Navigating the current credit cycle

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MFS Investment Management

Agenda

- Age of disruption = low inflation for longer
- Bond investing just got harder
- Will the strategies that worked yesterday work going forward
- The importance of alpha

Platforms

Business disruption is often disinflationary

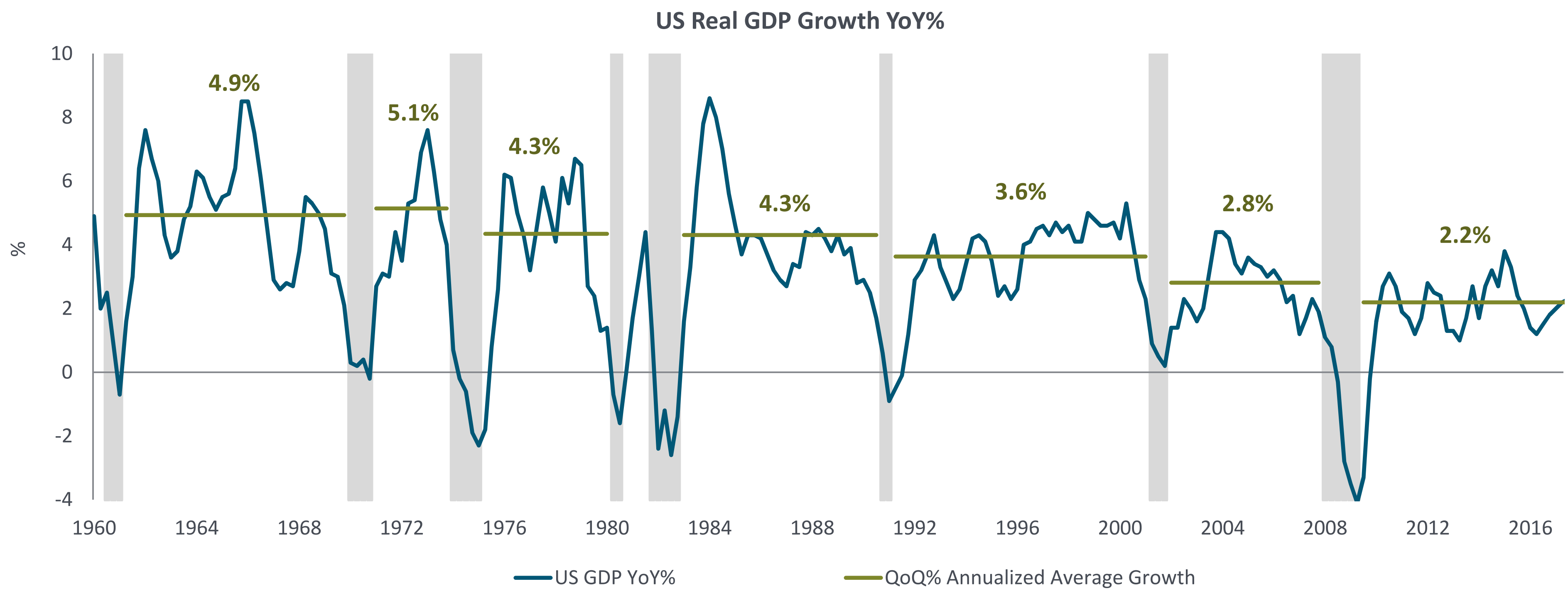
Company	Employees	Value Estimate	Value/Employee
GM	225,000	$61 billion	$267,000
Uber	12,000	$48 billion*	$4,000,000
Marriott	225,000	$51 billion	$220,000
airbnb	3,000	$30 billion*	$10,000,000

$$Y = AK^{\alpha}L^{(1-\alpha)}$$

As of 4 January 2018, unless otherwise noted
* Valuation estimate based on former investor sale of stock (Uber) or latest round of funding for Airbnb.
Source: Google-finance, Uber, Airbnb – values rounded.
Formula shown: Cobb-Douglas production function described the relationship between output (Y) and inputs (physical capital, labor and combination/management of these resources).

A little labor and a little capital can go a long way

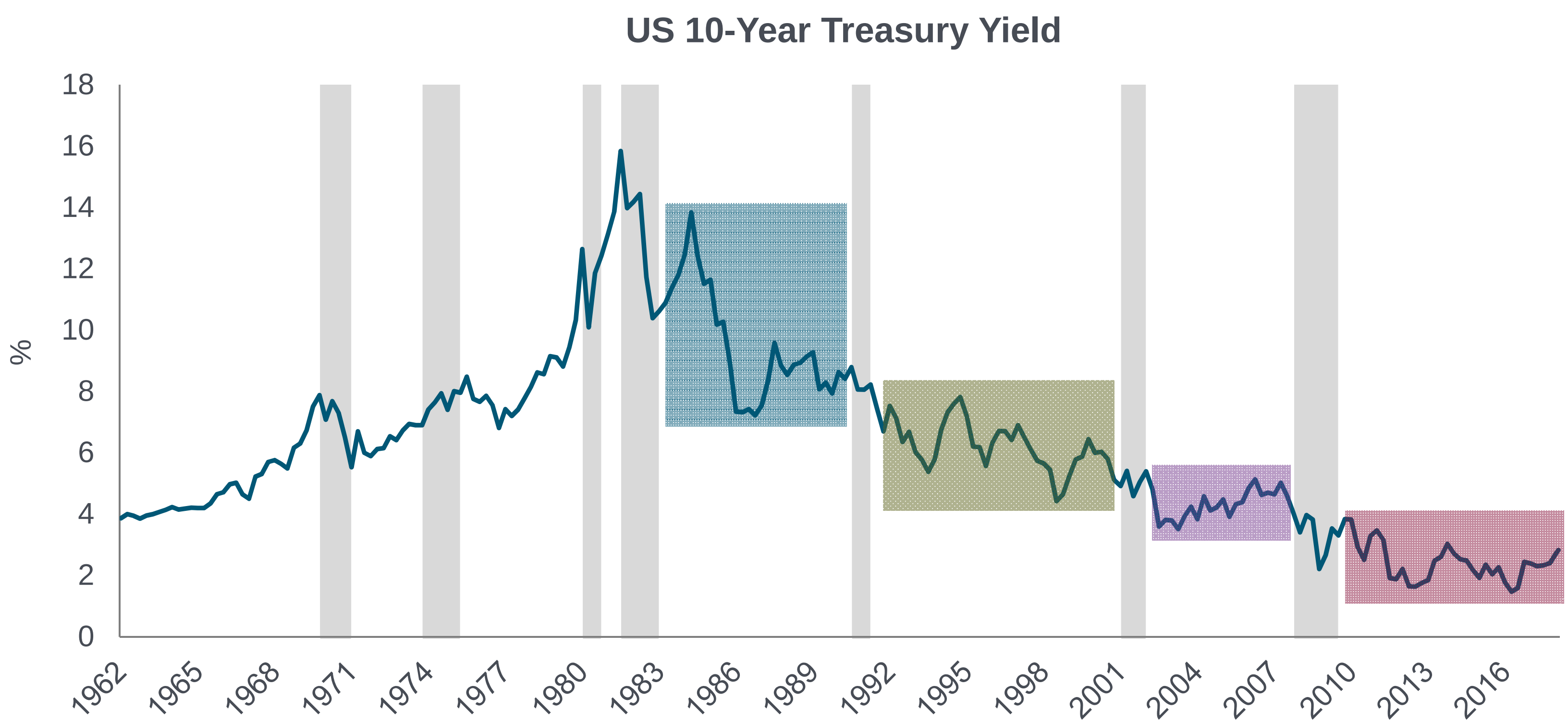
Do you see a pattern here?



Source: Bloomberg as of 30 September 2017. Values shown are averages during economic expansions. Shaded areas are US recessions.

Growth has been on a downward trend for several decades

“Lower” or “Low” for longer?

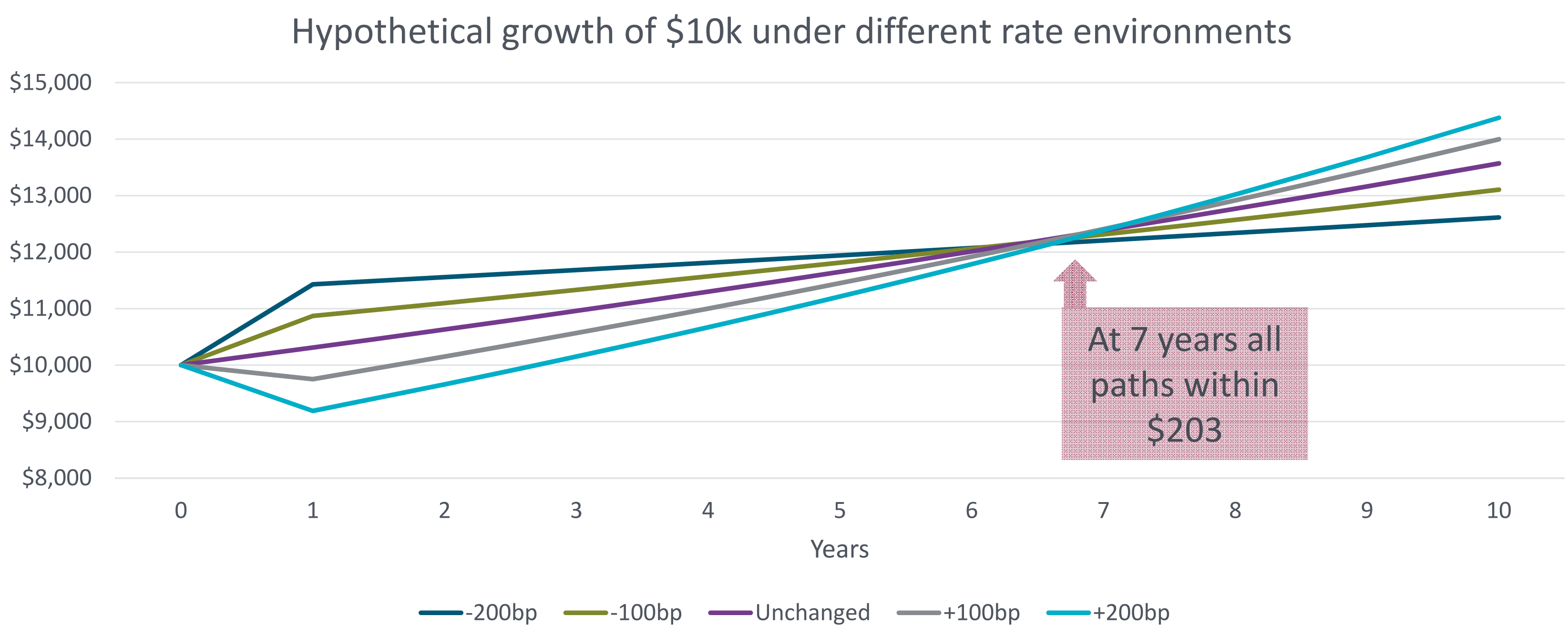


Source: Bloomberg as of 3/31/2018.

Color shadings represent business cycles post 1983 where the market has experienced "lower highs and lower lows" of 10-Year US Treasury yields.

Lower highs and lower lows for each successive business cycle

Should we really be fearing rising rates?



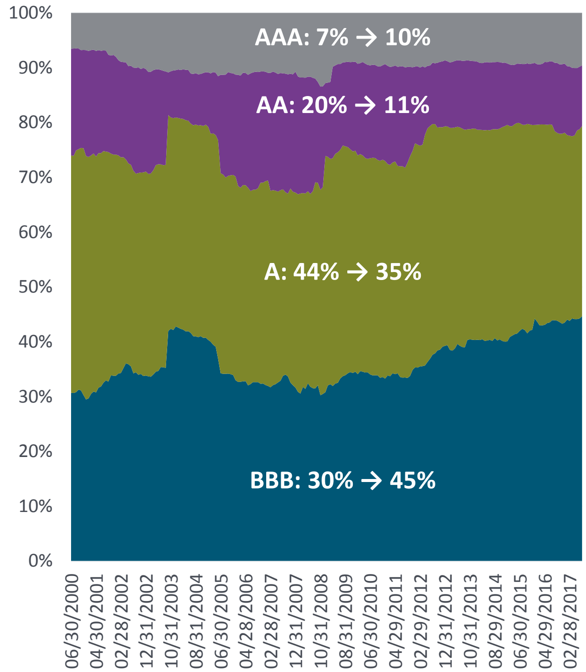
Hypothetical examples are for illustrative purposes only and are not intended to represent the future performance of any MFS portfolio or investment.

The hypothetical portfolio assumes a starting yield (3.1%) and duration (6.1.years) which reflects the characteristics, yield-to-worst and average effective duration, respectively, of the Bloomberg Barclays US Aggregate Index as of 3/31/18. The calculation assumes a constant corporate bond spread of 1%, a constant duration of 6.1 years with maturing bond proceeds invested at each year's new starting yield, and holding aside convexity effects for simplicity. The likelihood of spreads and duration remaining constant over a 10-year time period is highly unlikely. The movement in rates shocked the portfolio initially, and then left to grow in the given circumstances. The hypothetical interest rate movements (-200bps - +200bps) were used as a they can be considered a potential range of the 10-Year US Treasury given the historical trend of interest rate movements, and ranges, the market has experienced over the last 30+ years. Spreads were kept constant to highlight the potential impact of an interest rate shock on a bond portfolio given the aforementioned circumstances/environment.

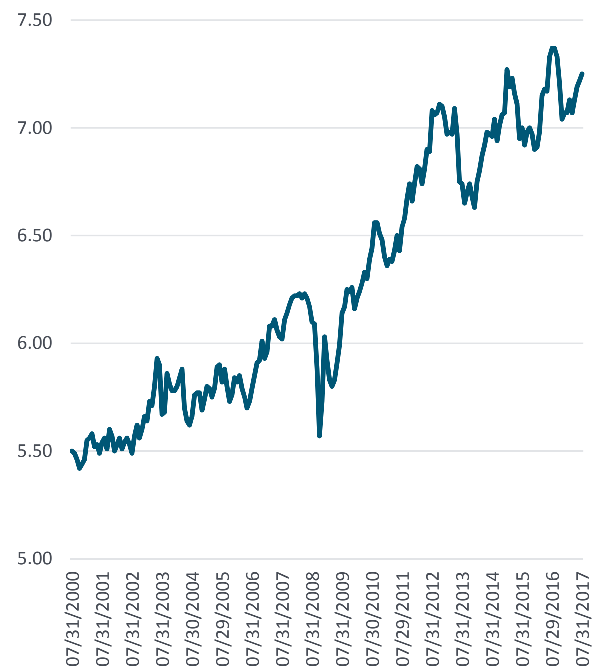
Bond math works in surprising ways

Significant changes in investment grade composition

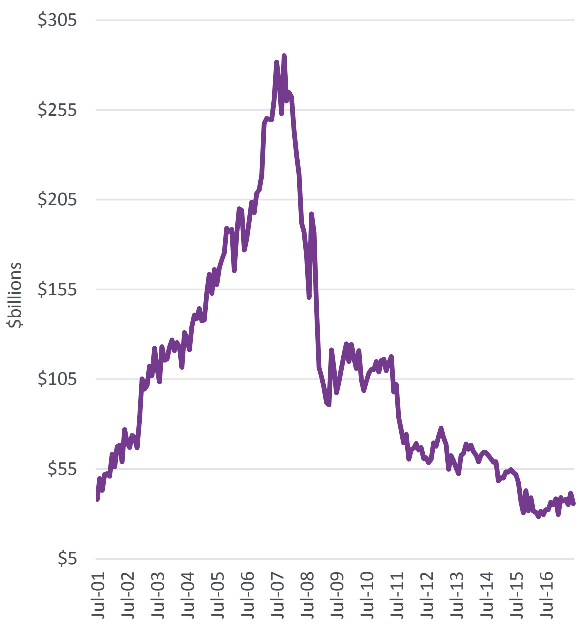
Change in Credit Quality Composition for US Credit Index[1]



US Credit Index Duration[1]



Primary Dealer Corporate Bond Inventories[2]

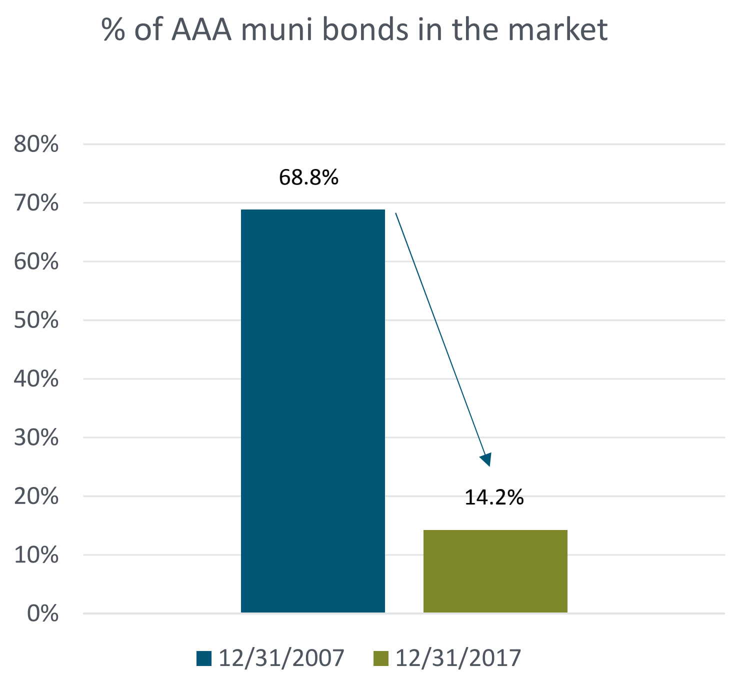


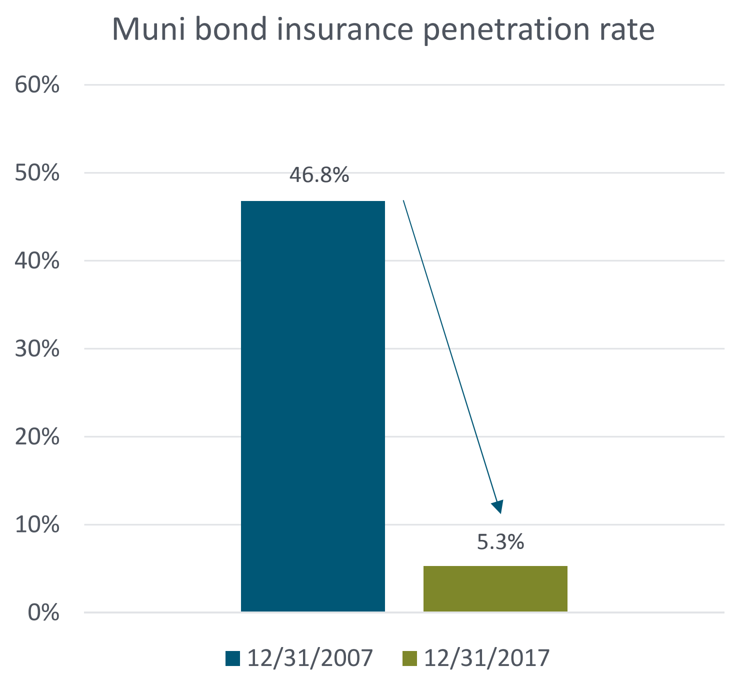
[1]Source: LHS & Middle – Barclays POINT as of 31 March 2018. Global Corporate = Bloomberg Barclays Global Aggregate Corporate Index.

[2]Source: RHS - Haver Analytics 31 March 2018.

Risks have been gradually increasing over the past decade

Munis…similar story here as well



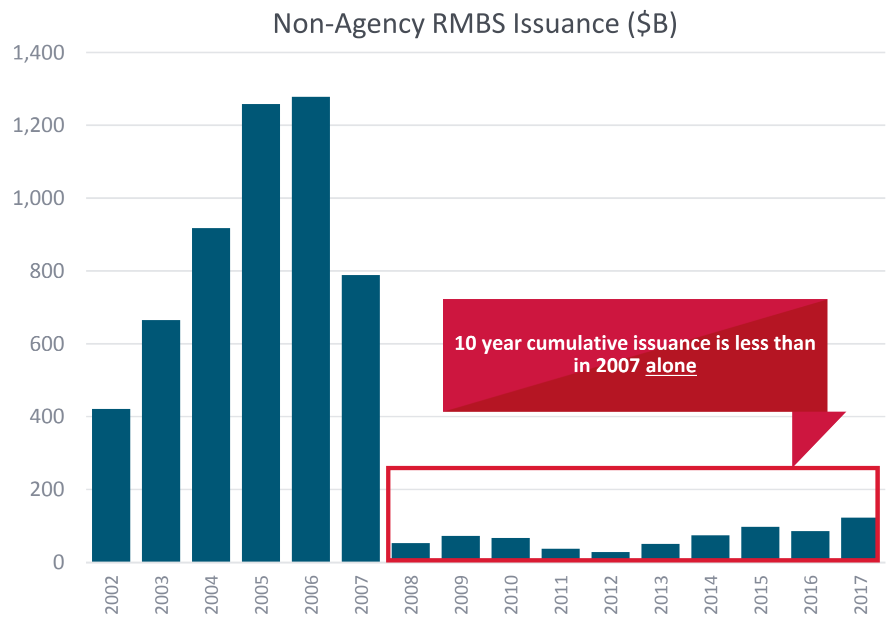


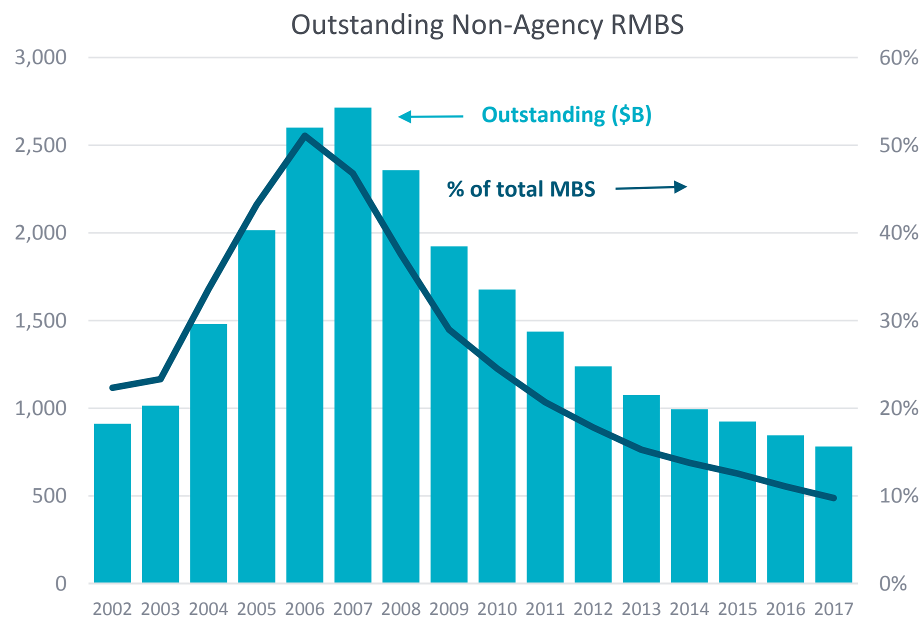
Source: Percent of outstanding muni bonds rated AAA by Standard & Poors from Bloomberg Barclays Live. Municipal bond insurance penetration rate from The Bond Buyer. As of 12/31/17.

Risks have been gradually increasing over the past decade

Non-agency RMBS; one less lever to pull?

Significant outperformance relative to traditional fixed income since the crisis

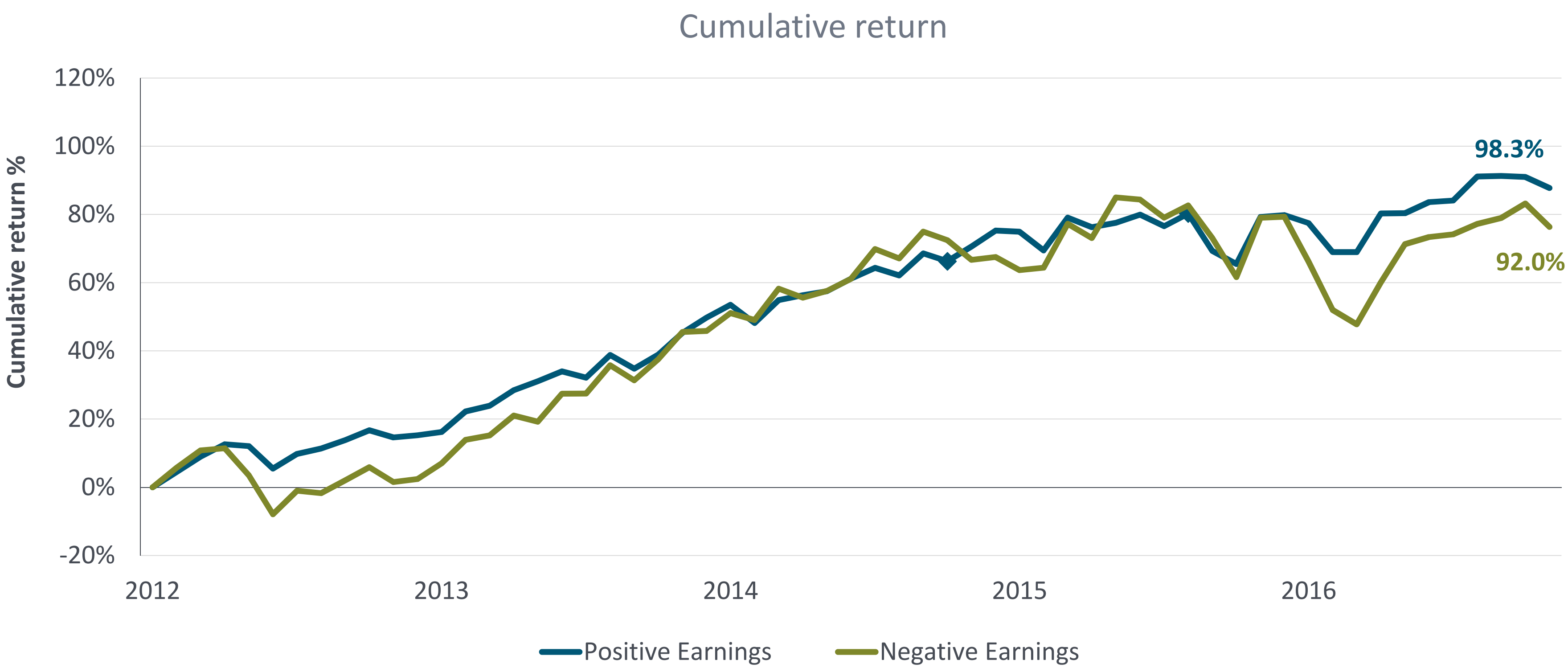




Source: SIFMA as of 12/31/17.

A shrinking asset class and higher prices are headwinds for performance repeatability

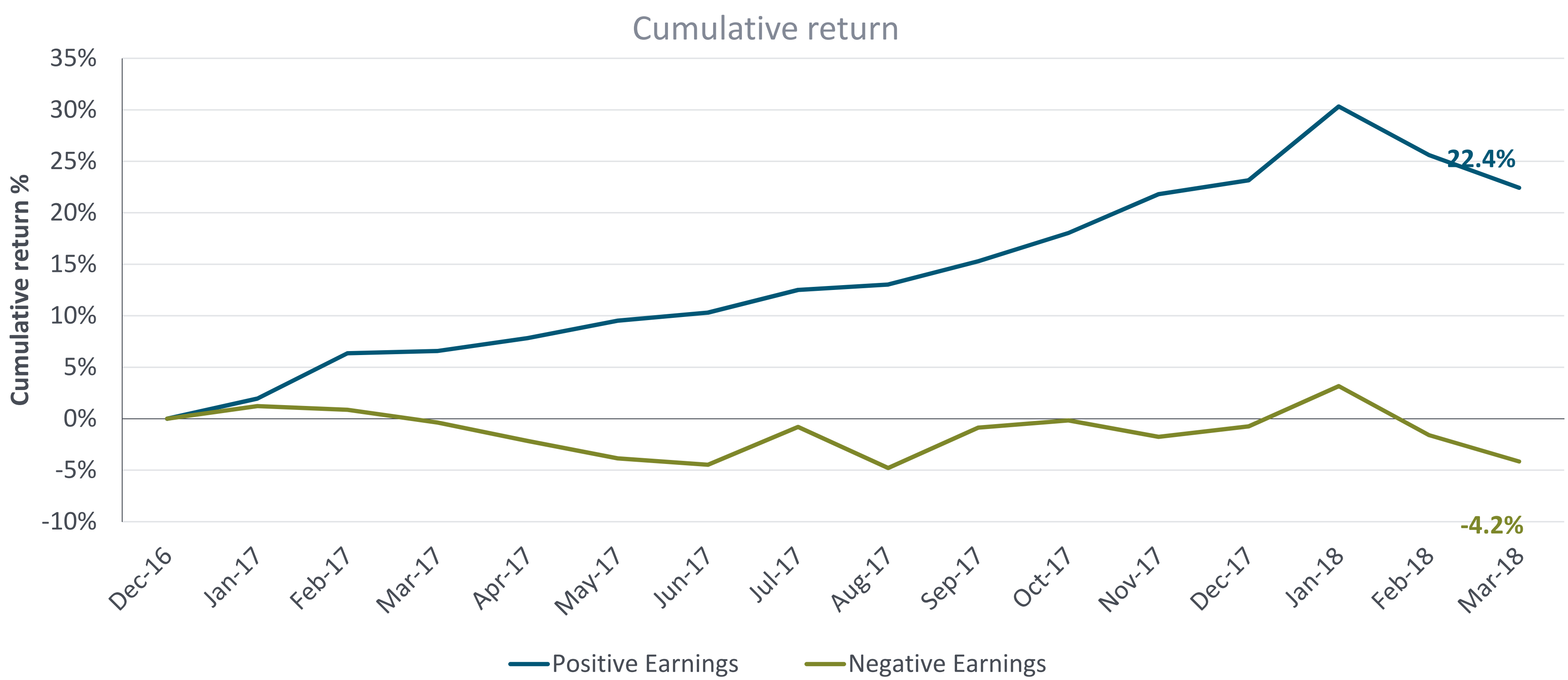
Dispersion of equity returns – abnormal?



Source: Compustat earnings per share (EPS) data from January 2012 – December 2016 for the S&P 500. Each portfolio of positive and negative earnings companies is rebalanced monthly and market cap weighted. Data labels are cumulative returns as of 31st December 2016.

As dispersions normalize, are companies' efforts to support stock price aligned with bondholders' interests?

Dispersion of equity returns – normal?

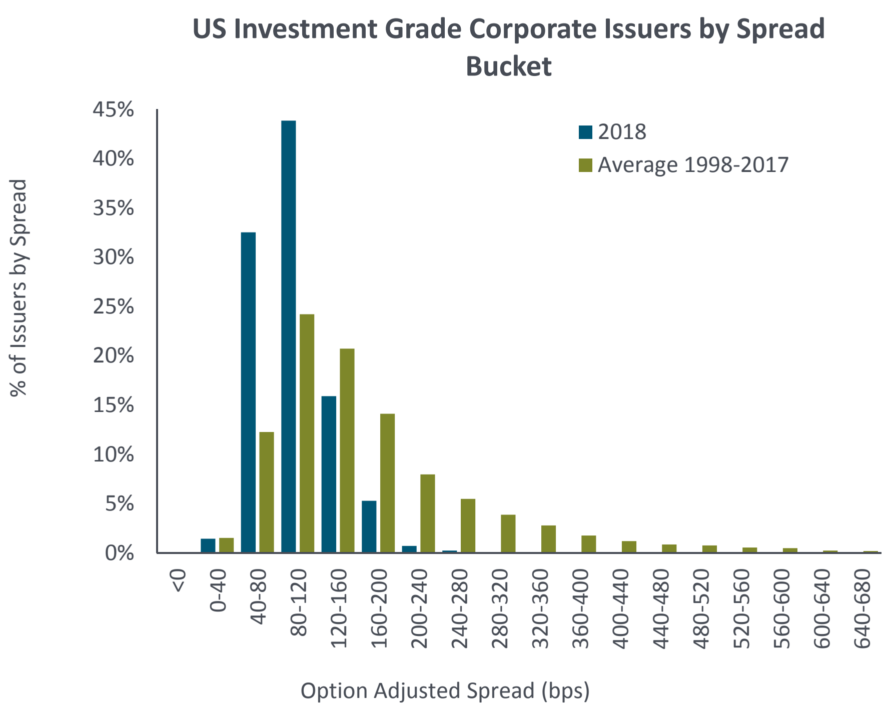


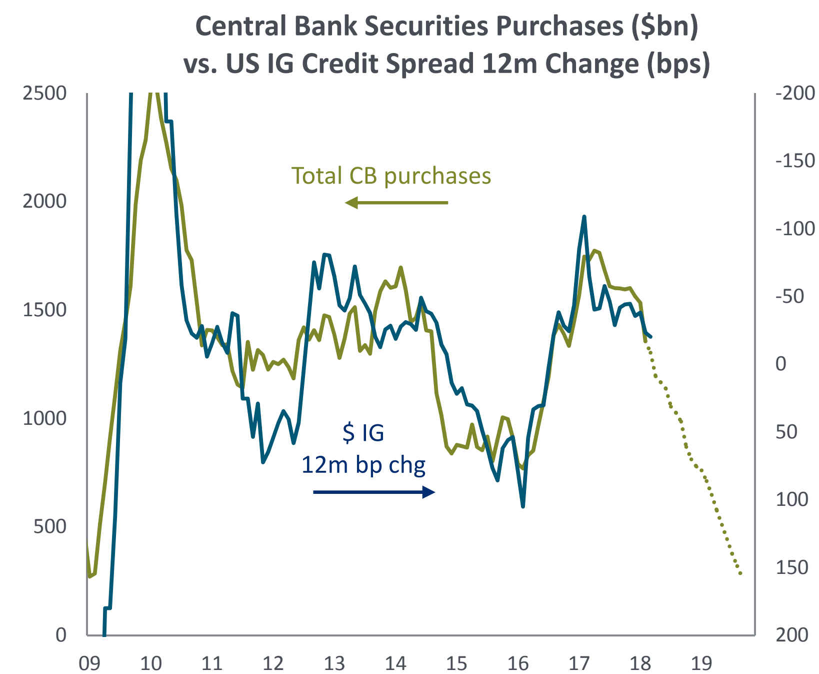
Source: Compustat earnings per share (EPS) data from December 2016 – March 2018 for the S&P 500. Each portfolio of positive and negative earnings companies is rebalanced monthly and market cap weighted. Data labels are cumulative returns as of 31st March 2018.

As dispersions normalize, are companies' efforts to support stock price aligned with bondholders' interests?

Active opportunities

U.S. Investment Grade Corporate Bonds

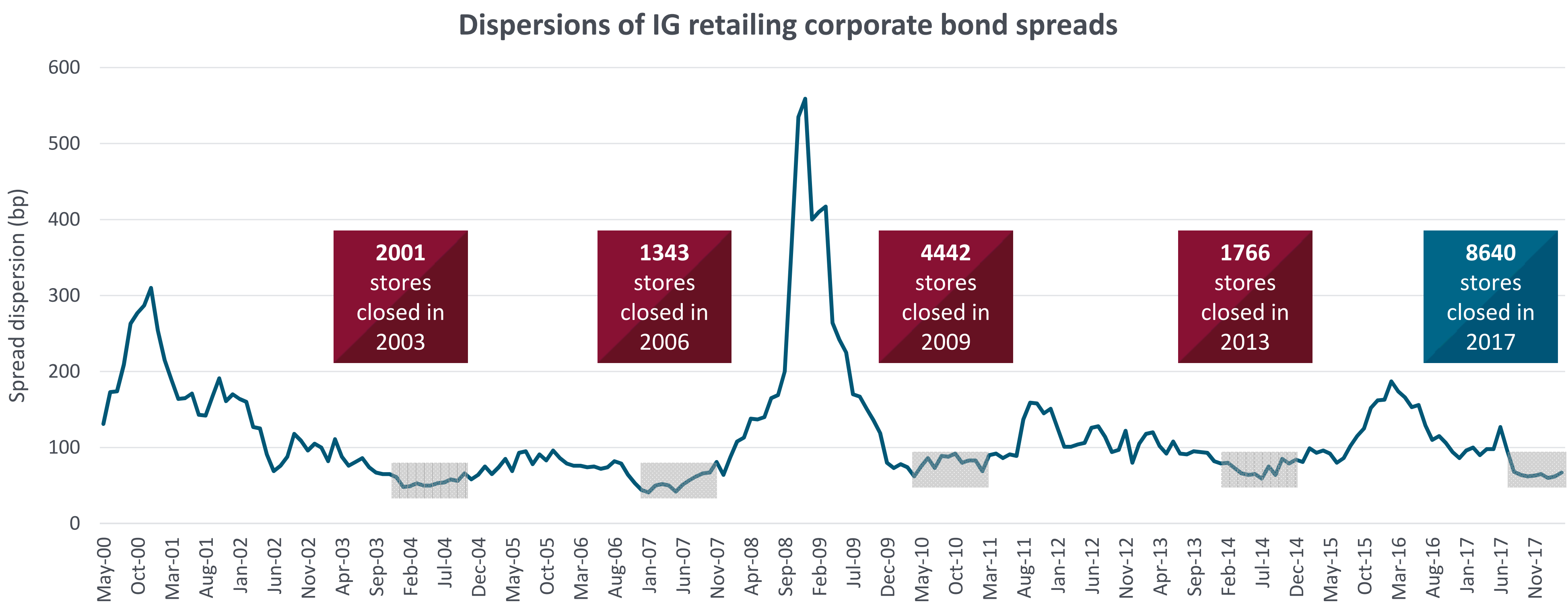




Sources: LHS - Bloomberg Barclays Point as of 15 March 2018. Average spread for each issuer (ticker) is as of month-end from 30 April 1998 through 28 February 2018 and 15 March 2018, averaging each of these monthly snapshots to determine an average spread for each ticker during the year and creating a distribution of those spreads bucketed in 40 basis-point increments. RHS – Citi Research & Yield Book as of 28 February 2018.

Risks have been gradually increasing over the past decade

Are dispersions of spreads pricing in the risk?

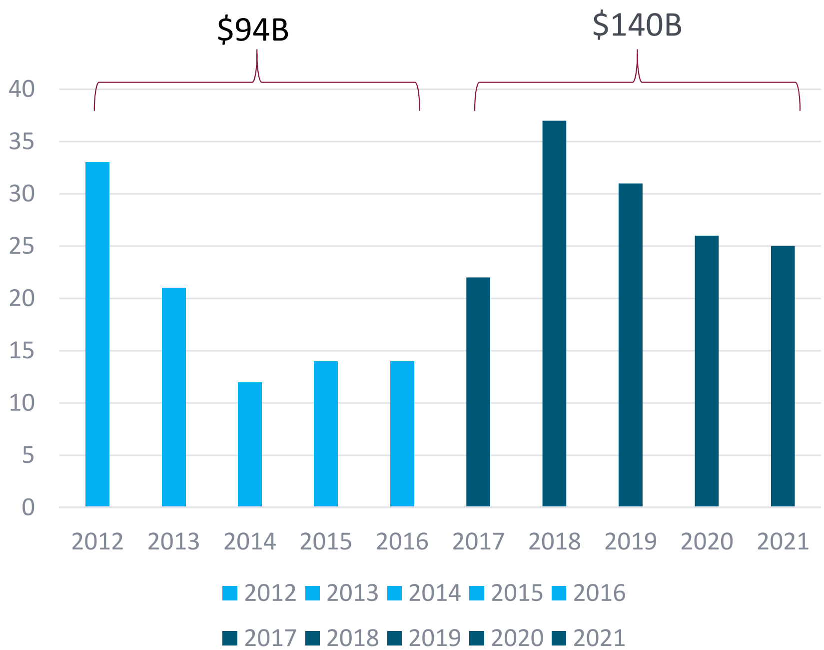


Source Bloomberg Barclays POINT & Credit Suisse. Dispersion of spreads is the differential between the 80th percentile spread and the 20th percentile investment grade corporate spread within the retail industry.

Are increased risks to brick and mortar retailers priced into bonds?

Pharmaceutical cash flows at risk

US Branded Drugs Sales at Risk[1]



Biologic	Company	Percent of 2017 sales	# of biosimilars[2]
Humira	AbbVie	18.9%	35
Enbrel	Amgen	8.3%	31
Remicade	Janssen	7.8%	17
Herceptin	Roche	7.4%	38
Avastin	Genentech /Roche	7.1%	33
Lantus	Sanofi	5.7%	13
Neulasta	Amgen	4.6%	28

[1] Left chart is US branded drug sales at risk from generic or biosimilar competition. [2] Number of biosimilars in pipeline for each drug

Source: (Left) IMS Institute. (Right) Biosimilarpipeline.com and PharmaCompass.com. As of 5/31/18 latest data available

Pharms cash flows at risk to generic and biosimilar growth

Summary

- “Low” for longer
- Changing credit markets
- Fixed income markets pricing in risks?
- The importance of diversity of alpha sourcing

"It is more important to be less wrong than more right. This is winning by not losing"

-Author Brian Portnoy

MFS Meridian® Funds–
U.S. Total Return Bond Fund

Second Quarter 2018

Portfolio characteristics are based on equivalent exposure, which measures how a portfolio's value would change due to price changes in an asset held either directly or, in the case of a derivative contract, indirectly. The market value of the holding may differ.

MAY LOSE VALUE – NOT GUARANTEED

Top ten holdings, portfolio characteristics and weightings do not reflect the effect of exposure/weightings for hedging of hedged share classes. Full holdings and net assets do reflect this hedging.
See important disclosures on final page of presentation.
See the fund's offering documents for more details, including information on fund risks and expenses.
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MFS® Meridian Funds - U.S. Total Return Bond Fund Team

Joshua Marston

Portfolio Manager
25 years industry experience

Robert Persons, CFA

Portfolio Manager
31 years industry experience

Jed Koenigsberg

Institutional Portfolio Manager
19 years industry experience

Additional Resources		
38 Fixed Income Analysts[1]	**5** Quantitative Analysts	**16** Fixed Income Traders

Brian Mastrullo, CFA

Investment Product Specialist
17 years industry experience

[1] As of 30-Jun-18

Experienced team, deep resources

MFS Meridian® Funds–U.S. Total Return Bond Fund

Disciplined investment approach

Goal	Seeks to outperform the Bloomberg Barclays U.S. Aggregate Bond Index over a full market cycle
Investment Objective	Seeks total return, measured in US dollars
Multidisciplinary Approach	Combined top-down, bottom-up and quantitative perspectives drive risk-budgeting and allocation decisions
Diverse Alpha Sources	Full suite of fixed income alpha levers is utilized, with an emphasis on areas where we believe markets are inefficient, including asset allocation and security selection
Long-Term Focus	Thoroughly researched investment theses allow for patience and conviction through periods of volatility

Seeks consistent alpha generation with an emphasis on asset allocation and security selection

Risks

The fund may not achieve its objective and/or you could lose money on your investment in the fund. • Investments in debt instruments may decline in value as the result of declines in the credit quality of the issuer, borrower, counterparty, or other entity responsible for payment, underlying collateral, or changes in economic, political, issuer-specific, or other conditions. Certain types of debt instruments can be more sensitive to these factors and therefore more volatile. In addition, debt instruments entail interest rate risk (as interest rates rise, prices usually fall). Therefore the Fund's share price may decline during rising rates. Funds that consist of debt instruments with longer durations are generally more sensitive to a rise in interest rates than those with shorter durations. At times, and particularly during periods of market turmoil, all or a large portion of segments of the market may not have an active trading market. As a result, it may be difficult to value these investments and it may not be possible to sell a particular investment or type of investment at any particular time or at an acceptable price. The price of an instrument trading at a negative interest rate responds to interest rate changes like other debt instruments; however, an instrument purchased at a negative interest rate is expected to produce a negative return if held to maturity. • Investments in derivatives can be used to take both long and short positions, be highly volatile, involve leverage (which can magnify losses), and involve risks in addition to the risks of the underlying indicator(s) on which the derivative is based, such as counterparty and liquidity risk. • Mortgage-backed securities can be subject to prepayment and/or extension and therefore can offer less potential for gains and greater potential for loss. • Because the portfolio may invest a substantial amount of its assets in issuers located in a single country or in a limited number of countries, it may be more volatile than a portfolio that is more geographically diversified. • Please see the prospectus for further information on these and other risk considerations.

Diverse Set of Alpha Sources

Expected Sources of Alpha (%)[1]

- Sector Asset Allocation: **20–30**
- Quality: **20–30**
- Security Selection: **20–40**
- Duration/Yield Curve: **10–20**

[1] Expected sources of alpha are based on historical data. These estimates represent our reasonable judgment of where the strategy may achieve alpha over a market cycle.

The ranges above are not intended to be promissory or suggestive of future returns. They are offered to help institutional investors better understand the strategy's risk profile. Actual client experience may differ.

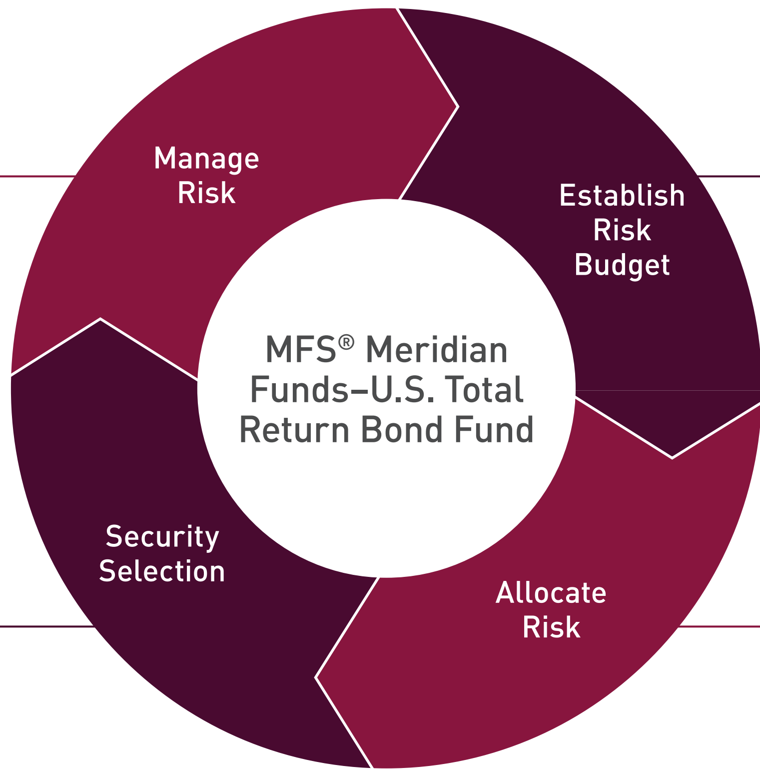
Excess return has been generated from a diverse set of alpha sources

Investment Process

Overview

Ensure risks are intended, understood and appropriately sized

Target allocation of active risk across sectors, industry quality, duration and curve



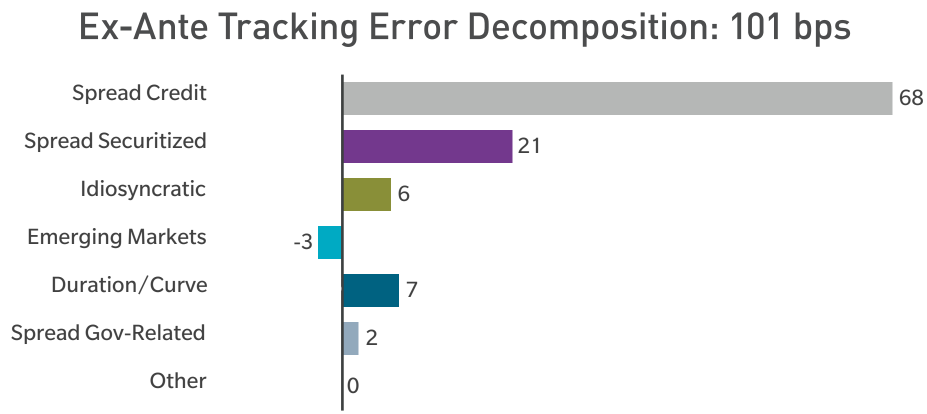
Optimal portfolio consistent with risk budget and client objectives

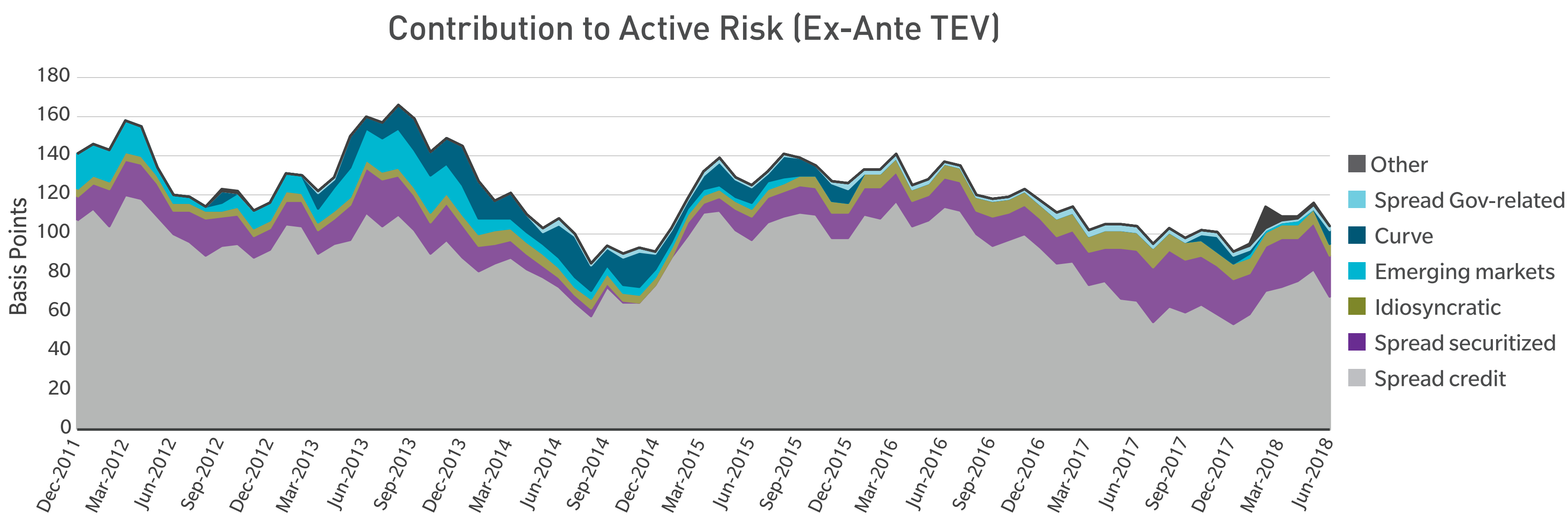
Security-level fundamental and relative value ratings

A disciplined, repeatable investment process that incorporates multiple research perspectives

Investment Process

Current and historic allocation of risk — as of 30 June 2018





Source: Bloomberg Barclays POINT as of 30-Jun-18.

FOR ILLUSTRATIVE PURPOSES ONLY. The figures are the output from the Barclays POINT factor based risk model.

Active risk has been managed dynamically, but within a disciplined framework

Portfolio Positioning

As of 30 June 2018

Characteristics	Portfolio	Benchmark^	Difference
Yield-to-worst[1]	3.5%	3.1%	0.4%
Average effective duration[2] (yrs)	5.7 yrs	6.0 yrs	-0.3 yrs
Average spread duration (yrs)	6.46	6.22	0.24

	Market Value (%)		
Sector	Portfolio	Benchmark^	Difference
US Treasury	24.57	37.82	-13.25
Government related	1.00	1.64	-0.64
Securitized	33.26	30.62	2.64
Agency MBS	15.41	28.12	-12.71
CMBS	8.93	1.90	7.03
Other securitized (ABS, CLO, RMBS)	8.92	0.60	8.32
IG corporates	34.13	24.67	9.46
Industrials	17.07	14.85	2.22
Financials	13.63	8.04	5.59
Utilities	3.48	1.78	1.70
High yield	4.59	0.00	4.59
EMD	1.03	1.71	-0.68
Municipals	1.33	0.00	1.33
Non US Sovereign	0.00	3.54	-3.54
Other[4]	-2.58	0.00	-2.58
Cash	2.66	0.00	2.66
Total	**100.00**	**100.00**	**0.00**

Key Rate Duration Exposure (yrs)	Portfolio	Benchmark^	Difference
6 months	0.06	0.08	-0.02
2 years	0.61	0.66	-0.05
5 years	1.40	1.51	-0.11
10 years	1.34	1.37	-0.03
20 years	1.21	1.28	-0.07
30 years	1.04	1.14	-0.10
Total	**5.66**	**6.04**	**-0.38**

	Market Value (%)		
Credit Quality Breakdown[3]	Portfolio	Benchmark^	Difference
U.S. Govt	21.99	37.24	-15.25
Federal Agency	16.41	28.14	-11.73
AAA	12.68	6.20	6.48
AA	3.77	3.74	0.03
A	16.24	11.21	5.03
BBB	20.03	13.47	6.56
BB	4.11	0.00	4.11
B and Below	0.94	0.00	0.94
Cash & Cash Equivalents	0.08	0.00	0.08
Other	3.75	0.00	3.75
Total	**100**	**100**	

^ Benchmark: Bloomberg Barclays U.S. Aggregate Bond Index.
1 The weighted average yield-to-worst of all portfolio holdings. The yield-to-worst is computed by using the lower of either the yield-to-maturity or the yield-to-call on every possible call date. Essentially the yield-to-worst is a bond's yield-to-maturity under the least desirable bond repayment pattern under the assumption that bond market yields are unchanged.
2 Average effective duration is a measure of how much a bond's price is likely to fluctuate with general changes in interest rates, e.g., if rates rise 1.00%, a bond with a 5-year duration is likely to lose about 5.00% of its value.
3 For all securities other than those specifically described below, ratings are assigned to underlying securities utilizing ratings from Moody's, Fitch, and Standard & Poor's rating agencies and applying the following hierarchy: If al three agencies provide a rating, the middle rating (after dropping the highest and lowest ratings) is assigned; if two of the three agencies rates a security, the lower of the two is assigned. Ratings are shown in the S&P and Fitch scale (e.g., AAA). All ratings are subject to change. U.S. Government includes securities issued by the U.S. Department of the Treasury. Federal Agencies includes rated and unrated U.S. Agency fixed-income securities, U.S. Agency MBS, and CMOs of U.S. Agency MBS. Other Not Rates includes fixed income securities which have not been rated by any rating agency. The portfolio itself has not been rated. MFS has applied its ratings methodology to classify index credit quality.
4 Other consists of: (i) currency derivatives and/or (ii) any derivative offsets.
Source: Bloomberg Barclays POINT as of 30-Jun-18.

Sector Allocation Range

As of 30 June 2018

	Current (%)	10-Year Period Ending 30 June 2018 Minimum (%)	Maximum (%)	Average (%)
High Grade Corporates	34.2	26.8	45.2	35.0
Securitized (CMBS, ABS, CDO)	17.4	5.9	20.0	11.6
High Yield Corporates	4.6	1.0	8.1	5.6
Emerging Markets Debt	1.0	0.1	6.3	2.4
U.S. Govt Agencies	1.0	0.5	8.1	2.5
Non-U.S. Sovereigns	0.0	0.0	2.6	0.7
Mortgage Backed	15.4	13.2	29.8	20.3
U.S. Treasuries	24.6	0.6	35.2	18.0
Municipals	1.3	0.0	5.0	0.8

Short positions, unlike long positions, lose value if the underlying asset gains value.

Fund Regulatory Details

See the fund's offering documents for more details, including information on fund risks and expenses. For additional information, call **Latin America:** 416.506.8418 in Toronto or 352.46.40.10.600 in Luxembourg. **European Union:** MFS International (U.K.) Ltd., One Carter Lane, London, EC4V 5ER UK. Tel: 44 (0)20 7429 7200. **Switzerland:** Carnegie Fund Services S.A., 11 rue du General-Dufour, 1204 Geneva, Switzerland. Tel: 41.22.705.1177. **Hong Kong:** State Street Trust (HK) Limited, 68th Floor, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. Tel: 852.2840.5388. **Taiwan:** Master Agent: PineBridge Investments Consulting Taiwan Limited, 10th floor, 144 Minchuan E. Rd., Section 2, Taipei 10436, Taiwan Tel: 886.2.2516.7676

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