

The GIC Weekly



LISA SHALETT

*Head of Wealth Management
Investment Resources
Head of Investment & Portfolio Strategies
Morgan Stanley Wealth Management*

*Lisa.Shalett@morganstanley.com
+1 212 296-0335*

Upcoming Catalysts

Dec. 11 Japan Producer Price Index
Dec. 12 NFIB Small Business Optimism Index
Dec. 12 US Producer Price Index
Dec. 13 US Consumer Price Index
Dec. 13 FOMC meeting
Dec. 13 Euro Zone industrial production
Dec. 14 China industrial production
Dec. 14 US retail sales
Dec. 14 US import/export prices
Dec. 14 European Central Bank rate decision
Dec. 15 Empire State Manufacturing Survey
Dec. 15 US industrial production

What We Are Talking About

- **Tech Wreck or Slow Mo’?** Recent rotations from the tech sector, the growth style and momentum factors toward financial, value-style and yield/quality stocks are natural outcomes of the market’s embrace of reflation and tax reform, not a precursor of a market top; we expect these trends to persist through at least the first half of 2018; in addition to profit-taking, the tech, growth and momentum stocks remain vulnerable due to their overowned status, relatively weaker earnings growth, high valuations, and sensitivity to rising interest rates and inflation; resolution of tax reform’s details on R&D credits, repatriation and the corporate alternative minimum tax may create a pause in the rotation, but Fed hawkishness will accelerate it. **Consider** neutralizing capitalization and sector biases in portfolios, adding small- and mid-caps, value-style and quality/yield stocks.

Tech Wreck or Slow Mo’?

With 14 more trading days left in 2017, investors are looking to close the books on an excellent year marked by likely double-digit returns in stocks, high single-digit gains in credit and even positive total returns in US Treasuries. To be sure, overall stock valuations do not look extreme in the context of still-low interest rates, benign inflation and a forecast for 10% to 15% corporate earnings growth, which includes the benefits of tax reform. Even so, signs of exuberance are emerging: Crypto-currencies are exploding like tulips, a DaVinci painting recently sold at auction for \$450 million and the percentage of bulls in the Investor Intelligence Poll hit a 17-year high. So it is natural that when the tech-heavy NASDAQ Composite Index swooned last week after hitting an all-time high on Nov. 28, investors are beginning to wonder if tech’s tumble presages a market top.

In our view, the NASDAQ’s pullback is not symptomatic of impending broad-based market trouble, but rather an indication that the dominant regime that has governed markets for the past nine years is undergoing tectonic shifts. To wit, in an environment of low economic growth, low volatility, falling interest rates and low inflation, it is logical that long-duration assets like tech stocks would be attractive. But with reflation and policy



normalization on both fiscal and monetary fronts on the horizon, it makes sense that investors would be taking profits in crowded and increasingly expensive tech companies to purchase stocks that stand to benefit from a pick-up in global economic growth, interest rates and inflation. These include the financial sector, value-style stocks and companies with yield/quality factor exposures.

As we illustrate in the *Chart of the Week* (see page 3), the performance of growth and momentum stocks has begun to fade, while long-struggling stocks with value attributes are picking up. This rotation explains how the NASDAQ could be recoiling as the Dow Jones Industrial Average continues to climb. While we are not yet ready to give up on the tech sector, we do see the trends which underpin the rotation extending well into 2018.

To begin with, tax reform, which now seems to have a near-90% probability of passage within the next 90 days, does not help tech in a relative sense. The reason is that most tech companies already have effective tax rates that are well below the current 35% statutory rate and quite near the proposed new rates of 20% to 23%. While tech may see earnings-per-share (EPS) gains of 4% to 6% at the S&P 500 sector level, the consumer discretionary, consumer staples, telecom and financial sectors are likely to see EPS growth in the 7% to 13% range. Michael Wilson, Morgan Stanley & Co.'s chief US equity strategist, estimates that small- and mid-cap stocks are likely to see 11%-to-13% EPS gains next year.

The pending tax bill poses other concerns for tech. While tech companies are likely to benefit from the one-time repatriation that allows overseas profits to be returned to the US, the currently proposed tax rate is 14%, well above the 8% to 10% that was anticipated. Furthermore, there are concerns that the tech sector will be disproportionately hurt by the loss of the research-and-development tax credits, limitations on interest deductibility and the imposition of a corporate alternative minimum tax. A final note on policy is that while deregulatory winds seem to be blowing favorably for areas like financials, the Trump administration has shown some stridence toward antitrust concerns, which has already raised questions for proposed media mergers and potential e-commerce combinations.

A second vulnerability for tech stocks is their sensitivity to rising GDP and interest rates. Like 30-year bonds, tech stocks are long-duration assets, which means that the value of future

cash flows is highly dependent on the interest rate used to discount those flows. Unlike this year, when the cumulative 100 basis point increase in the federal funds rate—another 25-basis-point increase is expected this week—was offset by improving financial conditions, next year we think both real rates and inflation expectations will move up as policy normalization gains momentum globally and the global economic cycle picks up steam. A catalyst for repricing will likely be market surprises as investors are currently discounting only two 25-basis-point hikes in 2018. That's half the MS & Co. rate-hike forecast, which is also in line with Federal Reserve guidance. Our view of a faster-than-expected pace of rate hikes is based on strength in metrics such as the Baltic Dry index, orders-to-inventory ratios within the PMI and regional indexes of leading economic indicators, all of which point to global GDP acceleration.

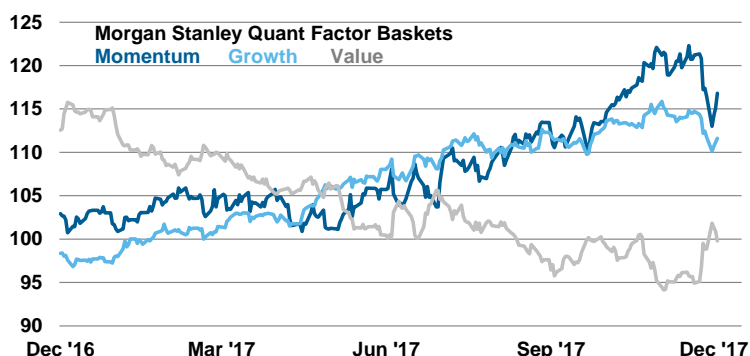
Finally, sentiment and positioning are also headwinds for tech. We often talk about these factors as contrarian indicators in that sectors that are cheap and underowned or expensive and overowned often benefit from or fall victim to, mean reversion. After this year's near 50% gains on top of nearly nine years of market leadership, the tech sector remains "crowded." Long a favorite of hedge funds, their net long ownership remains in the 82nd percentile of the past 20 years, according to Morgan Stanley Prime Brokerage. Although technical factors such as the share of stocks trading above their 200-day moving average are robust, the list of positives for the sector seems to be shrinking. For example, Wilson notes that while many small- and mid-cap companies as well as financials and energy plays are still earning profit margins below prior peaks, many of the tech giants have reached all-time high profit margins. With valuations robust, the potential for relatively strong positive earnings revisions—an important driver this year—is shrinking.

Bottom Line: The recent pick-up in volatility among tech, growth and momentum stocks is not a cause for concern. Rather, the market rotations we have witnessed in the past several weeks are a healthy sign that investors are embracing the reflation and tax reform narratives. Normalization of growth, rates and inflation suggest market leadership can broaden to include small-caps, financials, value style and dividend/quality plays. **Watch** federal funds futures to see if a more hawkish rate path is developing. That would be a headwind for tech stocks. **Consider** neutralizing capitalization and sector biases in portfolios, adding small- and mid-cap, value-style and quality/yield stocks. ■

THE GIC WEEKLY

Chart of the Week: Market Leadership Rotation Likely to Continue

Despite an improving economy in 2017, value has underperformed as the market has been led by growth-and momentum factors, powered by the tech sector (see chart). We believe that the recent rotation back to value is likely to persist into 2018. Earnings revisions look better for value—the cohort includes financial, industrial and energy stocks—and the impact of better GDP growth and tax cuts is driving double-digit earnings forecasts for next year. What's more, the prospect of rising rates and higher inflation could be headwinds for growth stocks going forward. Given the valuations in technology, we don't see a return of extreme outperformance. Rather at this point in the cycle, we expect style, sector and factor performance to revert to the mean.



Source: Bloomberg, MS & Co. as of Dec. 7, 2017

Asset Class Performance and Heat Map (as of Dec. 8, 2017)

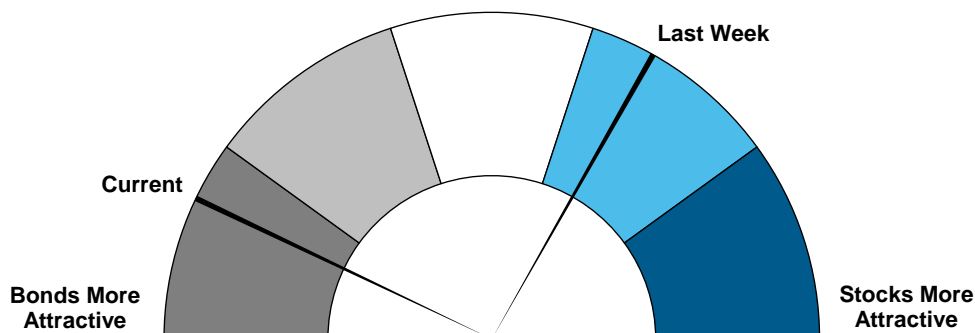
Asset Class	Annualized Returns (%)							Yield	Valuation		Volatility (%)		Correlation to Global Equities	
	YTD	1-Yr.	2016	3-Yr. ¹	5-Yr. ¹	10-Yr. ¹	20-Yr. ¹		Current YTM	Avg. YTM ²	30 Days	20 Yrs. ¹	30 Days	20 Yrs. ¹
Cash								1.30	1.30	1.95	0.04	0.60	-0.11	-0.04
90-Day US Treasury Bills	0.8	0.8	0.3	0.3	0.2	0.4	2.0	1.30	1.30	1.95	0.04	0.60	-0.11	-0.04
Global Equities								Current Div. Yld.	Current P/E	Avg. P/E²				
US Large-Cap Growth	29.1	28.9	6.5	13.1	17.0	10.0	6.7	1.14	21.9	21.3	8.6	17.5	0.73	0.89
US Large-Cap Value	14.0	14.5	16.3	9.0	14.4	6.6	6.8	2.80	16.0	13.9	7.1	14.2	0.71	0.88
US Mid-Cap Growth	20.2	16.8	6.4	8.5	14.7	8.4	7.7	0.78	23.0	26.7	8.3	23.3	0.83	0.81
US Mid-Cap Value	16.3	14.0	20.9	10.8	16.3	9.2	9.4	2.39	16.4	14.4	7.4	16.4	0.63	0.87
US Small-Cap Growth	21.7	18.5	14.0	11.5	16.1	10.1	9.7	0.58	28.5	24.0	10.2	22.0	0.86	0.84
US Small-Cap Value	10.5	8.7	25.8	10.5	15.0	10.0	9.5	2.31	20.6	17.1	9.0	17.3	0.76	0.84
Europe Equity	23.5	26.1	0.2	5.2	8.3	1.6	6.0	3.26	14.9	14.3	8.3	18.2	0.69	0.94
Japan Equity	22.5	20.2	2.7	11.2	12.5	2.9	3.7	1.94	14.6	20.5	11.4	17.1	0.66	0.69
Asia Pacific ex Japan Equity	20.5	18.1	8.0	5.4	5.3	3.2	8.6	3.72	15.6	14.4	7.8	20.9	0.44	0.86
Emerging Markets	31.7	29.6	11.6	6.5	5.0	1.7	8.0	2.25	12.3	11.4	12.7	23.3	0.62	0.86
Global Fixed Income								Current YTM	Current Spread	Avg. Spread²				
Short-Term Fixed Income	0.8	0.8	1.3	0.8	0.8	1.9	3.4	1.97	14.0	31.0	0.5	1.4	-0.32	-0.15
US Fixed Income	3.3	3.5	2.6	2.1	2.0	4.0	5.0	2.70	37.0	55.0	2.4	3.4	-0.32	-0.05
International Fixed Income	8.5	7.8	1.8	1.4	-0.1	2.5	4.3	0.97	37.0	49.0	4.2	8.1	-0.06	0.30
Inflation-Protected Securities	7.5	8.1	6.5	1.6	1.0	3.2	6.2	-	-	-	4.5	7.6	-0.09	0.44
High Yield	9.7	10.5	14.3	6.1	6.0	8.1	7.8	5.61	350.0	514.0	2.3	10.1	0.53	0.76
Emerging Markets Fixed. Inc.	12.6	13.0	9.9	-0.2	-1.5	3.4	7.4	6.15	225.0	353.5	5.2	13.0	0.35	0.68
Alternative Investments								Current Div. Yld.						
REITs	12.6	13.0	4.6	5.5	7.5	3.1	8.2	3.75	-	-	5.8	18.1	0.74	0.79
MLP/Energy Infrastructure ³	-10.2	-5.9	18.3	-12.4	-1.6	5.6	-	7.90	-	-	21.3	18.3	0.18	0.55
Commodities ex Prec. Metals	-4.5	-4.1	11.6	-10.4	-10.0	-8.2	-0.5	-	-	-	10.5	17.0	0.13	0.43
Precious Metals	4.8	1.5	9.5	1.7	-8.3	3.5	6.9	-	-	-	13.0	19.3	0.05	0.20
Hedged Strategies ⁴	4.8	5.0	2.5	1.0	2.1	-0.5	-	-	-	-	3.6	6.0	0.78	0.64
Managed Futures ⁵	1.1	1.7	-2.9	-0.9	0.1	-0.9	-	-	-	-	7.3	7.8	0.70	0.17
S&P 500	20.7	20.5	12.0	10.9	15.7	8.3	7.2	1.79	18.3	16.0	6.73	14.9	0.85	0.95
Russell 2000	13.5	11.2	21.3	11.1	15.0	8.7	8.0	1.51	24.5	20.4	10.52	19.8	0.80	0.82
MSCI EAFE	22.7	23.5	1.5	6.5	8.7	2.0	5.6	2.99	14.9	15.1	7.07	16.6	0.83	0.96
MSCI AC World	22.3	22.1	8.5	8.6	11.5	4.9	6.6	2.32	16.2	15.6	5.95	15.5	1.00	1.00

Note: Performance values calculated using USD. 1. As of Nov. 30, 2017. 2. 20-year average as of Nov. 30, 2017. 3. Volatility and Correlation: June 30, 2006 – Present. 4. Volatility and Correlation: Jan 31, 1998 – Present Hedged strategies consist of hedge funds and managed futures 5. Volatility and Correlation: February 28, 1998 – Present. Cheap = Below -0.5 standard deviation; Moderate = Between +0.5 standard deviation and -0.5 standard deviation; Expensive = Above +.5 std dev. Standard deviation (volatility) is a measure of the dispersion of a set of data from its mean.

Source: Factset, Bloomberg, Morgan Stanley Wealth Management GIC.

THE GIC WEEKLY

Short-Term Stock and Bond Indicator



	Macro		Policy		Fundamentals		Sentiment and Technicals	
	Growth	Inflation	Rates	Liquidity	Valuation & Market	Earnings	Sentiment	Technicals
Current	Neutral	Very Negative	Neutral	Neutral	Very Negative	Neutral	Very Negative	Neutral
Last Week	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Very Positive

Indicator	Category	Absolute Level and Change	Impact on Risk Assets: Z-Score of Level	Impact on Risk Assets: Z-Score of Change
PMI (+)	Growth	Neutral and Falling	0.09	-0.75
Durable Goods (+)		Neutral and Falling	-0.27	-0.60
Retail Sales (+)		Neutral and Falling	-0.14	-2.50
Manufacturing Hours Worked (+)		Neutral	0.09	-0.07
Commodity Prices (+)	Inflation	Neutral and Falling	-0.88	-0.65
Yield Curve: 10-Yr./Three-Mo.(-)	Rates	Low	2.06	-0.09
Yield Curve: Two-Yr./Three-Mo.(-)		Neutral	-0.95	0.44
Pace of Interest Rate Hikes (-)		Low and Falling	1.21	0.59
Term Premium Model (-)		Long Duration	-	-
High Yield Spreads (-)	Liquidity	Neutral and Falling	-0.03	1.06
Investment Grade Spreads (-)		Low	1.00	0.20
Financial Conditions (-)		Neutral and Rising	0.33	-0.69
S&P 500 Earnings/Baa Yield (+)	Valuation & Market Behavior	Low	-1.30	0.29
Large vs. Small Performance (-)		Neutral and Rising	-0.25	-0.84
High- vs. Low-Quality Performance (-)		High and Rising	-1.02	-0.76
High- vs. Low-Beta Performance (+)		Neutral and Rising	-0.07	0.51
S&P 500 Forward Price/Earnings Ratio (+)		Neutral	0.46	0.03
Earnings Revisions Breadth (-)	Earnings	Neutral	-	-
Global Risk Demand (+)	Sentiment	Neutral and Rising	-0.19	0.74
Implied Currency Volatility (-)		Neutral	-0.53	0.22
Five-Yr. Macro Sensitivity (-)		Neutral and Falling	-0.66	1.41
% Stocks Above 200-Day Moving Avg. (+)	Technicals	Neutral	0.22	-0.30
Cumulative Advance/Decline (+)		Neutral	0.39	-0.05
S&P 500 Put/Call Ratio (-)		High and Rising	-1.52	-1.47
Emerging Market Fund Flows (+)		Neutral	-0.15	-0.41
Smart Money Flow Index (+)		Neutral	0.14	-0.50

Note: + Indicates that a rise in the indicator is linked to a more favorable outlook for risk assets; - indicates that a rise in the indicator is linked to a less favorable outlook for risk assets. Z-Scores and color coding are set in accordance with the impact on risk assets. A z-score is a statistical measurement of a score's relationship to the mean in a group of scores. A z-score of 0 means the score is the same as the mean.

Positive for Stocks Relative to Bonds

Neutral

Negative for Stocks Relative to Bonds

Note: Commodity prices are represented by the Bloomberg Commodity Index; pace of interest rate hikes by the Morgan Stanley Pace of Rate Hikes Index; high yield spreads by the Bloomberg Barclays Aggregate US High Yield Index; investment grade spreads by the Bloomberg Barclays US Aggregate Index; financial conditions by the Morgan Stanley Financial Conditions Index; global risk demand and implied currency volatility by the Morgan Stanley Standardized Global Risk Demand Index. For more information on our Term Premium Model, please refer to our special report, *Using the Term Premium to Manage Portfolio Duration*, March 2016.

Source: Morgan Stanley Wealth Management GIC, Morgan Stanley & Co., Haver Analytics, Bloomberg, FactSet as of Dec. 8, 2017

THE GIC WEEKLY

Morgan Stanley & Co. Forecasts (as of Dec. 8, 2017)

	Real GDP Growth (%)			10-Yr. Govt. Bond Yield (%)		Headline Inflation (%)			Currency Versus US Dollar		
	2017E	2018E	2019E	Q1 '18E	Q3 '18E	2017E	2018E	2019E	Q1 '18E	Q3 '18E	Q1 '19E
Global	3.6	3.8	3.7			2.5	2.9	2.8			
US	2.3	2.5	1.9	2.25	2.05	2.1	2.1	1.8			
Euro Zone	2.3	2.1	1.9			1.5	1.7	1.6	1.20	1.18	1.20
UK	1.5	1.1	0.8	1.45	1.55	2.7	2.6	2.2	1.25	1.27	1.27
Japan	1.5	1.3	1.5	0.05	0.20	0.5	1.2	0.9	114	108	102
Emerging Markets	4.7	5.0	5.0			3.1	3.6	3.5			
China	6.8	6.5	6.3	4.20	4.30	1.6	2.5	2.6	6.63	6.68	6.65

Source: Morgan Stanley & Co. Research

Macro Factor Heat Map (as of Dec. 8, 2017)

	Economic Growth	Rates	Inflation / Deflation	Liquidity	Sentiment and Risk	Valuation	Earnings	GIC Conclusion
Japan	↑	↓	↑	↓	↓	↑	↓	Reflating on BoJ, Weaker yen and Fiscal Policy
Europe	↓	↑	↑	↑	↓	↓	↓	Cyclical Earnings Rebound
China	↓	↓	↑	↓	↓	↑	↓	Recovery and Stimulus Maturing
Brazil	↑	↓	↓	↑	↓	↓	↓	Trying to Stabilize
	Risk Asset Positive	Neutral	Risk Asset Negative					

Note: Text in a factor box denotes a color change; for further explanation of the chart, see page 9.

Source: Morgan Stanley Wealth Management GIC

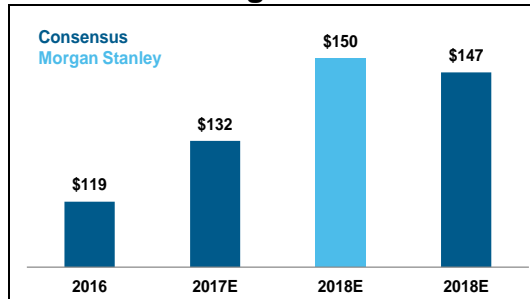
Market Factor Data Points (for the week ending Dec. 8, 2017)

	Positives	Negatives
Global Growth	<ul style="list-style-type: none"> November US payrolls added 228,000 new jobs vs. 195,000 expected; jobless rate held at 4.1% October US factory orders beat forecast US durable goods order revised higher for October Euro Zone third-quarter GDP revised upward to 2.6%; Japan also revised upward to 2.5% November China imports and exports grew faster than expected 	<ul style="list-style-type: none"> US average hourly earnings disappointed, growing at 2.5% year over year versus 2.7% expectation ISM nonmanufacturing below estimates for November, but still elevated University of Michigan Consumer Sentiment Index fell month over month, below expectations Euro Zone retail sales fell more than expected in October, growing at 0.4% year over year
Rates	<ul style="list-style-type: none"> Markets give 98% probability to Dec. 15 Fed rate hike 	
Inflation	<ul style="list-style-type: none"> Euro Zone PPI up 2.5% year over year 	
Sentiment	<ul style="list-style-type: none"> China foreign exchange reserves increased for the 10th straight month US Dollar Index up 1% for the week VIX fell as tax bill advanced and government shutdown averted 	

Source: Morgan Stanley Wealth Management GIC

THE GIC WEEKLY

S&P 500 Earnings Estimates



MS & Co. S&P 500 12-Month Price Target

Landscape	Earnings	Price/Earnings Multiple	Price Target	Upside / Downside
Bull Case	150	20.0	3,000	13.1%
Base Case	150	18.3	2,750	3.7%
Bear Case	135	17.0	2,300	-13.3%
Current S&P 500 Price			2,652	

Source: FactSet, Thomson Reuters, Morgan Stanley & Co. Research as of Dec. 1, 2017

Source: Thomson Reuters, Morgan Stanley & Co. Research as of Dec. 1, 2017

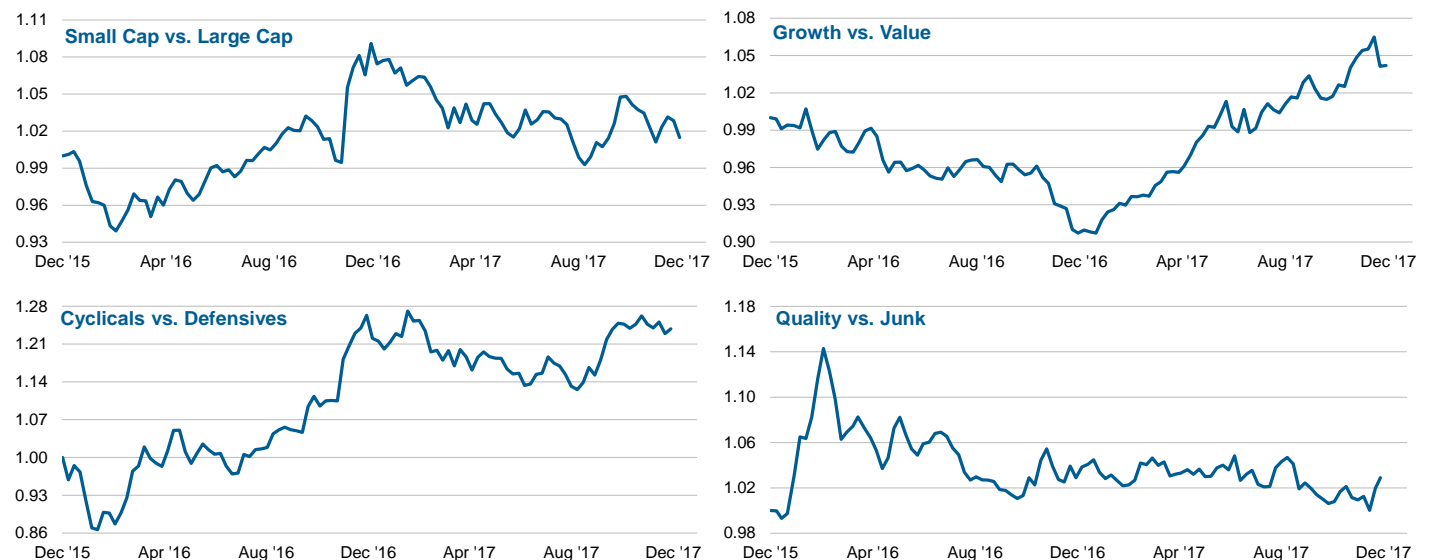
S&P 500 Sector Performance and Valuation (as of Dec. 8, 2017)

Index Name	Total Return			Dividend Yield (%)	Beta	20-Year Avg. Forward 12-Mo. PE	Forward 12-Mo. P/E*
	WTD (%)	YTD (%)	1-Year (%)				
S&P 500	0.39	20.72	20.45	1.79		16.0	18.3
Energy	-0.57	-5.40	-5.72	2.75	0.90	17.6	26.1
Materials	0.60	21.18	17.63	1.95	1.16	13.9	18.2
Industrials	1.38	19.02	17.11	1.90	1.11	16.3	19.4
Consumer Discretionary	0.61	20.85	17.56	1.28	0.94	18.0	20.9
Consumer Staples	0.68	12.06	13.87	2.59	0.52	17.1	19.8
Health Care	-0.40	22.15	24.30	1.56	0.81	17.5	16.7
Financials	1.52	21.95	20.14	1.49	1.35	12.9	15.2
Information Technology	0.08	38.15	38.10	1.18	1.28	20.8	18.9
Telecommunication Services	0.25	-6.00	-1.83	5.01	0.67	16.5	12.8
Utilities	-0.96	17.88	21.82	3.27	0.20	14.2	18.4
Real Estate	-0.95	10.55	11.63	3.13	0.48	15.3	18.0

*Dark blue/light blue/gray fill denotes whether current relative forward 12-month P/E is low/neutral/high relative to history

Source: Morgan Stanley & Co.

Performance of Style and Cap Pairs (as of Dec. 8, 2017)

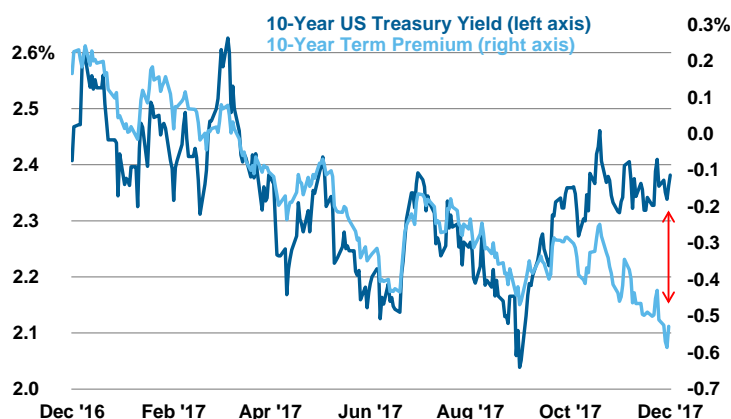


Source: Morgan Stanley & Co. Small Cap is represented by the Russell 2000 Index; Large Cap represented by the Russell 1000 Index; Growth represented by the Russell 1000 Growth Index; Value represented by the Russell 1000 Value Index. Cyclical and Defensive, and Quality and Junk are based on Morgan Stanley & Co. Research analysis.

THE GIC WEEKLY

Fixed Income Insight: Direction of Rates Sits With the Term Premium

The term premium is the compensation, over and above the short-term real rate and inflation expectations, for taking on duration risk. With real rates negative and inflation expectations well below 2% for most of the past nine years, the term premium has been declining, dragging the 10-year yield with it (see chart). Since October, as the yield curve has flattened, the term premium has continued to shrink but the nominal 10-year yield has continued to trade in the 2.3%-to-2.4% range. This has led some to conclude that current yields, rather than poised to rise, may in fact reflect a pick-up in real rates and inflation expectations. If this is the case, the "Goldilocks" conditions that have existed may persist into 2018. Alternatively, if the term premium begins to mean revert, the 10-year yield could rise quickly to the 2.6%-to-2.7% range.



Source: Bloomberg as of Dec. 8, 2017

Government Debt Monitor

	US			
	Yield (%)	Total Return (%)		
Treasury Benchmark	Current	ΔWTD	ΔYTD	YTD
3-Month	1.27	0.01	0.77	0.74
2-Year	1.79	0.02	0.61	0.25
5-Year	2.14	0.03	0.21	0.85
10-Year	2.38	0.01	-0.07	2.21
30-Year	2.77	0.01	-0.30	8.21
2-Yr./10-Yr. Spread (bp)	58	-0.80	-67.45	-
10-Yr. TIPS Breakeven (bp)	190	1.18	-7.45	-
Interest Rate Volatility† (bp)	47	-2.68	-24.14	-

Fixed Income Spread Dashboard

Investment Grade	Duration (Yrs.)	Yield-to-Worst (%)	OAS (bp)	OAS Range**		
				Rich	Cheap	
MBS*	4.27	2.85	23	9	35	
AAA	4.46	2.29	26	21	44	
AA	5.45	2.44	12	8	18	
A	7.57	3.02	77	75	158	
BBB	7.41	3.58	131	127	295	
High Yield	BB	4.14	4.44	237	223	662
	B	3.59	5.98	383	370	1,009
	CCC	3.21	11.47	1,032	851	1,972

Unless stated, indexes utilized are Citi Broad Investment Grade, Citi High Yield, and Citi Global Indexes

†Interest Rate Volatility measured by Merrill Lynch Option Volatility Estimate (MOVE) Index

*MBS distills high grade agency-rated mortgage-backed securities, a substantial subsector of investment grade indexes.

**OAS stands for Option-Adjusted Spread or spread over the Treasury. Grey diamond denotes current OAS; blue circle denotes two-year average.

Source: Bloomberg, The Yield Book® Software and Services. © 2017 Citigroup Index LLC. All rights reserved. Data as of Dec. 8, 2017

Government Debt Monitor

10-Year Govt. Bond	Global			Total Return (%)*
	Yield (%)	Total Return (%)		
	Current	ΔWTD	ΔYTD	YTD
France	0.63	0.02	-0.05	4.53
Germany	0.31	0.00	0.10	2.02
Japan	0.05	0.02	0.00	1.82
Spain	1.40	-0.02	0.02	5.21
UK	1.28	0.05	0.04	1.93
3-Month LIBOR	1.54	0.04	0.54	-
US Tax Exempt				
10-Year AAA Muni	1.95	-0.12	-0.36	5.49
10-Yr. Muni/UST Ratio	82.24	-5.40	-12.39	-

Benchmark Returns

Index	Total Returns (%)		
	YTD	MTD	2016
Bloomberg Barclays US Aggregate	3.34	0.27	2.65
Bloomberg Barclays US MBS	2.37	0.22	1.67
Bloomberg Barclays US IG Corporate	5.89	0.41	6.11
Bloomberg Barclays Municipal	5.49	1.09	0.25
Bloomberg Barclays US High Yield	7.24	0.05	17.13
Bloomberg Barclays Global Aggregate	6.54	-0.46	2.09
JPMorgan Emerging Market	8.82	0.17	10.19

*Global total returns reflect Citigroup 7- to 10-year bond indexes and Muni total returns reflect Bloomberg Barclays Municipal Bond Index Total Return

Source: Bloomberg, Thomson Reuters Municipal Market Data (MMD) as of Dec. 8, 2017

THE GIC WEEKLY

Tactical Asset Allocation Reasoning

Global Equities		Relative Weight Within Equities
US	Overweight	While US equities have done exceptionally well since the global financial crisis, they are now in the latter stages of a cyclical bull market. While the Trump/Republican progrowth agenda has been slower to develop than hoped, it has recently picked up, with progress on tax reform driving equity prices higher. Sentiment is now much more bullish than it was a year ago, leaving much less upside to our 2,750 target on the S&P 500 for the first half of 2018.
International Equities (Developed Markets)	Overweight	We maintain a positive bias for Japanese and European equity markets. The populist movements around the world are likely to drive more fiscal policy action in both regions, which is needed to make the extraordinary monetary policy offered more effective. Both are still at record levels of cheapness but we prefer Japan at the moment given the over-exuberance on Europe. We recommend hedging currency risk for 50% of Japanese positions but not Europe.
Emerging Markets	Overweight	Emerging market (EM) equities have been the best region over the past 12 months and for the year to date. With the US dollar appearing to have made a cyclical top, global growth and earnings accelerating, and financial conditions remaining loose, we think EM equities will continue to keep up with global equity markets but are unlikely to lead as strongly.
Global Fixed Income		Relative Weight Within Fixed Income
US Investment Grade	Underweight	We have recommended shorter-duration* (maturities) since March 2013 given the extremely low yields and potential capital losses associated with rising interest rates from such low levels. While interest rates have remained exceptionally low, there is more near-term upward pressure US economic data to reverse and begin surprising to the upside and the European Central Banks tapers its bond purchases. Within investment grade, we prefer BBB-rated corporates and A-rated municipals to US Treasuries.
International Investment Grade	Underweight	Yields are even lower outside the US, leaving very little value in international fixed income, particularly as the global economy begins to recover more broadly. While interest rates are likely to stay low, the offsetting diversification benefits do not warrant much, if any, position, in our view.
Inflation-Protected Securities	Overweight	With deflationary fears having become extreme in 2015 and early 2016, these securities still offer relative value in the context of our forecasted acceleration in global growth, and expectations for oil prices and the US dollar's year-over-year rate of change to revert back toward 0%. That view played out in 2016 but has not yet run its course.
High Yield	Equal weight	High yield has performed exceptionally well since early 2016 with the stabilization in oil prices and retrenchment by the weaker players. We recently downgraded high yield to equal weight from overweight on the back of this performance, record low credit spreads and interest rates and early signs of credit deterioration in commercial real estate and auto financing.
Alternative Investments		Relative Weight Within Alternative Investments
REITs	Underweight	Real estate investment trusts (REITs) have underperformed global equities since mid-2016 when interest rates bottomed. We think it is still too early to reconsider our underweight zero allocation given the further rise in rates we expect and deteriorating fundamentals for the industry. Non-US REITs should be favored relative to domestic REITs.
Master Limited Partnerships/Energy Infrastructure*	Overweight	Master limited partnerships (MLPs) rebounded sharply from a devastating 2015 but, with oil's slide, have performed poorly in 2017. As long as oil remains above \$40 per barrel, they should provide a reliable and attractive yield and they look exceptionally cheap relative to high yield. A Trump presidency should also be supportive for fracking activity and pipeline construction, both of which should lead to an acceleration in dividend growth.
Hedged Strategies (Hedge Funds and Managed Futures)	Equal Weight	This asset category can provide uncorrelated exposure to traditional risk-asset markets. It tends to outperform when traditional asset categories are challenged by growth scares and/or interest rate volatility spikes. As volatility becomes more persistent in 2018, these strategies should do better than in recent years.

***For more about the risks to Master Limited Partnerships (MLPs) and Duration, please see the Risk Considerations section beginning on page 10 of this report.**

Source: Morgan Stanley Wealth Management GIC as of Dec. 8, 2017

THE GIC WEEKLY

Macro Factor Heat Map Key (see page 5)

	Economic Growth	Rates	Inflation / Deflation	Liquidity	Sentiment and Risk	Valuation	Earnings	Conclusion
Dark Blue	Economic growth robust	Steep yield curve	Low-moderate and rising inflation	Liquidity robust in economy / banking system	Shorter-term sentiment and technicals bearish	Risk assets attractively valued	Earnings outlook robust	Confluence of factors supports a risk-on investment approach
Light Blue	Economic growth neutral	Normal yield curve	Low-moderate and declining inflation; moderate inflation; higher and falling inflation	Liquidity neutral in the economy / banking system	Shorter-term sentiment and technicals neutral	Risk assets neutral	Earnings outlook neutral	Confluence of factors supports a neutral investment approach
Gray	Economic growth anemic	Flat/inverted yield curve	Very high/low inflation/deflation; high and rising inflation	Liquidity low in economy / banking system	Shorter-term sentiment and technicals bullish	Risk assets are richly valued	Earnings outlook anemic	Confluence of factors supports a risk-off investment approach
Up	Growth accelerating	Yield curve steepening	Inflation rising	Liquidity increasing	Sentiment becoming more bullish	Valuations rising	Earnings outlook improving	
Down	Growth declining	Yield curve flattening	Inflation falling	Liquidity decreasing	Sentiment becoming more bearish	Valuations falling	Earnings outlook worsening	
Signal Horizon	One to three years	One to three years	One to three years	One to three years	One to three months	Six months to two years	Six months to two years	
Inputs	<ul style="list-style-type: none"> • Industrial production • Unemployment • Total return • Earnings revisions • Home prices • OECD LEI (China and Brazil) • MS & Co. ARIA (US) 	<ul style="list-style-type: none"> • 10-year vs. 2-year government bond yield spread 	<ul style="list-style-type: none"> • Consumer Price Index 	<ul style="list-style-type: none"> • M1 growth • Private credit growth • Libor-OIS spread 	<ul style="list-style-type: none"> • MS US Equity Risk Indicator (US) • MS Combined Market Timing Indicator (Europe) • MS Global Risk Demand Index • Relative strength index • Members above / below moving average. • Index above / below moving average • Consumer confidence 	<ul style="list-style-type: none"> • Forward price/earnings ratio • Price/book ratio • Equity risk premium • High yield option-adjusted spread 	<ul style="list-style-type: none"> • Earnings revisions breadth • Earnings surprise • Return on equity 	<ul style="list-style-type: none"> • Weighted average z-score of all factors

Index Definitions

For index, indicator and survey definitions referenced in this report please visit the following:
<http://www.morganstanleyfa.com/public/projectfiles/id.pdf>

Hedged Strategy Definitions

Credit Long/Short: This strategy consists of a core holding of long credits hedged at all times with varying degrees of short sales of bonds and/or index options. Some managers maintain a substantial portion of assets within a hedge structure and commonly employ leverage.

Equity Long/Short: This strategy consists of a core holding of long equities hedged at all times with varying degrees of short sales of stock and/or index options. Some managers maintain a substantial portion of assets within a hedge structure and commonly employ leverage.

Market-neutral: A type of investment strategy undertaken by an investor or an investment manager that seeks to profit from both increasing and decreasing prices in one or more markets, while attempting to completely avoid some specific form of market risk.

Risk Considerations

MLPs

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk.

The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value.

MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV; and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Duration

Duration, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. Generally, if interest rates rise, bond prices fall and vice versa. Longer-term bonds carry a longer or higher duration than shorter-term bonds; as such, they would be affected by changing interest rates for a greater period of time if interest rates were to increase. Consequently, the price of a long-term bond would drop significantly as compared to the price of a short-term bond.

International investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are suitable only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; and Risks associated with the operations, personnel, and processes of the manager. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. Further, opinions regarding Alternative Investments expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management. This is not a "research report" as defined by NASD Conduct

THE GIC WEEKLY

Rule 2711 and was not prepared by the Research Departments of Morgan Stanley Smith Barney LLC or Morgan Stanley & Co. LLC or its affiliates. Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank. In Consulting Group's advisory programs, alternative investments are limited to US-registered mutual funds, separate account strategies and exchange-traded funds (ETFs) that seek to pursue alternative investment strategies or returns utilizing publicly traded securities. Investment products in this category may employ various investment strategies and techniques for both hedging and more speculative purposes such as short-selling, leverage, derivatives and options, which can increase volatility and the risk of investment loss. Alternative investments are not suitable for all investors. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund. Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Managed futures investments are speculative, involve a high degree of risk, use significant leverage, have limited liquidity and/or may be generally illiquid, may incur substantial charges, may subject investors to conflicts of interest, and are usually suitable only for the risk capital portion of an investor's portfolio. Before investing in any partnership and in order to make an informed decision, investors should read the applicable prospectus and/or offering documents carefully for additional information, including charges, expenses, and risks. Managed futures investments are not intended to replace equities or fixed income securities but rather may act as a complement to these asset categories in a diversified portfolio.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Physical precious metals are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. If sold in a declining market, the price you receive may be less than your original investment. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be suitable for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor. The Securities Investor Protection Corporation ("SIPC") provides certain protection for customers' cash and securities in the event of a brokerage firm's bankruptcy, other financial difficulties, or if customers' assets are missing. SIPC insurance does not apply to precious metals or other commodities.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Interest on municipal bonds is generally exempt from federal income tax; however, some bonds may be subject to the alternative minimum tax (AMT). Typically, state tax-exemption applies if securities are issued within one's state of residence and, if applicable, local tax-exemption applies if securities are issued within one's city of residence.

Treasury Inflation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

Ultrashort bond funds Ultra-short bond funds are mutual funds and exchange-traded funds that generally invest in fixed income securities with very short maturities, typically less than one year. They are not money market funds. While money market funds attempt to maintain a stable net asset value, an ultra-short bond fund's net asset value will fluctuate, which may result in the loss of the principal amount invested. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk

The majority of \$25 and \$1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending

THE GIC WEEKLY

on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per \$25 or \$1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price.

The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk.

The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield.

Some \$25 or \$1000 par **preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Principal is returned on a monthly basis over the life of a **mortgage-backed security**. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information.

Asset-backed securities generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Companies paying **dividends** can reduce or cut payouts at any time.

Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Stocks of medium-sized companies entail special risks, such as limited product lines, markets, and financial resources, and greater market volatility than securities of larger, more-established companies.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment.

The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Smith Barney LLC retains the right to change representative indices at any time.

Credit ratings are subject to change.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

Technology stocks may be especially volatile. Risks applicable to companies in the **energy and natural resources** sectors include commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Investing in foreign emerging markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks.

Investing in foreign markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks. **Investing in currency** involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

THE GIC WEEKLY

Certain securities referred to in this material may not have been registered under the U.S. Securities Act of 1933, as amended, and, if not, may not be offered or sold absent an exemption therefrom. Recipients are required to comply with any legal or contractual restrictions on their purchase, holding, and sale, exercise of rights or performance of obligations under any securities/instruments transaction.

Disclosures

Morgan Stanley Wealth Management is the trade name of Morgan Stanley Smith Barney LLC, a registered broker-dealer in the United States. This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Past performance is not necessarily a guide to future performance.

The author(s) (if any authors are noted) principally responsible for the preparation of this material receive compensation based upon various factors, including quality and accuracy of their work, firm revenues (including trading and capital markets revenues), client feedback and competitive factors. Morgan Stanley Wealth Management is involved in many businesses that may relate to companies, securities or instruments mentioned in this material.

This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security/instrument, or to participate in any trading strategy. Any such offer would be made only after a prospective investor had completed its own independent investigation of the securities, instruments or transactions, and received all information it required to make its own investment decision, including, where applicable, a review of any offering circular or memorandum describing such security or instrument. That information would contain material information not contained herein and to which prospective participants are referred. This material is based on public information as of the specified date, and may be stale thereafter. We have no obligation to tell you when information herein may change. We make no representation or warranty with respect to the accuracy or completeness of this material. Morgan Stanley Wealth Management has no obligation to provide updated information on the securities/instruments mentioned herein.

The securities/instruments discussed in this material may not be suitable for all investors. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. Morgan Stanley Wealth Management recommends that investors independently evaluate specific investments and strategies, and encourages investors to seek the advice of a financial advisor. The value of and income from investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies and other issuers or other factors. Estimates of future performance are based on assumptions that may not be realized. Actual events may differ from those assumed and changes to any assumptions may have a material impact on any projections or estimates. Other events not taken into account may occur and may significantly affect the projections or estimates. Certain assumptions may have been made for modeling purposes only to simplify the presentation and/or calculation of any projections or estimates, and Morgan Stanley Wealth Management does not represent that any such assumptions will reflect actual future events. Accordingly, there can be no assurance that estimated returns or projections will be realized or that actual returns or performance results will not materially differ from those estimated herein.

This material should not be viewed as advice or recommendations with respect to asset allocation or any particular investment. This information is not intended to, and should not, form a primary basis for any investment decisions that you may make. Morgan Stanley Wealth Management is not acting as a fiduciary under either the Employee Retirement Income Security Act of 1974, as amended or under section 4975 of the Internal Revenue Code of 1986 as amended in providing this material except as otherwise provided in writing by Morgan Stanley and/or as described at www.morganstanley.com/disclosures/dol.

Morgan Stanley Smith Barney LLC, its affiliates and Morgan Stanley Financial Advisors do not provide legal or tax advice. Each client should always consult his/her personal tax and/or legal advisor for information concerning his/her individual situation and to learn about any potential tax or other implications that may result from acting on a particular recommendation.

This material is disseminated in Australia to "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813).

Morgan Stanley Wealth Management is not incorporated under the People's Republic of China ("PRC") law and the material in relation to this report is conducted outside the PRC. This report will be distributed only upon request of a specific recipient. This report does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors must have the relevant qualifications to invest in such securities and must be responsible for obtaining all relevant approvals, licenses, verifications and or registrations from PRC's relevant governmental authorities.

If your financial adviser is based in Australia, Switzerland or the United Kingdom, then please be aware that this report is being distributed by the Morgan Stanley entity where your financial adviser is located, as follows: Australia: Morgan Stanley Wealth Management Australia Pty Ltd (ABN 19 009 145 555, AFSL No. 240813); Switzerland: Morgan Stanley (Switzerland) AG regulated by the Swiss Financial Market Supervisory Authority; or United Kingdom: Morgan Stanley Private Wealth Management Ltd, authorized and regulated by the Financial Conduct Authority, approves for the purposes of section 21 of the Financial Services and Markets Act 2000 this material for distribution in the United Kingdom.

Morgan Stanley Wealth Management is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule") and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule.

This material is disseminated in the United States of America by Morgan Stanley Smith Barney LLC.

Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages of any kind relating to such data.

This material, or any portion thereof, may not be reprinted, sold or redistributed without the written consent of Morgan Stanley Smith Barney LLC.

© 2017 Morgan Stanley Smith Barney LLC. Member SIPC.