



NORTHERN TRUST

MARKET
OUTLOOK

STRATEGIC THEMES & TACTICAL OPPORTUNITIES

Jim McDonald

Chief Investment Strategist

SESSION GOALS



**Strategic themes &
long-term returns**

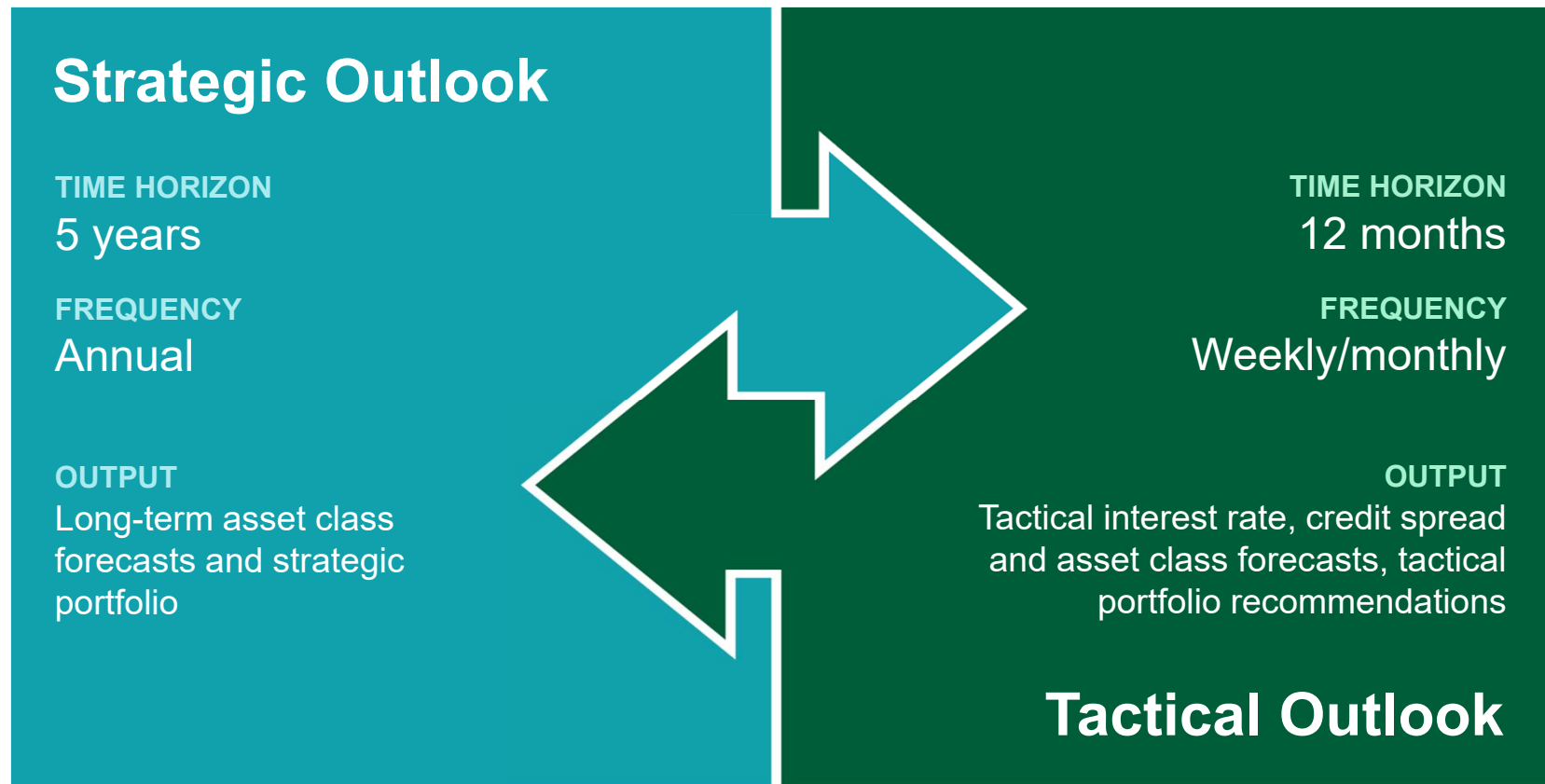


**Tactical opportunities
& positioning**



**Risk cases & lessons
learned**

A Modern Approach to Implementing a Strategic Outlook



What to Watch in the Years Ahead

Mild Growth
Myopia

Stuckflation

Pass/Fail
Monetarism

Technology
Slowzone

Global
(Re)Positioning
System

Executive
Power Drive

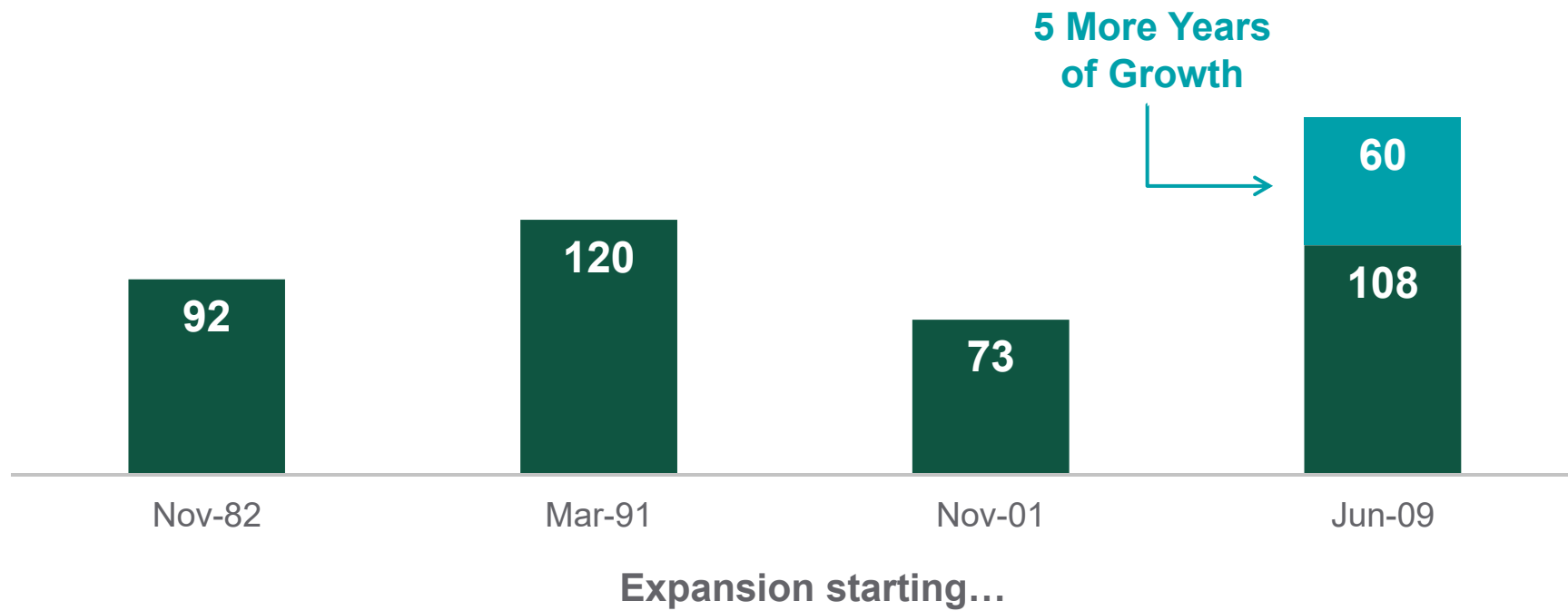
MILD GROWTH MYOPIA



**5-Year
Outlook**

Record Length...

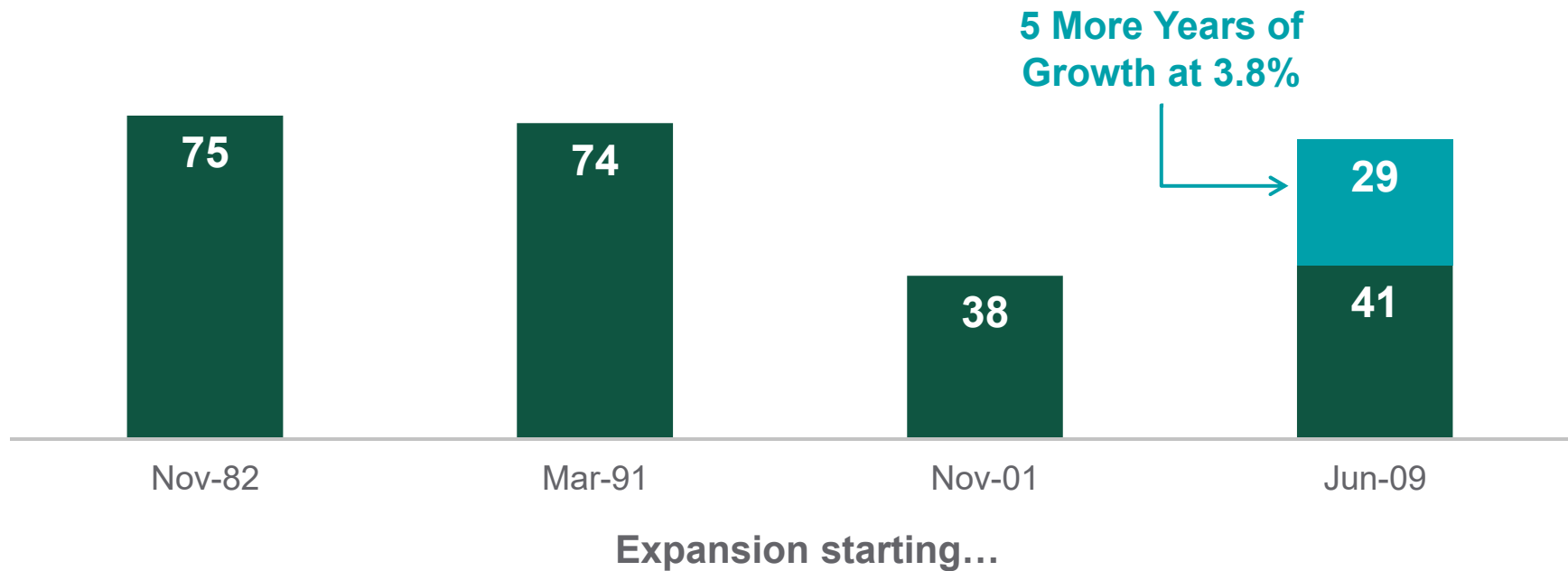
EXPANSIONS BY LENGTH (MONTHS)



Source: NT Global Asset Allocation, Bloomberg.

...But Not Record Magnitude

TOTAL OUTPUT (CUMULATIVE GROWTH %)



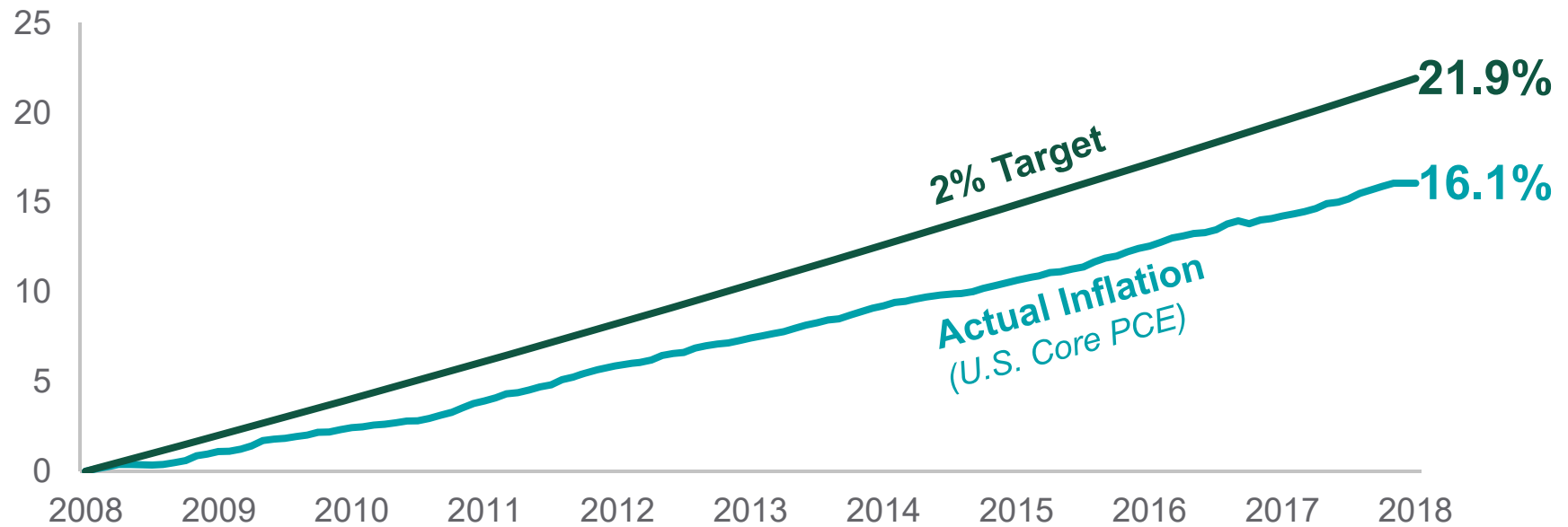
Source: NT Global Asset Allocation, Bloomberg.

STUCKFLATION

**5-Year
Outlook**

Inflation Falling Behind

CUMULATIVE PRICE INCREASES (%)



Source: NT Global Asset Allocation, Bloomberg. Data from 6/30/2008 to 6/30/2018.

Underachievers

CUMULATIVE INFLATION SHORTFALLS VS. TARGET OVER PAST DECADE



Source: NT Global Asset Allocation, Bloomberg. Data from 6/30/2008 to 6/30/2018. Green bars represents the core inflation measures.

PASS/FAIL MONETARISM



**5-Year
Outlook**

Lower Lows, Lower Highs

FED FUNDS RATE (%)



Source: NT Global Asset Allocation, Bloomberg. Data from 12/31/1989 to 4/30/2019.

Less Room for Maneuvering

FED FUNDS RATE REDUCTION IN PAST CYCLES (%)



Source: NT Global Asset Allocation, Bloomberg. Current ability to cut rates as of 4/30/2019.

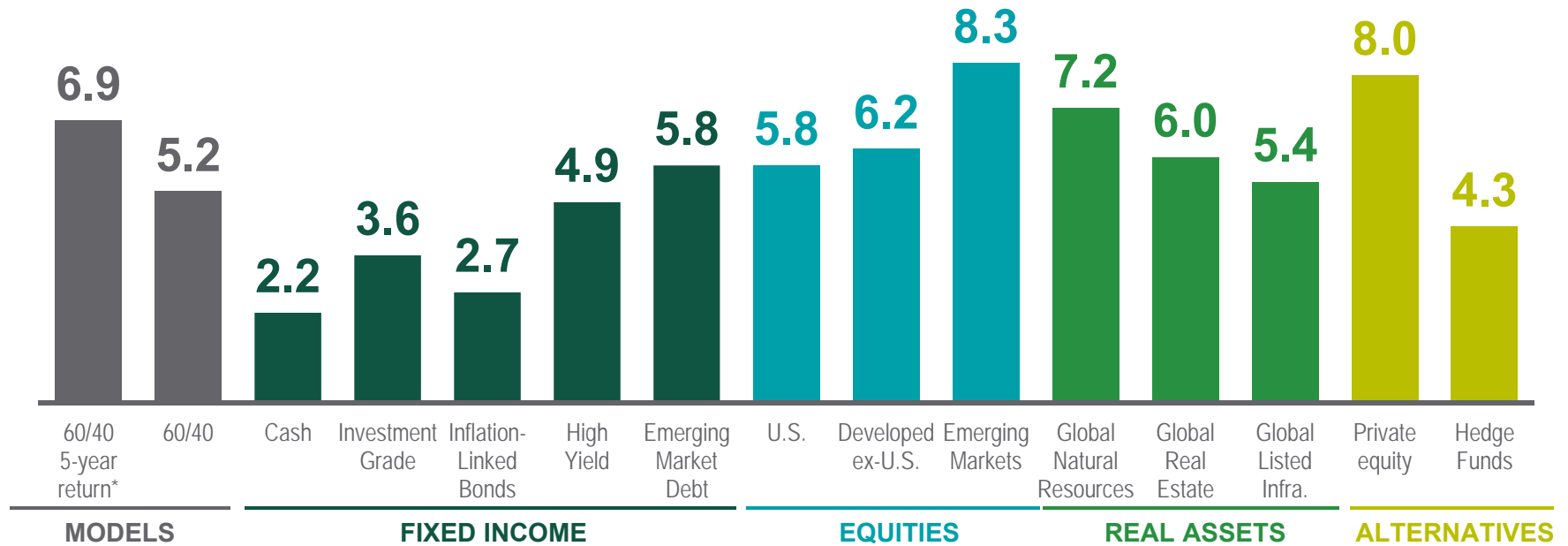
ASSET CLASS FORECASTS



**5-Year
Outlook**

Current Forecasts

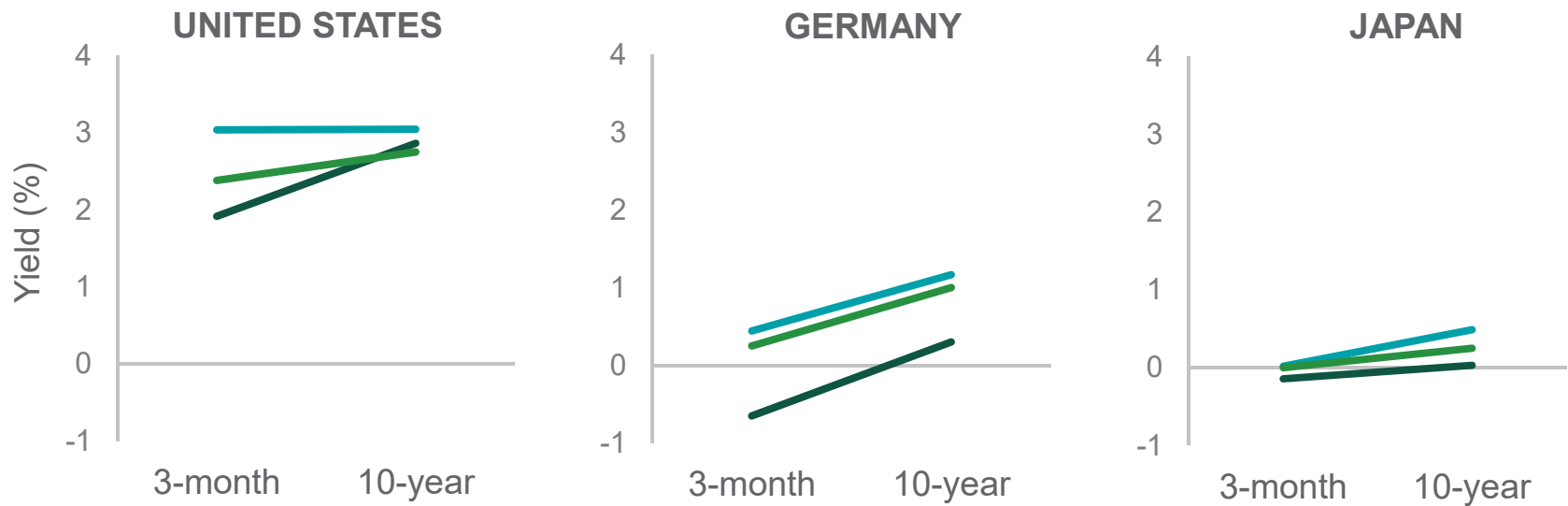
2018 FIVE-YEAR ASSET CLASS TOTAL RETURN FORECASTS (%)



Source: Northern Trust. Pre-tax strategic, growth and income investor portfolio model. All figures in percentage terms. *5-year return from 6/30/2013 – 6/30/2018. Forward-looking statements could differ from actual results. For illustrative purposes only. CMA model expected returns do not show actual performance.

Fixed Income: Low Rates, Flat Curves

— Current
 — 5-Year Forward
 — 2018 NT CMA Forecast

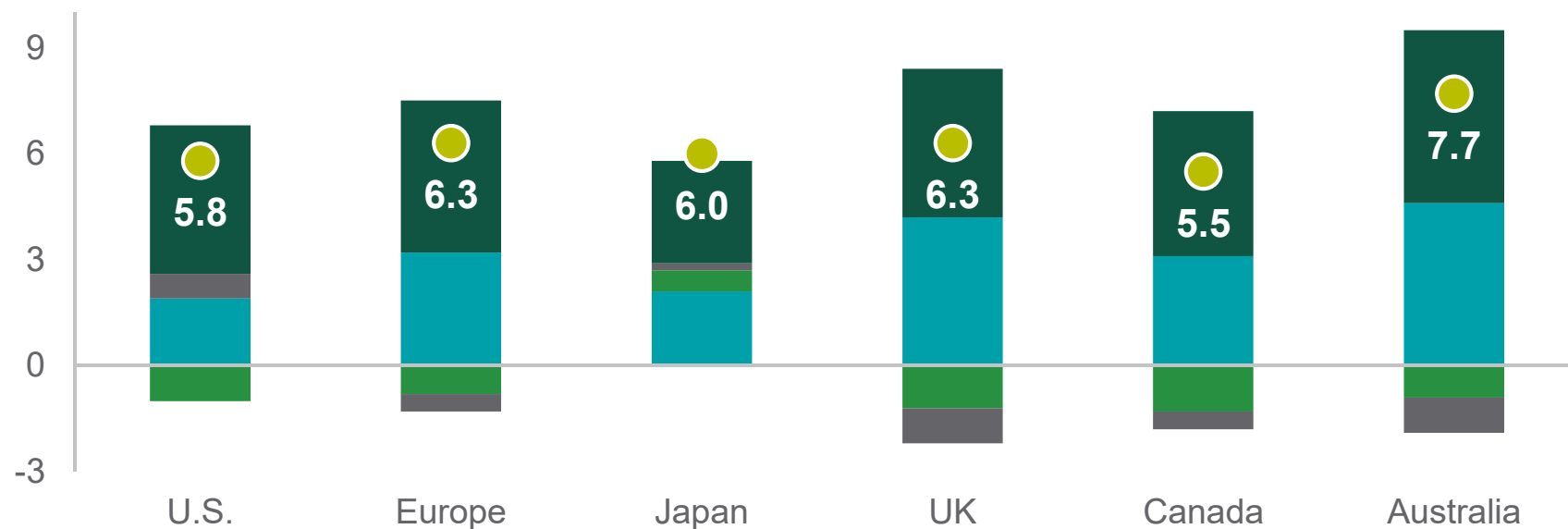


Source: Northern Trust Global Asset Allocation, Bloomberg. Current and five-year forward data as of 6/30/2018. Forecasts of financial market trends that are based on current market conditions constitute CMAWG judgment and are subject to change without notice.

Equities: Building Blocks to Total Returns

EQUITY RETURN FORECAST COMPONENT BY COUNTRY (%)

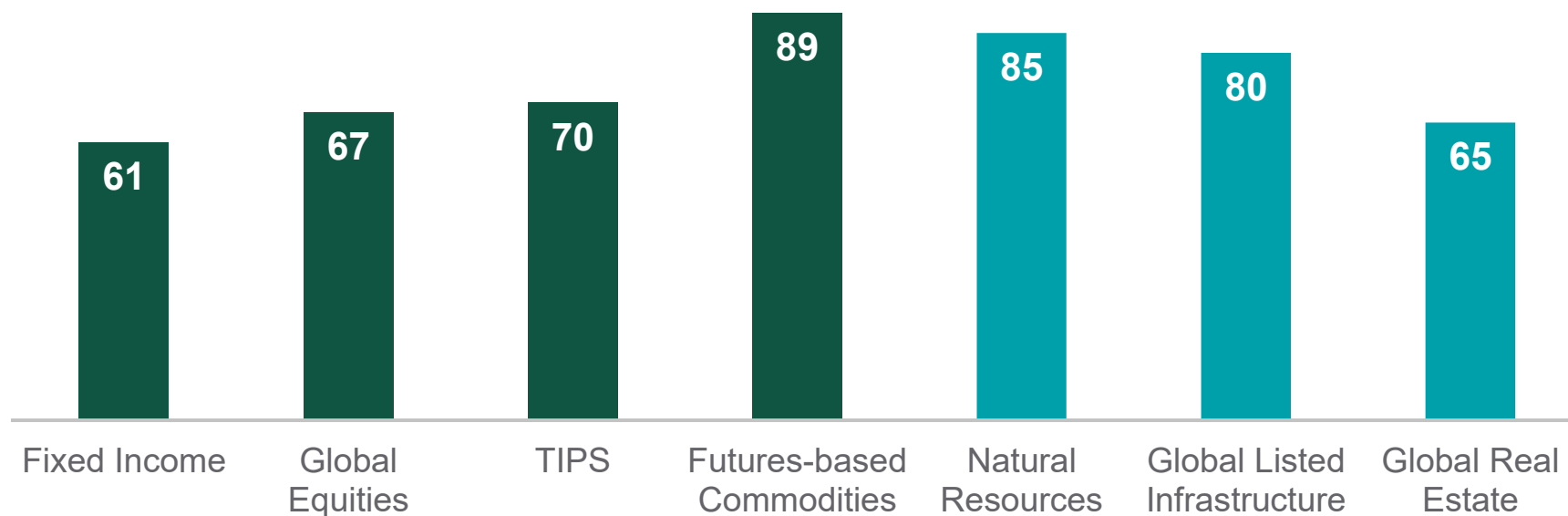
■ Dividend ■ Valuations ■ Profit translation ■ Revenue ● Total return



Source: Northern Trust Global Asset Allocation. Forecasts of financial market trends that are based on current market conditions constitute CMAWG judgment and are subject to change without notice.

Real Assets: Which Assets Beat Inflation – and How Often?

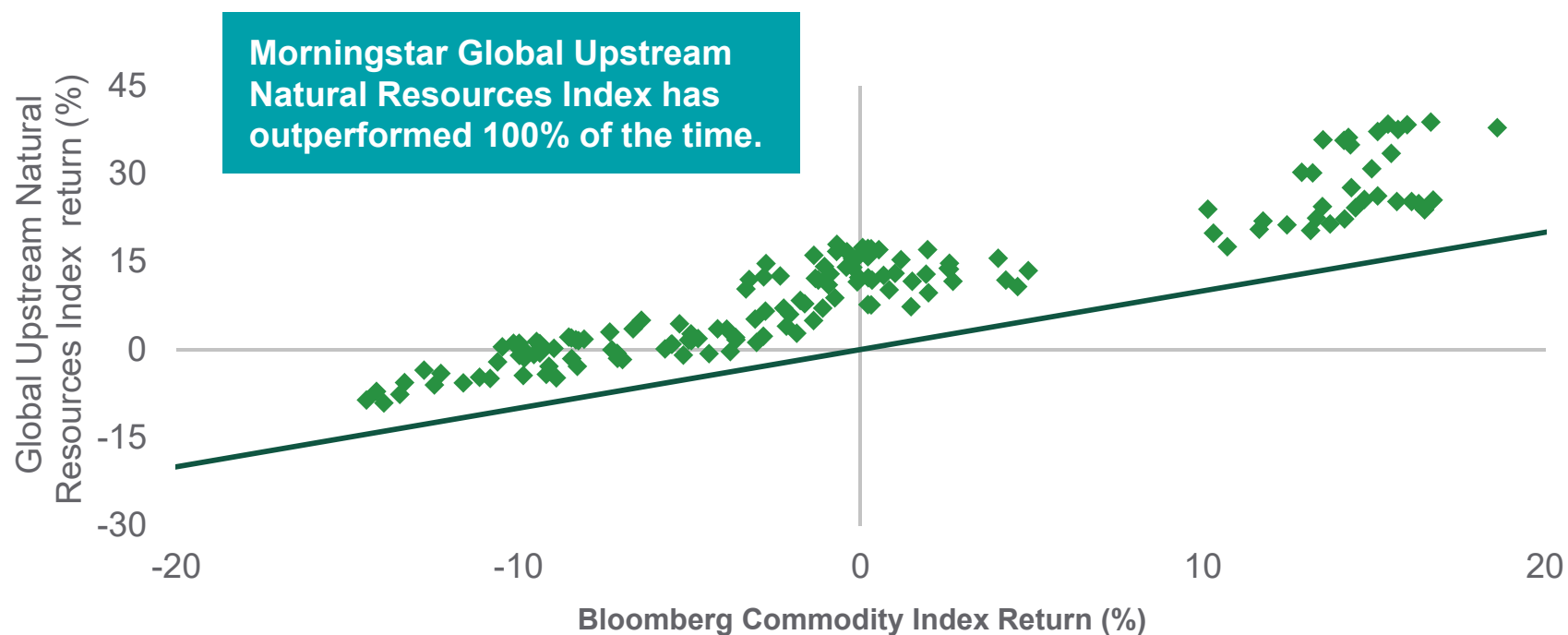
% OF TIME ASSET CLASS COVERS INFLATION DURING HIGH INFLATION PERIODS



Source: Northern Trust Global Asset Allocation, Bloomberg. Data from 12/31/2001 to 3/31/2018. High inflation (above 2.98%) is the 75th percentile of data during the data range. Normal inflation is below 2.98.

Real Assets: Natural Resource Equities Beat Futures Soundly

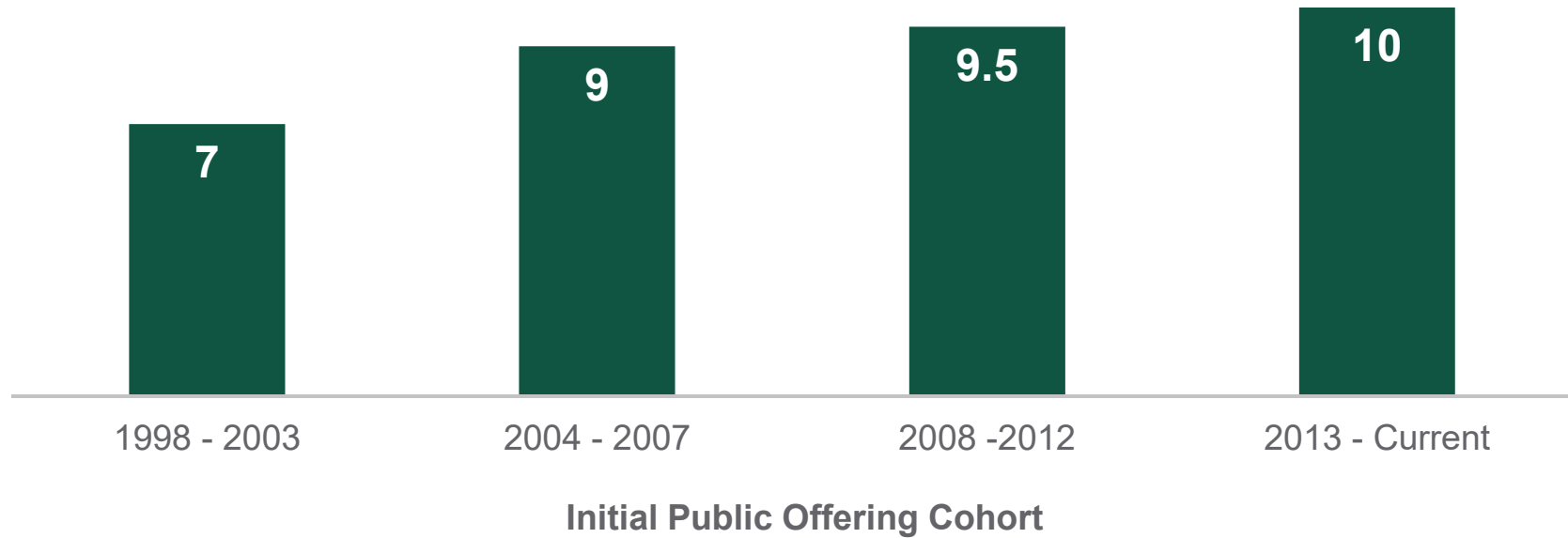
5-YEAR ROLLING RETURNS



Source: NT Global Asset allocation, Bloomberg. Data from 12/31/2000 to 6/30/2018. Past performance does not guarantee future results.

Alternatives: More Private Opportunities as IPOs are Delayed

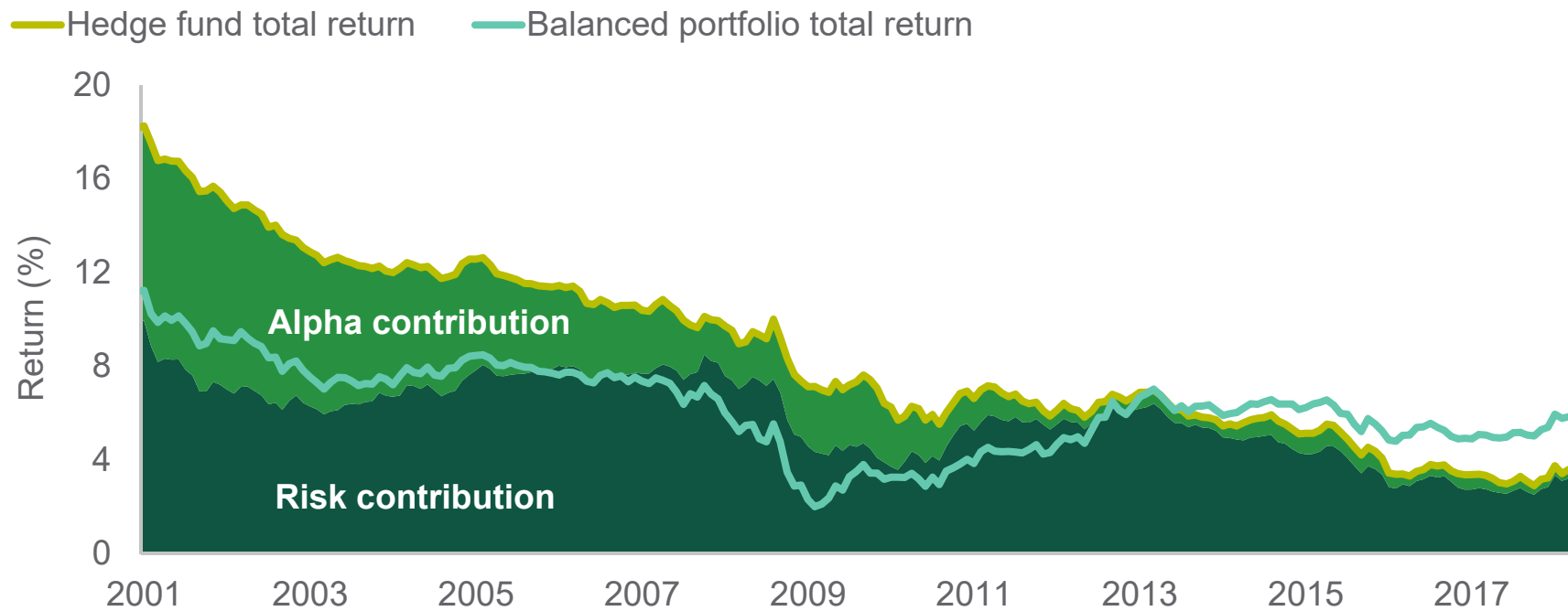
MEDIAN YEARS COMPANIES ARE STAYING PRIVATE



Source: NT Global Asset Allocation, Venture Capital Journal. Data as of June 2018.

Alternatives: Manager Selectivity Is the Key

HEDGE FUND VS. BALANCED PORTFOLIO – 10 YEAR ROLLING RETURNS



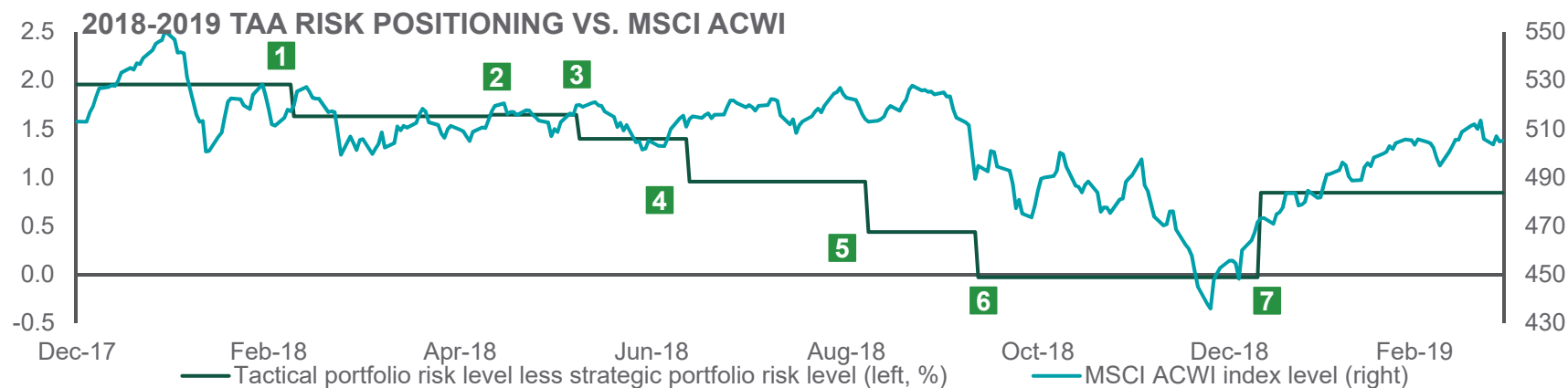
Source: NT Global Asset Allocation, NT Portfolio Construction Desk, Bloomberg. Data from 12/31/2000 to 3/31/2018. Balanced portfolio is 50% MSCI ACWI / 50% Bloomberg Barclays Global Aggregate Index. Past performance does not guarantee future results.

TACTICAL POSITIONING



**1-Year
Outlook**

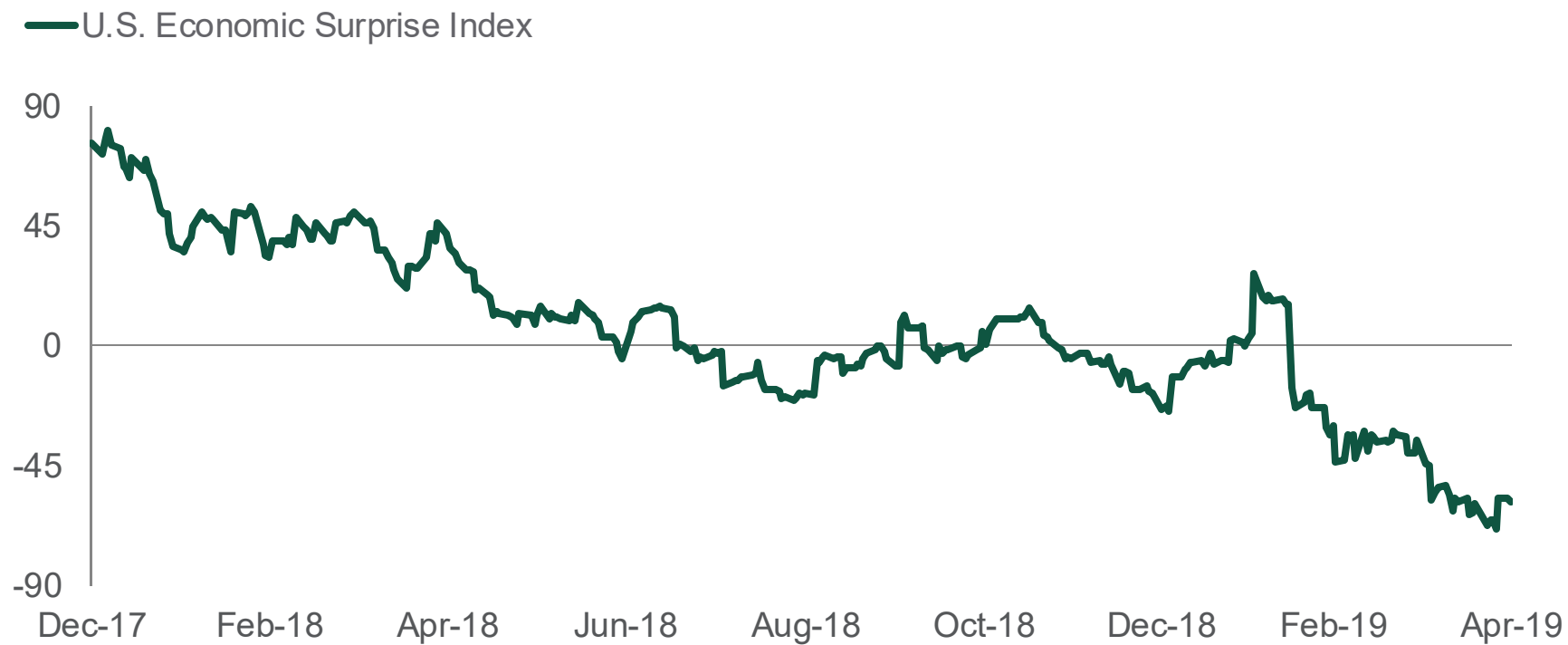
De-Risking in 2018, Re-Risking in 2019



1	3/8/2018	Return	3	6/7/2018	Return	5	9/7/2018	Return	7	1/10/2019	Return
	+2% IG Fixed Income	5.3%		+2% High Yield	4.5%		+2% IG Fixed Income	4.5%		+2% US Equity	8.9%
	-2% US Equity	4.6%		+2% US Equity	2.3%		+1% High Yield	2.9%		+2% EM Equity	4.9%
				-4% Dev. ex-US Equity	-6.2%		-3% EM Equity	2.7%		+2% Global RE	10.5%
										-6% IG Fixed Income	3.0%
2	5/10/2018	Return	4	7/12/2018	Return	6	10/12/2018	Return			
	+2% IG Fixed Income	5.5%		+2% IG Fixed Income	4.5%		+3% IG Fixed Income	5.3%			
	-2% Cash	1.9%		+2% High Yield	4.2%		-2% US Equity	2.8%			
				-4% TIPS	1.5%		-1% EM Equity	7.4%			

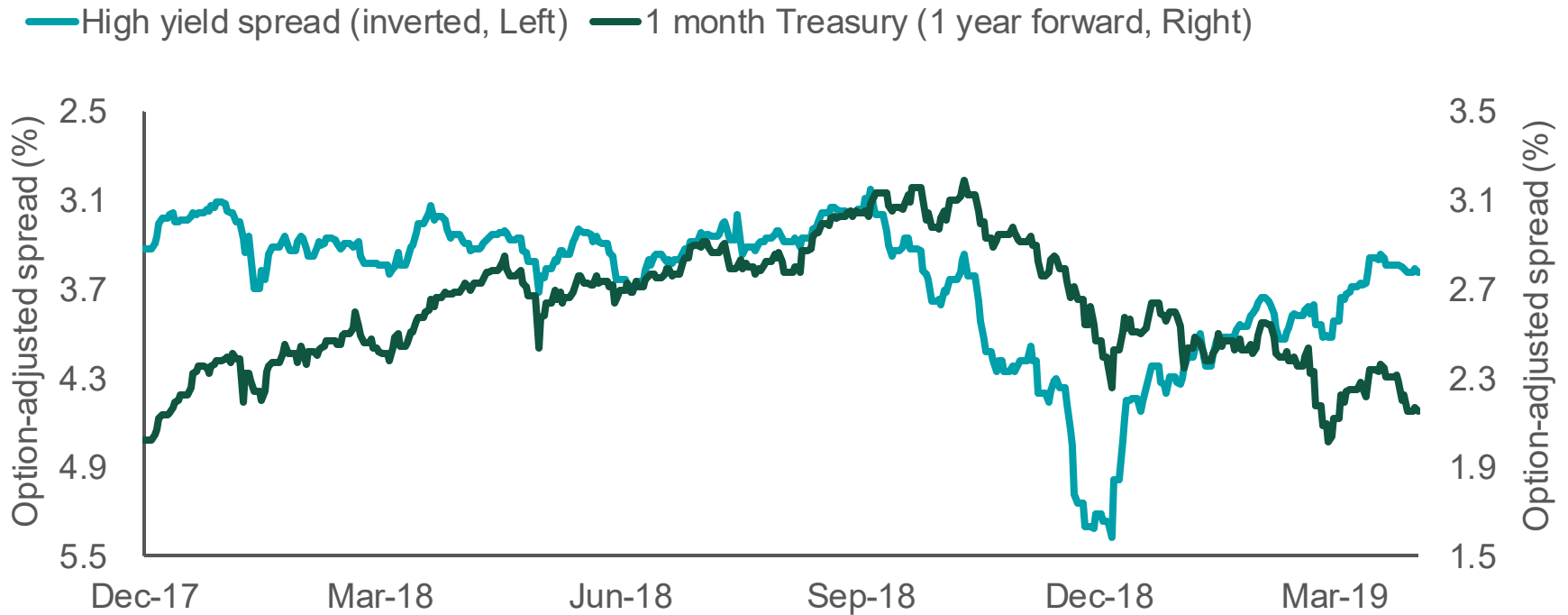
Source: NT Global Asset Allocation, Bloomberg. Data as of 3/28/2019. The tactical and strategic portfolios are model portfolios based on Investment Policy Committee allocation decisions and asset class index proxies, which cannot be directly invested in and may change over time. The difference in risk level series is represented by the standard deviation of the tactical portfolio less the standard deviation of the strategic portfolio.

Growth Expectations Shifted from Boom to Gloom



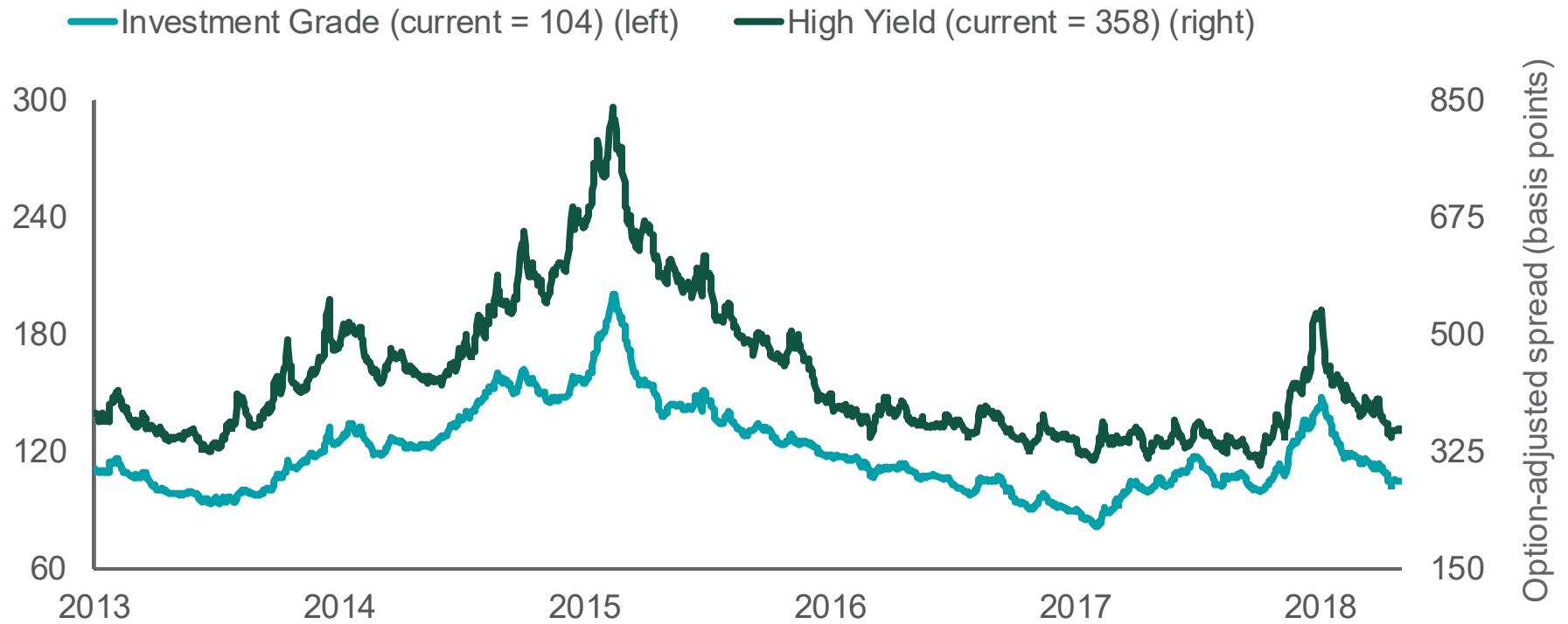
Source: NT Global Asset Allocation, Bloomberg, Citi. Data from 12/29/2017 to 4/30/2019.

Risk Rose and the Fed Backed Off



Source: Northern Trust Investment Strategy, Bloomberg. Data from 12/29/2017 to 4/30/2019.

Credit Sell-off Overdone



Source: Northern Trust Investment Strategy, Bloomberg, Barclays. Daily data through 4/30/2019. Averages of data over period charted.

Equities: Stocks Have Become Less Expensive



Source: Northern Trust Investment Strategy, MSCI. Monthly data through 4/30/2019. Indices are MSCI US, MSCI World ex-US, and MSCI Emerging Markets; U.S. and World ex-U.S. data begin in 1970, EM data begins in 1995. Normal Range: +/- 1 standard deviation from the median. LT: long-term.

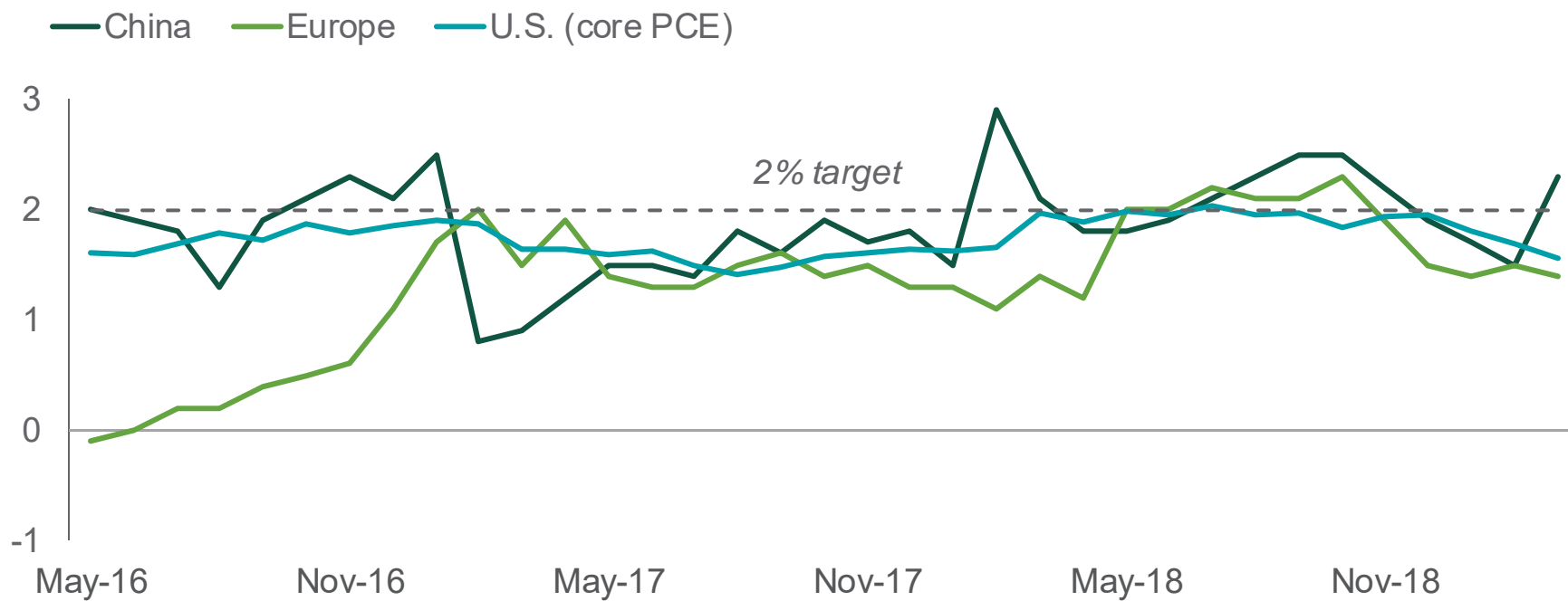
High Yield Bounces Back Quickly

Start of Drawdown	Months to Max Drawdown	Return to Drawdown (%)	Months to Recover	Return to Recovery (%)
March - 1987	7	-6.9	3	8.9
February - 1989	20	-13.8	5	25.2
July - 1998	3	-7.0	6	8.3
April - 1999	19	-8.9	3	11.0
February - 2001	17	-12.0	8	16.6
May - 2007	18	-33.3	9	51.8
July - 2011	2	-7.1	4	9.7
May - 2015	8	-9.7	5	10.8

Source: Northern Trust Global Asset Allocation, Bloomberg.
Past performance does not guarantee future results.

Inflation Struggling to Hit Target

YEAR-OVER-YEAR INFLATION (%)

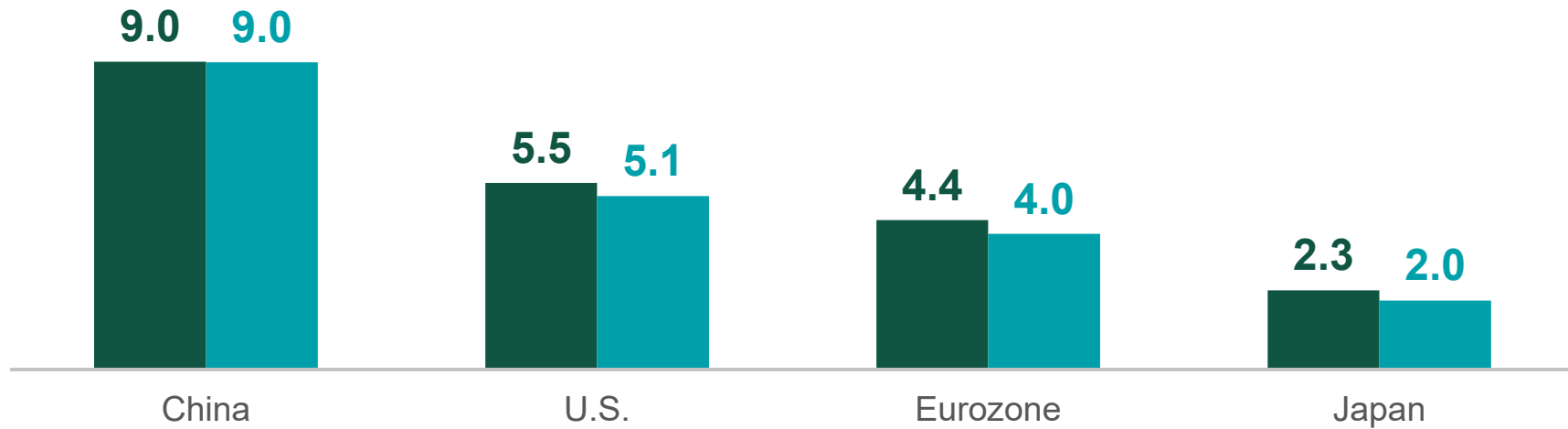


Source: NT Global Asset Allocation, Bloomberg. Headline CPI used unless otherwise noted. U.S. data as of Mar-2019. China: Mar-2019. Europe: Mar-2019.

Fixed Income: Slowing Growth Should Cap Interest Rate Upside

NOMINAL GDP (%)

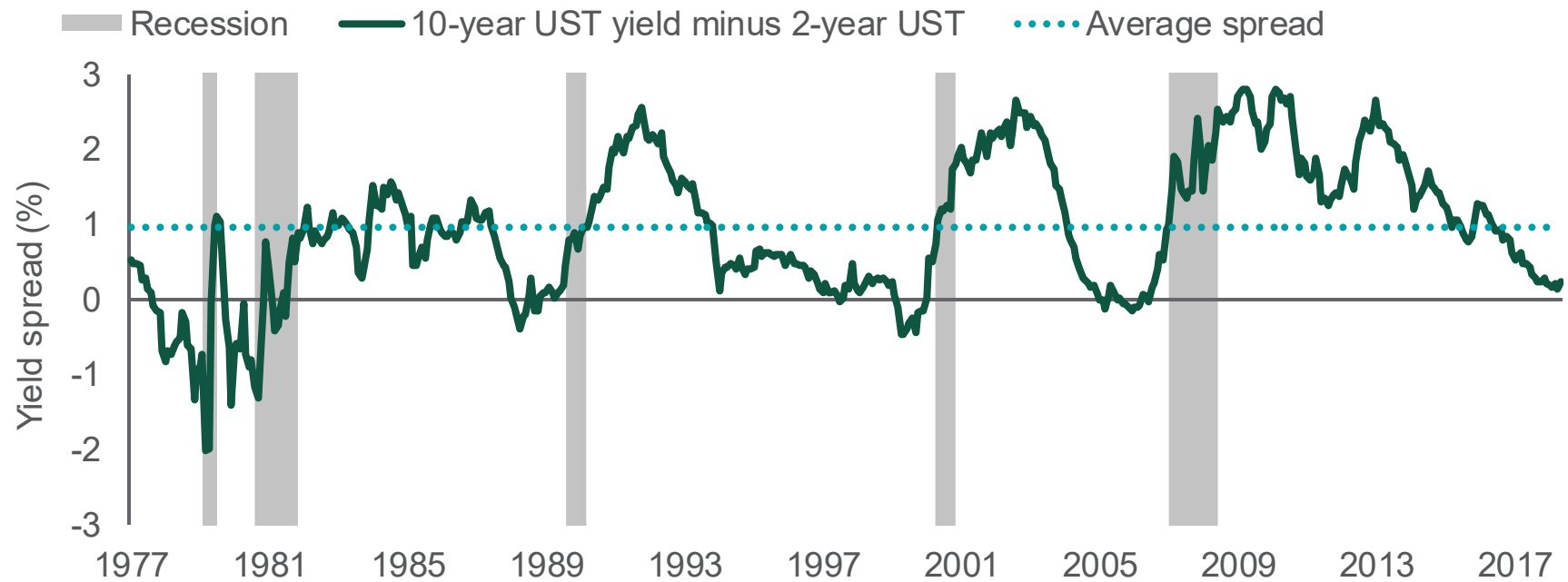
■ 2018 ■ 2019



Source: NT Global Asset Allocation, IMF April Economic Outlook 2018.

Inversions Have Preceded The Last 5 Recessions

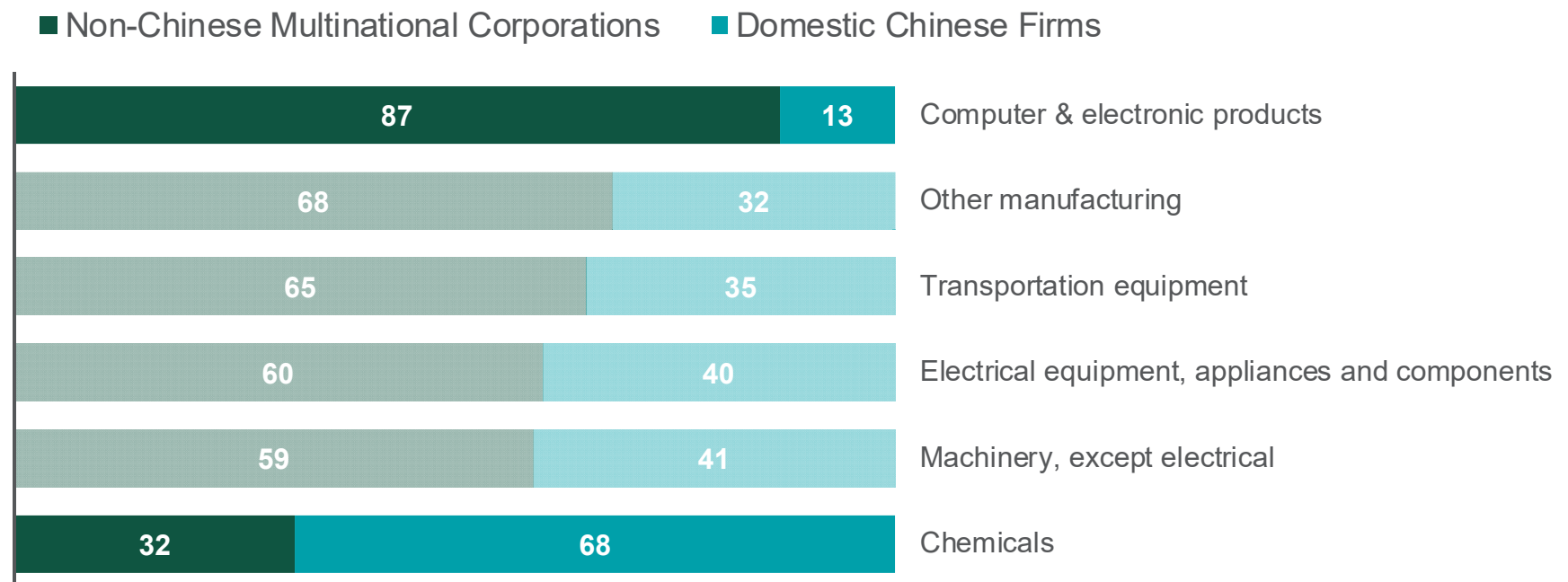
YIELD CURVE SPREAD AND ECONOMIC RECESSIONS



Source: Northern Trust Investment Strategy, Bloomberg, Federal Reserve Bank of St. Louis. Monthly data: 12/31/1977 through 4/30/2019.

Trade War: Hitting The Wrong Target

% OF TOTAL CHINESE EXPORTS (BY INDUSTRY) THAT COMES FROM...



Source: NT Global Asset Allocation, Peterson Institute for International Economics. Calculations as of 6/18/2018.

Tactical Positioning: Taking Measured Risk

		ASSET CLASS	STRATEGIC (%)	OVER/UNDERWEIGHT (%)	TACTICAL (%)
RISK CONTROL	Fixed Income	Cash	2	-2	0
		U.S. Investment Grade	27	-5	22
		Inflation-Linked	4	-4	0
		High Yield	2		8
RISK ASSETS	Equities	U.S. Equity	14		2
		Dev Ex-U.S. Equity	9		0
		EM Equity	5	-1	4
	Real Assets	Global Natural Resources	3		0
		Global Real Estate	1		2
		Global Listed Infrastructure	1		0
	Alts	Hedge Funds*	20		0
		Private Equity*	12		0

Source: Northern Trust Investment Strategy. Allocations above reflect Northern Trust's Perpetual Capital Model (Moderate risk profile). Tactical recommendations (in the form of over/under/equal weights) are displayed in the bar chart. Allocations as of 5/9/2019. SAA = Strategic Asset Allocation. TAA = Tactical Asset Allocation.*Note: Due to illiquid nature of Alternative asset classes, Northern Trust does not make tactical recommendations.

CURRENT RISK CASES



**5-Year
Outlook**

Key Risk Cases to Watch



Inflation

Subdued inflation has been the key driver of favorable risk asset returns over the last few years; an unexpected jump in cyclical inflation could reduce central bank accommodation, harming the risk asset outlook.



Political Miscalculation

Any economic stumbles will likely be man-made. Political battles (U.S.-China and Brexit) are at risk of going past brinkmanship into something harmful. U.S.-China risks have increased of late.

**FIVE-YEAR
REPORT CARD**

**Asset
Class
Forecasts**

Report Card: Asset Class Level

ANNUALIZED FIVE YEAR RETURNS (%)

■ Actual ■ 2013 Prediction



Source: Northern Trust Investment Strategy Bloomberg, NT Portfolio Construction Desk, Bloomberg. Actual data from 6/30/2013 to 6/30/2018. Past performance is no guarantee of future results. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Indexes are gross of fees.

Report Card: The Portfolio Perspective

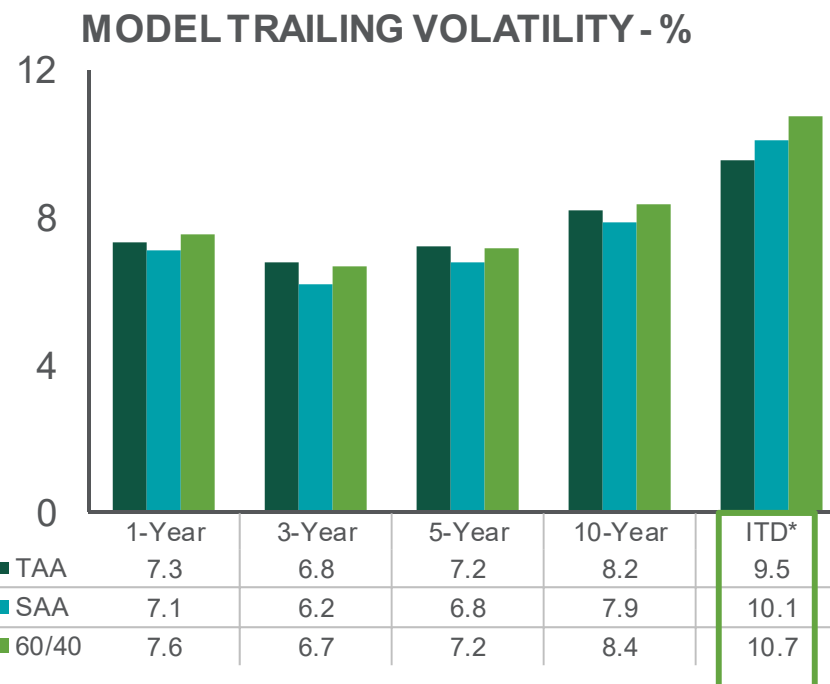
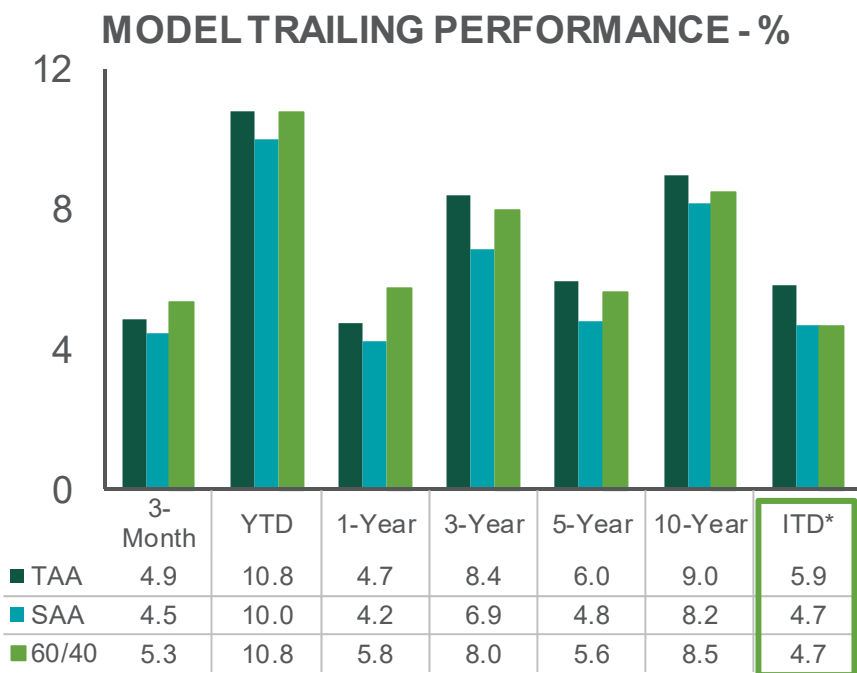
ANNUALIZED FIVE YEAR RETURNS (%)

■ Actual ■ 2013 Prediction



Source: Northern Trust Investment Strategy Bloomberg, NT Portfolio Construction Desk, Bloomberg. Actual data from 6/30/2013 to 6/30/2018. Past performance is no guarantee of future results. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Indexes are gross of fees.

A Focus On Both Return and Risk



Source: Northern Trust Investment Strategy, Bloomberg. Performance data through 4/30/2019. Volatility data through 4/30/2019. *Inception-to-date (12/31/2007). TAA and SAA model portfolio asset class hypothetical expected returns are developed annually by Northern Trust's Capital Market Assumptions Working Group. SAA and TAA are hypothetical model portfolios based on Investment Policy Committee asset allocation decisions and asset class index proxies, which cannot be directly invested in and may change over time; return figures are gross of fees and exclude any potential transaction costs or expenses. Hypothetical performance results do not reflect actual trading and have certain inherent limitations. The 60/40 portfolio comprises the MSCI ACWI total return and Bloomberg Barclays U.S. Aggregate indices, respectively. Trailing 3Yr, 5Yr, 10Yr and since inception returns annualized. All volatility figures are annualized and use weekly data.

Biography



James D. McDonald
Chief Investment Strategist

Jim McDonald is an Executive Vice President and the Chief Investment Strategist for Northern Trust. He is the co-portfolio manager of the Northern Global Asset Allocation Fund and he chairs the Northern Trust Tactical Asset Allocation Committee. In addition, he is a member of the Investment Policy Committee and is a trustee of the 50 South Capital Alpha Strategies and Equity Long/Short Strategies Hedge Funds.

Prior to joining Northern Trust in 2001 as the Director of Equity Research, Jim was Director of Equity Research at ABN AMRO in New York and Chicago (1994-2000) and Equity Research Analyst at ABN AMRO following the Environmental Services Industry (1990-1994). He started his professional career in 1981 with Arthur Andersen & Co. in Detroit.

McDonald received a BBA from the University of Michigan and an MBA degree with high distinction from Babson College. He is a member of the CFA® Society of Chicago and a registered CPA in the State of Michigan.

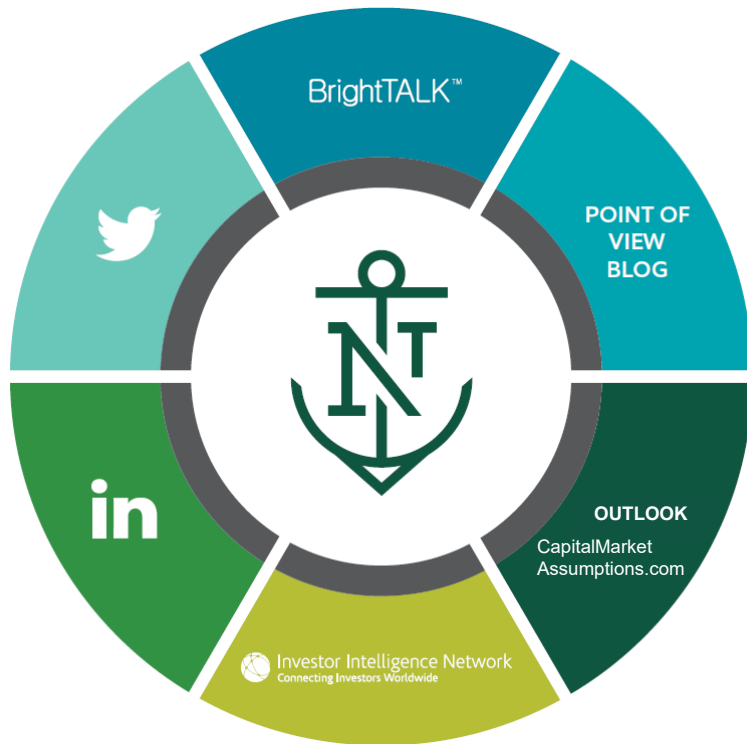
QUESTIONS



FOR MORE INFORMATION

[CapitalMarketAssumptions.com](https://www.CapitalMarketAssumptions.com)

Accessing our Global Insights



FIVE-YEAR OUTLOOK

QUANTITATIVE RESEARCH

Articles, Webinars, Videos

The Value Factor Isn't Dead, Just Misapplied

Contrary to popular perception, the value factor has outperformed over the last decade.

By Head of Quantitative Strategies Michael Hottel, Ph.D.; Equity Strategist Ben Gornick, CFA, and Senior Equity Investment Strategist Andrew Kuehl, CFA

Investors are losing patience with value strategies. They think the value factor has had its moment, underperforming since 2008. We disagree. But there is a difference between the value factor and value strategies. The value factor underperforms precisely because of its long-term track record. In contrast, many value strategies suffer from inefficient diversification.

MARKETSCOPE

Meaningful Insights in Less Than 3 minutes

BLOG

Timely market perspectives

Important Information

The information contained herein is intended for use with current or prospective clients of Northern Trust Investments, Inc. The information is not intended for distribution or use by any person in any jurisdiction where such distribution would be contrary to local law or regulation. Northern Trust and its affiliates may have positions in and may effect transactions in the markets, contracts and related investments different than described in this information. This information is obtained from sources believed to be reliable, and its accuracy and completeness are not guaranteed. Information does not constitute a recommendation of any investment strategy, is not intended as investment advice and does not take into account all the circumstances of each investor. Opinions and forecasts discussed are those of the author, do not necessarily reflect the views of Northern Trust and are subject to change without notice.

This report is provided for informational purposes only and is not intended to be, and should not be construed as, an offer, solicitation or recommendation with respect to any transaction and should not be treated as legal advice, investment advice or tax advice. Recipients should not rely upon this information as a substitute for obtaining specific legal or tax advice from their own professional legal or tax advisors. References to specific securities and their issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities. Indices and trademarks are the property of their respective owners. Information is subject to change based on market or other conditions.

All securities investing and trading activities risk the loss of capital. Each portfolio is subject to substantial risks including market risks, strategy risks, adviser risk and risks with respect to its investment in other structures. There can be no assurance that any portfolio investment objectives will be achieved, or that any investment will achieve profits or avoid incurring substantial losses. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Risk controls and models do not promise any level of performance or guarantee against loss of principal. Any discussion of risk management is intended to describe Northern Trust's efforts to monitor and manage risk but does not imply low risk.

Past performance is no guarantee of future results. Performance returns and the principal value of an investment will fluctuate. Performance returns contained herein are subject to revision by Northern Trust. Comparative indices shown are provided as an indication of the performance of a particular segment of the capital markets and/or alternative strategies in general. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Net performance returns are reduced by investment management fees and other expenses relating to the management of the account. Gross performance returns contained herein include reinvestment of dividends and other earnings, transaction costs, and all fees and expenses other than investment management fees, unless indicated otherwise. For additional information on fees, please refer to Part 2a of the Form ADV or consult a Northern Trust representative.

Important Information

Forward-looking statements and assumptions are Northern Trust's current estimates or expectations of future events or future results based upon proprietary research and should not be construed as an estimate or promise of results that a portfolio may achieve. Actual results could differ materially from the results indicated by this information.

Capital Market Assumption (CMA) model expected returns do not show actual performance. CMA model expected returns are based on IPC Forecasted Returns and reflect Northern Trust's Investment Policy Committee's (IPC) forward-looking annual capital market assumptions. The Capital Market Assumptions Working Group (CMAWG), a subset of IPC members, publishes its assumptions as a white paper report. Forecasted returns are for average annual returns (geometric basis). Five year forecasts are developed annually; most recent forecasts released [7/13/2018]. The model cannot account for the impact that economic, market, and other factors may have on the implementation and ongoing management of an actual investment strategy. Model outcomes do not reflect actual trading, liquidity constraints, fees, expenses, taxes and other factors that could impact the future returns. The model assumptions are passive only. References to expected returns are not promises or even estimates of actual returns an investor may achieve. The assumptions, views, techniques and estimates set out are provided for illustrative purposes only. Forecasts of financial market trends that are based on current market conditions constitute CMAWG judgment and are subject to change without notice. "Expected" or "alpha" return estimates are subject to uncertainty and error. The ability to achieve similar outcomes is subject to risk factors over which Northern Trust may have no or limited control.

If presented, hypothetical portfolio information provided does not represent results of an actual investment portfolio but reflects representative historical performance of the strategies, funds or accounts listed herein, which were selected with the benefit of hindsight. Hypothetical performance results do not reflect actual trading. No representation is being made that any portfolio will achieve a performance record similar to that shown. A hypothetical investment does not necessarily take into account the fees, risks, economic or market factors/conditions an investor might experience in actual trading. Hypothetical results may have under- or over- compensation for the impact, if any, of certain market factors such as lack of liquidity, economic or market factors/conditions. The investment returns of other clients may differ materially from the portfolio portrayed. There are numerous other factors related to the markets in general or to the implementation of any specific program that cannot be fully accounted for in the preparation of hypothetical performance results. The information is confidential and may not be duplicated in any form or disseminated without the prior consent of Northern Trust.

Important Information

This information is intended for purposes of Northern Trust marketing of itself as a provider of the products and services described herein and not to provide any investment recommendations or advice within the meaning of the Department of Labor's Final Fiduciary Rule (29 CFR §2510.3-21). Northern Trust is not undertaking to provide impartial investment advice or give advice in a fiduciary capacity to the recipient of these materials. To the extent that the recipient of these materials has authority to act on behalf of a benefit plan that is subject to Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), Northern Trust provides information with the understanding that the recipient: (1) is a fiduciary under ERISA with respect to any plan transaction(s) contemplated herein and is responsible for exercising independent judgment in evaluating any such transaction(s); (2) is independent of Northern Trust; (3) is a bank or similarly regulated financial institution, insurance carrier, registered investment adviser, registered broker-dealer, or a plan fiduciary that holds, or has under management or control, total assets of at least \$50 million; (4) is capable of evaluating investment risks independently, both in general and with regard to particular transactions and investment strategies. Please advise Northern Trust immediately if any of the foregoing understandings is incorrect. Further, Northern Trust and its affiliates receive fees and other compensation in connection with the products and services described herein as well as for custody, fund administration, transfer agent, investment operations outsourcing and other services rendered to various proprietary and third party investment products and firms that may be the subject of or become associated with the services described herein.

Northern Trust Asset Management is composed of Northern Trust Investments, Inc. Northern Trust Global Investments Limited, Northern Trust Global Investments Japan, K.K, NT Global Advisors Inc., 50 South Capital Advisors, LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

© 2018 Northern Trust Corporation. Head Office: 50 South La Salle Street, Chicago, Illinois 60603 U.S.A.