

The GIC Weekly



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Upcoming Catalysts

Aug. 28 Texas Manufacturing Outlook Survey
Aug. 29 Conf. Board Consumer Confidence Index
Aug. 30 Japan industrial production
Aug. 30 Euro Zone consumer confidence
Aug. 30 China Manufacturing PMI
Aug. 30 US Personal Consumption Expenditures
Aug. 31 Chicago PMI
Aug. 31 Euro Zone CPI
Sept. 1 ISM Manufacturing Survey
Sept. 1 U. of M. Consumer Sentiment Index

What We Are Talking About

- **Mining Market Disconnects.** The next six-to-10 weeks are usually the seasonally weakest of the year; volatility can produce opportunities; with prospects for global growth and positive earnings surprises strong, we want to exploit disconnects, especially because the equity risk premium is higher today than in January; three areas that have caught our eye are commodities, currencies and credit; mining and materials stocks have yet to reflect the outperformance of industrial metals prices, especially relative to gold; European stocks have recently stalled on a surging euro that has decoupled from retreating German Bund yields; the underperformance of small-caps exceeds what is suggested by credit market spreads. **Consider** making opportunistic stock picks, focusing on global materials and energy, Europe and US small-caps.

Mining Market Disconnects

Although 2017 has delivered solid returns across virtually every major asset class, investor skepticism remains high. In fact, few asset classes' returns fully reflect the strong synchronous rebound in global growth and the broad-based and double-digit earnings gains in the MSCI All Country World Index (MSCI ACWI), which is up 13.5% for the year to date. In fact, because gains have trailed earnings growth, the MSCI ACWI sells at a lower price/earnings (P/E) ratio than it did last year. At 15.7 times next 12 months' consensus earnings, the P/E is exactly in line with the average of the past 20 years.

In the US, equity market indexes trade near all-time highs yet the equity risk premium (ERP), or excess return over a risk-free investment, at 365 basis points, is higher today than at the year's market low in February when it was 326 basis points. What's more, the ERP is well above the average of 176 basis points on trailing earnings and 242 basis points on forward earnings. Investor concerns continue to center on market valuation, potential for monetary and fiscal policy mistakes, fear of recession, the persistent lack of inflation and an environment in which globalization and technology disruption have seemingly accelerated their grip.

The negative sentiment can be seen across markets. Global bond yields remain near year-to-date lows and within 50-to-75 basis points of all-time lows. Portfolio positioning



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by individual investors, hedge funds and options speculators is defensive currently; cash levels are above average; net long equity exposure is below 20-year norms; and options trading on US Treasuries is near a record high. Facing seasonal volatility that could last six-to-10 more weeks, we take a more granular view of the other disconnects that might present opportunities in asset classes linked to commodities, currencies and credit.

For starters, we note that global purchasing manager indexes maintained their upward momentum in August. In the US, the Markit composite PMI jumped to 56.0 from 54.6 as services strongly surprised on the upside, while the Euro Zone composite and Japan manufacturing gauges also made sequential gains. If these readings were spurious or indicative of an economic peak, we do not think the signal would be so strong in the industrial commodities market, a typical reflationary bellwether. To the contrary, the year-to-date outperformance of industrial metals seems to corroborate continued economic strength. Copper is up nearly 21% this year, with the recent price of \$3.04 per pound the highest since 4Q 2014. This strength is not idiosyncratic to copper, either; similar patterns are in place for palladium, aluminum, zinc, lead, nickel and even iron ore.

US Treasuries are completely ignoring this signal (see *Chart of the Week*, page 3). The 10-year bond yield has decoupled to the downside from its typical correlation with the relative performance of copper to gold; gold is a proxy for investor fear and uncertainty, and copper is a leading indicator of industrial price inflation. Also, consider the underperformance of metals/mining stocks for the year to date. While the S&P 500 is up about 9% and an equally weighted basket of industrial metals is up 18%, mining stocks are up in the 6%-to-8% range.

Morgan Stanley & Co.'s Global Metals and Mining team suggests there is opportunity here, especially because metals and mining companies have shown discipline in capital spending, investing only 38% of their proposed budgets versus the more typical 47% average for midyear. Such spending restraint suggests free cash flow yields may be poised to jump by another 1% to 2% while the sector-wide margin on earnings before interest, taxes, depreciation and amortization expands to 39.1% from last year's 32.4% and the 27.2% cycle trough in 2015. The team further notes that the industry's balance sheets have improved materially, with credit spreads and the pricing of credit default swaps near three-year lows. The Datastream World DS Mining Index price/book ratio is at a 30% discount to its 40-year history and near 2015's trough valuations.

A second area of disconnect is the decoupling of German Bund yields and the value of the euro. While European

economic growth and earnings have surprised strongly to the upside this year, the 9% trade-weighted appreciation of the euro has caused concern. In our view, it has stalled the upward trend in earnings revisions and led to sideways trading in stocks, which based on the MSCI Europe Index are up 18.2% for the year to date. Versus the US dollar, the euro has strengthened even more, up in excess of 11% for the year to date. Importantly, dynamics around the euro may reflect an overbought condition, with policy and politics helping overshoot the fundamentals.

Specifically, the euro/US dollar exchange rate has typically followed German Bund yields and real-yield differentials with Treasuries. But while the 10-year Bund yield has retreated to 38 basis points from 60 basis points in mid-July and the two-year yield is below its January 1 level, the euro has continued to strengthen. The reason? Possibly the anticipation that the European Central Bank will start to taper its Quantitative Easing program next year. Should the euro pull back, European value stocks—in particular, energy, financials and industrials—could outperform, especially given attractive valuations of only 1.2 times book value versus a 22 year average of 1.6.

A final disconnect is small-cap underperformance relative to large-cap stocks. Although some of the Russell 2000's nearly 300 basis points of underperformance relative to the S&P 500 can be attributed to the unwinding of the postelection "Trump" trade, the magnitude of the drag—especially small-cap value stocks' 1,300 basis points—seems at odds with typical corollaries found in the credit markets. While overall credit spreads in investment grade and high yield universes have widened a bit from their tightest points of the year, the spread between bonds rated BBB and those rated BB has remained relatively stable. To us, that suggests no systemic change in the relative attractiveness of small-cap stocks.

Bottom Line: The seasonally weak period of late August through early October has often produced opportunities. While this year investors are rightfully concerned about monetary and fiscal policy, valuations and the lack of inflation, global growth momentum looks solid, financial liquidity is constructive and earnings surprise potential appears good. As a consequence, we remain opportunistic investors—especially where certain asset classes have decoupled from their key drivers. **Watch** for underappreciated strength in industrial metals prices, the euro to retrace recent strength and credit spreads to make one more retest of their 2017 tights. **Consider** making opportunistic stock picks, focusing on global materials and energy, Europe and US small-caps. ■

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Chart of the Week: Treasuries' Decoupling From Copper/Gold Metric an Opportunity

Investors have long watched the correlation between the 10-year US Treasury yield and the copper/gold performance ratio (see chart). Low readings for the ratio suggest a weak economy, slowing growth, fading inflation expectations and an overall flight to quality associated with high gold prices. A high reading, as we have now, has typically pointed to economic acceleration, reflation and more sanguine risk sentiment associated with high copper prices. Since mid-July, this relationship has broken down: The Treasury yield continues to drift downward while global economic data has improved—validated by better industrial commodity prices. With certain equity sectors still seemingly taking cues from the mispriced bond market, we see opportunities to switch bond proxies like utilities and telecoms for materials and energy stocks.



Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 23, 2017

Asset Class Performance and Heat Map (as of August 25, 2017)

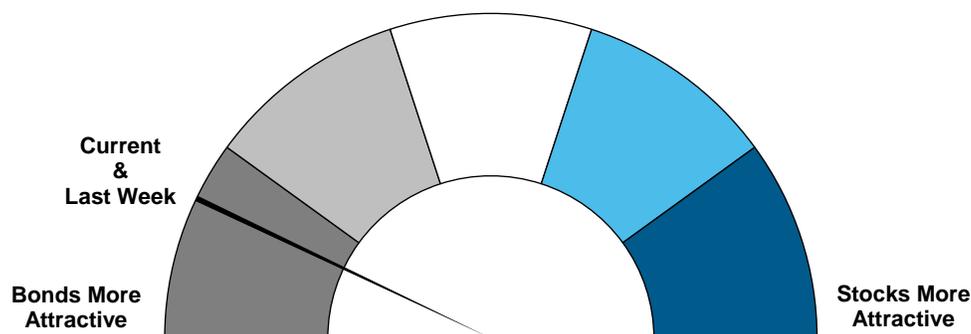
Asset Class	Annualized Returns (%)							Yield	Valuation		Volatility (%)		Correlation to Global Equities	
	YTD	1-Yr.	2016	3-Yr. ¹	5-Yr. ¹	10-Yr. ¹	20-Yr. ¹		Current YTM	Avg. YTM ²	30 Days	20 Yrs. ¹	30 Days	20 Yrs. ¹
Cash								Current YTM	Current YTM	Avg. YTM ²				
90-Day US Treasury Bills	0.5	0.6	0.3	0.2	0.2	0.5	2.1	1.10	1.10	2.02	0.03	0.61	0.36	-0.05
Global Equities								Current Div. Yld.	Current P/E	Avg. P/E ²				
US Large-Cap Growth	17.6	18.9	6.5	13.2	15.9	9.7	6.2	1.20	21.4	21.4	10.4	17.6	0.85	0.89
US Large-Cap Value	5.2	11.8	16.3	8.8	13.5	6.0	6.6	2.86	15.6	13.9	7.9	14.3	0.89	0.88
US Mid-Cap Growth	9.5	9.8	6.4	8.3	14.1	7.6	7.2	0.81	22.0	26.7	10.2	23.4	0.85	0.81
US Mid-Cap Value	7.4	14.8	20.9	10.5	16.2	8.1	9.4	2.50	19.3	14.4	8.9	16.4	0.91	0.87
US Small-Cap Growth	8.3	12.7	14.0	9.9	15.2	9.3	9.3	0.62	27.6	24.0	11.5	22.2	0.82	0.83
US Small-Cap Value	1.0	12.2	25.8	9.6	14.9	8.9	9.6	2.44	19.7	17.0	11.0	17.3	0.82	0.84
Europe Equity	19.4	19.1	0.2	2.6	9.8	1.7	5.8	3.32	14.7	14.3	7.7	18.4	0.84	0.94
Japan Equity	11.7	12.7	2.7	6.4	10.8	1.6	1.8	2.07	13.6	20.9	9.3	17.4	-0.36	0.69
Asia Pacific ex Japan Equity	18.7	16.1	8.0	1.6	6.4	4.2	6.4	3.68	15.4	14.3	9.2	21.7	0.57	0.85
Emerging Markets	28.2	24.0	11.6	2.8	5.1	2.3	6.0	2.34	12.8	11.4	9.9	23.8	0.69	0.86
Global Fixed Income								Current YTM	Current Spread	Avg. Spread ²				
Short-Term Fixed Income	1.1	0.8	1.3	1.1	0.9	2.2	3.5	1.52	16.0	31.0	0.6	1.4	-0.23	-0.14
US Fixed Income	3.4	0.3	2.6	2.7	2.0	4.4	5.1	2.46	42.0	55.0	2.6	3.4	-0.17	-0.04
International Fixed Income	9.5	-1.6	1.8	-0.7	0.3	3.2	4.4	0.97	41.0	50.0	5.8	8.1	-0.28	0.29
Inflation-Protected Securities	7.1	1.7	6.5	0.3	1.4	3.8	6.4	-	-	-	5.4	7.6	-0.25	0.43
High Yield	8.4	8.9	14.3	4.7	7.1	8.2	7.7	5.62	376.0	514.0	2.1	10.2	0.51	0.76
Emerging Markets Fixed. Inc.	14.4	8.1	9.9	-1.8	-0.7	4.1	7.2	6.05	249.0	357.0	4.7	13.2	0.28	0.68
Alternative Investments								Current Div. Yld.						
REITs	9.6	1.7	4.6	5.3	8.0	3.2	7.3	3.75	-	-	7.5	18.5	0.63	0.79
MLP/Energy Infrastructure ³	-8.4	-4.8	18.3	-9.8	1.0	6.0	-	7.61	-	-	16.0	18.4	0.31	0.56
Commodities ex Prec. Metals	-6.7	-0.9	11.6	-14.7	-10.8	-8.2	-0.8	-	-	-	10.0	17.0	0.04	0.42
Precious Metals	10.2	-4.8	9.5	-2.7	-6.7	4.9	6.9	-	-	-	10.1	19.4	-0.31	0.21
Hedged Strategies ⁴	3.2	4.9	2.5	0.3	2.0	-0.8	-	-	-	-	2.5	6.0	0.82	0.64
Managed Futures ⁵	0.1	-2.0	-2.9	0.2	-0.4	-1.0	-	-	-	-	4.6	7.9	0.48	0.17
S&P 500	10.6	14.8	12.0	10.9	14.8	7.7	6.9	1.91	17.3	16.0	8.74	15.0	0.91	0.95
Russell 2000	2.3	12.6	21.3	9.9	14.2	7.8	7.8	1.51	23.6	20.3	12.34	19.9	0.82	0.82
MSCI EAFE	17.3	16.9	1.5	3.3	9.6	1.9	4.8	3.07	14.5	15.2	5.84	16.8	0.69	0.96
MSCI AC World	14.6	16.4	8.5	6.8	11.5	4.7	5.9	2.40	15.7	15.6	6.41	15.7	1.00	1.00

Note: Performance values calculated using USD. 1. As of July 31, 2017. 2. 20-year average as of July 31, 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.

Cheap	Low	Low
Moderate	High	High
Expensive		

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Short-Term Stock and Bond Indicator



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

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	0.06	-0.50
Durable Goods (+)		Low and Falling	-2.04	-1.36
Retail Sales (+)		Neutral and Rising	0.69	0.59
Manufacturing Hours Worked (+)		Neutral	-0.07	0.11
Commodity Prices (+)	Inflation	Neutral and Falling	0.01	-0.72
Yield Curve: 10-Yr./Three-Mo.(-)	Rates	Low	2.17	0.25
Yield Curve: Two-Yr./Three-Mo.(-)		Neutral	0.51	0.03
Pace of Interest Rate Hikes (-)		Low	2.53	0.05
Term Premium Model (-)		Long Duration	-	-
High Yield Spreads (-)	Liquidity	High	-1.36	0.07
Investment Grade Spreads (-)		Neutral	0.92	0.11
Financial Conditions (-)		High and Falling	-1.65	0.82
S&P 500 Earnings/Baa Yield (+)	Valuation & Market Behavior	Low	-1.07	-0.14
Large vs. Small Performance (-)		Neutral	-0.02	0.49
High- vs. Low-Quality Performance (-)		High	-1.29	0.31
High- vs. Low-Beta Performance (+)		Low	-1.00	0.33
S&P 500 Forward Price/Earnings Ratio (+)		Neutral	-0.59	0.09
Earnings Revisions Breadth (-)	Earnings	Neutral	-	-
Global Risk Demand (+)	Sentiment	Neutral and Rising	-0.56	0.73
Implied Currency Volatility (-)		Neutral and Falling	0.14	0.63
Five-Yr. Macro Sensitivity (-)		High	-1.27	-0.40
% Stocks Above 200-Day Moving Avg. (+)	Technicals	Low	-1.00	0.35
Cumulative Advance/Decline (+)		Low	-1.09	0.28
S&P 500 Put/Call Ratio (-)		Neutral and Falling	0.26	1.18
Emerging Market Fund Flows (+)		Neutral	0.19	0.32
Smart Money Flow Index (+)		Neutral	-0.56	-0.12

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 Aug. 25, 2017

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Morgan Stanley & Co. Forecasts (as of Aug. 25, 2017)

	Real GDP Growth (%)			10-Yr. Govt. Bond Yield (%)		Headline Inflation (%)			Currency Versus US Dollar		
	2016	2017E	2018E	Q4 '17E	Q2 '18E	2016	2017E	2018E	Q4 '17E	Q2 '18E	Q4 '18E
Global	3.1	3.6	3.7			2.6	2.6	2.8			
US	1.6	2.2	2.2	2.45	2.40	1.3	1.9	1.8			
Euro Zone	1.7	2.1	1.8			0.2	1.5	1.5	1.22	1.21	1.16
UK	1.8	1.6	1.1	1.00	0.95	0.7	2.7	3.1	1.24	1.23	1.27
Japan	1.0	1.9	1.1	0.08	0.20	-0.1	0.6	1.2	114	112	105
Emerging Markets	4.2	4.7	5.0			3.9	3.2	3.5			
China	6.7	6.6	6.4	3.89	3.85	2.0	1.7	2.3	6.60	6.70	6.80

Source: Morgan Stanley & Co. Research

Macro Factor Heat Map (as of Aug. 25, 2017)

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

Note: Text in a factor box denotes a color change; In Japan, Sentiment and Risk went from risk asset neutral to positive as the Relative Strength Index lowered closer to oversold territory; In Brazil, Earnings moved from risk asset negative to neutral as earnings revisions improved; for further explanation of the chart, see page 9.

Source: Morgan Stanley Wealth Management GIC

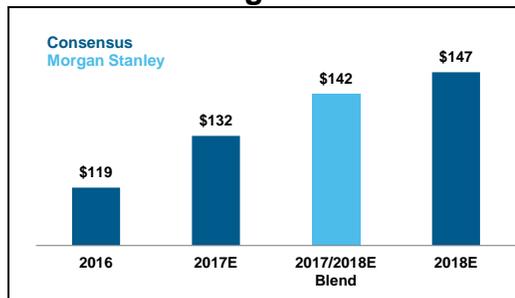
Market Factor Data Points (for the week ending Aug. 25, 2017)

	Positives	Negatives
Global Growth	<ul style="list-style-type: none"> Weekly initial jobless claims remain in the 230,000-to-240,000 range August Markit US Composite rose to 56.0 from 54.6 Richmond and Kansas City Fed manufacturing surveys beat expectations August Markit Euro Zone Composite PMI increased to 55.8, slightly above expectations UK second-quarter GDP met forecast at 1.7% year over year August Japan manufacturing PMI at three-month high 	<ul style="list-style-type: none"> Chicago Fed National Activity Index fell in July, -0.01 versus 0.1 expectation US new home sales plunged 9.4% month over month in July July US durable goods orders, down 6.8%, declined more than expected FHFA House Price Index weaker than expected in June
Inflation	<ul style="list-style-type: none"> Japan CPI 0.4% for July in line with expectations 	
Sentiment	<ul style="list-style-type: none"> Crude oil flat for week with eighth straight weekly inventory drawdown 	<ul style="list-style-type: none"> VIX fell through the week but remained relatively elevated

Source: Morgan Stanley Wealth Management GIC

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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	142.00	21.1	3,000	22.8%
Base Case	142.00	19.0	2,700	10.5
Bear Case	126.50	16.6	2,100	-14.0%
Current S&P 500 Price			2,443	

Source: FactSet, Thomson Reuters, Morgan Stanley & Co. Research as of Aug. 25, 2017

Source: Thomson Reuters, Morgan Stanley & Co. Research as of Aug. 25, 2017

S&P 500 Sector Performance and Valuation (as of Aug. 25, 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	0.75	10.58	14.81	1.91		16.0	17.3
Energy	1.03	-15.05	-7.43	3.06	1.03	17.4	27.5
Materials	1.28	10.51	13.35	2.00	1.11	13.8	17.7
Industrials	0.41	8.20	15.49	2.04	1.07	16.2	17.1
Consumer Discretionary	0.41	9.69	11.12	1.40	0.97	18.0	19.2
Consumer Staples	-0.97	7.30	3.37	2.65	0.67	17.1	19.5
Health Care	1.15	15.58	10.33	1.61	0.91	17.6	16.1
Financials	0.76	7.46	29.13	1.63	1.24	12.9	13.7
Information Technology	0.98	23.74	28.36	1.28	1.14	20.8	18.3
Telecommunication Services	1.98	-6.69	-3.77	4.94	0.74	16.6	12.9
Utilities	1.08	15.34	13.71	3.26	0.53	14.1	18.3
Real Estate	2.29	8.36	2.05	3.21	0.73	15.2	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 Aug. 25, 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.

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Fixed Income Insight: Has the Euro/US Dollar Exchange Rate Overshot?

Central bank intervention in the global rates markets this cycle has made currency exchange rates even more important as a market transmission mechanism. That said, most of the time currencies have stayed pegged to the short end of the yield curve—tracking two-year yields—with both fixed income and currency traders agreeing on the direction of policy. But since mid-July, the euro has strengthened by more than 6% versus the US dollar, extending its year-to-date gain to more than 11%, while the two-year German Bund rate fell further into negative territory (see chart). Our guess is that in September or October, the European Central Bank will announce that it will start tapering in January 2018. If so, the euro will probably retrace some of its recent gains. This could help earnings revisions trends in Europe and may reignite investor interest in value-style equities.



Source: Bloomberg as of Aug. 25, 2017

Government Debt Monitor

	US			
	Yield (%)			Total Return (%)
Treasury Benchmark	Current	ΔWTD	ΔYTD	YTD
3-Month	1.00	0.00	0.51	0.38
2-Year	1.33	0.03	0.14	0.66
5-Year	1.76	0.00	-0.17	2.09
10-Year	2.17	-0.03	-0.28	3.60
30-Year	2.75	-0.03	-0.32	7.94
2-Yr./10-Yr. Spread (bp)	83	-5.41	-42.16	-
10-Yr. TIPS Breakeven (bp)	176	-1.20	-21.64	-
Interest Rate Volatility† (bp)	51	0.40	-21.07	-

Fixed Income Spread Dashboard

	Duration (Yrs.)	Yield-to-Worst (%)	OAS (bp)	OAS Range**	
				Rich	Cheap
Investment Grade	MBS*	3.98	2.64	25	9 — 35
	AAA	4.41	1.92	28	20 — 44
	AA	5.32	2.15	13	8 — 18
	A	7.53	2.84	87	79 — 158
	BBB	7.32	3.43	144	133 — 295
High Yield	BB	4.22	4.45	275	248 — 662
	B	3.60	5.95	432	386 — 1,009
	CCC	2.88	11.13	1,065	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 Aug. 25, 2017

Government Debt Monitor

	Global			
	Yield (%)			Total Return (%)*
10-Year Govt. Bond	Current	ΔWTD	ΔYTD	YTD
France	0.69	-0.02	0.01	1.89
Germany	0.38	-0.04	0.17	0.82
Japan	0.01	-0.02	-0.03	1.45
Spain	1.59	0.04	0.21	2.75
UK	1.05	-0.04	-0.18	3.24
3-Month LIBOR	1.32	0.00	0.32	-
US Tax Exempt				
10-Year AAA Muni	1.88	-0.03	-0.43	5.06
10-Yr. Muni/UST Ratio	86.68	-0.30	-7.95	-

Benchmark Returns

Index	Total Returns (%)		
	YTD	MTD	2016
Bloomberg Barclays US Aggregate	3.38	0.65	2.65
Bloomberg Barclays US MBS	2.34	0.53	1.67
Bloomberg Barclays US IG Corporate	5.07	0.49	6.11
Bloomberg Barclays Municipal	5.06	0.63	0.25
Bloomberg Barclays US High Yield	5.70	-0.37	17.13
Bloomberg Barclays Global Aggregate	7.13	0.91	2.09
JPMorgan Emerging Market	8.29	1.30	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 Aug. 25, 2017

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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. This bull market was challenged during the past year by fears of political events and instability. While the Trump/Republican progrowth agenda has been slower to develop than hoped, it has also left us in a bit of a Goldilocks environment in which growth and interest rates are neither too hot nor too cold. This is supportive of our call for higher valuations and 2700 on the S&P 500.
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 in the first half of the year.
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 2017, 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 Aug. 25, 2017

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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

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Index Definitions

DATASTREAM WORLD DS MINING INDEX This index has 109 stocks and represents the mining sector of a broader world index that includes 26 developed markets and 40 emerging markets.

For other index, indicator and survey definitions referenced in this report please visit the following:

<http://www.morganstanleyfa.com/public/projectfiles/id.pdf>

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 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

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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 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.

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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.

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.

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