TCW

How to Invest in the Bond Market in a Low Interest World

JUNE 4, 2019

Presented by:
Gian Luca Giurlani | Managing Director | International Marketing

TCW Overview

AS OF MARCH 31, 2019

Distinguishing Features:

- Among leading global asset management firms with nearly five decades of investment experience
- Disciplined, team-managed investment processes that have been tested across market cycles
- Broad range of products and expertise across fixed income, equities, emerging markets, and alternative investments
- High level of employee ownership of TCW
- For the fifth year in a row, TCW named "Best Places to Work in Money Management among firms with 500-999 employees" by *Pensions & Investments*, 2014, 2015, 2016, 2017, and 2018

Firm Facts:

- Established in 1971 in Los Angeles, California
- $200 billion under management
- Through our TCW and MetWest Fund Families, TCW manages one of the largest mutual fund complexes in the U.S. with approximately $94 billion in assets under management
- TCW staff of more than 600 individuals
- Offices in Los Angeles, New York, Boston, Chicago, London, Milan, Hong Kong, and Tokyo

Source: TCW
Comprises the assets under management, or committed to management, of The TCW Group, Inc. and its subsidiaries.

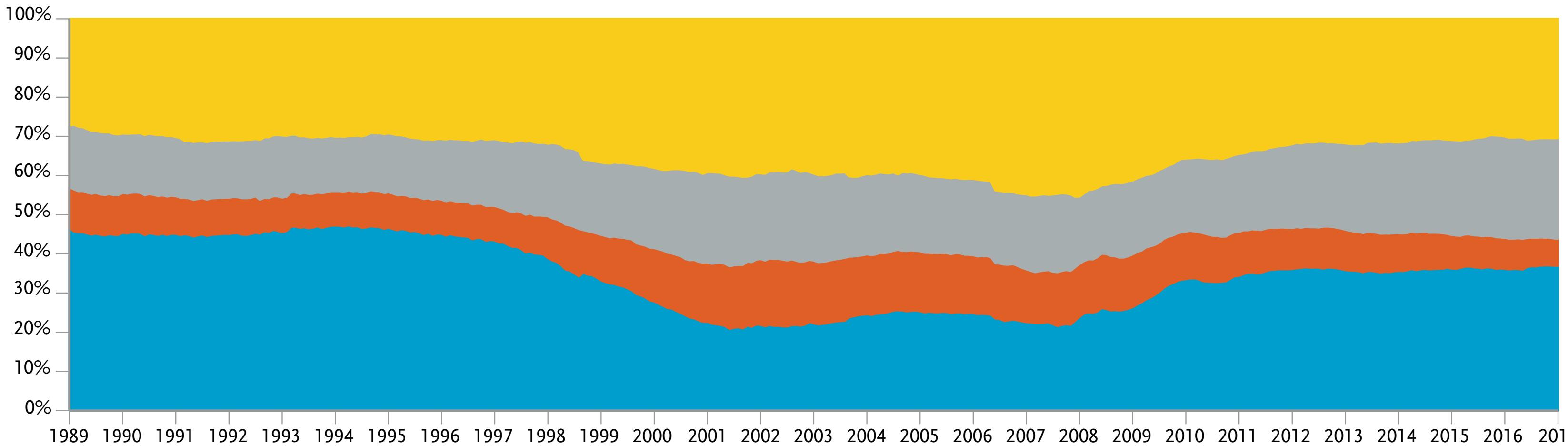
Bond Market Investing in a Low Interest World

TCW

The Index Allocation to Low Yielding Government Bonds has Steadily Increased

Reason #1: Active Fixed Income Managers Have Flexibility to Find Value in all Sectors

HISTORICAL SECTOR ALLOCATION - BLOOMBERG BARCLAYS AGGREGATE BOND INDEX



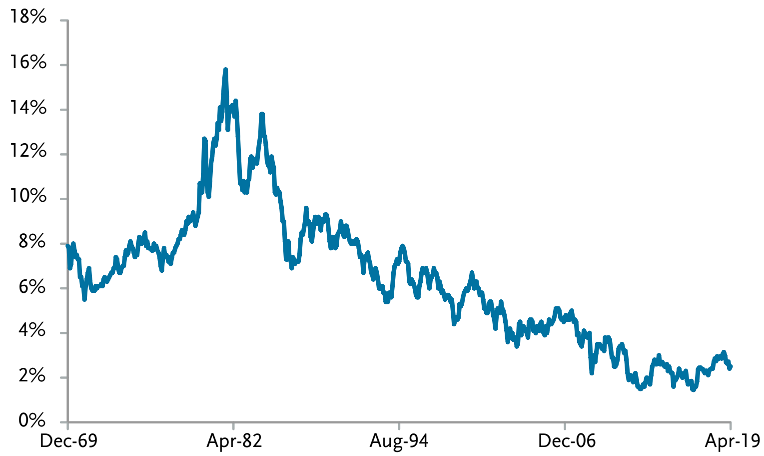
Source: Barclays Live

- Since the financial crisis, the index allocation to low yielding government bonds has steadily increased as Treasury and other government related bonds including agency mortgages comprise almost 70% of the Bloomberg Barclays Aggregate Bond Index
- The Bloomberg Barclays Aggregate Bond Index does not include many attractive fixed income sectors like non-agency MBS, floating rate bonds or TIPS
- Replication of the Bloomberg Barclays Aggregate Bond Index is challenging
  - Index includes thousands of issues that trade very rarely and are highly illiquid (primarily in the corporate sector)
  - Due to QE programs, the Fed has removed much of the outstanding value of certain parts of the Treasury and agency mortgage sectors

Interest Rates Have Enjoyed a Long-Term Decline

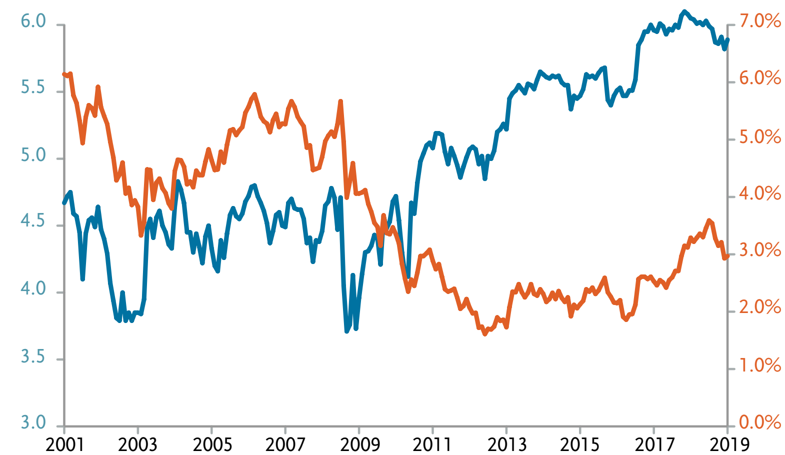
Reason #2: Active Management Can Help Protect a Portfolio From Higher Interest Rates

10 YEAR US TREASURY YIELD



Source: Bloomberg

HISTORICAL DURATION AND YIELD BLOOMBERG BARCLAYS AGGREGATE BOND INDEX

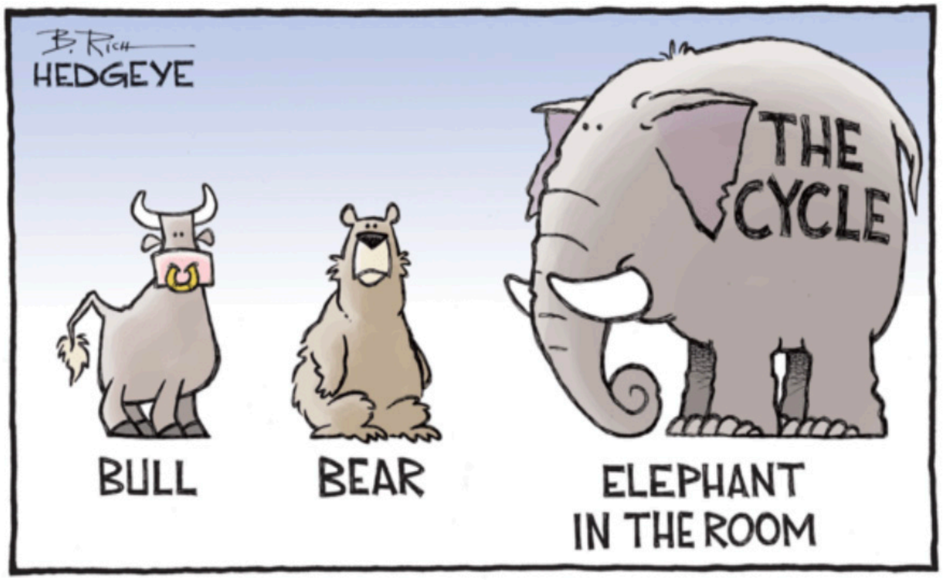


Source: Barclays Live

- Interest rates have enjoyed a long-term decline generating positive returns for fixed income markets
- The long-term bull market and Fed support will ultimately end, eventually leading to higher interest rates over the longer-term
- Duration of the Bloomberg Barclays Aggregate Bond Index has risen while the yield has declined
  – At current levels a 40 basis point increase in interest rates over the next 12-months will push annual return of the index below zero
- Skilled active fixed income managers can help mitigate the impact of rising rates and be more likely to deliver positive returns
  – Actively reduce the overall duration of the portfolio
  – Increase the yield of a portfolio by purchasing undervalued bonds

Conclusion: The Late Cycle Has Arrived

Investment Grade Credit	✔ ✔
High Yield/Bank Loans	✔ ✔
Yield Curve	✔
U.S. Housing	✔
Global Housing	✔
EM Equities	✔
Fund Flows	✔
Commodity Prices	✔
Commercial Real-Estate	✔
EM Credit	Perhaps
U.S. Equities	Perhaps



In the Late Cycle, Fixed Income Strategies That Emphasize Yield Lose the Most Money

	That Was Then... 2017		This Is Now... 2018	
EM HY Corps Return	+10.5%		-2.9%	
EM Sovs/ Quasisovereign Return	+10.3%		-4.3%	
U.S. HY Corporate Return	+7.5%		-2.3%	
Euro HY Corporates	+6.7%		-3.6%	
EM IG Corps Return	+6.3%		-0.6%	
	Total Return	**Peer Group Percentile**	**Total Return**	**Peer Group Percentile**
Sample Portfolio	+6.96%	1	-1.49%	85
Sample Portfolio	+6.62%	2	-0.73%	60
Sample Portfolio	+5.13%	10	-0.26%	39
Sample Portfolio	+4.26%	28	-0.88%	68
Sample Portfolio	+3.43%	61	+0.16%	23
Bloomberg Barclays Aggregate Index	***+3.54%***	***N/A***	***+0.01%***	***N/A***

Source: Bloomberg, BofA ML, Morningstar

Please see important disclosures at the end of the section regarding the data presented herein.

Fixed Income Investment Philosophy

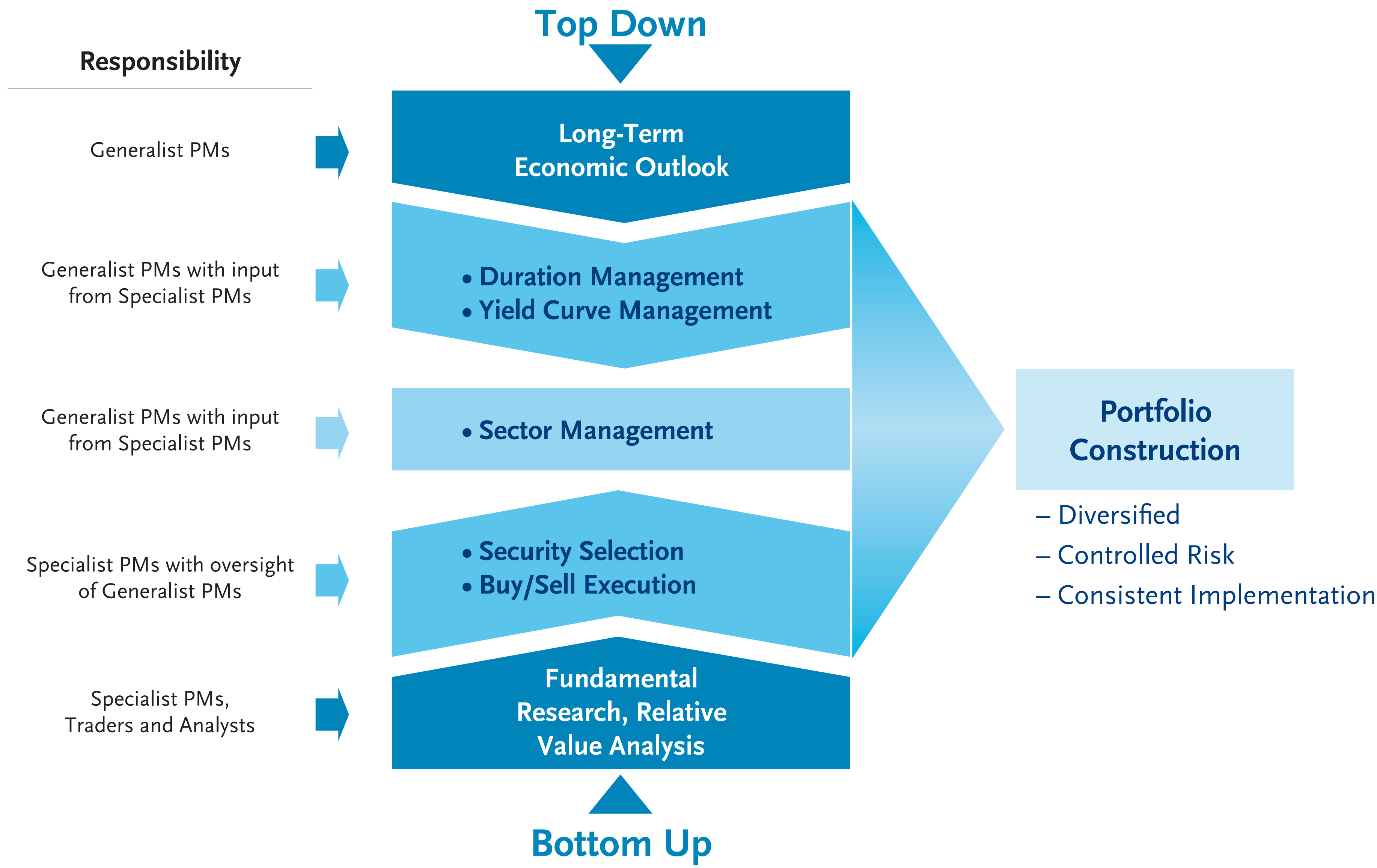
Philosophical Tenets:

- Fixed income markets/securities are mean reverting
- Technical factors can temporarily drive pricing away from fundamentals
- Persistent inefficiencies can be exploited through disciplined research and bottom-up issue selection

Outperformance May Be Achieved Through:

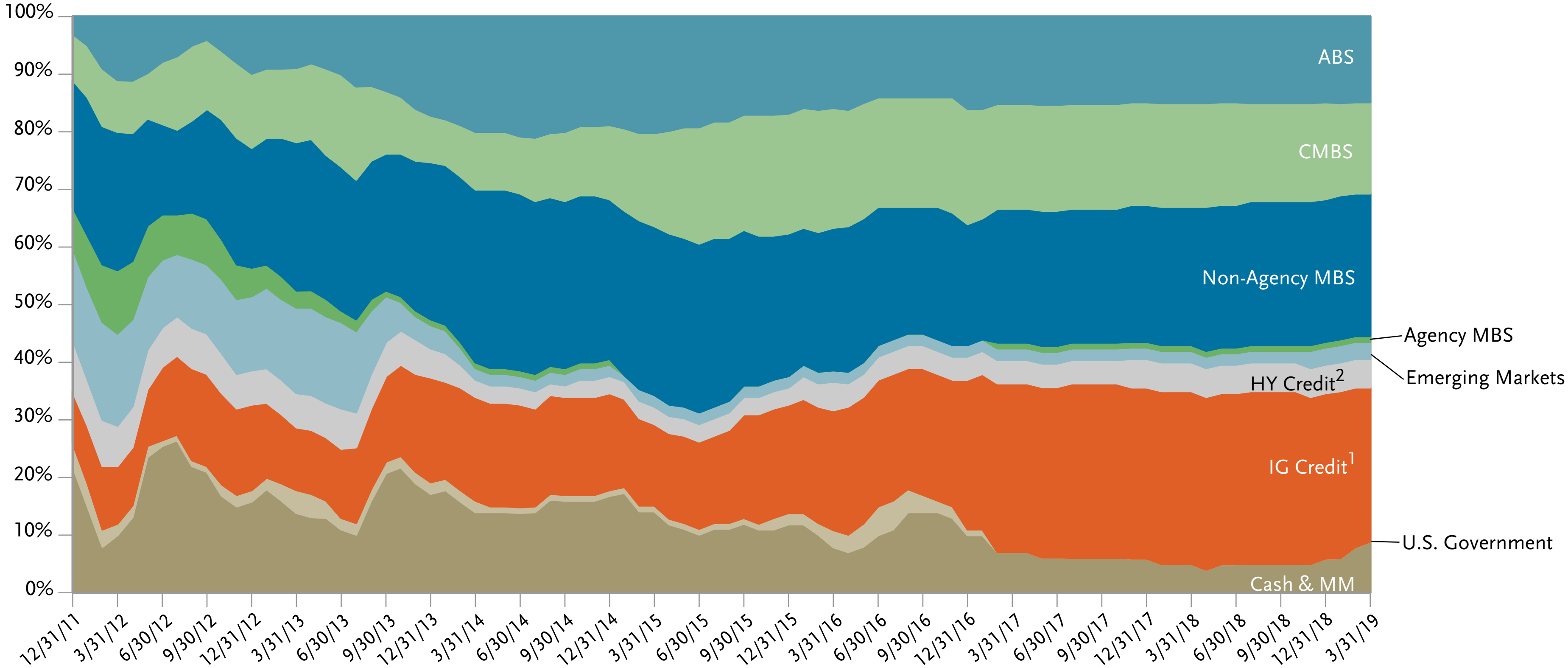
- Disciplined implementation of multiple fixed income strategies
- Application of fundamental value-driven research process
- Focus on sector management and issue selection

Investment Process



Sample Portfolio Historical Sector Positioning[1]

AS OF MARCH 31, 2019 | SUPPLEMENTAL INFORMATION



Source: TCW

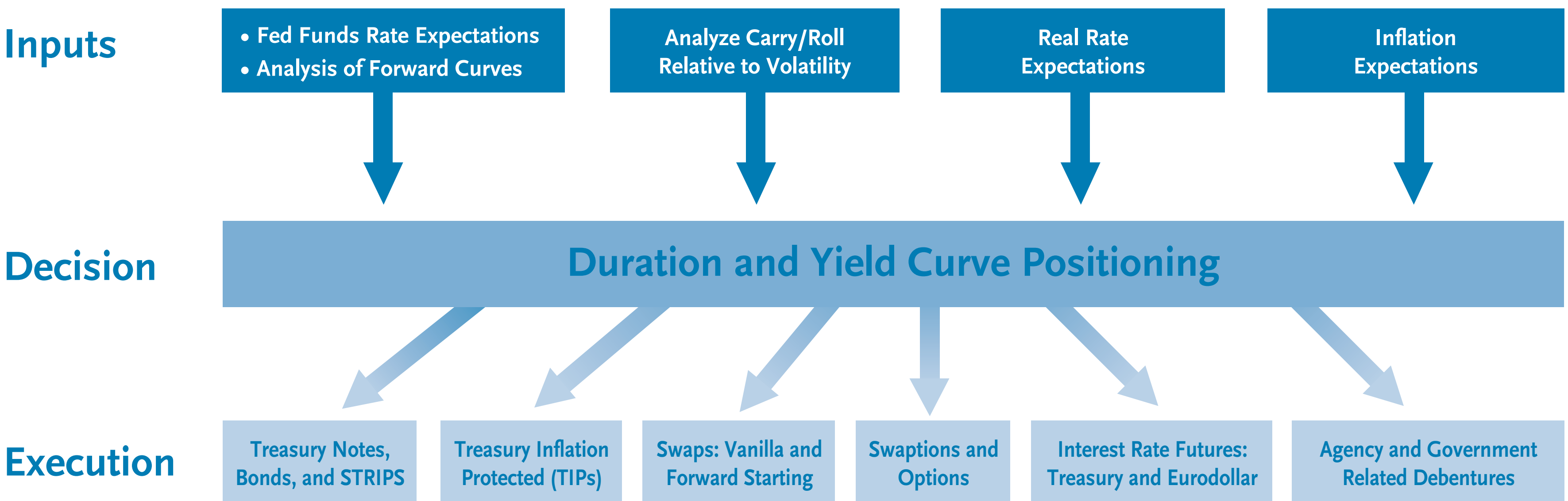
1 Including Munis.

2 Market value of HY Credit includes synthetic HY CDX derivative exposure; total of the columns may not add up to 100%.

Based upon a representative account. Portfolio characteristics and holdings are subject to change at any time.

Issue Selection: Interest Rate Products

- TCW's Interest Rate Products Group is the hub amongst the specialist groups tasked with managing the liquidity, duration, convexity, and yield curve positioning across our fixed income strategies
- Market inefficiencies as a result of biases such as complexity and segmentation may result in alpha generation opportunities



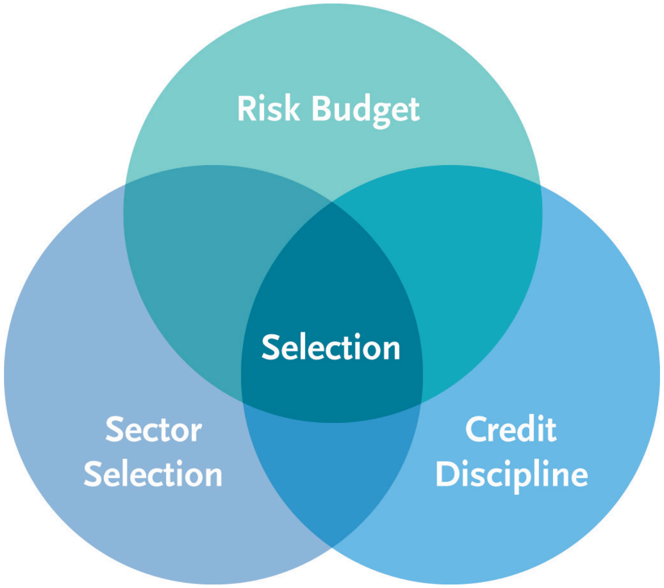
TCW

Issue Selection: Corporate Credit

- Credit discipline emphasizes protections: assets, covenants, contracts and regulation
- Top-down risk budget evolution anchored by bottom-up credit selection

■ Adjust corporate exposure (basis) over the credit cycle
■ Value-based discipline based on mean-reverting nature of fixed income markets

- Credit selection disciplined based on downside protection
  - Collateral security
  - Covenant protection
  - Regulated industry oversight
  - Contracted or high visibility of cash flows
- Utilize full range of opportunities to gain attributes above
  - EETCs, project debt, loans, etc.



- Intensive fundamental credit analysis
  - Quality of company
    - Cash flow forecast
    - Available liquidity
  - Quality of claim
    - Capital structure analysis
    - Covenant analysis
  - Other factors
    - Ratings agency discussions
    - Management quality/ Shareholder
- Size affords nimble trading ability

TCW Sample Portfolio Alpha Attribution

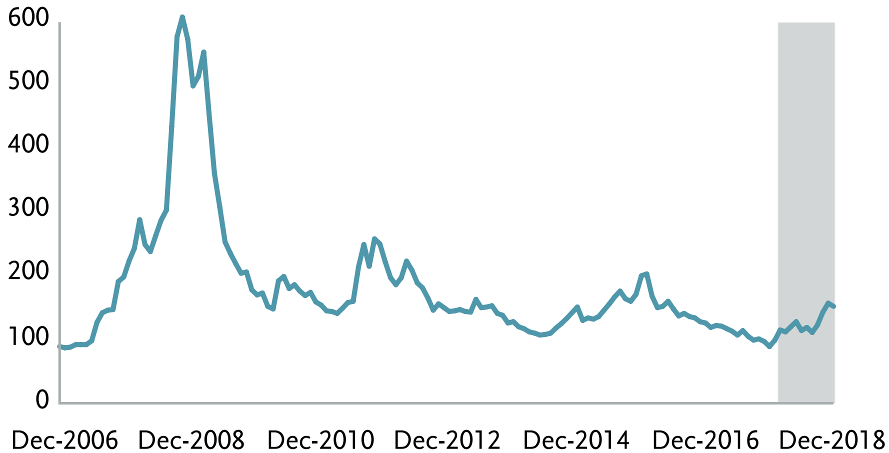
	Approximate % of Alpha	Notes
Issue Selection	55%	The cornerstone of our investment process and the largest component of our alpha is grounded in solid issue selection based on strong fundamental research. Risk is controlled through 2.5% issuer concentration limits within the portfolio.
Sector	30%	Sector allocation is a key element of TCW sample portfolio as the portfolio has wide latitude to invest in various sectors. For instance, the portfolio allows up to 50% in below IG exposure and the actual allocation has ranged from almost 40% in 2012 to less than 20% in 2018.
Yield Curve	5%	Yield curve is generally a small component of alpha, but at times, such as 2007 and 2003 when the curve was at extremes it can be a meaningful source of returns.
Duration	5%	Duration is typically a modest contributor to returns given large duration positions can add significant volatility.
Trading	5%	Diligent pursuit of best execution and opportunistic trading opportunities have also been beneficial.

Portfolio characteristics and holdings are subject to change at any time. Past performance is no guarantee of future results.

The Sun Will…

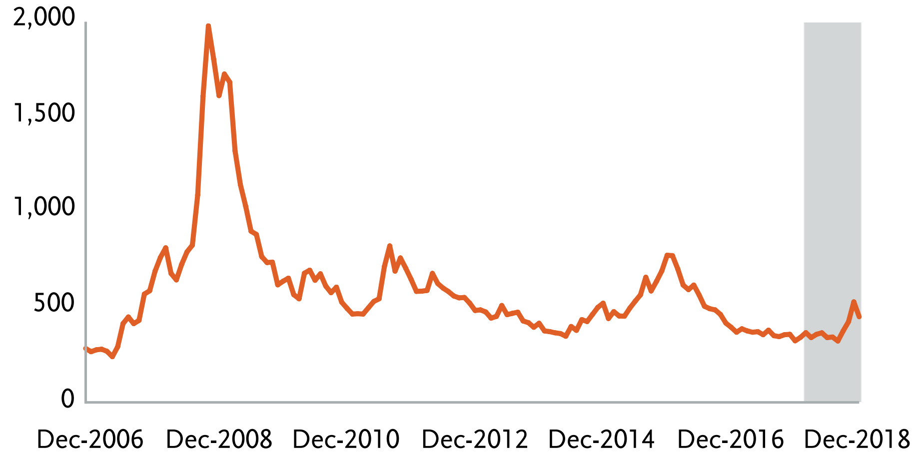
Now For the Good News → Valuations Have Improved (Modestly)

IG Corporate Spreads



Source: BofA ML, Bloomberg

High Yield Corporate Spreads

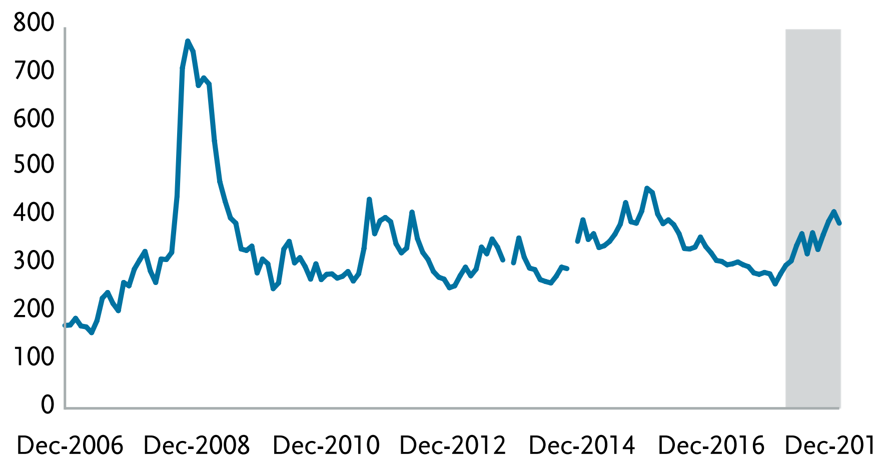


Source: BofA ML, Bloomberg

MBS Current Coupon Spread

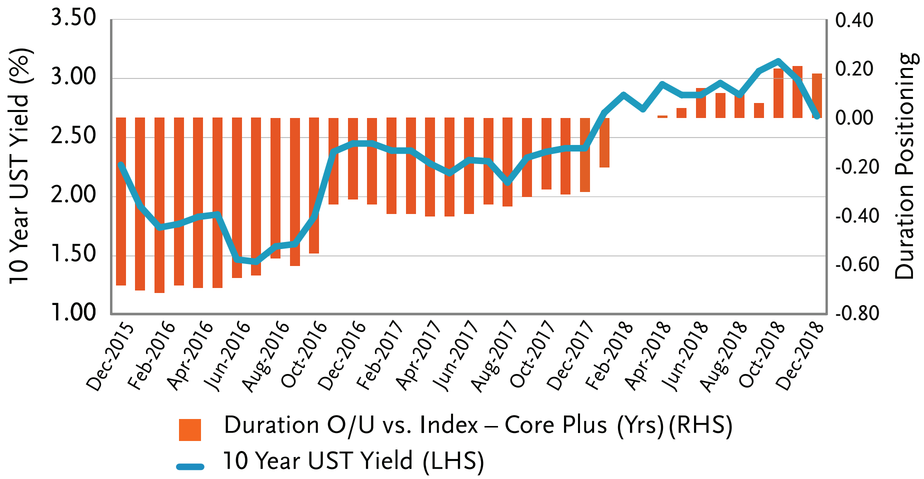
Source: Bloomberg, TCW

Emerging Market Spreads

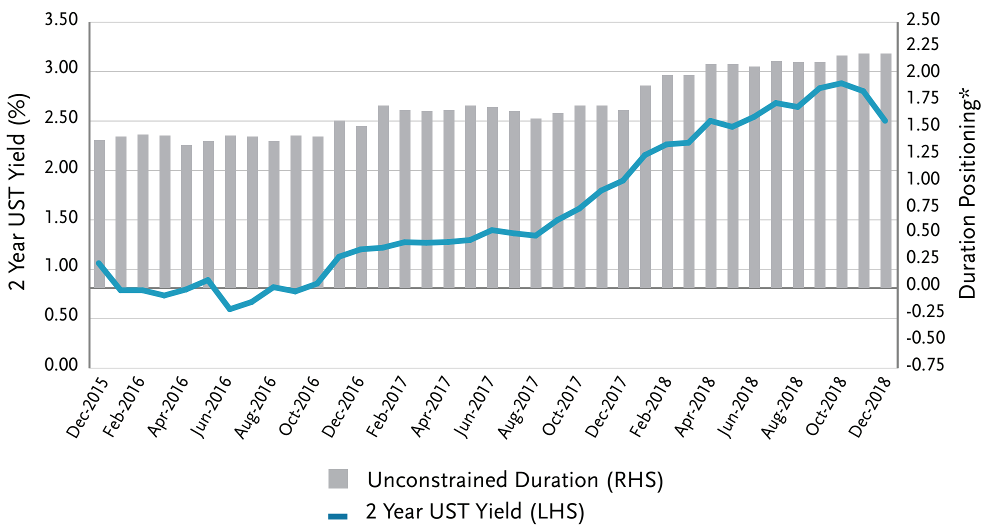


Source: JP Morgan

Duration Positioning → Lengthen as Rates Have Risen



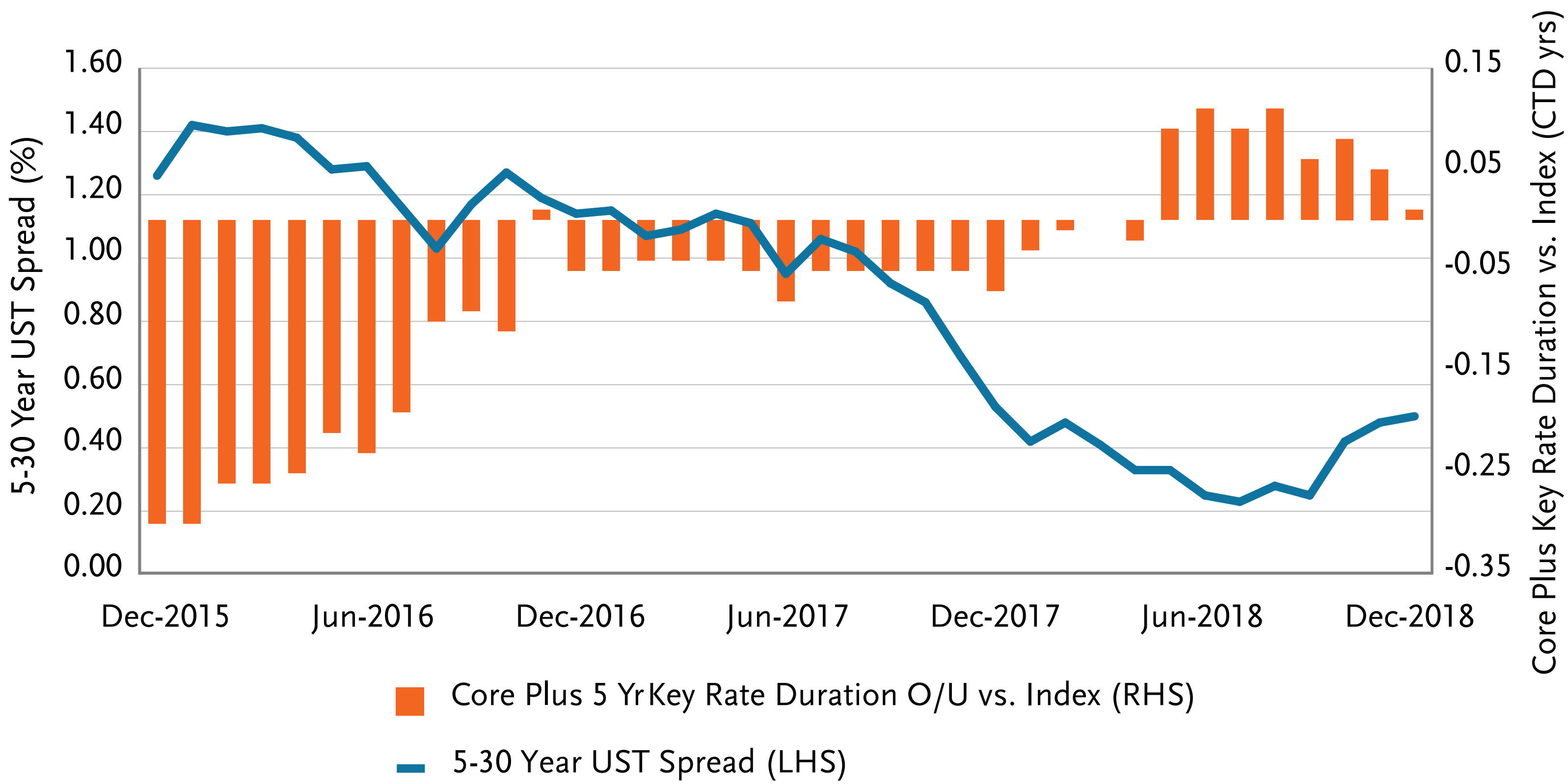
- Core Plus +0.2 year long duration vs. index



- Unconstrained has lengthened to 2.2 years

Source: TCW, Bloomberg
* Low Duration Duration is the duration difference between Low Duration and its benchmark (Merrill 1-3 yr UST Index). Unconstrained Duration is the absolute duration of Unconstrained.

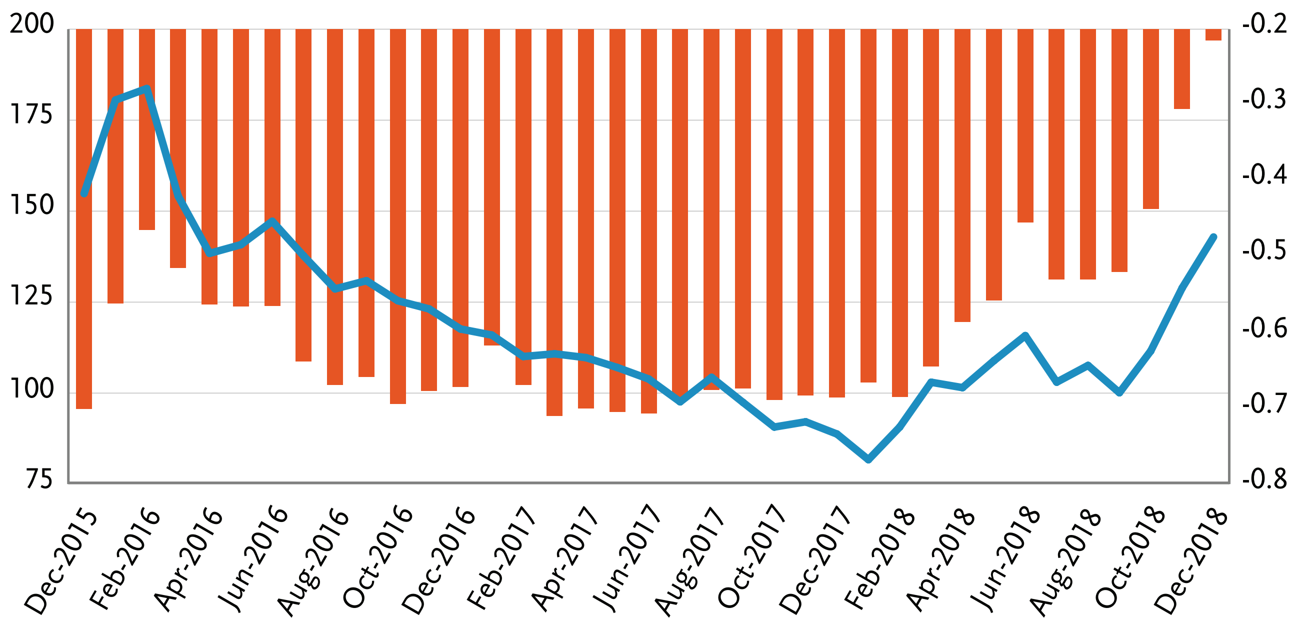
Yield Curve Positioning → Move Toward Bullet as Curve Has Flattened



- Now slightly overweight five year part of the curve, while slightly underweight 30 year

Source: TCW, Bloomberg
*This dataset includes CTD from the 20 year bucket as well.

Corporate Credit Positioning → Add Opportunistically as Spreads Widen



- Opportunistically added front end corporates in 4Q 2017 as technicals pressured spreads
- Further corporate purchases in 2018 as spreads widened ~50 basis points
  - New issue concessions very attractive
  - High quality/defensive sectors – aerospace/defense, rails, telco
  - Midstream energy attractive given deleveraging and move away from MLP structure
- Now overweight by market value, though underweight by spread duration

Source: TCW

How Are We Adjusting Portfolios to the Changing Conditions?

- Consistent with our value disciplines…
  - Durations have been increased as rates rise, now slightly above benchmark
  - Investment grade corporate exposure has been increased selectively, now overweight by market value, still underweight by spread duration
  - Agency MBS has been added as this sector underperformed Treasuries, now slightly above benchmark
  - Moved to a very slight bullet maturity structure given flat yield curve

- Portfolio positioning still defensive, preparing for more volatility/opportunity…
  - Added high yield, emerging market exposure, but still near low end of risk budgets
  - Credit issue selection is selective, defensive
    - Favor financials, utilities, non-cyclical vs. cyclical, commodity, non-U.S. exposure
    - Generally shorter in maturity/duration profile
    - Up-the-capital-structure where possible
    - Select ideosyncratic opportunities (Ford, GE)
  - Senior-most tranches in securitized used as a way to maintain safe spread & carry vs. index
  - Maintain high liquidity!

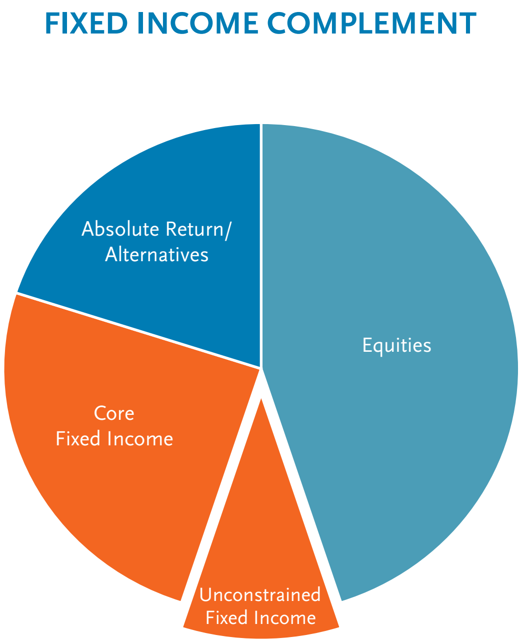
TCW Fixed Income Sample Portfolio Objective

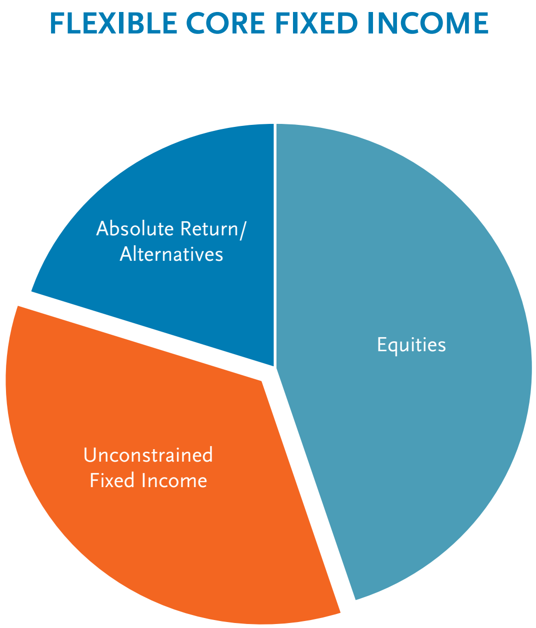
Sample Portfolio Active Management Focuses on Sector and Issue Selection

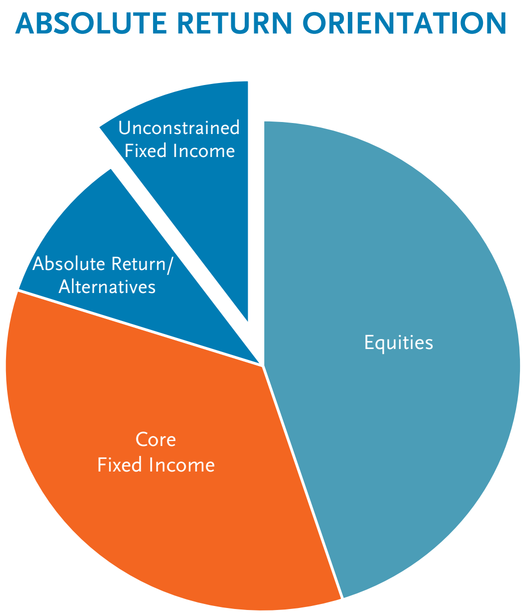
	Latitude	90% Confidence Range	Historical Range[1]	Expected Performance Driver
Duration	- 3 yrs to +8 yrs	1 – 4	0.9 - 2.2 yrs	Low
Securitized Products	0% to 100%	5 – 60	32 - 69%	Significant
IG Credit[2]	0% to 100%	5 – 60	8 - 32%	Significant
Below Investment Grade[3]	0% to 50%	3 – 45	18 - 39%	Significant
Emerging Markets	0% to 50%	3 – 30	1 - 24%	Moderate
Foreign Currencies	0% to 40%	0 – 10	0 - 2%	Low
Convertibles/Preferred Stock	0% to 10%	0 – 3	0%	Very Low
Common Stock	0% to 5%	0 – 1	0%	Very Low

Source: TCW
1 Based upon a representative account.
2 Includes all investment grade credit securities excluding emerging market bonds.
3 Includes below investment grade corporate, emerging markets, and securitized debt.
Portfolio characteristics and holdings are subject to change at any time.

Fixed Income Sample Portfolio in the Context of Asset Allocation







OBJECTIVES:

- To enhance returns of a core, core plus fixed income strategy

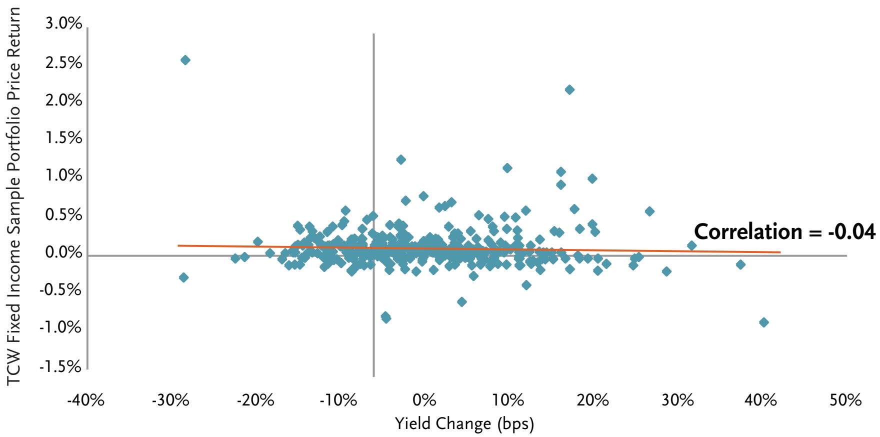
- To replace a traditional intermediate duration strategy with a more flexible, opportunistic approach

- Seeks to generate positive returns over the long-term with low correlation to interest rates and equities

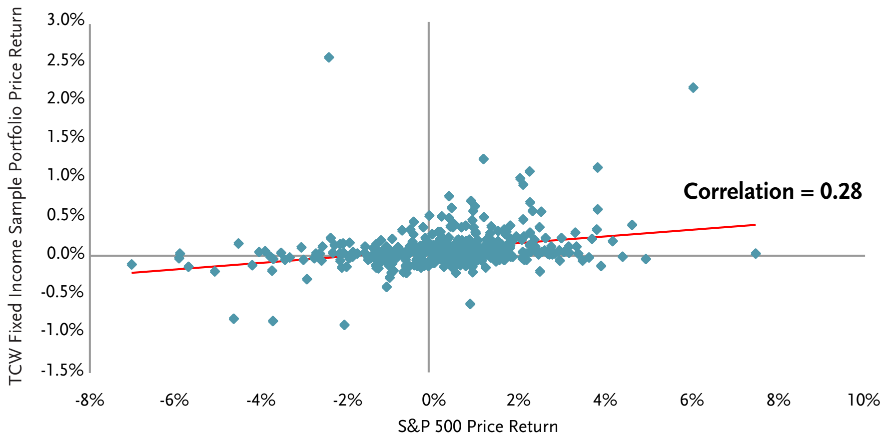
TCW Fixed Income Sample Portfolio Correlations

AS OF MARCH 31, 2019

TCW SAMPLE PORTFOLIO FIXED INCOME PRICE RETURN VS. 10 YR UST YIELD CHANGE*



TCW SAMPLE PORTFOLIO FIXED INCOME PRICE RETURN VS. S&P 500 PRICE RETURN*



Source: Bloomberg, Barclays, TCW

*Based upon a representative account. Since September 30, 2011 through March 31, 2019; based on weekly return data.

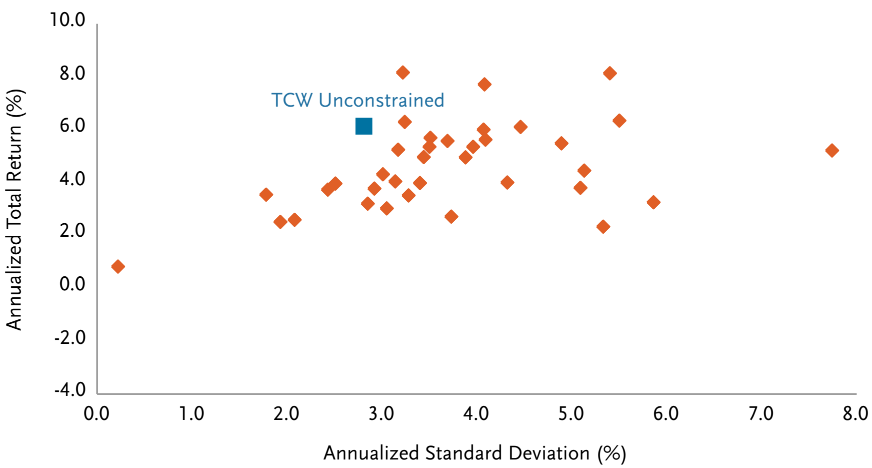
Please see additional disclosures in the appendix, which are an integral and important part of this presentation.Individual results may vary. Past performance is no guarantee of future results.

TCW Fixed Income Sample Portfolio Risk/Return Analysis

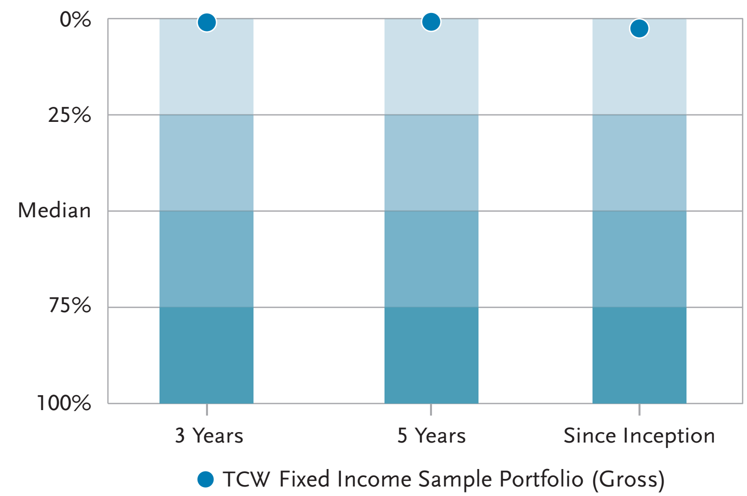
AS OF MARCH 31, 2019 | SUPPLEMENTAL INFORMATION

RISK-RETURN ANALYSIS

10/1/11 - 3/20/19



SHARPE RATIO RANK



RISK STATISTICS

	Total Return (Gross)			Standard Deviation			Sharpe Ratio			Maximum Drawdown		
	3 Years	5 Years	SI	3 Years	5 Years	SI	3 Years	5 Years	SI	3 Years	5 Years	SI
TCW Sample Portfolio	4.24%	3.39%	6.13%	1.00%	0.98%	2.81%	3.06	2.71	2.01	0.19%	0.51%	1.77%
3-month Index (LUS5)[1]	1.56%	1.06%	0.82%	0.22%	0.24%	0.22%	1.35	1.12	1.33	0.00%	0.00%	0.00%

Source: eVestment

1 ICE BofAML U.S. Dollar 3-Month Deposit Offered Rate Average Index (LUS5)

Inception date: October 1, 2011

The peer group is comprised of 158 composites in the eVestment Global Unconstrained Fixed Income Universe that are managed by U.S.-domiciled investment managers, are listed in the U.S. exchanges and are benchmarked against a USD-denominated index.

Footnotes regarding performance appear in the appendix and are an integral and important part of this chart. Individual results may vary. Past performance is no guarantee of future results. Portfolio characteristics and holdings are subject to change at any time.

History Shows Why We Can Stop Worrying and Love the Fed

January 29, 2007:
"One of the pleasant surprises I had coming to government has been the strong economy we have today." ***– Henry Paulson***

February 21, 2007:
"I'm waking up less at night than I was [over the slowdown in housing]. So far, there's been remarkably little effect [from housing] on the rest of the economy." ***– Janet Yellen***

March 28, 2007:
"At this juncture...the impact on the broader economy and financial markets of the problems in the subprime markets seems likely to be contained." ***– Ben Bernanke***

April 5, 2007:
"The damage from the subprime market has been largely contained." ***– Richard Fisher***

April 20, 2007:
"I don't see (subprime mortgage market troubles) imposing a serious problem. I think it's going to be largely contained." ***– Henry Paulson***

The Three Kinds of Assets In a De-Leveraging

- Treasuries and certain other Sovereigns
- Agency MBS

- IG Credit
- AAA-rated CMBS and ABS
- Senior Non-Agency RMBS
- Risk-premia will widen in a linear, controlled manner
- Volatility will be significant but not catastrophic
- Capture "Safe Spread"

- High Yield, some EM
- Marginal assets and businesses become insolvent and must be liquidated or restructured
- Price declines can be catastrophic and permanent

This material is for general information purposes only and does not constitute or form part of an invitation or offer to issue or sell, or a solicitation of an offer to buy, any security, specific product or services. This material is only directed at institutional investors and only provided upon their request. The distribution of this material in certain jurisdictions and/or to certain investors may be restricted or prohibited and should therefore not be relied upon by such persons. Accordingly, this material may not be used in any jurisdiction except under circumstances that will result in compliance with any applicable laws and regulations. Persons to whom this presentation is communicated should inform themselves about and observe any such restrictions. Any issuers or securities noted in this document are provided as illustrations or examples only, for the limited purpose of analyzing general market or economic conditions and may not form the basis for an investment decision, nor are they intended to serve as investment advice. Any such issuers or securities are under periodic review by the portfolio management group and are subject to change without notice. TCW makes no representation as to whether any security or issuer mentioned in this document is now in any TCW portfolio. TCW, its officers, directors, employees or clients may have positions in securities or investments mentioned in this publication, which are subject to change without notice. Any information and statistical data contained herein derived from third party sources are believed to be reliable, but TCW does not represent that they are accurate, and they should not be relied on as such or be the basis for an investment decision. All information is as of the date of this presentation unless otherwise indicated.

An investment in the strategy described herein has risks, including the risk of losing some or all of the invested capital. An investor should carefully consider the risks and suitability of an investment strategy based on their own investment objectives and financial position. There is no assurance that the investment objectives and/or trends will come to pass or be maintained. The information contained herein may include preliminary information and/or "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented herein. TCW assumes no duty to update any forward-looking statements or opinions in this document. This material comprises the assets under management of The TCW Group, Inc. and its subsidiaries, including TCW Investment Management Company LLC, TCW Asset Management Company LLC, and Metropolitan West Asset Management, LLC. Any opinions expressed herein are current only as of the time made and are subject to change without notice. The investment processes described herein are illustrative only and are subject to change. Past performance is no guarantee of future results.

The investments referred to in this brochure may not be suitable for all investors. It is categorically offered at the request of the recipient who is categorised as a Professional Client or an Eligible Counterparty under applicable law. This brochure is directed at persons who are classified as Professional clients and Eligible Counterparties only.

The distribution of this brochure in certain jurisdictions may require that it is translated into the official language of those countries. Should any inconsistency arise between the official language version and the English version, the official language version shall prevail for the relevant investors.

Currency movements may affect the value of investments. Investors should also be aware that the value and income of any securities or investments and the price of shares and the income derived from them, which are mentioned in this brochure, may fall as well as rise. Past performance is not a guarantee to future performance.

Under no circumstances should information or any part of it be copied, reproduced or redistributed.

TCW Europe Limited is authorised and regulated by the Financial Conduct Authority:

25 Hanover Square | London W1S 1JF, UK

TCW