

December 10, 2018 05:01 AM GMT

US Equity Strategy | North America

Weekly Warm Up: Yield Curve Inversion Is Inconclusive. Our 2650-2800 Range Holds

Yield curve inversion was inevitable after 5 years of flattening. Unfortunately, it is not a clear signal for what happens next. More importantly, we think it supports our late cycle view and growing risk of an earnings, if not economic, recession next year.

The inversion of the yield curve is already 5 years in the making. From our perspective, the markets have been discounting this inevitable event for most of the year. However, we received a number of inquiries this week from investors who wonder if it signifies an important market shift and perhaps a way to explain this past week's negative price action.

Unfortunately, there aren't any clear patterns to discern from prior inversions, making it difficult to predict what it means for sector leadership or index direction. There has been a lot of hearsay about how it is generally a good sign for equity markets even though it is also a good predictor of a recession coming closer, but we think it's difficult to have much confidence. Our analysis suggests the market has been trading very differently into this (near) inversion than in prior occurrences. That means either the curve isn't going to invert anytime soon or else it is just different this time.

We think Tuesday's sell off in Financials was definitely related to the accelerated flattening in the curve. However, the weakness in the broader market was more likely the result of ill advised buying after Powell's dovish tilt the previous week and the trade truce over the following weekend. Bad entry points trapped significant capital and led to one of the biggest days of selling of the year as evidenced by the extreme reading in the ARMS Index on Tuesday. Friday felt almost as bad but the ARMS Index reading was only 2 versus Tuesday's 3.5. Nevertheless, such readings are supportive of the claim that positioning is getting light as we finish the year and another reason why we think the low end of our range will hold.

Our 2650-2800 trading range for the S&P 500 continues to hold and we continue to expect choppiness in that range. Our call for the Rolling Bear to move to a Chopping Bear on November 5th has played out very well with the S&P 500 following our 2650-2800 prescribed range. Although we continue to like this range, it is going to get tougher to capture the moves given the limited number of trading days left in the year and the resulting lower liquidity as market participants begin to shut it down for the year. In other words, it is likely to be an even choppier ride.

MORGAN STANLEY & CO. LLC

Michael J Wilson

EQUITY STRATEGIST

M.Wilson@morganstanley.com

+1 212 761-2532

Adam Virgadamo, CFA

EQUITY STRATEGIST

Adam.Virgadamo@morganstanley.com

+1 212 761-1376

Andrew B Pauker

EQUITY STRATEGIST

Andrew.Pauker@morganstanley.com

+1 212 761-1330

Michelle M. Weaver

EQUITY STRATEGIST

Michelle.M.Weaver@morganstanley.com

+1 212 296-5254

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

What to Focus on This Week

What Does an Inverted Yield Curve Mean for Markets?

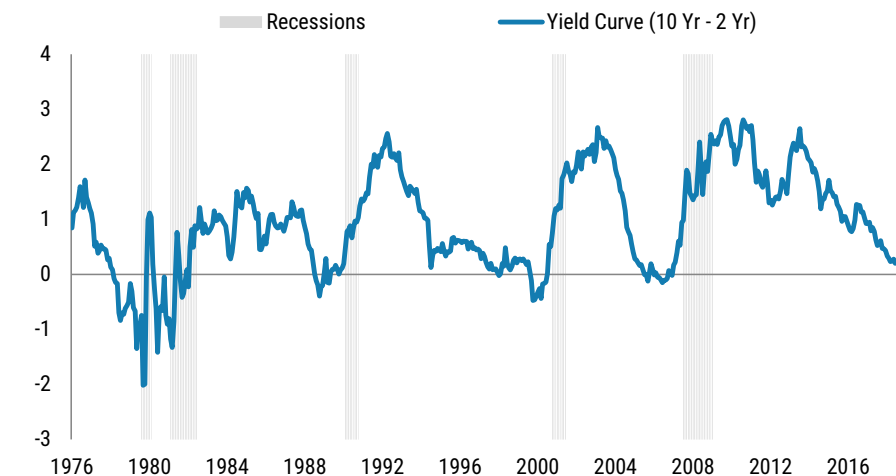
To say that our inbox this week was dominated by questions/concerns around the yield curve inverting would be an understatement. We have also seen just about every commentator addressing it so we thought we would add our two cents to the debate.

We have noticed that a yield curve inversion is a good leading indicator for an economic recession but that it is a very early indicator. What the stock market does post inversion is a bit more open ended.

Our work shows that post yield curve inversion the equity market can move higher, but the evidence is hardly compelling or consistent. More importantly, we think making such a statement absolutely is misleading and misses the more important point for investors - the yield curve has been steadily flattening since the end of 2013 when the Fed first began its tightening cycle with the tapering of QE. Our view that Tapering was Tightening was out of consensus in 2014, and though it has become more mainstream at this point, it is still underappreciated, in our view.

The yield curve began flattening as QE began to wind down. [Exhibit 1](#) clearly shows the peak in the yield curve (2s10s) coinciding with the beginning of the QE tapering. Since then, we've been in a steady and deliberate downtrend with a few hiccups - when the ECB began its QE program in early 2015 and then again in the fall of 2016 when it became apparent we were experiencing a powerful populist wave from the BREXIT vote and US Presidential election. Both of these events had a steepening effect on the US Treasury curve, albeit a temporary one.

Exhibit 1: The Yield Curve Has Been Flattening Since the End of 2013



Source: Bloomberg, Morgan Stanley Research

We did our own analysis on the yield curve inversion looking at the limited historical occurrences available ([Exhibit 2](#) and [Exhibit 3](#)) and found that inversion is neither bullish nor bearish and far from conclusive either way. In other words, an inverted yield

curve is important for other reasons (which we will get to) but it is far from conclusive regarding what to do with one's portfolio. In past cycles, the yield curve has often inverted twice before we have an economic recession (the primary and secondary inversion). [Exhibit 2](#) shows what happens in the S&P 500 (market) and each sector going into the first inversion since that is what we are looking at this time. As you can see, the market is usually positive into the inversion but with very narrow performance led by Technology stocks (and other growth names). This cycle looks different, with the market trading poorly into the inversion (assuming it is near), with defensive sectors leading and Tech the second worst performer after Energy on a 1- and 3-month basis. To be clear, the curve has not officially inverted yet which may explain the difference. However, what's clear is that this time is very inconsistent with the historical patterns.

Exhibit 3 shows what has happened historically *after* the inversion. The market performance is generally poor on a 1- and 3-month basis and basically in line with the average market performance on a 6-month basis during all periods. From a sector standpoint, it appears that defensive and early cyclicals lead--a value bias while Tech and Discretionary lag. This is how we are positioned in our sector preferences. Once again, it's important to note that curve inversion hasn't actually happened yet, making this analysis potentially meaningless.

Exhibit 2: Sector Performance Prior to Yield Curve Inversion

Pre Inversion Leadership - Relative Performance												
-1 Month												
Inversion	Market	Energy	Materials	Industrials	Discretionary	Staples	Healthcare	Financials	Tech	Comm	Utilities	Real Estate
8/31/1978	3.2%	1.8%	0.5%	1.1%	-1.0%	-1.5%	-2.8%	2.7%	1.0%	0.4%	-3.5%	1.4%
1/31/1989	6.6%	0.0%	3.1%	-0.1%	-0.5%	-3.0%	-0.1%	1.5%	1.4%	2.2%	-4.5%	-2.1%
6/30/1998	5.1%	-6.0%	-7.9%	-2.7%	0.1%	-0.9%	2.1%	-0.6%	5.8%	1.4%	-1.6%	-0.9%
2/29/2000	1.9%	-8.1%	-11.3%	-5.7%	-6.2%	-12.4%	-8.9%	-11.8%	16.9%	0.3%	-7.1%	-13.3%
12/31/2005	0.1%	0.9%	3.2%	0.3%	-0.7%	-0.4%	2.8%	0.1%	-2.8%	-1.3%	1.0%	-0.4%
Average	3.4%	-2.3%	-2.5%	-1.4%	-1.7%	-3.7%	-1.4%	-1.6%	4.5%	0.6%	-3.1%	-3.1%
Today	2.0%	-3.9%	1.7%	1.7%	0.7%	-0.4%	5.0%	0.9%	-3.5%	-2.8%	3.1%	3.4%
-3 Months												
Inversion	Market	Energy	Materials	Industrials	Discretionary	Staples	Healthcare	Financials	Tech	Comm	Utilities	Real Estate
8/31/1978	8.0%	-2.2%	1.2%	4.3%	-3.9%	-1.9%	1.4%	2.9%	6.3%	-3.5%	-4.7%	10.8%
1/31/1989	6.9%	0.5%	3.9%	-0.4%	-2.1%	-1.1%	-1.6%	-2.5%	4.0%	3.2%	-4.4%	4.0%
6/30/1998	4.6%	-5.0%	-6.3%	-6.3%	7.7%	-3.0%	2.9%	-0.4%	5.2%	0.6%	-4.1%	-4.6%
2/29/2000	5.7%	-12.6%	-17.2%	-10.6%	-11.3%	-24.4%	-13.1%	-20.4%	30.8%	4.1%	4.4%	-9.3%
12/31/2005	2.4%	-9.4%	9.0%	2.6%	0.4%	-1.6%	-0.2%	5.8%	-1.0%	-1.1%	-8.3%	0.5%
Average	5.5%	-5.7%	-1.9%	-2.1%	-1.8%	-6.4%	-2.1%	-2.9%	9.0%	0.6%	-3.4%	0.3%
Today	-4.6%	-6.2%	-3.7%	-0.8%	-4.5%	9.5%	7.6%	0.6%	-4.5%	-2.7%	10.9%	5.8%
-6 Months												
Inversion	Market	Energy	Materials	Industrials	Discretionary	Staples	Healthcare	Financials	Tech	Comm	Utilities	Real Estate
8/31/1978	22.3%	-4.3%	5.0%	14.0%	-2.8%	-1.2%	8.1%	8.2%	4.7%	-9.7%	-17.1%	17.2%
1/31/1989	10.1%	-6.4%	-0.9%	-0.7%	-2.5%	1.9%	5.7%	-0.6%	-6.9%	8.3%	-2.6%	-22.1%
6/30/1998	20.3%	-16.0%	-9.7%	-8.8%	16.2%	-9.9%	4.8%	-2.6%	13.2%	8.6%	-14.1%	-24.1%
2/29/2000	13.9%	-23.6%	-26.1%	-18.6%	-8.7%	-33.7%	-18.5%	-24.0%	42.2%	16.5%	-15.5%	-19.4%
12/31/2005	6.2%	4.6%	8.1%	1.3%	-4.6%	-3.1%	-2.0%	3.1%	1.2%	-4.8%	-3.5%	1.5%
Average	14.5%	-9.1%	-4.7%	-2.6%	-0.5%	-9.2%	-0.4%	-3.2%	10.9%	3.8%	-10.5%	-9.4%
Today	3.0%	-14.7%	-9.8%	-4.6%	-2.8%	11.5%	13.8%	-2.5%	-2.3%	-3.7%	9.4%	6.4%

Source: Clarifi, Morgan Stanley Research. Based on Top 500 US stocks by market cap. These exhibits are based on monthly data, "today" taken to be 11/30/2018.

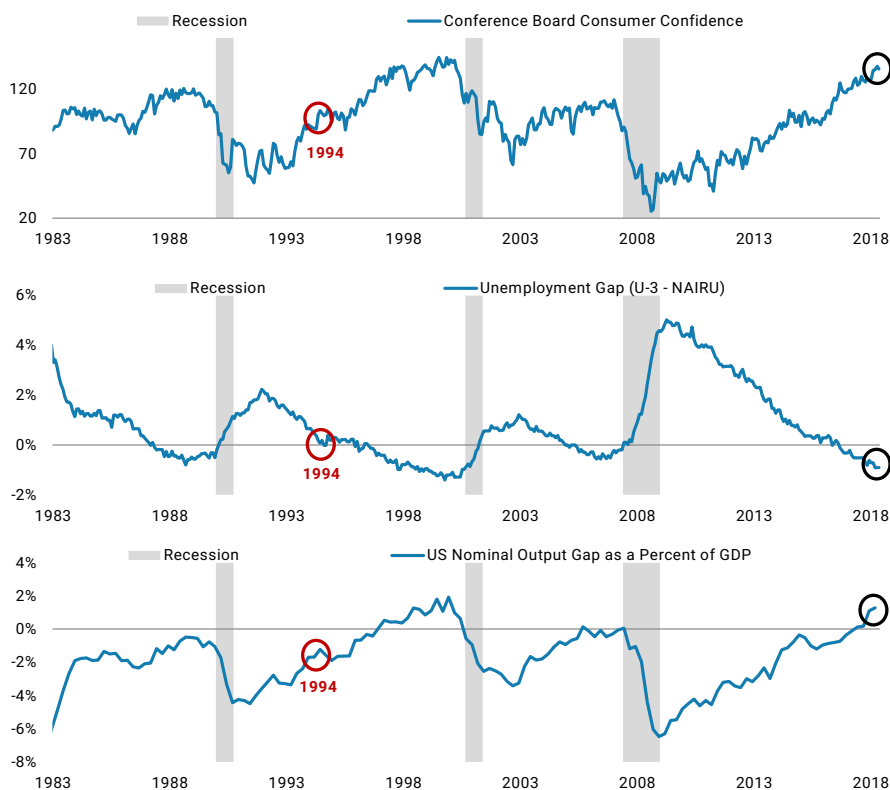
Exhibit 3: Sector Performance After the Yield Curve Inversion

Post Inversion Leadership - Relative Performance												
+1 Month												
Inversion	Market	Energy	Materials	Industrials	Discretionary	Staples	Healthcare	Financials	Tech	Comm	Utilities	Real Estate
8/31/1978	-1.0%	4.6%	1.6%	-3.0%	-0.2%	-0.7%	-2.0%	-0.9%	-3.5%	2.0%	0.9%	-1.2%
1/31/1989	-2.8%	2.2%	-0.3%	-0.1%	-1.0%	-1.4%	0.9%	1.7%	-2.4%	1.0%	0.6%	0.1%
6/30/1998	-0.7%	-5.4%	-6.8%	-3.4%	-1.1%	-3.3%	0.7%	0.4%	4.9%	4.9%	-4.9%	-11.4%
2/29/2000	7.4%	3.9%	3.3%	6.1%	3.2%	-8.7%	-4.0%	11.7%	-2.4%	-2.8%	-3.8%	-2.6%
12/31/2005	2.7%	11.3%	2.0%	-3.2%	-1.0%	-2.6%	-1.9%	-1.9%	1.1%	0.0%	0.3%	5.2%
Average	1.1%	3.3%	-0.1%	-0.7%	0.0%	-3.3%	-1.3%	2.2%	-0.5%	1.0%	-1.4%	-2.0%
+3 Months												
Inversion	Market	Energy	Materials	Industrials	Discretionary	Staples	Healthcare	Financials	Tech	Comm	Utilities	Real Estate
8/31/1978	-7.9%	5.5%	-0.9%	-6.1%	-1.8%	-1.3%	-1.6%	-3.6%	-0.3%	6.4%	3.7%	-3.1%
1/31/1989	4.0%	1.1%	-1.8%	-0.3%	-4.2%	-1.4%	4.6%	4.5%	-12.1%	9.8%	-1.2%	-20.9%
6/30/1998	-9.8%	6.0%	-6.5%	-4.7%	-7.9%	-4.8%	9.6%	-11.3%	10.4%	7.1%	13.0%	-10.8%
2/29/2000	-3.6%	23.4%	5.5%	18.0%	0.2%	14.1%	16.6%	24.7%	-13.1%	-16.0%	18.8%	16.9%
12/31/2005	4.2%	4.7%	2.9%	3.2%	-0.9%	-2.2%	-4.0%	-1.0%	0.9%	0.7%	-4.7%	12.2%
Average	-2.6%	8.1%	-0.1%	2.0%	-2.9%	0.9%	5.1%	2.7%	-2.8%	1.6%	5.9%	-1.2%
+6 Months												
Inversion	Market	Energy	Materials	Industrials	Discretionary	Staples	Healthcare	Financials	Tech	Comm	Utilities	Real Estate
8/31/1978	-5.0%	9.6%	2.4%	-7.4%	-5.2%	-4.9%	-4.2%	-6.9%	3.8%	5.8%	3.0%	3.3%
1/31/1989	16.0%	-5.2%	-8.5%	0.1%	-8.3%	3.6%	7.8%	10.4%	-22.7%	16.7%	2.8%	-34.1%
6/30/1998	9.3%	-12.8%	-22.9%	-5.7%	0.0%	-5.4%	5.3%	-14.0%	28.7%	7.8%	-3.3%	-33.7%
2/29/2000	7.1%	13.0%	-12.5%	15.2%	-18.4%	2.3%	13.7%	32.1%	-0.5%	-27.7%	30.0%	17.4%
12/31/2005	2.9%	10.5%	4.7%	4.7%	-3.8%	2.0%	-7.3%	-0.1%	-8.2%	5.5%	2.4%	11.9%
Average	6.1%	3.0%	-7.4%	1.4%	-7.1%	-0.5%	3.1%	4.3%	0.2%	1.6%	7.0%	-7.0%

Source: Clarifi, Morgan Stanley Research. Based on Top 500 US stocks by market cap.

Despite investor feedback saying we are mid-cycle, we continue to hold our late-cycle view.

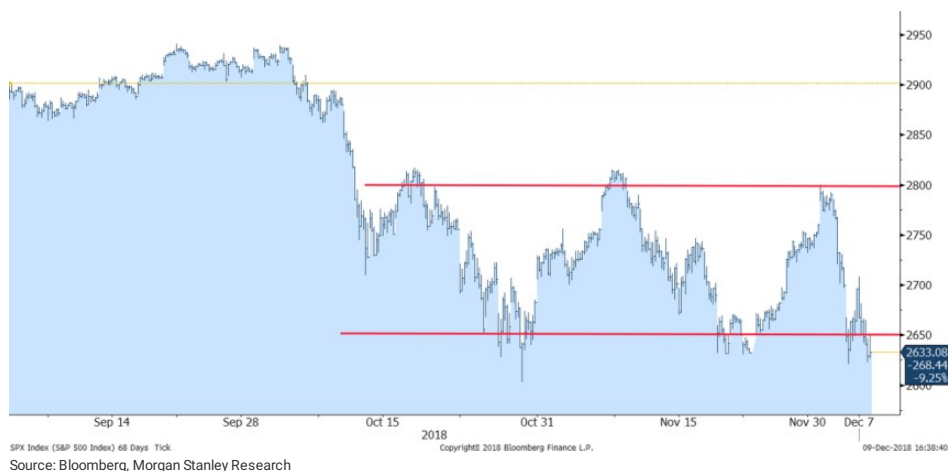
We have also had numerous questions about our late cycle view, with many investors suggesting we are actually mid-cycle. If true, such a conclusion means curve inversion is irrelevant from a market standpoint, furthering their bullish view. The near inversion of December 1994 is one cited as the best comparable to the current situation. With respect to this "mid-cycle" view, we disagree due to a few irrefutable facts. Specifically, the unemployment gap relative to NAIRU, the output gap, and consumer confidence all look very different than they did in December 1994, which was indeed a mid-cycle situation. [Exhibit 4](#) illustrates just how different it is today. In fact, on all three measures, the US economy has rarely reached such high levels.

Exhibit 4: On Several Key Measures, the US Economy is Very Late Cycle, Not Mid Cycle like Dec 1994

Source: Bloomberg, Morgan Stanley Research as of November 30, 2018.

Our 2650-2800 Range Continues to Hold

Into year end, we still struggle to see the market meaningfully breaking out of our 2650 - 2800 range in either direction. Five weeks ago we laid out our case for the S&P 500 to trade in a narrower range of 2650-2800 for the rest of the year ([Weekly Warm up: From Rolling to Chopping](#), November 5, 2018). Since then, that range has held almost perfectly, with several touches on either end ([Exhibit 5](#)). From our regular conversations with clients over the past month, we sense too many have been caught buying the highs and selling the lows. But, that's what choppy markets are designed to do--trap you--and why our advice has been to fight the momentum on both the upside and downside. Last week was just another example of the low end of the range getting tested, holding once again on Thursday just at the point that market participants could start worrying. Of course, on Friday that all reversed again only to see the S&P 500 back at the low end of our range, which we think will hold again.

Exhibit 5: 2650-2800 Range Continues to Define the S&P 500

Assuming no downward revisions to earnings estimates and no break lower in equity risk premium, we see no reason for a break out either way before year end. First, on the downside, we would need forward earnings estimates to fall meaningfully from here to break down given the S&P 500 trades at just 15x forward 12-month consensus EPS (\$175) at 2625. With 10-year yields back down to 2.87%, that puts the Equity Risk Premium all the way back to 380 bps at 15x, or the lowest level since 2016 when the market was concerned about Brexit and the US election. While we are calling for a 50% chance of an earnings recession next year, we also don't think the market will price that in until there is more hard evidence. Such evidence isn't likely to come until the next earnings season - i.e. after the new year. Conversely, with all of the uncertainty, we think it will be difficult for the ERP to fall below 340 bps, which means 16x is a good cap on valuation, or 2800. Obviously, markets can overshoot fair value but we think this serves as a very good framework for investors to understand where their risk is elevated, not to mention the fact that this range has now been validated in the marketplace.

Within the range, lower liquidity and continued volatility will make trading difficult.

With only 2 weeks of trading to go, the liquidity in the market is arguably going to get worse between now and year end, making the choppiness even harder to navigate. Since the October lows, we've had four 150 point straight line moves up and down in the S&P. We suspect it won't be that clean from here, making it much more difficult to capture whatever alpha is left in trading the Index in 2018. The abrupt reversal overnight on Thursday is a perfect example of this.

Fresh Money Buy List - Updates

Each week, we will use a section of our Weekly Warm Up to provide brief updates on select stocks on our [Fresh Money Buy List](#).

Exhibit 6: Fresh Money Buy List - Stats and Performance

Company Name	Ticker	MS Analyst Rating	Sector	Market Cap (\$Bn)	Price	MS PT	% to MS PT	MS Analyst	Date Added	Total Return Since Inclusion	
										Absolute	Rel. to S&P
Walt Disney Co	DIS	Overweight	Communication Services	\$167.3	\$111.98	\$135.00	21%	Swinburne, Benjamin	3/14/2018	9.7%	13.1%
Humana Inc	HUM	Overweight	Health Care	\$42.3	\$306.00	\$418.00	37%	Sopcak, Zack	7/19/2018	(3.3%)	2.4%
Iqvia Holdings Inc	IQV	Overweight	Health Care	\$25.0	\$117.98	\$145.00	23%	Goldwasser, Ricky	3/14/2018	11.6%	15.0%
LyondellBasell Industries N.V.	LYB	++	Materials	\$33.3	\$84.37	++	++	Andrews, Vincent	3/14/2018	(21.3%)	(17.9%)
Microsoft	MSFT	Overweight	Information Technology	\$814.8	\$104.82	\$130.00	24%	Weiss, Keith	3/14/2018	12.4%	15.8%
NextEra Energy Inc	NEE	Overweight	Utilities	\$87.1	\$182.86	\$185.00	1%	Byrd, Stephen	3/14/2018	20.6%	24.0%
Occidental Petroleum Corp	OXY	Overweight	Energy	\$50.3	\$66.54	\$88.00	32%	McDermott, Devin	7/19/2018	(18.0%)	(12.3%)
Progressive Corp	PGR	Overweight	Financials	\$37.2	\$63.42	\$84.00	32%	Pan, Kai	12/3/2018	(4.3%)	0.2%
T-Mobile US, Inc.	TMUS	++	Communication Services	\$56.06	\$65.69	++	++	Flannery, Simon	3/14/2018	1.1%	4.5%
Current List Performance											
Average (Eq. Weight)				\$145.9			24%			0.9%	5.0%
Median				\$50.3			24%			1.1%	4.5%
% Positive Returns (Abs. / Rel.)										56%	78%
% Negative Returns (Abs. / Rel.)										44%	22%
Avg. Hold Period (Months)											7.1
All Time List Performance											
Average (Eq. Weight)										(1.1%)	1.0%
Median										(3.3%)	2.4%
% Positive Returns (Abs. / Rel.)										46%	62%
% Negative Returns (Abs. / Rel.)										54%	38%
Avg. Hold Period (Months)											6.9

++ Rating and other information has been removed from consideration in this report because, under applicable law and/or Morgan Stanley policy, Morgan Stanley may be precluded from issuing such information with respect to this company at this time.

Performance returns shown above represent local currency total returns, including dividends and excluding brokerage commission. Returns are calculated using the closing price on the last trading day before the date shown in the "Date Added" column through close on the last trading day prior to publication of this report for stocks currently on the list and through close on the day of removal for stocks formerly on the list. These figures are not audited. Past performance is no guarantee of future results.

Source: Bloomberg, Morgan Stanley Research.

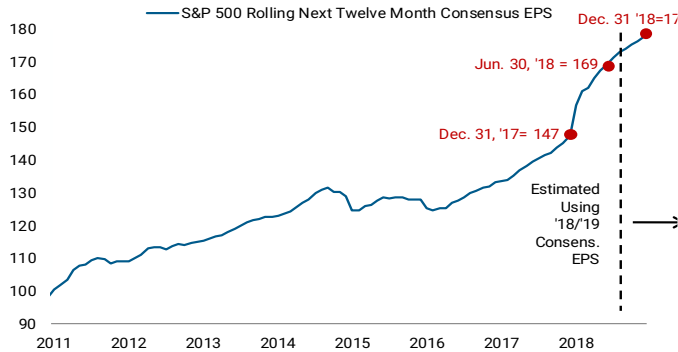
IQvia Holdings (IQV), Ricky Goldwasser

- Estimates and Price Target Updates for 10 Companies** - IQV shares are down 1% since reporting September quarter results as investors have been concerned with 2019 guidance coming in below consensus reflecting a step in investments ahead of on boarding new contract with Roche, representing a buying opportunity in our view. Price target moved to \$145 from \$130.

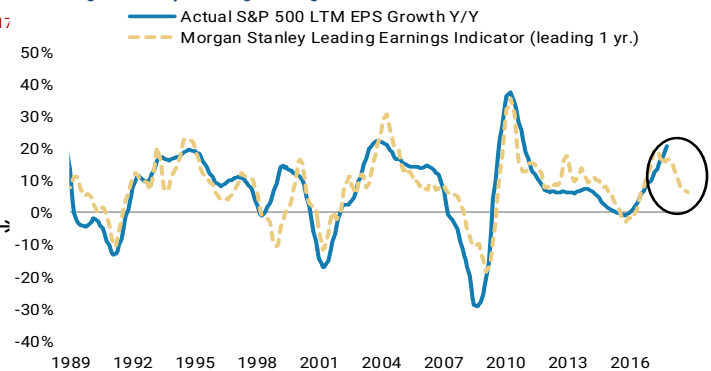
Weekly Charts to Watch

Exhibit 7: Four Charts to Focus On

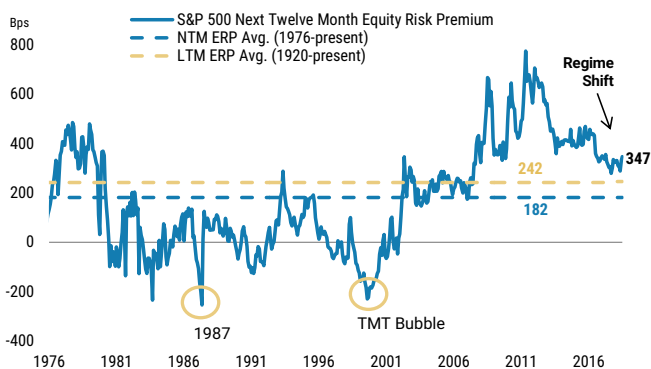
Rolling NTM EPS



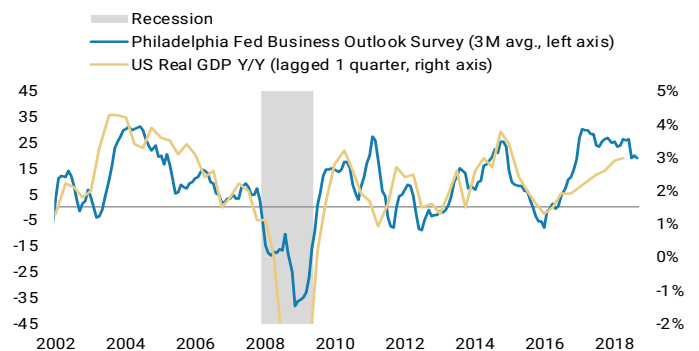
Morgan Stanley Leading Earnings Indicator



S&P 500 NTM Equity Risk Premium



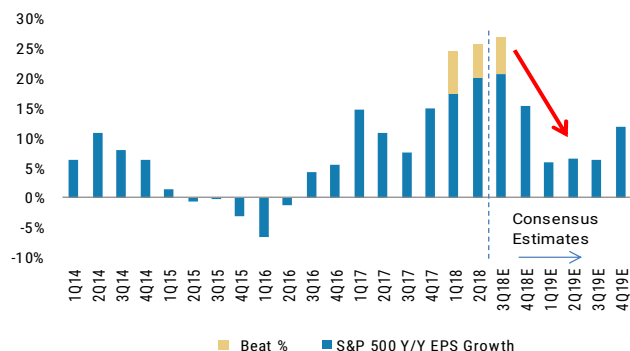
Phil. Fed Business Outlook Survey Leads Real GDP Growth



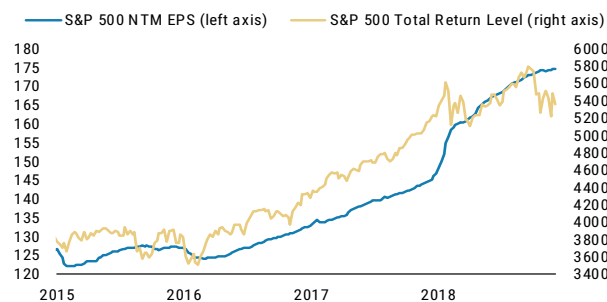
Source: FactSet, Bloomberg, Robert Shiller, Morgan Stanley Research. Top two and bottom right: As of October 31, 2018. Bottom left: As of November 29, 2018. MSLEI is a macro factor based earnings model that leads actual earnings growth by one year with a 0.7 12-month leading correlation. Note: S&P 500 fundamental data used post March 1993; Top 500 by market cap data used before 1993. LTM equity risk premium average is since 1920. ERP based on forward earnings yield and 10-year Treasury Yield.

Exhibit 8: US Earnings Snapshot

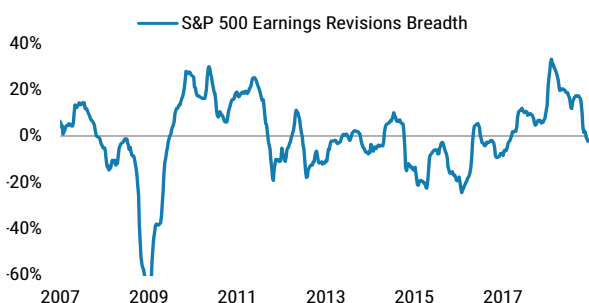
S&P 500 Y/Y EPS Growth



S&P 500 NTM EPS vs. Total Return Level



S&P 500 Earnings Revisions Breadth



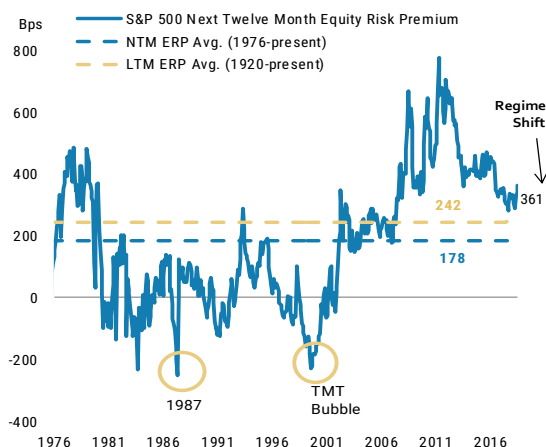
S&P 500 Earnings Revisions Breadth

Sector/Index	Current NTM EPS Revisions Vs. Prior Periods			
	3/31/2017	6/30/2017	9/30/2017	12/31/2017
S&P 500	29.9%	25.9%	23.4%	19.1%
Comm Services	29.1%	28.4%	24.4%	21.3%
Consumer Discretionary	21.8%	19.2%	19.3%	19.1%
Consumer Staples	12.2%	9.9%	7.2%	5.3%
Energy	93.1%	89.4%	105.1%	70.4%
Financials	33.6%	29.7%	27.2%	21.5%
Health Care	23.5%	20.5%	17.9%	16.7%
Industrials	27.0%	20.2%	19.0%	21.2%
Info Tech	34.4%	27.9%	22.7%	15.2%
Materials	26.8%	22.3%	18.5%	12.1%
Utilities	13.1%	11.0%	9.1%	7.6%
Real Estate	6.6%	5.0%	3.6%	2.3%

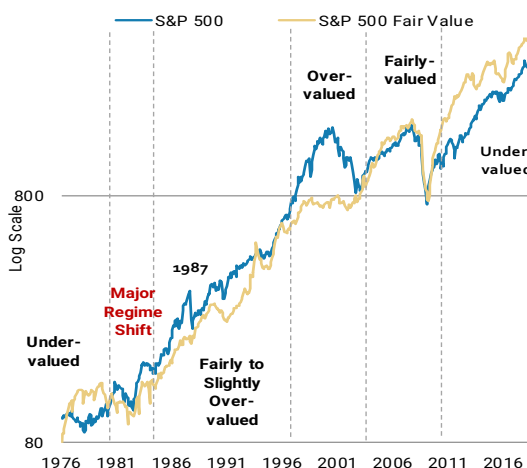
Source: Thomson Financial, FactSet, Morgan Stanley Research. Top: L: As of December 7, 2018, 2018 R: As of December 6, 2018 Bottom: L: As of December 5, 2018, R: As of December 6, 2018.

Exhibit 9: US Equity Market Valuation Measures Which Incorporate Interest Rates

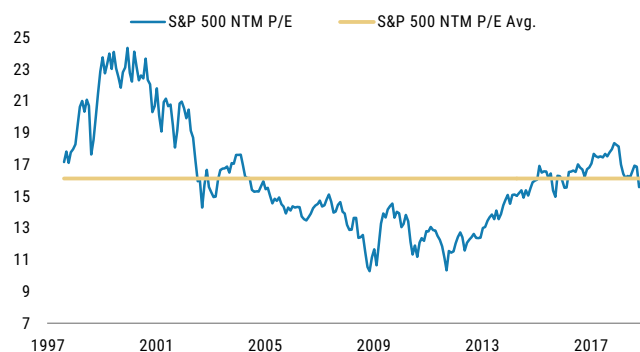
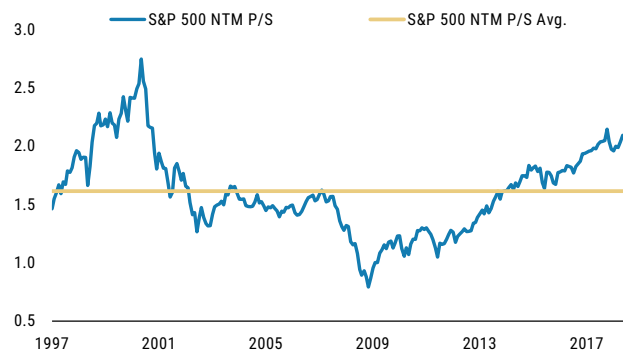
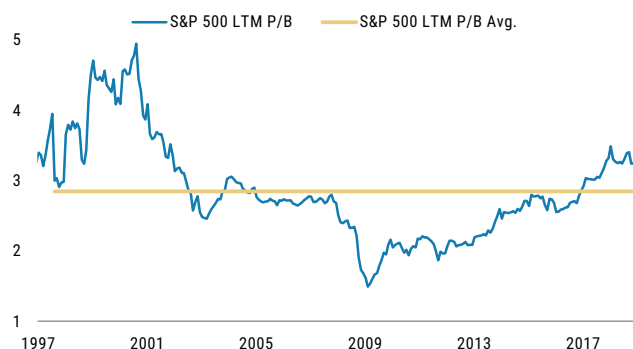
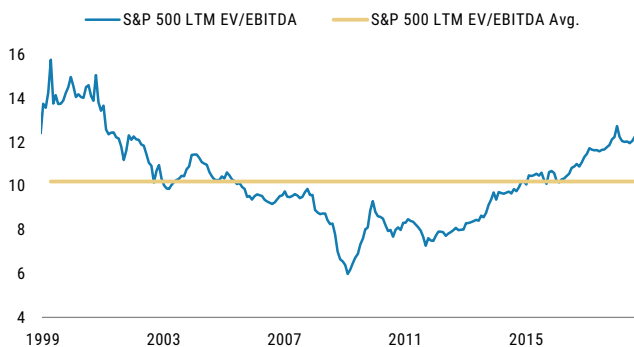
S&P 500 Next Twelve Month Equity Risk Premium



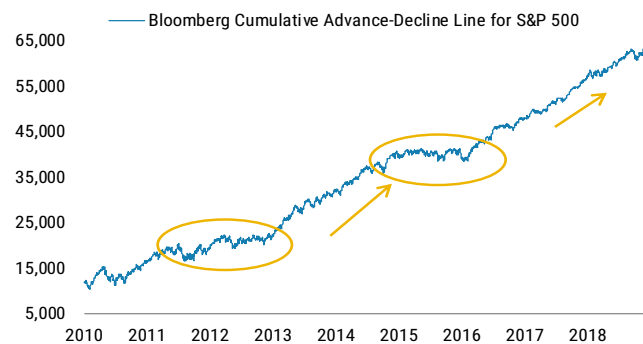
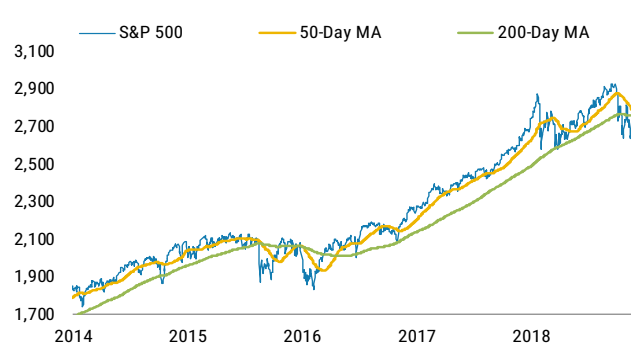
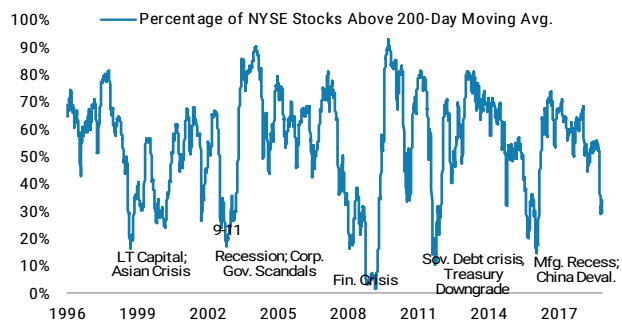
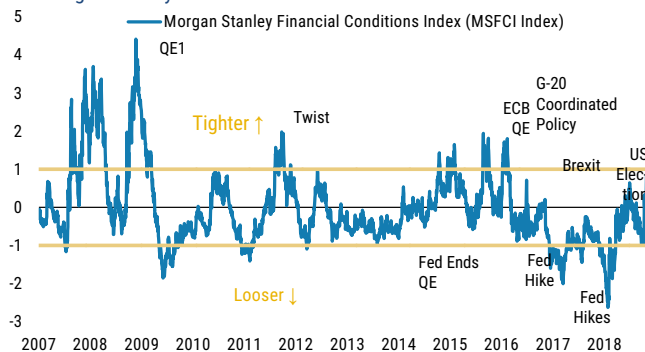
S&P 500 Fair Value



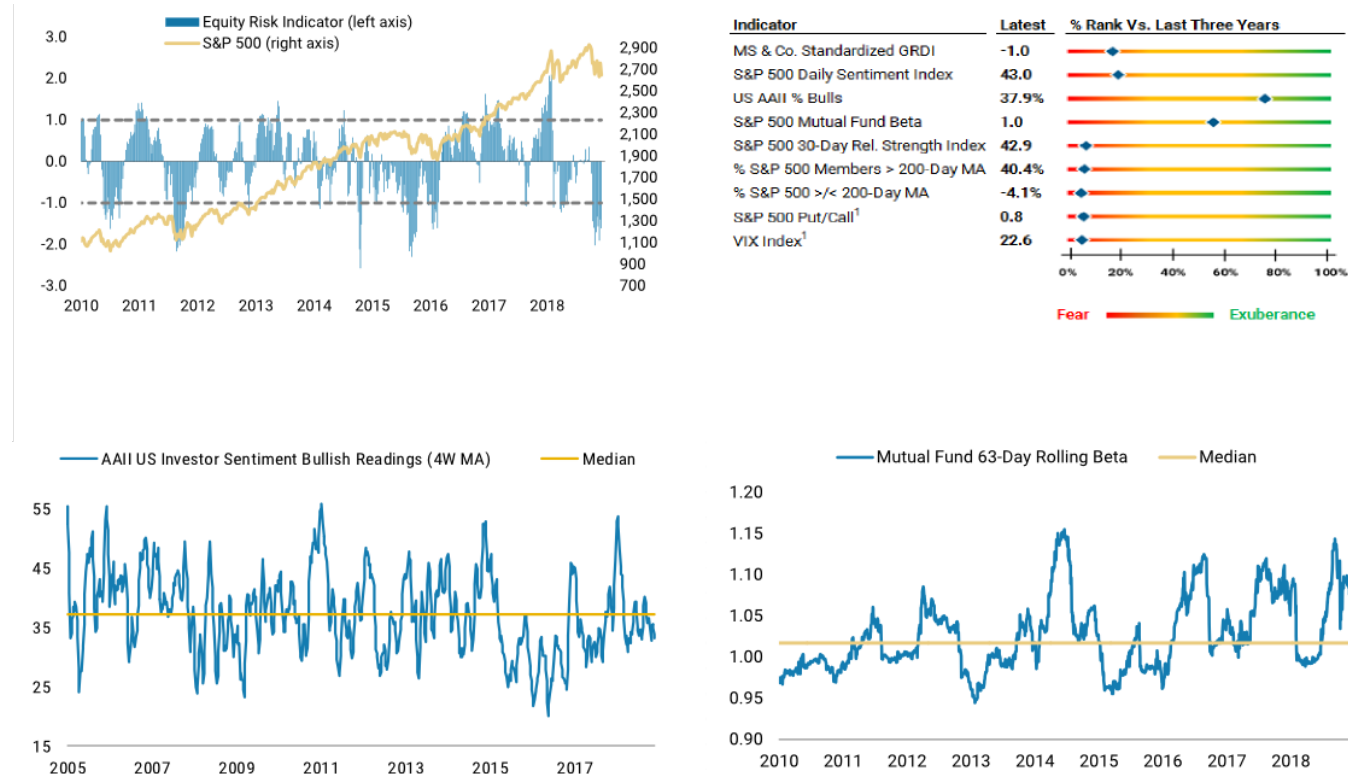
Source: FactSet, Bloomberg, Morgan Stanley Research L: As of December 6, 2018 R: As of November 30, 2018. Note: S&P 500 fundamental data used post March 1993; Top 500 by market cap data used before 1993. LTM equity risk premium average is since 1920. ERP based on forward earnings yield and 10-year Treasury Yield. Fair Value based on consensus S&P 500 EPS and Moody's Baa Bond Index yield.

Exhibit 10: US Equity Market Traditional Valuation Measures
S&P 500 NTM P/E

S&P 500 NTM P/S

S&P 500 LTM P/B

S&P 500 LTM EV/EBITDA


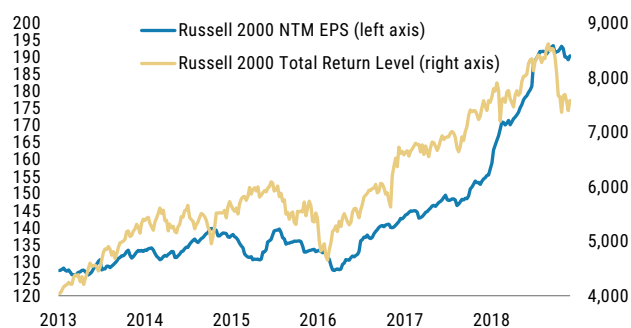
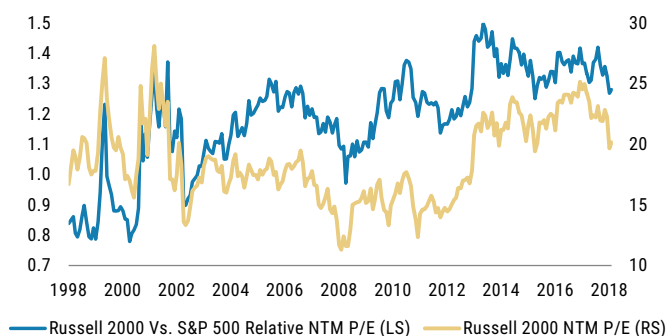
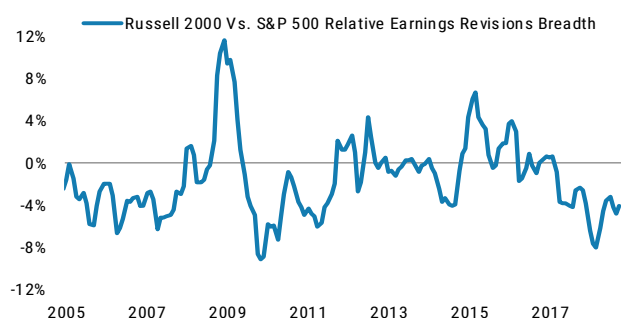
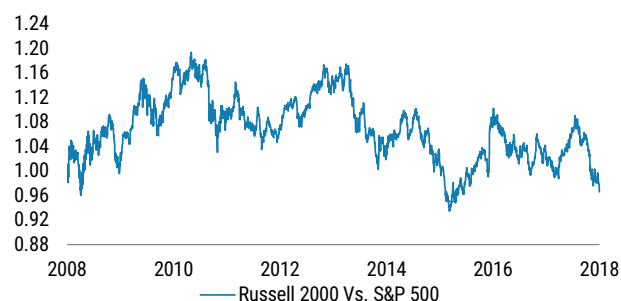
Source: FactSet, Morgan Stanley Research as of November 30, 2018. Monthly Data. Note: S&P 500 fundamental data used post March 1993; Top 500 by market cap data used before 1993.

Exhibit 11: US Equity Market Technicals and Financial Conditions
S&P 500 Cumulative Advance-Dcline

S&P 500 with Moving Averages

S&P 500 Percent Members Above 200-Day Moving Average

Morgan Stanley Financial Conditions Index


Source: Bloomberg, Morgan Stanley Research. All: As of December 6, 2018.

Exhibit 12: US Equity Market Sentiment


Source: Bloomberg, Factset, Morgan Stanley Research. As of December 7, 2018.

Exhibit 13: US Small Cap Equities
Russell 2000 NTM EPS vs. Total Return Level

Russell 2000 NTM P/E and Relative NTM P/E vs. S&P 500

Russell 2000 Relative Earnings Revisions Breadth

Russell 2000 Relative Performance vs. S&P 500


Source: Factset, Morgan Stanley Research. Top Right and Bottom Left: As of November 30, 2018. Top Left and Bottom Right: As of December 6, 2018.

Exhibit 14: We Have a Year End 2019 Price Target of \$2,750
Morgan Stanley S&P 500 Price Target: Year End 2019

Landscape	Earnings	Multiple	Price Target	Upside / Downside
Bull Case	\$185	16.0x	3,000	11.3%
Base Case	\$176	15.5x	2,750	2.0%
Bear Case	\$161	15.0x	2,400	-11.0%

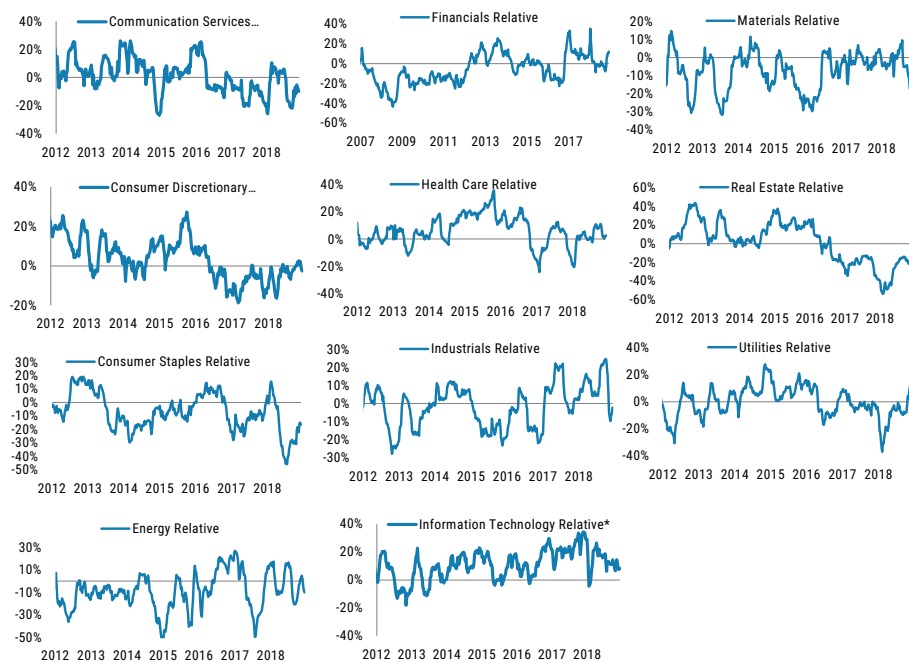
Current S&P 500 Price as of: 12/6/2018 2,696

Source: Morgan Stanley Research

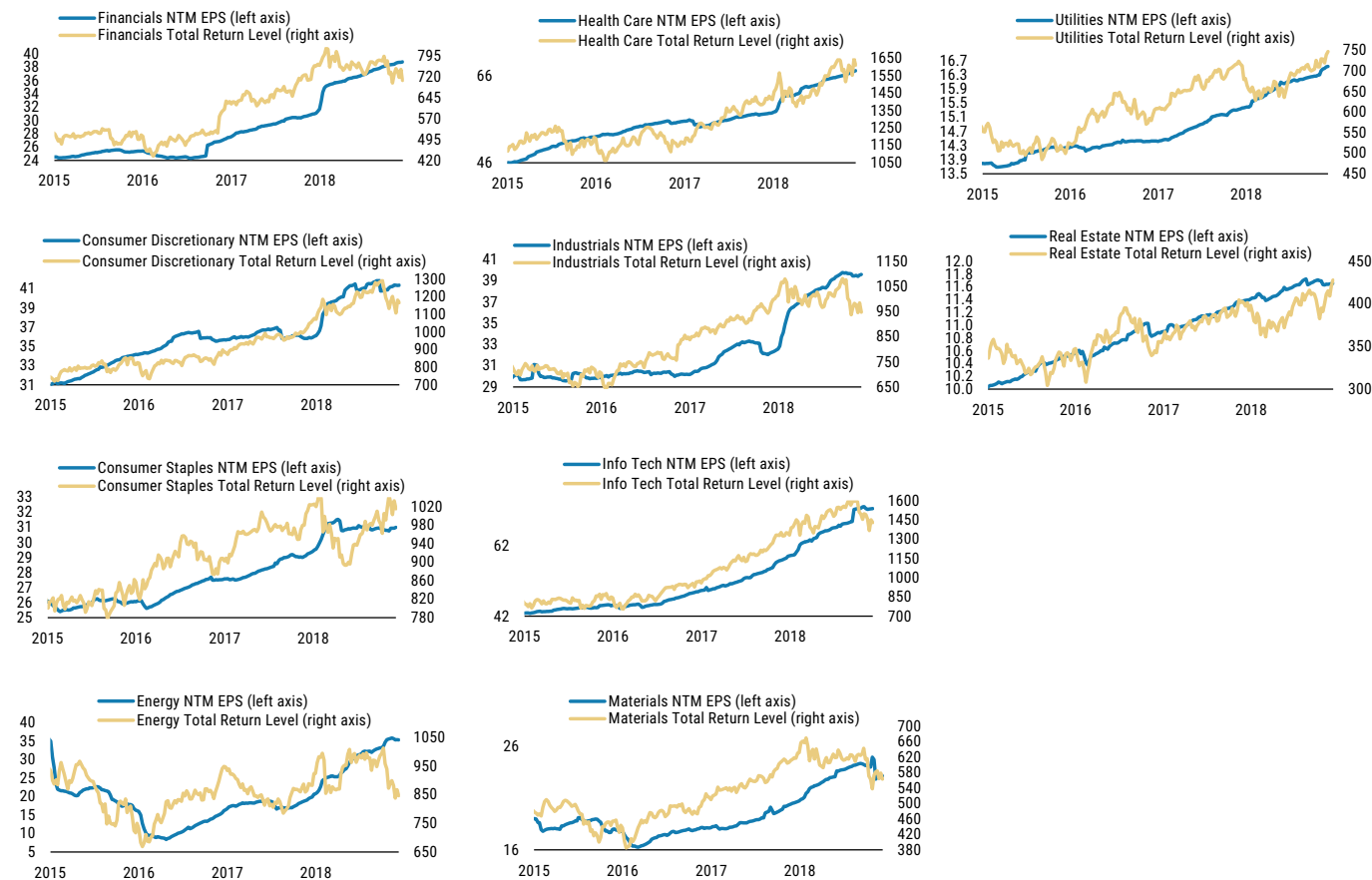
Exhibit 15: Sector Recommendations

Morgan Stanley Sector Recommendations					
Overweight	Consumer Staples	Energy	Financials	Utilities	
Neutral	Comm Services	Health Care	Industrials	Materials	Real Estate
Underweight	Discretionary	Technology			

Source: Morgan Stanley Research

Exhibit 16: Earnings Revisions Breadth

Source: Factset, Morgan Stanley Research. As of December 5, 2018. Sectors with * use current, fixed constituents. Data for those sectors updated through November 28, 2018.

Exhibit 17: US Sector NTM EPS vs. Total Return Level

Source: FactSet, Morgan Stanley Research as of December 6, 2018.

For valuation methodology and risks associated with any price targets referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Morgan Stanley & Co. LLC ("Morgan Stanley") is acting as financial advisor to Deutsche Telekom AG ("DT") and is providing financing services in relation to T-Mobile USA, Inc. ("T-Mobile") for the proposed acquisition by T-Mobile of Sprint Communications, Inc. ("Sprint") as announced on 29th April 2018. The transaction is subject to approval by T-Mobile and Sprint shareholders and other customary closing conditions. DT and T-Mobile have agreed to pay fees to Morgan Stanley for its financial services that are contingent upon the consummation of the transaction. Please refer to the notes at the end of the report.

Morgan Stanley is acting as financial advisor to LyondellBasell Industries NV ("LyondellBasell") in connection with its exclusive discussions with Odebrecht S.A. regarding a potential transaction between LyondellBasell and Braskem, S.A., as announced on June 15, 2018. There is no guarantee that any transaction will ultimately be consummated. Morgan Stanley may receive compensation from LyondellBasell for its services. Please refer to the notes at the end of this report.

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared by Morgan Stanley & Co. LLC, and/or Morgan Stanley C.T.V.M. S.A., and/or Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V., and/or Morgan Stanley Canada Limited. As used in this disclosure section, "Morgan Stanley" includes Morgan Stanley & Co. LLC, Morgan Stanley C.T.V.M. S.A., Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V., Morgan Stanley Canada Limited and their affiliates as necessary.

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Andrew B Pauker; Adam Virgadamo, CFA; Michelle M. Weaver; Michael J Wilson.

Unless otherwise stated, the individuals listed on the cover page of this report are research analysts.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflict/policies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important US Regulatory Disclosures on Subject Companies

As of November 30, 2018, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: LyondellBasell Industries N.V., NextEra Energy Inc, Occidental Petroleum Corp, Walt Disney Co.

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Humana Inc, NextEra Energy Inc, Progressive Corp, T-Mobile US, Inc..

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from Humana Inc, NextEra Energy Inc, Progressive Corp, Walt Disney Co.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Humana Inc, Iqvia Holdings Inc, LyondellBasell Industries N.V., Microsoft, NextEra Energy Inc, Occidental Petroleum Corp, Progressive Corp, T-Mobile US, Inc., Walt Disney Co.

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from Humana Inc, Iqvia Holdings Inc, LyondellBasell Industries N.V., Microsoft, NextEra Energy Inc, Occidental Petroleum Corp, Progressive Corp, T-Mobile US, Inc., Walt Disney Co.

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: Humana Inc, Iqvia Holdings Inc, LyondellBasell Industries N.V., Microsoft, NextEra Energy Inc, Occidental Petroleum Corp, Progressive Corp, T-Mobile US, Inc., Walt Disney Co.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: Humana Inc, Iqvia Holdings Inc, LyondellBasell Industries N.V., Microsoft, NextEra Energy Inc, Occidental Petroleum Corp, Progressive Corp, T-Mobile US, Inc., Walt Disney Co.

Morgan Stanley & Co. LLC makes a market in the securities of Iqvia Holdings Inc, LyondellBasell Industries N.V., Microsoft, NextEra Energy Inc, Occidental Petroleum Corp, Progressive Corp, T-Mobile US, Inc., Walt Disney Co.

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of November 30, 2018)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with NASD and NYSE requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover.

Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MSC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MSC
Overweight/Buy	1156	37%	295	40%	26%	541	38%
Equal-weight/Hold	1405	44%	342	47%	24%	641	45%
Not-Rated/Hold	46	1%	7	1%	15%	7	0%
Underweight/Sell	555	18%	85	12%	15%	226	16%
TOTAL	3,162		729			1415	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley Equity Research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the Equity Research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley & Co. International PLC and its affiliates have a significant financial interest in the debt securities of Humana Inc, LyondellBasell Industries N.V., Microsoft, NextEra Energy Inc, Occidental Petroleum Corp, Progressive Corp, T-Mobile US, Inc., Walt Disney Co.

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions. Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (<http://www.morganstanley.com/terms.html>). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (<http://www.morganstanley.com/terms.html>).

In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies

please do not access our research.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your 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 or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important US Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V. which is regulated by Comisión Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Asia International Limited, Hong Kong Branch; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Asia International Limited, Singapore Branch (Registration number T11FC0207F); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "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, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited; in Indonesia by PT. Morgan Stanley Sekuritas Indonesia; in Canada by Morgan Stanley Canada Limited, which has approved of and takes responsibility for its contents in Canada; in Germany by Morgan Stanley Bank AG, Frankfurt am Main and Morgan Stanley Private Wealth Management Limited, Niederlassung Deutschland, regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin); in Spain by Morgan Stanley, S.V., S.A., a Morgan Stanley group company, which is supervised by the Spanish Securities Markets Commission (CNMV) and states that Morgan Stanley Research has been written and distributed in accordance with the rules of conduct applicable to financial research as established under Spanish regulations; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulatory Authority and regulated by the Financial Conduct Authority and the Prudential Regulatory Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and regulated by the Financial Services Board in South Africa. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail

Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

© 2018 Morgan Stanley