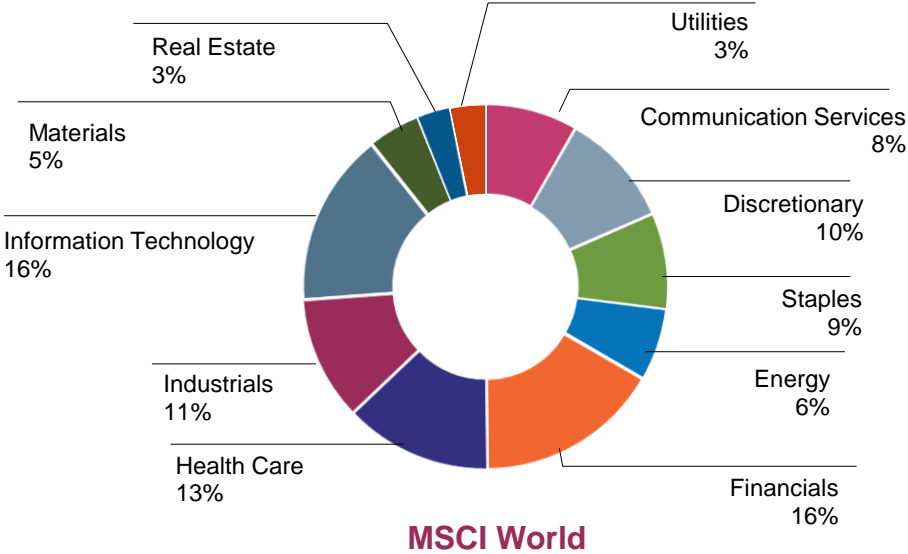
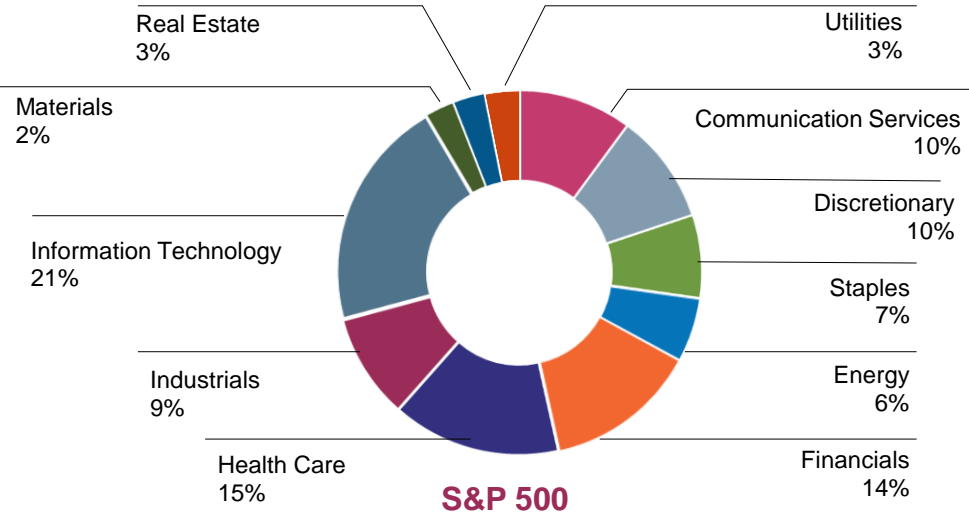


Source: Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Equities

Current characteristics and sector weights

	S&P 500	R2000	R1000G	R1000V	MSCI World	MSCI EAFE	MSCI EM	MSCI Europe	MSCI Asia Pac
Number of Holdings	505	2024	545	726	1636	921	1151	443	1349
Maximum Market Cap	\$1,057.08B	\$22.57B	\$1,057.08B	\$819.90B	\$1,057.08B	\$267.69B	\$368.82B	\$267.69B	\$368.82B
Minimum Market Cap	\$4.04B	\$0.01B	\$0.44B	\$0.25B	\$0.97B	\$0.97B	\$0.64B	\$1.76B	\$0.65B
Dividend Yield	1.89	1.32	1.18	2.49	2.54	3.42	2.94	3.72	2.83
NTM PE	15.48	19.64	19.15	13.21	14.37	12.55	10.20	12.55	11.56
Price to Book	3.19	2.12	7.23	2.01	2.30	1.57	1.55	1.72	1.43
Price to Cash Flow	12.52	13.68	17.18	9.96	11.31	9.88	8.48	9.04	10.36
Price to Sales	2.08	1.16	2.96	1.57	1.58	1.11	1.16	1.14	1.08
Est 3-5 Yr EPS Growth	12.72	15.69	22.41	9.72	13.42	8.88	13.45	10.10	9.51
5Yr. Div Growth Rate	10.74	6.19	8.87	11.47	4.41	-0.59	-6.23	-1.36	0.66



Source: FactSet as of 10/31/18.
Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

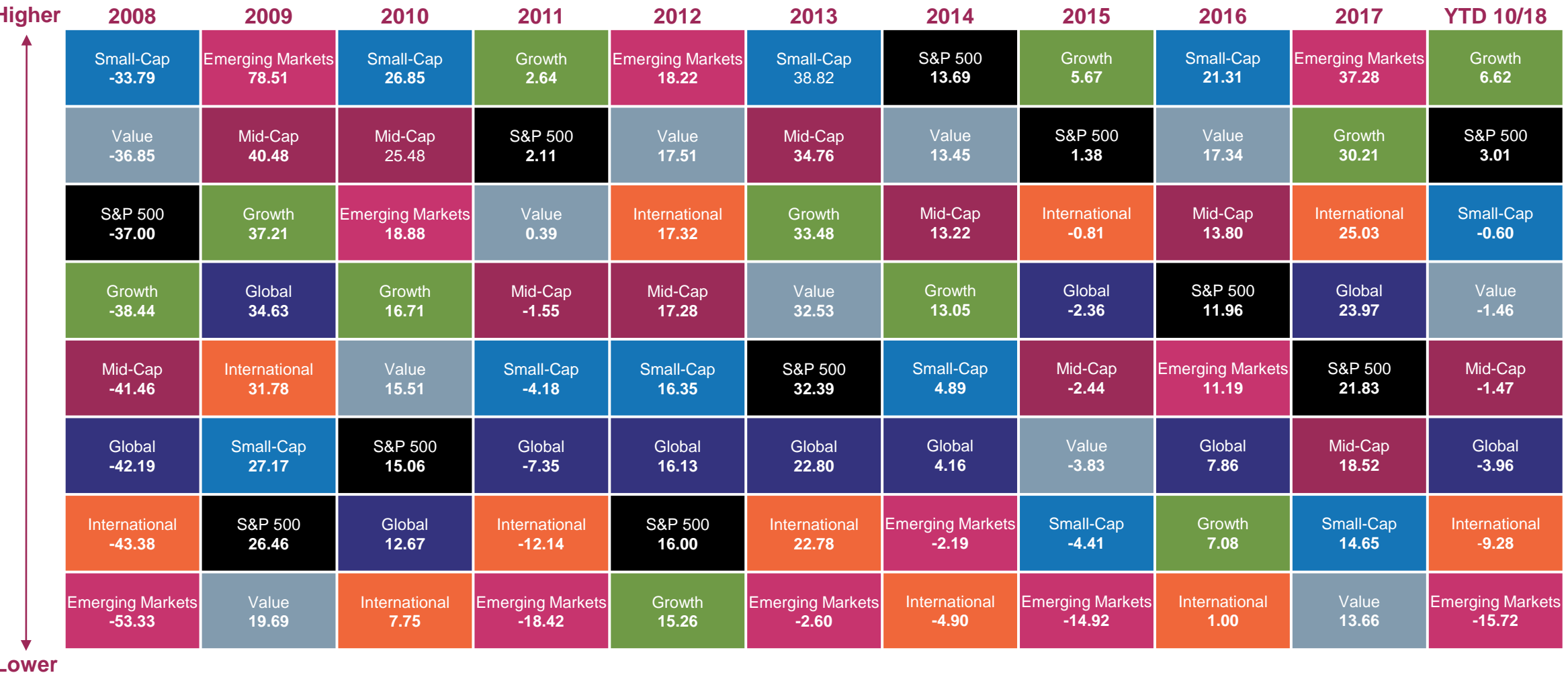
Equities

Asset class return analysis (%)

		1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	10Y	2017	2016	2015	2014	2013
U.S. Equities	S&P 500	-6.84	-3.25	3.01	7.35	11.52	11.34	13.24	21.83	11.96	1.38	13.69	32.39
	Russell 1000 Defensive	-5.04	-1.28	4.47	9.07	11.24	11.23	12.77	20.64	10.04	2.54	13.80	30.90
	Russell 1000 Dynamic	-9.08	-5.70	0.92	4.94	11.26	10.78	13.98	22.74	13.71	-0.71	12.64	35.29
	Russell 2500	-10.15	-7.72	-0.80	2.80	10.05	8.32	13.55	16.81	17.59	-2.90	7.07	36.80
	Russell 1000 Growth	-8.94	-3.43	6.62	10.71	13.67	13.43	15.45	30.21	7.08	5.67	13.05	33.48
	Russell 1000 Value	-5.18	-3.59	-1.46	3.03	8.88	8.61	11.30	13.66	17.34	-3.83	13.45	32.53
	Russell Mid Cap	-8.31	-6.07	-1.47	2.79	9.04	8.97	14.19	18.52	13.80	-2.44	13.22	34.76
	Russell 2000	-10.86	-9.26	-0.60	1.85	10.68	8.01	12.44	14.65	21.31	-4.41	4.89	38.82
	CBOE S&P 500 Buywrite BXM	-5.46	-3.64	0.95	3.16	6.80	7.03	7.79	13.00	7.07	5.24	5.64	13.26
Global Equities	MSCI World	-7.34	-5.67	-2.31	1.16	7.91	6.81	10.02	22.40	7.51	-0.87	4.94	26.68
	MSCI EAFE	-7.96	-8.95	-9.28	-6.85	3.62	2.02	6.89	25.03	1.00	-0.81	-4.90	22.78
	MSCI EM	-8.71	-11.65	-15.72	-12.52	6.52	0.78	7.84	37.28	11.19	-14.92	-2.19	-2.60
	MSCI AC Asia Pac	-9.56	-9.84	-12.15	-8.88	6.10	3.44	8.31	31.67	4.89	-1.96	0.00	11.97
	MSCI ACWI	-7.49	-6.36	-3.96	-0.52	7.74	6.15	9.75	23.97	7.86	-2.36	4.16	22.80
	MSCI Europe	-7.63	-9.89	-9.90	-8.34	2.51	1.21	6.54	25.51	-0.40	-2.84	-6.18	25.23
	FTSE 100	-6.77	-9.30	-9.22	-4.61	1.48	0.40	6.53	11.95	-0.17	-6.72	-5.16	20.91
	FTSE All Small	-8.28	-9.20	-10.68	-7.32	2.40	2.91	11.73	18.55	-4.02	3.46	-4.58	35.70
	STOXX Europe 600	-7.84	-10.19	-10.05	-8.50	2.41	1.40	6.89	25.89	-1.22	-1.61	-5.86	26.24
	Nikkei 225 Average	-8.47	-2.99	-2.49	1.86	8.74	7.43	10.06	20.88	5.18	10.24	-4.82	30.85
Sectors	S&P 500 Comm. Services	-5.75	1.26	-5.04	6.50	5.17	3.69	9.19	-1.25	23.49	3.40	2.99	11.47
	S&P 500 Cons Disc	-11.27	-5.74	7.04	15.16	10.62	12.28	18.50	22.98	6.03	10.11	9.68	43.08
	S&P 500 Cons Staples	2.31	3.90	-1.11	6.81	6.36	8.36	11.56	13.49	5.38	6.60	15.98	26.14
	S&P 500 Energy	-11.26	-11.97	-4.64	1.77	2.63	-1.88	4.74	-1.01	27.36	-21.12	-7.78	25.07
	S&P 500 Financials	-4.73	-5.56	-4.65	0.63	12.58	11.64	9.66	22.18	22.80	-1.53	15.20	35.63
	S&P 500 Health Care	-6.69	0.24	8.83	11.28	9.43	12.83	14.85	22.08	-2.69	6.89	25.34	41.46
	S&P 500 Industrials	-10.81	-8.59	-6.50	-1.04	9.99	9.23	12.81	21.03	18.86	-2.53	9.83	40.68
	S&P 500 Info Tech	-7.97	-1.92	11.02	12.30	20.03	19.31	18.43	38.83	13.85	5.92	20.12	28.43
	S&P 500 Materials	-9.47	-11.76	-11.95	-9.35	7.13	5.76	10.11	23.84	16.69	-8.38	6.91	25.60
	S&P 500 Real Estate	-1.67	-1.89	-0.03	2.42	5.17	8.58	11.76	10.85	3.39	4.68	30.19	1.60
	S&P 500 Utilities	1.95	2.48	4.72	1.00	10.93	10.65	10.62	12.11	16.29	-4.85	28.98	13.21

Equities

Asset class return analysis (%)



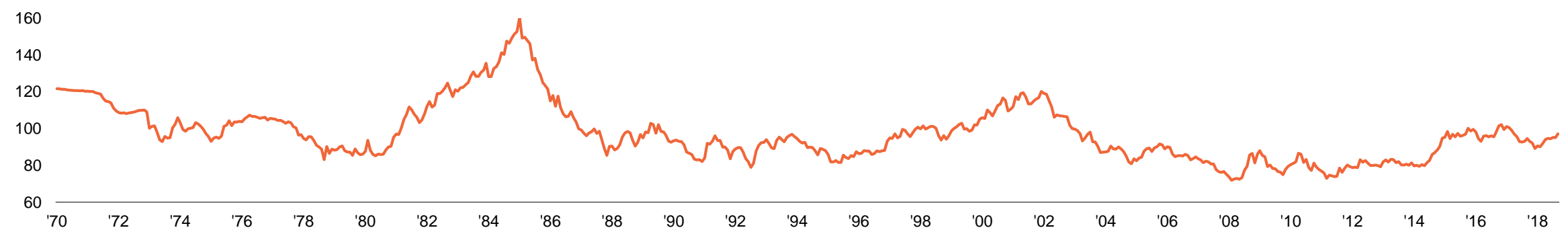
Source: Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Small-Cap represented by Russell 2000 Index. Emerging Markets represented by MSCI Emerging Markets Index. Value represented by Russell 1000 Value Index. Mid-Cap represented by Russell Midcap Index. Global represented by MSCI ACWI Index. Growth represented by Russell 1000 Growth Index. International represented by MSCI EAFE Index.

Alternatives

Developed market currency performance and yields

Currency	Spot Returns vs. USD (%)					Spot Returns vs. EUR (%)					Local Interest Rates (%)
	1-Mo.	YTD	1Y	3Y	5Y	1-Mo.	YTD	1Y	3Y	5Y	1Y
U.S. Dollar (USD)	-	-	-	-	-	2.51	5.98	2.82	-0.84	3.71	2.65
Euro (EUR) *	-2.45	-5.64	-2.74	0.85	-3.58	-	-	-	-	-	-0.66
British Pound (GBP)	-2.02	-5.54	-3.78	-6.12	-4.48	0.44	0.10	-1.07	-6.91	-0.93	0.76
Japanese Yen (JPY)	0.65	-0.18	0.69	2.26	-2.76	3.17	5.79	3.52	1.40	0.85	-0.14
Australian Dollar (AUD)	-2.05	-9.38	-7.56	-0.22	-5.63	0.41	-3.97	-4.96	-1.06	-2.13	1.93
Canadian Dollar (CAD)	-1.57	-4.59	-1.84	-0.12	-4.51	0.90	1.11	0.92	-0.97	-0.96	2.15
New Zealand Dollar (NZD)	-1.50	-8.18	-4.68	-1.18	-4.63	0.97	-2.69	-1.99	-2.01	-1.09	1.73
Norwegian Krone (NOK)	-3.11	-2.68	-2.65	0.22	-6.68	-0.68	3.13	0.09	-0.62	-3.22	0.89
Swedish Krona (SEK)	-2.70	-10.42	-8.40	-2.42	-6.67	-0.25	-5.06	-5.82	-3.25	-3.21	-0.44
Danish Krone (DKK)	-2.50	-5.84	-2.99	0.84	-3.58	-0.05	-0.21	-0.26	-0.01	-0.01	-0.67
Swiss Franc (CHF)	-2.89	-3.12	-0.90	-0.67	-2.08	-0.45	2.67	1.89	-1.51	1.55	-0.86

U.S. Dollar Index



* German Rate. Source: Factset, Bloomberg as of 10/31/18. Dollar is represented by the US Trade Weighted Dollar Index (DXY). Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Alternatives

Emerging market currency performance and yields

Currency	Spot Returns vs. USD (%)					Spot Returns vs. EUR (%)					Local Interest Rates (%)
	1-Mo.	YTD	1Y	3Y	5Y	1-Mo.	YTD	1Y	3Y	5Y	1Y
Asia, excluding Japan											
Chinese Renminbi (CNY)	-1.34	-6.63	-4.97	-3.24	-2.66	1.14	-1.04	-2.30	-4.06	0.95	2.84
Malaysian Ringgit (MYR)	-1.10	-3.29	1.17	0.88	-5.49	1.38	2.50	4.02	0.03	-1.98	3.43
Indian Rupee (INR)	-1.97	-13.68	-12.41	-4.04	-3.63	0.49	-8.52	-9.94	-4.85	-0.06	7.40
Indonesian Rupiah (IDR)	-1.98	-10.75	-10.79	-3.44	-5.81	0.48	-5.42	-8.28	-4.25	-2.31	6.79
Philippine Peso (PHP)	0.98	-6.70	-3.51	-4.35	-4.18	3.52	-1.12	-0.80	-5.16	-0.63	6.29
Singapore Dollar (SGD)	-1.33	-3.50	-1.62	0.38	-2.18	1.15	2.28	1.15	-0.47	1.45	1.92
South Korean Won (KRW)	-2.66	-6.06	-1.68	0.01	-1.42	-0.21	-0.44	1.08	-0.83	2.24	1.80
Taiwanese Dollar (TWD)	-1.33	-3.83	-2.53	1.61	-1.03	1.15	1.92	0.21	0.76	2.64	0.46
Thai Baht (THB)	-2.44	-1.69	0.21	2.37	-1.25	0.01	4.19	3.03	1.51	2.41	1.81
Latin America											
Brazilian Real (BRL)	7.51	-10.70	-11.93	1.15	-9.76	10.21	-5.36	-9.45	0.29	-6.41	6.91
Chilean Peso (CLP)	-5.28	-11.69	-8.69	-0.26	-5.97	-2.90	-6.41	-6.12	-1.10	-2.48	2.95
Colombian Peso (COP)	-7.83	-7.36	-5.54	-3.54	-10.12	-5.51	-1.82	-2.88	-4.35	-6.78	4.66
Mexican Peso (MXN)	-7.66	-3.39	-5.53	-6.55	-8.48	-5.34	2.39	-2.87	-7.33	-5.09	8.55
Peruvian New Sol (PEN)	-2.02	-3.74	-3.53	-0.82	-3.80	0.44	2.01	-0.81	-1.65	-0.23	2.26

Source: Factset, Bloomberg as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Alternatives

Emerging market currency performance and yields

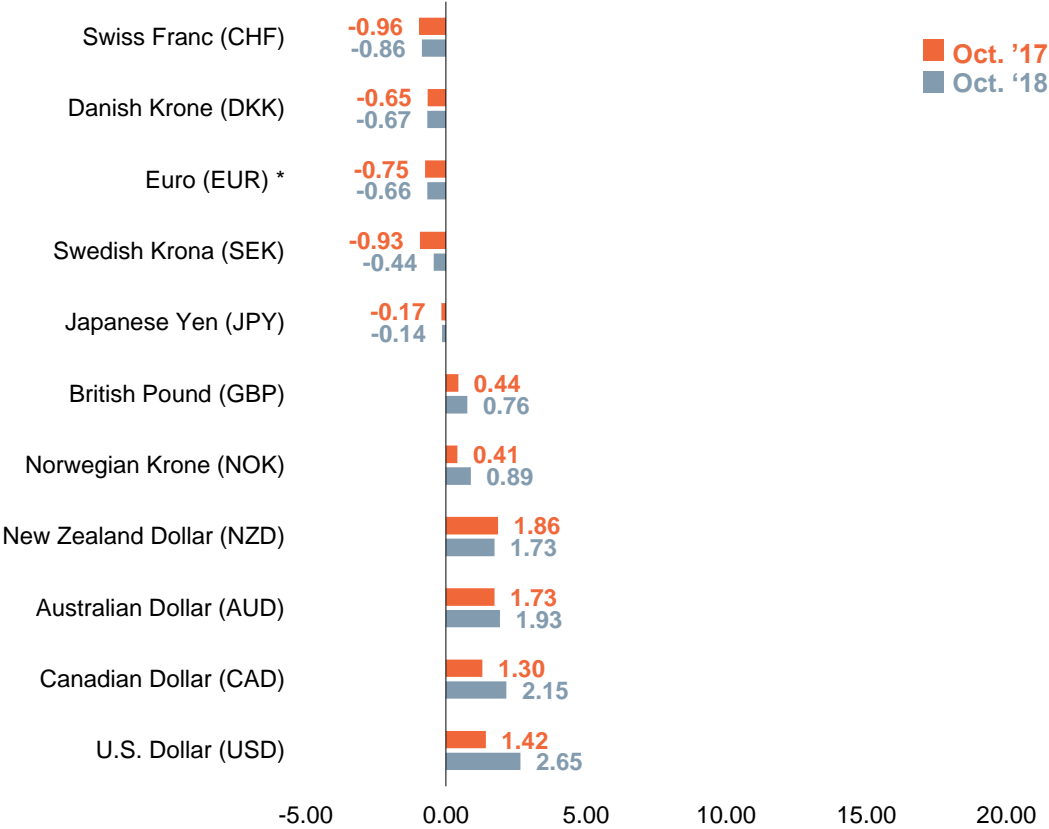
Currency	Spot Returns vs. USD (%)					Spot Returns vs. EUR (%)					Local Interest Rates (%)
	1-Mo.	YTD	1Y	3Y	5Y	1-Mo.	YTD	1Y	3Y	5Y	1Y
Europe											
Czech Koruna (CZK)	-3.06	-7.15	-3.80	2.32	-3.70	-0.63	-1.60	-1.10	1.46	-0.13	1.28
Hungarian Forint (HUF)	-2.92	-9.94	-6.79	-0.63	-5.42	-0.48	-4.56	-4.17	-1.47	-1.91	0.28
Polish Zloty (PLN)	-3.77	-9.29	-5.00	0.19	-4.29	-1.35	-3.86	-2.33	-0.66	-0.74	1.27
Romanian Leu (RON)	-2.58	-5.54	-4.01	-0.81	-4.54	-0.14	0.11	-1.31	-1.64	-0.99	3.37
Russian Ruble (RUB)	-0.37	-12.43	-11.25	-0.97	-13.36	2.13	-7.19	-8.75	-1.80	-10.15	9.09
Turkish New Lira (TRY)	7.21	-32.33	-32.24	-19.60	-18.68	9.90	-28.29	-30.34	-20.28	-15.67	22.59
Middle East and Africa											
Ghanaian Cedi (GHS)	1.01	-6.66	-9.18	-7.52	-14.45	3.54	-1.07	-6.63	-8.30	-11.28	15.00
Israeli Shekel (ILS)	-2.31	-6.73	-5.42	1.24	-1.12	0.14	-1.15	-2.76	0.39	2.55	0.26
Kenyan Shilling (KES)	-1.27	1.13	1.67	-0.02	-3.52	1.21	7.17	4.53	-0.86	0.06	9.52
Moroccan Dirham (MAD)	-1.40	-2.24	-0.65	0.84	-2.92	1.08	3.61	2.15	-0.01	0.69	2.45
Nigerian Naira (NGN)	0.45	-0.83	-0.83	-18.15	-15.24	2.97	5.10	1.97	-18.84	-12.09	14.40
South African Rand (ZAR)	-4.16	-16.16	-4.23	-2.21	-7.49	-1.76	-11.15	-1.54	-3.04	-4.06	8.10
Ugandan Shilling (UGX)	2.00	-2.80	-2.47	-1.76	-7.61	4.56	3.01	0.28	-2.59	-4.18	13.95
Zambian Kwacha (ZMK)	3.83	-15.72	-15.38	2.06	-14.29	6.44	-10.68	-13.00	1.20	-11.11	22.50

Source: Factset, Bloomberg as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

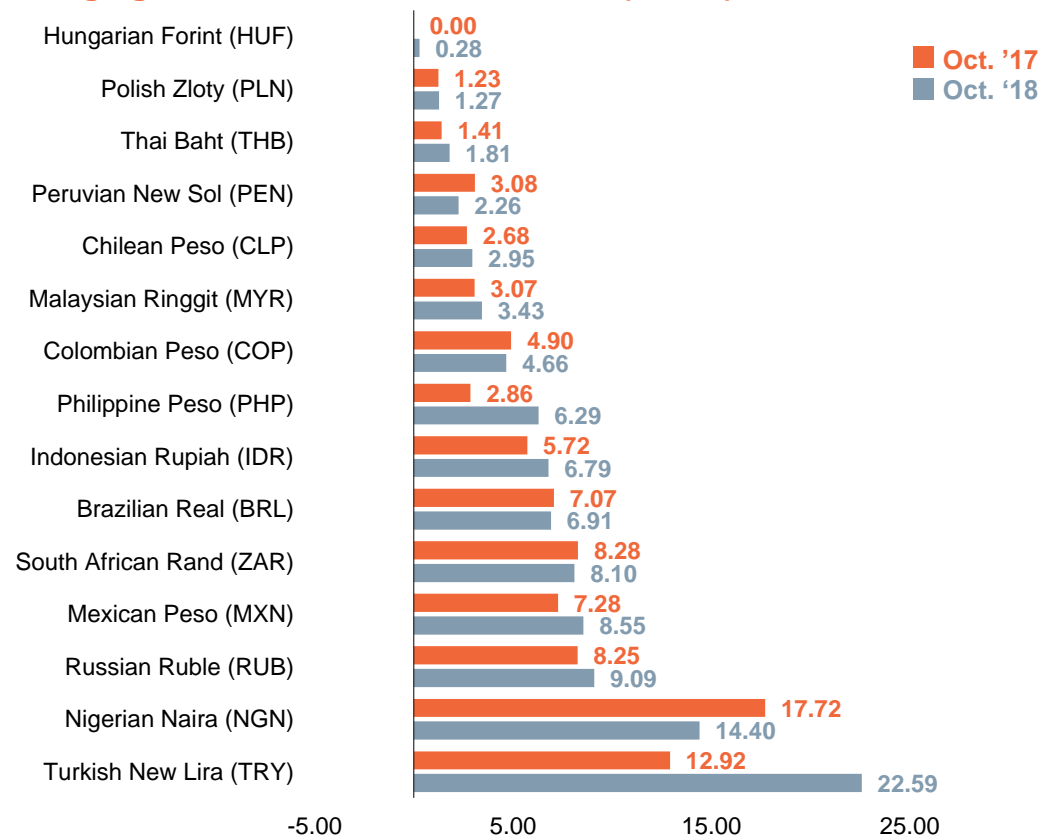
Alternatives

Local sovereign currency yields

Developed Market Local Interest Rates % (1 Year)



Emerging Market Local Interest Rates % (1 Year)



* German Rate. Source: Bloomberg as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Alternatives

Commodities return analysis (%)

Index	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y
Bloomberg Commodity Index	-2.16	-2.05	-4.14	-1.73	-0.69	-7.31
Bloomberg Sub Agriculture	2.17	-5.93	-8.99	-9.99	-7.32	-9.22
Coffee	10.23	0.22	-16.34	-17.62	-10.97	-7.76
Corn	2.17	-5.46	-5.11	-7.07	-11.60	-12.73
Cotton	0.85	-13.74	0.45	15.41	7.61	1.84
Soybean	-0.63	-8.27	-15.12	-17.90	-4.50	-5.69
Soybean Oil	-3.15	-3.85	-17.67	-21.83	-4.19	-10.93
Sugar	18.01	17.55	-19.27	-16.80	-8.07	-15.27
Wheat	-1.47	-12.51	4.64	2.81	-14.63	-15.27
Bloomberg Sub Energy	-5.51	3.14	11.15	18.17	-0.38	-13.24
Brent Crude	-8.57	2.53	18.96	31.59	7.38	-13.06
Heating Oil	-4.23	5.25	12.03	22.51	7.05	-9.06
Natural Gas	6.57	14.11	6.46	2.74	-12.32	-18.53
Unleaded Gas	-15.73	-9.08	-3.44	0.38	-1.11	-11.20
WTI Crude Oil	-10.16	-2.41	14.31	26.78	-1.34	-15.74

Index	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y
Bloomberg Sub Industrial Metals	-5.52	-7.68	-16.68	-12.83	6.85	-2.55
Aluminum	-5.22	-5.29	-11.62	-7.40	8.99	-1.98
Copper	-5.01	-6.29	-20.24	-15.49	3.04	-5.23
Nickel	-8.65	-18.05	-9.99	-6.78	3.38	-5.90
Zinc	-3.75	-2.22	-21.31	-20.03	14.58	4.67
Bloomberg Sub Precious Metals	0.77	-2.65	-9.97	-7.47	0.09	-4.02
Gold	1.78	-0.97	-7.75	-5.05	1.34	-2.28
Platinum	2.72	-0.15	-10.01	-8.42	-5.54	-10.64
Silver	-2.72	-8.29	-17.08	-15.13	-4.01	-9.30
Bloomberg Sub Livestock	-0.69	6.80	-3.05	-9.42	-2.31	-3.12
Lean Hogs	1.11	15.92	-7.81	-12.43	-3.65	-9.86
Live Cattle	-1.40	3.44	-0.78	-8.22	-1.60	0.99

Source: Bloomberg, Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Commodity represented by Bloomberg Commodity Index. Agriculture represented by Bloomberg Agriculture Subindex. Energy represented by Bloomberg Energy Subindex. Grains represented by Bloomberg Grains Subindex. Industrial Metals represented by Bloomberg Industrial Metals Subindex. Livestock represented by Bloomberg Livestock Subindex. Precious Metals represented by Bloomberg Precious Metals Subindex.

Alternatives

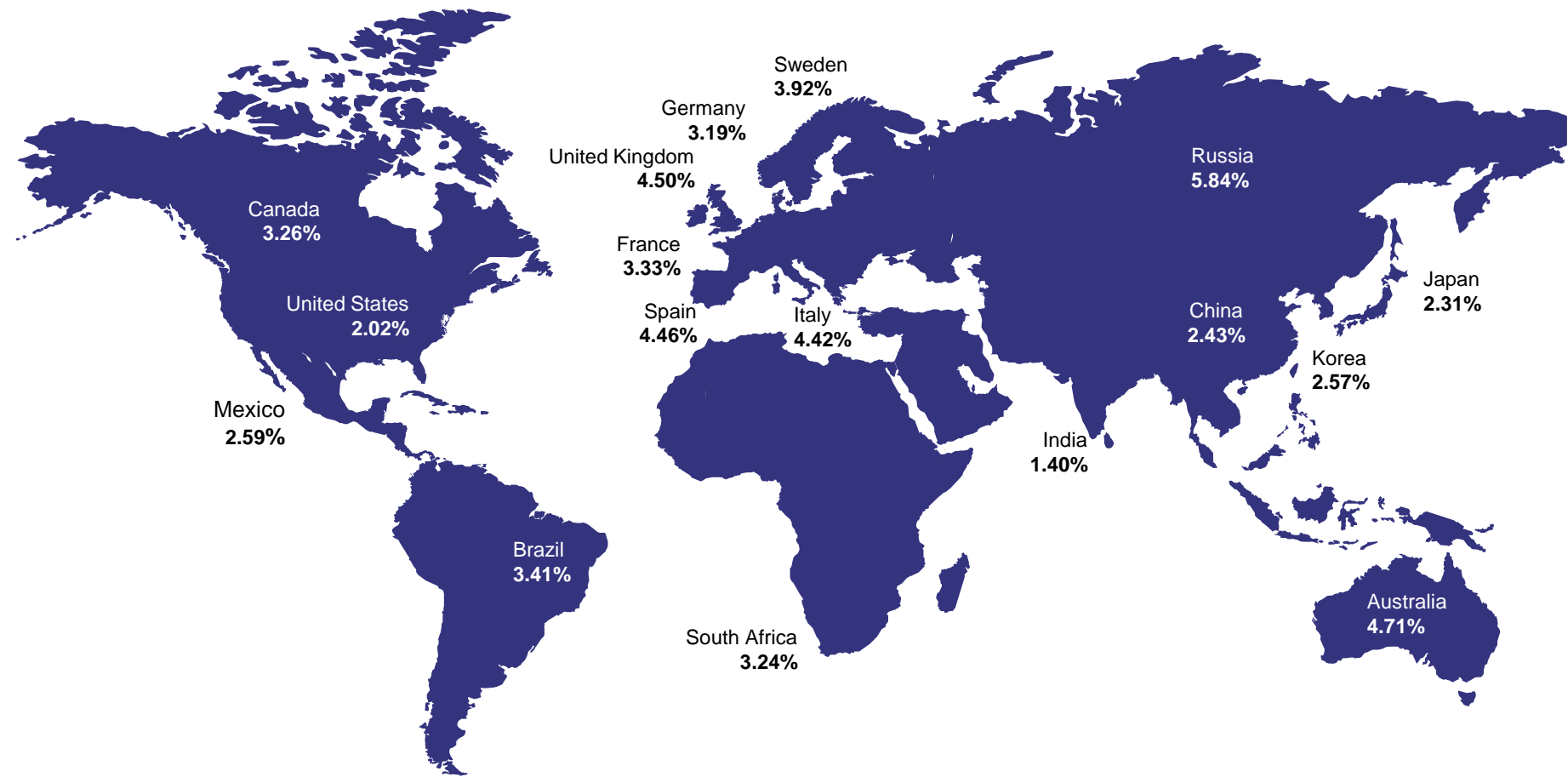
Asset class return analysis (%)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD 9/18
Higher ↑	Managed Futures 18.33	MLP 76.41	MLP 35.85	MLP 13.88	Private Equity 14.19	MLP 27.58	Managed Futures 18.37	Private Equity 5.66	MLP 18.31	Private Equity 17.52	MLP 5.90
	Currency -3.85	Convertible Arbitrage 47.35	Private Equity 20.73	Private Equity 11.34	Multi-Strategy 11.19	Private Equity 21.32	Private Equity 11.13	Multi-Strategy 3.84	Private Equity 13.00	Long/Short Equity 13.41	Multi-Strategy 2.79
	Global Macro -4.62	Fixed Income Arbitrage 27.41	Commodity 16.83	Global Macro 6.44	Fixed Income Arbitrage 11.04	Long/Short Equity 17.74	Multi-Strategy 6.09	Long/Short Equity 3.55	Commodity 11.77	Currency 11.54	Fixed Income Arbitrage 2.43
	Event Driven -17.74	Multi-Strategy 24.62	Global Macro 13.47	Fixed Income Arbitrage 4.69	Event Driven 10.63	Event Driven 15.47	Long/Short Equity 5.55	Equity Market Neutral 1.69	Convertible Arbitrage 6.60	Equity Market Neutral 8.45	Event Driven 2.36
	Long/Short Equity -19.76	Event Driven 20.38	Event Driven 12.63	Equity Market Neutral 4.49	Long/Short Equity 8.21	Multi-Strategy 11.23	MLP 4.80	Convertible Arbitrage 0.81	Multi-Strategy 4.41	Multi-Strategy 6.83	Long/Short Equity 2.20
	Private Equity -22.61	Long/Short Equity 19.47	Fixed Income Arbitrage 12.51	Multi-Strategy 1.83	Convertible Arbitrage 7.82	Equity Market Neutral 9.27	Fixed Income Arbitrage 4.37	Fixed Income Arbitrage 0.59	Fixed Income Arbitrage 4.29	Fixed Income Arbitrage 6.52	Global Macro 1.65
	Multi-Strategy -23.63	Commodity 18.91	Managed Futures 12.22	Convertible Arbitrage 1.13	Currency 7.45	Convertible Arbitrage 6.03	Global Macro 3.11	Global Macro 0.18	Global Macro 3.58	Event Driven 6.30	Convertible Arbitrage 0.98
	Fixed Income Arbitrage -28.82	Private Equity 13.30	Convertible Arbitrage 10.95	Managed Futures -4.19	MLP 4.80	Global Macro 4.32	Event Driven 1.57	Managed Futures -0.93	Currency 3.54	Convertible Arbitrage 5.01	Equity Market Neutral -0.15
	Convertible Arbitrage -31.59	Currency 11.69	Multi-Strategy 9.29	Currency -5.19	Global Macro 4.58	Fixed Income Arbitrage 3.80	Equity Market Neutral -1.19	Event Driven -6.29	Event Driven 2.68	Managed Futures 3.29	Commodity -2.03
	Commodity -35.65	Global Macro 11.55	Long/Short Equity 9.28	Long/Short Equity -7.31	Equity Market Neutral 0.85	Currency -2.04	Convertible Arbitrage -1.68	Currency -7.61	Long/Short Equity -3.43	Global Macro 2.14	Managed Futures -3.12
	MLP -36.91	Equity Market Neutral 4.05	Currency 5.68	Event Driven -9.09	Commodity -1.06	Managed Futures -2.56	Currency -7.03	Commodity -24.66	Equity Market Neutral -4.58	Commodity 1.70	Currency -4.48
Lower ↓	Equity Market Neutral -40.32	Managed Futures -6.57	Equity Market Neutral -0.85	Commodity -13.32	Managed Futures -2.93	Commodity -9.52	Commodity -17.01	MLP -32.59	Managed Futures -6.84	MLP -6.52	Private Equity --

Source: Morningstar as of 9/30/18. *Data is on a 1-month lag. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. Global Macro represented by Credit Suisse Global Macro Index. Private equity represented by Cambridge Associates US Private Equity Index. MLP represented by Alerian MLP Index. Event Driven represented by Credit Suisse Event Driven Index. Multi-Strategy represented by Credit Suisse Multi-Strategy Index. Long/Short Equity represented by Credit Suisse Long/Short Equity Index. Convertible Arbitrage represented by Credit Suisse Convertible Arbitrage Index. Currency represented by JP Morgan EMLI+ Index. Equity Market Neutral represented by Credit Suisse Equity Market Neutral Index. Fixed Income Arbitrage represented by Credit Suisse Fixed Income Arbitrage Index. Managed Futures represented by Credit Suisse Managed Futures Index. Commodity represented by Bloomberg Commodity Index.

Asset Allocation Ideas

Equity yields around the globe

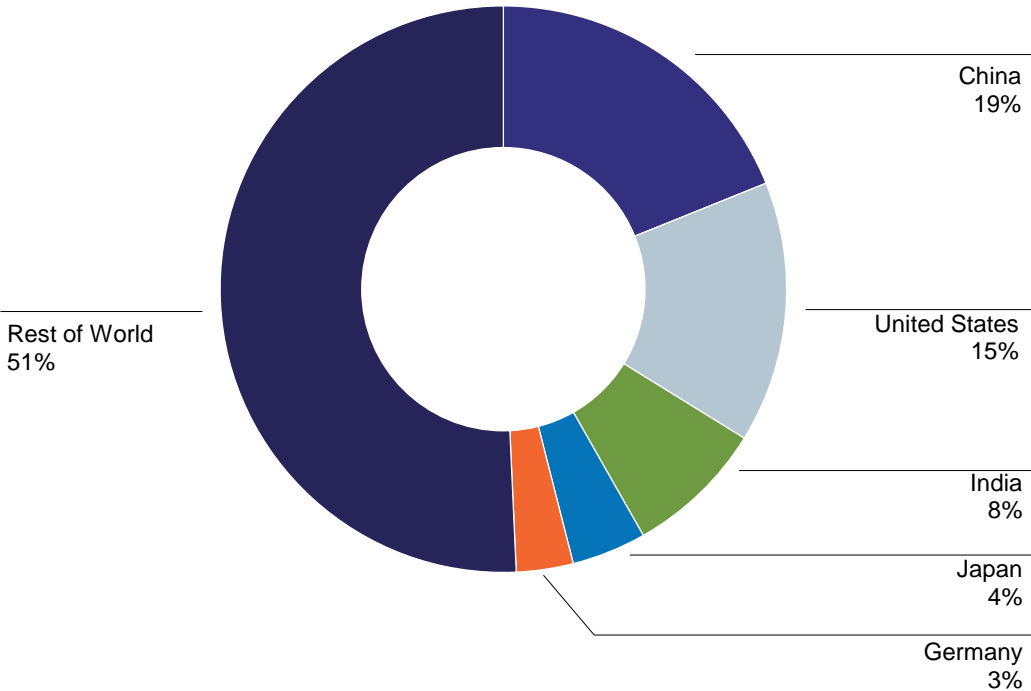


Source: Factset as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

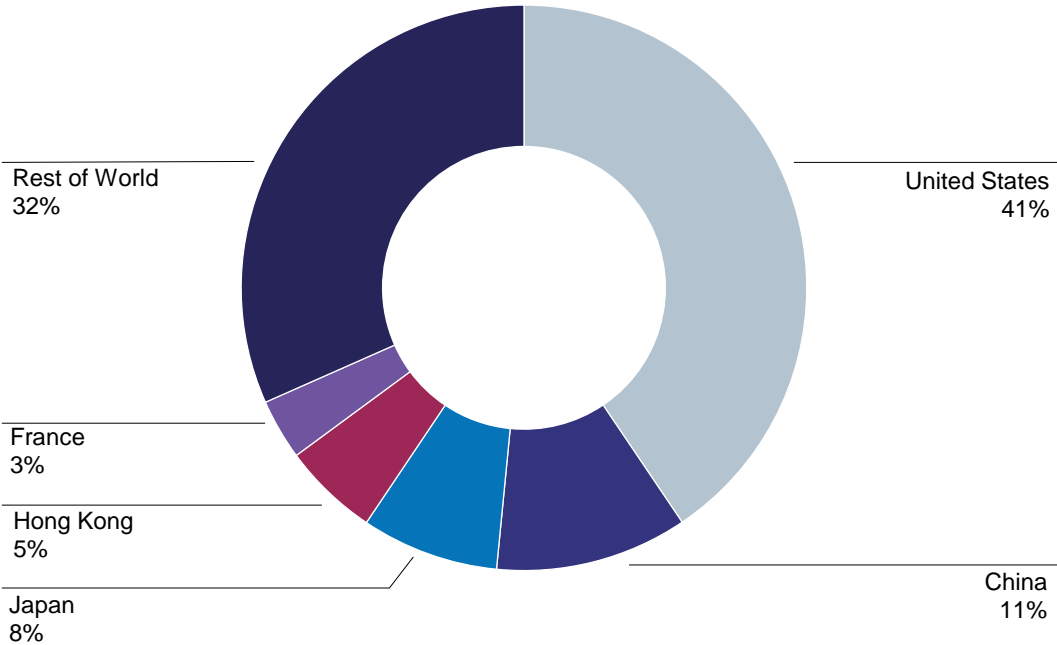
Asset Allocation Ideas

U.S. dominates global equity allocations

GDP % of World Total



Market Capitalization % of World Total

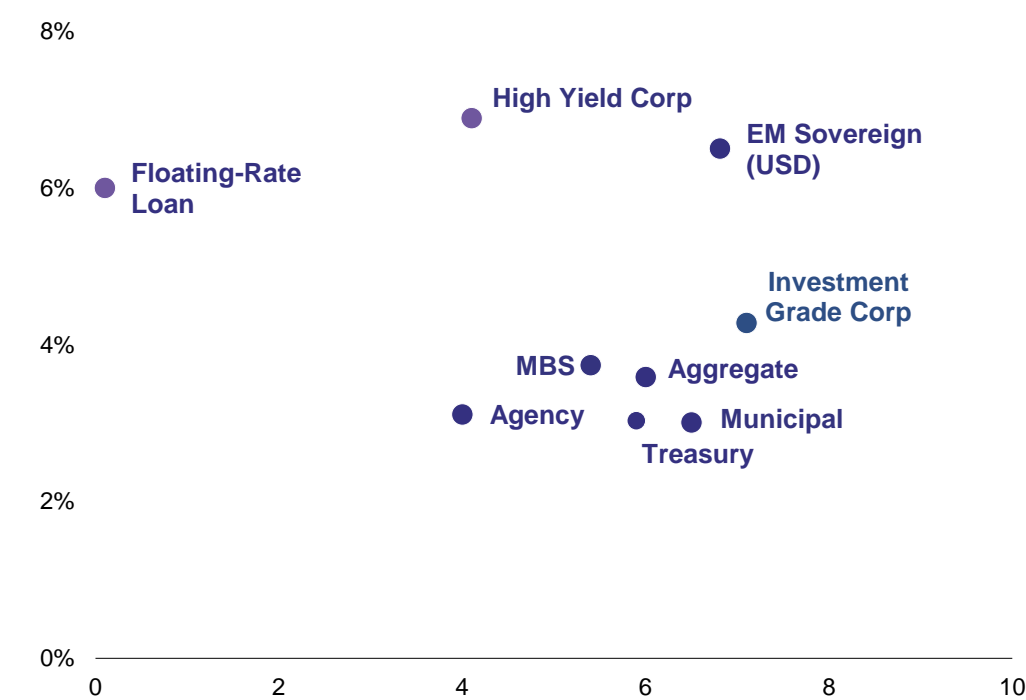


Source: World Economic Outlook Database, April 2018; World Bank.
Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.
Gross domestic product based on purchasing-power-parity (PPP) share of world total (percent). Purchasing-power-parity adjusts GDPs for differences in prices, so aggregate country values are more comparable.

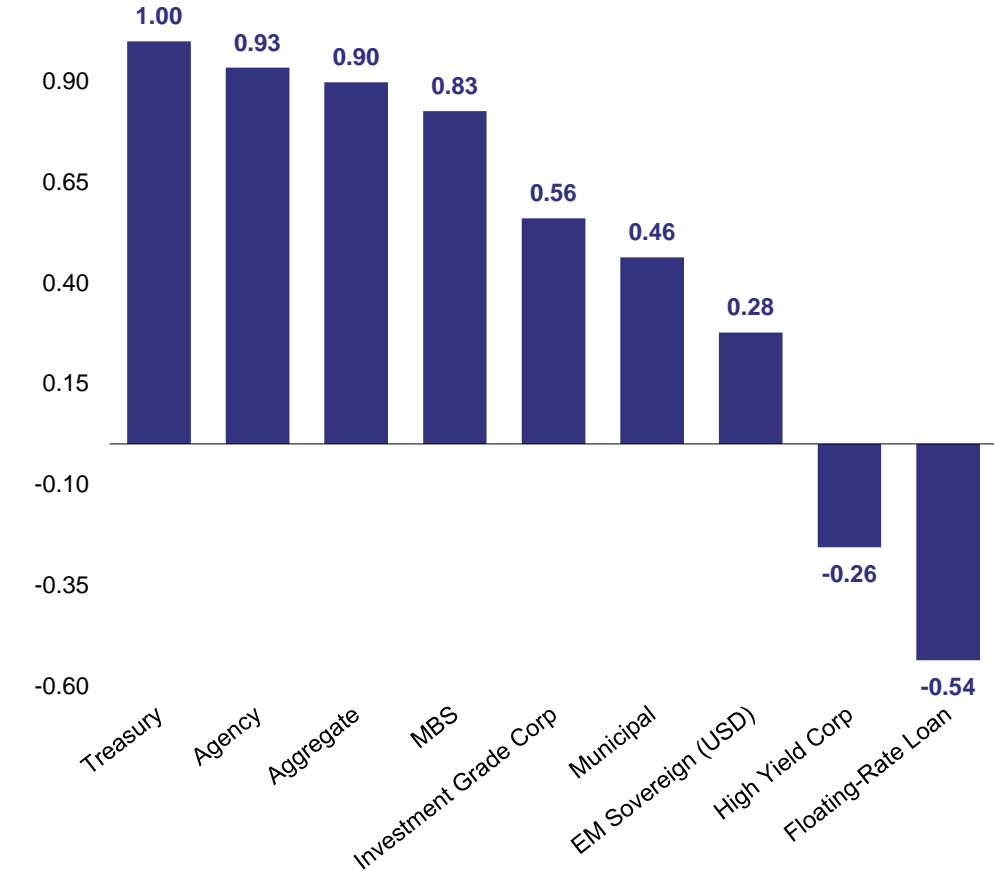
Asset Allocation Ideas

Loans & high yield: swapping rate risk for credit exposure

Yield/Duration



10-Year Correlation with US Treasuries

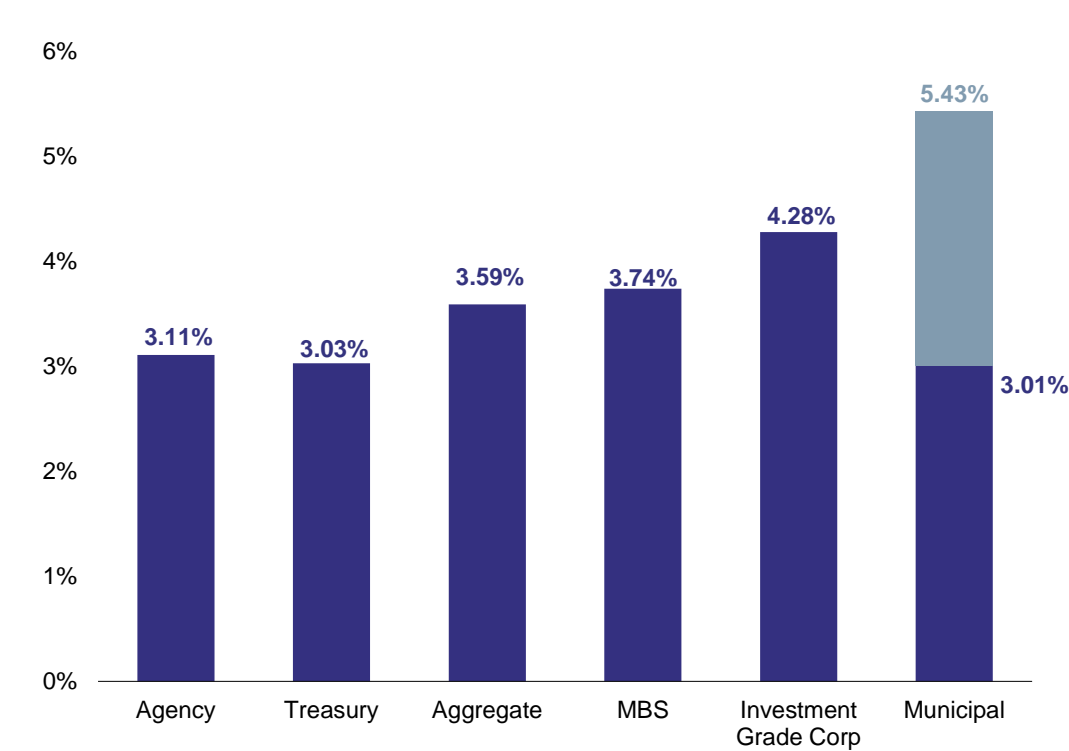


Source: Factset, Morningstar as of 10/31/18. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

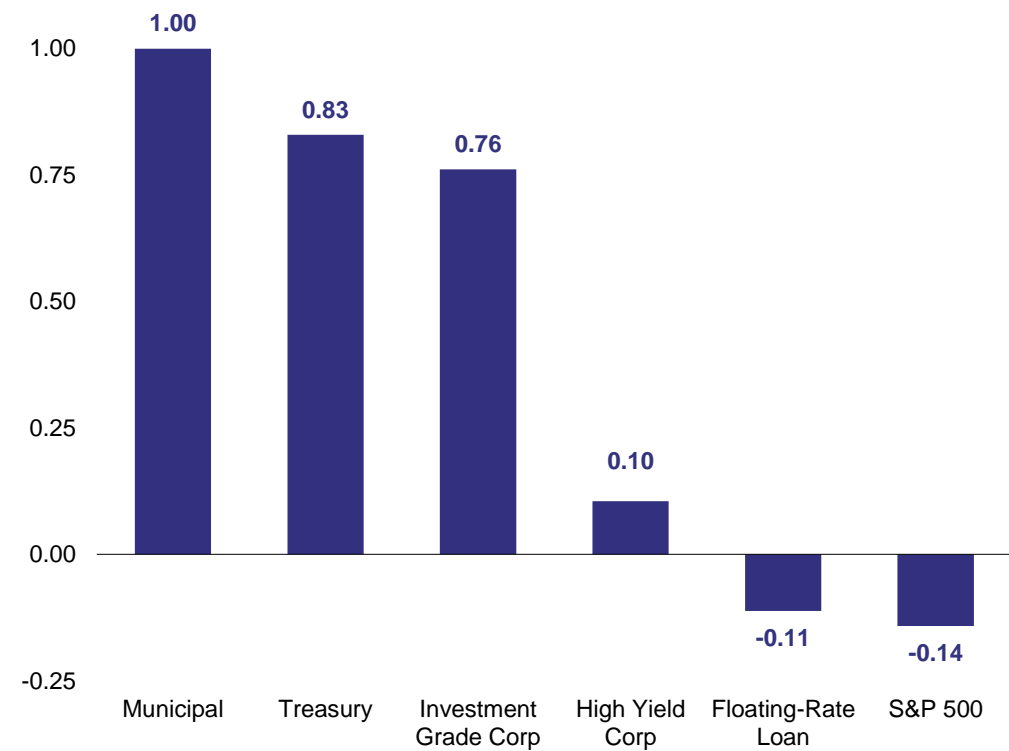
Asset Allocation Ideas

Municipal bonds tax-equivalent yield and 5-year correlation

Tax-Equivalent Yield



5-Year Correlation with Municipals

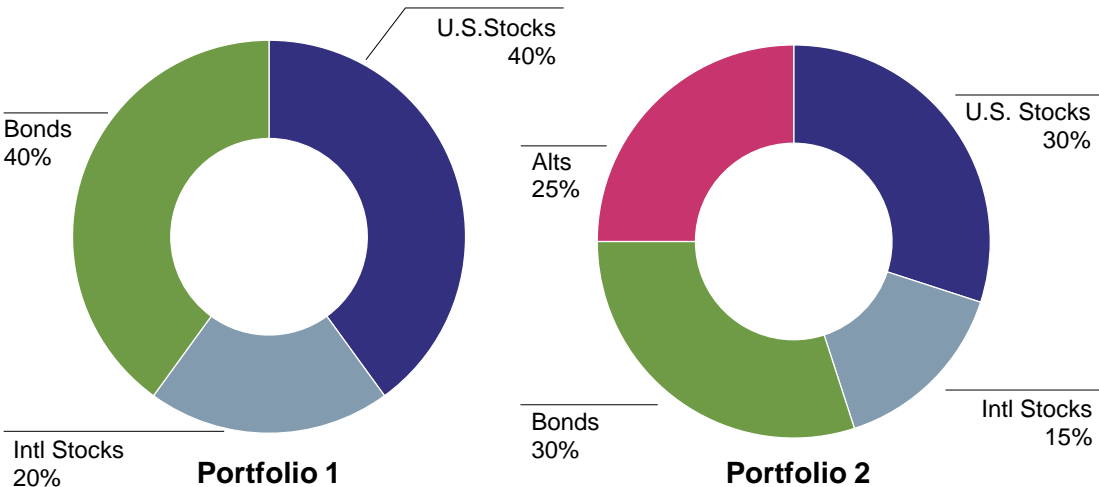


Source: Factset, Morningstar as of 10/31/18. Tax equivalent yield assumes a maximum rate of 44.59%, which includes the tax from the Affordable Care Act and itemized deduction limitations. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Asset Allocation Ideas

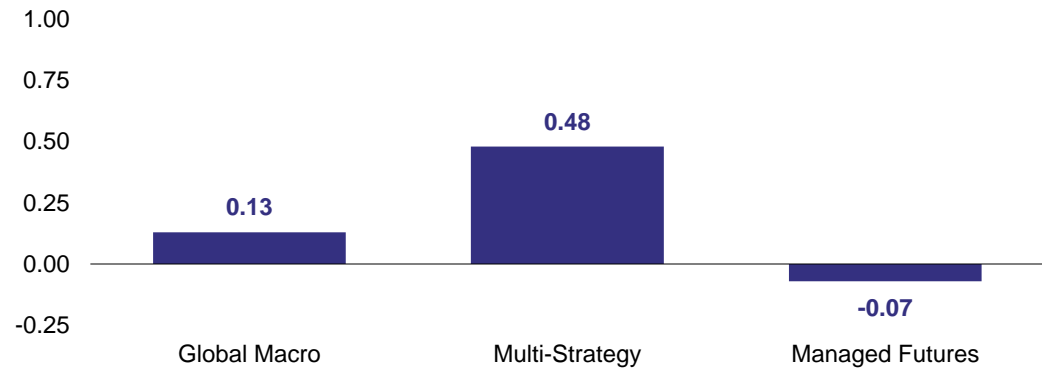
Meaningful allocation to alts has improved performance and reduced risk

Asset Allocation



20 Years ending 9/30/18	Return (%)	Standard Deviation (%)	Maximum Drawdown (%)
Hypothetical Portfolio 1	6.14	8.76	-34.06
Hypothetical Portfolio 2	6.32	7.07	-27.88

20 Year Correlation with U.S. Stocks



20 Year Correlation with Bonds



Source: Zephyr as of 9/30/18. *Data is on a one month lag. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. U.S Stocks represented by S&P 500 Index. International Stocks represented by MSCI EAFE Index. Bonds represented by Bloomberg Barclays US Aggregate Bond Index. Alternatives represented by 10% Credit Suisse Global Macro Index, 10% Credit Suisse Multi-Strategy Index, 5% Credit Suisse Managed Futures Index. Index returns do not reflect the effect of any applicable sales charges, commissions, expenses, taxes or leverage, as applicable. It is not possible to invest directly in an index. Historical performance of the index illustrates market trends and does not represent the past or future performance of any fund.

Asset Allocation Ideas

Major asset classes correlation table

	S&P 500	International	Emerging Markets	Small-Cap	US Aggregate	Municipal	High Yield	Bank Loan	Commodities
S&P 500	1.00	0.87	0.76	0.89	-0.08	-0.09	0.63	0.42	0.54
International	0.81	1.00	0.86	0.75	0.04	0.02	0.71	0.45	0.58
Emerging Markets	0.64	0.78	1.00	0.68	0.12	0.10	0.75	0.49	0.63
Small-Cap	0.78	0.54	0.39	1.00	-0.13	-0.13	0.62	0.42	0.46
US Aggregate	-0.05	0.01	0.16	-0.10	1.00	0.62	0.14	-0.21	-0.08
Municipal	-0.14	-0.01	0.07	-0.25	0.86	1.00	0.25	0.16	-0.09
High Yield	0.64	0.73	0.69	0.54	0.23	0.10	1.00	0.78	0.48
Bank Loan	0.46	0.60	0.57	0.38	0.03	-0.11	0.81	1.00	0.34
Commodities	0.24	0.34	0.46	0.21	-0.07	-0.07	0.55	0.51	1.00

5 Years ended October 31, 2018

10 Years ended October 31, 2018

Source: Morningstar as of 10/31/18. The table above shows the return correlation between various asset classes (represented by market indices as defined in this disclosure) over the past five and ten years. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. S&P 500 is represented by the S&P 500 Index. International is represented by MSCI EAFE Index. Emerging Markets is represented by MSCI Emerging Markets Index. Small-Cap is represented by Russell 2000 Index. US Aggregate is represented by the Bloomberg Barclays Capital US Aggregate Bond Index. Municipal is represented by Bloomberg Barclays Municipal Bond Index. High Yield is represented by ICE BofAML US High Yield Index. Bank Loan is represented by S&P/LSTA Leveraged Loan Index. Commodity is represented by Bloomberg Commodity Index.

Asset Allocation Ideas

Fund and ETF flows by category

Top 10 Open-End Mutual Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Intermediate-Term Bond	5,474	11,701	89,252
Ultrashort Bond	3,704	15,377	33,656
Foreign Large Blend	2,598	9,742	65,514
Short-Term Bond	2,127	1,922	535
Long Government	1,108	4,953	13,464
Bank Loan	1,089	3,901	13,917
High Yield Bond	1,007	(408)	(23,736)
Small Growth	863	3,865	4,755
Diversified Emerging Mkts	609	1,461	13,835
World Bond	538	2,971	23,312

Bottom 10 Open-End Mutual Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Multialternative	(902)	(1,588)	86
Multisector Bond	(1,124)	(2,598)	11,753
Short Government	(1,224)	(1,999)	(2,686)
Mid-Cap Value	(1,638)	(5,069)	(17,400)
World Large Stock	(1,799)	(6,071)	(9,516)
World Allocation	(2,125)	(5,931)	(10,780)
Allocation--30% to 50% Equity	(2,360)	(5,324)	(12,512)
Large Growth	(3,096)	(13,054)	(45,110)
Large Value	(4,684)	(12,141)	(46,353)
Large Blend	(6,512)	(13,333)	(2,003)

Top 10 Exchange-Traded Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Large Blend	13,988	26,331	70,393
Small Blend	3,055	5,383	17,852
Health	2,686	7,112	4,156
Long Government	2,483	3,723	3,048
Mid-Cap Blend	2,367	4,464	12,467
Ultrashort Bond	1,613	6,431	30,058
Communications	1,512	1,996	2,131
Corporate Bond	1,489	2,384	5,230
Large Value	1,166	4,994	15,494
Foreign Large Blend	935	1,571	42,637

Bottom 10 Exchange-Traded Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Trading--Inverse Debt	(256)	(489)	(699)
Trading--Leveraged Commodities	(272)	(147)	(1,296)
Pacific/Asia ex-Japan Stk	(273)	215	308
Foreign Small/Mid Blend	(402)	59	3,239
Preferred Stock	(508)	538	515
Miscellaneous Region	(529)	1,360	(2,168)
Japan Stock	(537)	(1,467)	(1,376)
Technology	(668)	1,872	13,459
Europe Stock	(1,071)	(2,069)	(10,243)
High Yield Bond	(1,452)	2,336	(4,188)

Source: Morningstar as of 9/30/18. Flow data is on a one month lag. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

Glossary of terms

Index definitions

Bloomberg Barclays Global Aggregate Ex-USD Index is a broad-based measure of global Investment Grade fixed-rate debt investments, excluding USD-denominated debt

Bloomberg Barclays High Yield Municipal Bond Index is an unmanaged index of non-Investment Grade Municipal bonds traded in the U.S.

Bloomberg Barclays Municipal Bond Index is an unmanaged index of Municipal bonds traded in the U.S.

Bloomberg Barclays Taxable Municipal Bond Index is an unmanaged index of Taxable Municipal bonds traded in the U.S.

Bloomberg Barclays U.S. Agency Index measures agency securities issued by U.S. government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. government

Bloomberg Barclays U.S. Aggregate Index is an unmanaged index of domestic investment-grade bonds, including corporate, government and mortgage-backed securities

Bloomberg Barclays U.S. Asset Backed Securities (ABS) Index measures ABS with the following collateral type: credit and charge card, auto, and utility loans

Bloomberg Barclays U.S. CMBS Index measures the market of conduit and fusion CMBS deals with a minimum current deal size of \$300mn

Bloomberg Barclays U.S. Corporate Investment Grade Index is an unmanaged index that measures the performance of investment-grade corporate securities within the Barclays U.S. Aggregate Index

Bloomberg Barclays U.S. Mortgage Backed Securities (MBS) Index measures agency mortgage-backed pass-through securities issued by GNMA, FNMA, and FHLMC

Bloomberg Barclays U.S. Treasury Index measures public debt instruments issued by the U.S. Treasury

Bloomberg Commodity Index is a broadly diversified index tracking futures contracts on physical commodities

CBOE Volatility Index (VIX) tracks the implied volatilities of a wide range of S&P 500 Index options

CBOE S&P 500 BuyWrite Index measures the performance of a hypothetical buy-write strategy on the S&P 500 Index

ICE BofAML US Inflation-Linked Treasury Index tracks the performance of USD denominated inflation linked sovereign debt publicly issued by the US government

ICE BofAML Fixed Rate Preferred Securities Index is an unmanaged index of fixed-rate, preferred securities issued in the U.S.

ICE BofAML UK Gilts Index tracks the performance of GBP denominated sovereign debt publicly issued by the UK government in its domestic market.

ICE BofAML European Union Government Bond Index tracks the performance of sovereign debt publicly issued by countries that are members of the European Union

ICE BofAML U.S. High Yield Index is an unmanaged index of below-investment grade U.S. corporate bonds.

FTSE 100 Index is an unmanaged market-capitalization weighted index representing the performance of the 100 largest UK listed blue chip companies, which pass screening for size and liquidity

FTSE All Small Index consists of all the companies in the FTSE SmallCap and FTSE Fledgling indices

JPMorgan Corporate Emerging Markets Bond Index (CEMBI) Broad Diversified is an unmanaged index of USD-denominated emerging market corporate bonds.

JPMorgan Emerging Markets Bond Index (EMBI) Global Diversified is an

unmanaged index of USD-denominated bonds with maturities of more than one year issued by emerging markets governments.

JPMorgan Government Bond Index-Emerging Markets (GBI-EM) Global Diversified is an unmanaged index of local-currency bonds with maturities of more than one year issued by emerging market governments

Morgan Stanley Capital International (MSCI) Emerging Markets Index is an unmanaged index of emerging markets common stocks

Morgan Stanley Capital International All Country Asia Pacific Index (MSCI AC Asia Pac) is an unmanaged total return, capitalization-weighted index that measures the performance of stock markets in 15 Pacific region countries, including Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan and Thailand

Morgan Stanley Capital International (MSCI) Japan Index is an unmanaged index designed to measure the performance of the large and mid cap segments of the Japan market

Morgan Stanley Capital International (MSCI) World Index is an unmanaged index of equity securities in the developed markets

Morgan Stanley Capital International All Country World (MSCI AC World) Index is an unmanaged free float-adjusted market-capitalization-weighted index designed to measure the equity market performance of developed and emerging markets

Morgan Stanley Capital International Europe (MSCI Europe) Index is an unmanaged free float-adjusted market-capitalization-weighted index designed to measure the equity market performance of the developed markets in Europe

Glossary of terms and about risk

Index definitions (cont.)

Morgan Stanley Capital International Europe, Australasia, Far East (MSCI EAFE) Index is an unmanaged index of equities in the developed markets, excluding the U.S. and Canada

Nikkei 225 Stock Average Index is unmanaged price-weighted index of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange

Russell 1000 Index is an unmanaged index of 1,000 U.S. large-cap stocks

Russell 1000 Growth Index is an unmanaged index of 1,000 U.S. large-cap growth stocks

Russell 1000 Value Index is an unmanaged index of 1,000 U.S. large-cap value stocks

Russell 2000 Index is an unmanaged index of 2,000 U.S. small-cap stocks

Russell 2500 Index is an unmanaged index of approximately 2,500 U.S. small- and mid-cap U.S. stocks

Russell Midcap Index is an unmanaged index of U.S. mid-cap stocks

Standard & Poor's 500 Index is an unmanaged index of large-cap stocks commonly used as a measure of U.S. stock market performance

S&P/LSTA Leveraged Loan Index is an unmanaged index of the institutional leveraged loan market

STOXX Europe 600 Index is a fixed component number index designed to provide a broad yet liquid representation of large, mid and small capitalization companies in Europe

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Terms

Municipal-to-Treasury Yield Ratios are relative value indicators that measure the richness or cheapness of Municipal bond yields to comparable maturity Treasury bond yields.

Yield to Worst is a measure which reflects the lowest potential yield earned on a bond without the issuer defaulting. The yield to worst is calculated by making worst-case scenario assumptions by calculating the returns that would be received if provisions, including prepayment, call or sinking fund, are used by the issuer.

About risk

Bank Loans – There can be no assurance that the liquidation of collateral securing an investment will satisfy the issuer's obligation in the event of non-payment or that collateral can be readily liquidated. The ability to realize the benefits of any collateral may be delayed or limited. **Commodities** – The value of commodities investments will generally be affected by overall market movements and factors specific to a particular industry or commodity including weather, embargoes, tariffs, or health, political, international and regulatory developments. **Credit** – Investments in income securities may be affected by changes in the creditworthiness of the issuer and are subject to the risk of non-payment of principal and interest. The value of income securities also may decline because of real or perceived concerns about the issuer's ability to make principal and interest payments. **Duration** – Securities with longer durations tend to be more sensitive to interest rate changes than securities with shorter durations. **Equity** – Equity investment values are sensitive to stock market volatility. **Foreign** – Investments in foreign instruments or currencies can involve greater risk and volatility than U.S. investments because of adverse market, economic, political, regulatory, geopolitical, or other conditions. In emerging countries, these risks may be more significant. **Gov't Agency** – While certain U.S. Government-sponsored agencies may be chartered or sponsored by acts of Congress, their securities are neither issued nor guaranteed by the U.S. Treasury. **Income Market** – An imbalance in supply and demand in the income market may result in valuation uncertainties and greater volatility, less liquidity, widening credit spreads and a lack of price transparency in the market. There generally is limited public information about Municipal issuers.

Inflation-Linked – Interest payments on inflation-linked securities may vary widely and will fluctuate as principal and interest are adjusted for inflation. Investments in inflation-linked securities may lose value in the event that the actual rate of inflation is different than the rate of the inflation index. **Interest Rate** – As interest rates rise, the value of certain income investments is likely to decline. **Lower-Rated** – Investments rated below Investment Grade (typically referred to as "junk") are generally subject to greater price volatility and illiquidity than higher rated investments. **Maturity** – Longer-term bonds typically are more sensitive to interest rate changes than shorter-term bonds. **Preferred Stocks** – When interest rates rise, the value of preferred stocks will generally decline. **Prepayment - MBS** – Mortgage-backed securities are subject to prepayment risk.

Prepayment - Bank Loan – Bank Loans are subject to prepayment risk. **Real Estate** – Changes in real estate values or economic downturns can have a significant negative effect on issuers in the real estate industry, including REITs.

Unless otherwise stated, index returns do not reflect the effect of any applicable sales charges, commissions, expenses, taxes or leverage, as applicable. It is not possible to invest directly in an index. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

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For more information



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