



Global Investment Committee | November 02, 2020

The GIC Weekly

Challenging Convention

Current market volatility could be explained by the COVID-19 resurgence, delayed fiscal stimulus and election anxiety. Even so, spikes in the volatility of volatility suggest something more structural is afoot. We see two powerful undercurrents: a new and different business cycle and a radical regime shift in policy that challenges conventional wisdom. Because more than a decade of secular stagnation created large imbalances in the economy and aggressive monetary policy failed to normalize growth, the conventional wisdom is turning toward Keynesian approaches. This means that investors will no longer think “government gridlock is good,” that “tax and spend is bad” or that “inflation is a menace.” The new business cycle, combined with this vastly different policy regime, should produce fresh market leadership centered on capital investment, infrastructure, housing and a leveraged consumer sector. Consider positioning portfolios toward financials, industrials, clean energy, construction, consumer durables and service-sector automation while taking profits in the smart phone/social media ecosystem and 2020’s work-from-home leaders.

The VIX, a closely watched measure of stock market volatility, has remained elevated all year, averaging at least twice the long-run average of 15. On Oct. 28, the VIX pierced 40, the highest mark since June. This might not be surprising given all that 2020 has thrown at investors. It would be easy to chalk up the recent volatility to roller-coaster headlines and a bout of risk-off growth scares. After all, COVID-19’s resurgence threatens another round of economic shutdowns in Europe and widespread acceleration in infections in the US. Investors are rightly concerned about a slowing of economic momentum, especially in critical labor markets. Third quarter earnings reports have been better than expected, but largely devoid of confident forward guidance. The collapse in CARES 2.0 stimulus talks amid intense political posturing has undoubtedly been another disappointment. With federal support for unemployment benefits expired, household savings buffers built in the spring are quickly being depleted. Bankruptcies of small businesses, which had been contained by the Payroll Protection Program, are inching upward. And of course, one week out, volatility could certainly be attributed to investors skittish about election outcomes—especially given the unreliability of the polls in 2016.

Lisa Shalett

Chief Investment Officer, Morgan Stanley
Wealth Management
Head of Wealth Management Investment
Resources
Lisa.Shalett@morganstanley.com
+1 212 296-0335

Upcoming Catalysts

November 02

ISM Manufacturing Survey
US construction spending

November 03

US factory orders
China Caixin PMI

November 04

ADP National Employment Report
US trade balance
ISM Services Survey
Euro Zone PPI

November 05

Challenger Job Cuts
US initial jobless claims
US continuing claims
FOMC meeting
Euro Zone retail sales

November 06

US nonfarm productivity, unit labor costs
US employment report

Similarly, and alternatively, the heightened volatility could simply be sector rotation associated with the troughing of GDP growth in the second quarter and the V-shaped recovery. Recall, our recession playbook expected a period of volatile range-bound trading after the S&P 500 Index's rebound to an all-time high on Sept. 2—nearly 6% above the prerecession peak. Historical analogy suggested the market was bound to consolidate as fundamentals caught up with investor anticipation. In fact, rather than validating a growth scare, we see it as a procyclical rotation. As stocks retreated nearly 9% from the recent high, US Treasury yields are up, yield curves are steeper, copper is outperforming gold, emerging markets are outperforming developed markets, and small caps and credit are holding steady.

For us, both explanations seem insufficient. It is not simply volatility that is high; but the volatility of volatility is spiking, hitting the third highest reading of the past five years (see *Chart of the Week*, page 3). Increased volatility may be a sign that investors sense a tectonic shift in macroeconomic policy. The impetus for this shift is massive imbalances caused by more than a decade of secular stagnation, and the failure of monetary policies alone to normalize growth. With policy interest rates at the zero lower bound on fed funds and wealth/income inequality at levels not seen since the 1920s, investors are turning to Keynesian approaches to break the logjam of excess supply and savings chasing insufficient aggregate demand. If that occurs, investors will need to challenge the conventional wisdom that has dominated investment strategy for the past 50 years.

Start with the conventional wisdom's first tenet: Markets prefer political gridlock. Since World War II, superior investment returns have been realized when the White House and Congressional majorities were of opposite parties. Such tension meant that overall change is measured and moderated by debate, creating policy stability and certainty for investors. Although that premise seems intuitively appealing, its efficacy comes into question at times of crisis such as now. With the election hanging in the balance and CARES 2.0 stalled out, Wall Street hopes for a deal even in the lame-duck session are fading. Odds that no stimulus is passed until January are upward of 80% based on surveying by Goodjudgement.com. With the Federal Reserve out of levers to further move the economy forward, the potential \$1 trillion to \$3 trillion in aid for states/municipalities, the unemployed and pandemic relief could make a significant difference to shielding the economy from permanent damage of bankruptcies and battered balance sheets. Spending on much-needed infrastructure to retool an economy in transition to the post COVID-19 world could be even more important, given its high multiplier effects on jobs and income. Achieving these outcomes in a new administration after what is likely to be a contentious election requires a degree of cooperation and compromise that is missing in Washington today.

A second tenet that may need to fall is the aversion to "tax and spend." Fiscal spending has rarely been more affordable for the US government given the historically low cost of capital. However, this crisis is occurring amid record deficits and debts—nearly 16% and 136% of GDP, respectively, as of the second quarter. With interest rates likely heading higher as growth normalizes, this debt load could become increasingly burdensome, weighing on the dollar and crowding out other spending if it is not financed with new revenues. Reformation of the tax code may be unavoidable, especially given the disproportionately low tax rates paid by some of the most profitable technology and technology-linked companies. According to a recent analysis by Empirical Research, the top six companies in the S&P 500 by market capitalization have an effective tax rate of 12%. Reversing half of Trump's corporate tax cuts to move the statutory corporate rate back to 28% from 21% as in Biden's plan, likely shaves 6% to 9% from S&P 500 aggregate earnings.

A final closely held belief is that inflation is a menace that must be managed by the Fed. Certainly, the logic behind the Fed's inflation-fighting mandate was justified by the growth-strangling inflation in the 1970s. Even the Fed has acknowledged that the usefulness of the Volcker era inflation-busting agenda and its reliance on the Phillips curve, tying unemployment and wage changes to inflation, is no longer useful. The Fed's new "average inflation targeting" framework is a massive sea change that investors have yet to fully discount. Importantly, a healthy level of inflation can serve many purposes, such as stimulating current consumption relative to savings, thus supporting growth and diluting the pain of high debt burdens. Increasingly, investors will find these attributes desirable. US corporate debt has also never been higher—56% of GDP, up from 23% in 1950.

Bottom Line: We don't see recent market volatility as merely signaling a pause in the bull market related to temporary uncertainties, nor do we think it's an end-of-cycle repositioning that accompanies all recessions. Rather, we see market churning as a burgeoning recognition by investors of much more profound change in which government activism, spending and regulation are cheered by investors while debt, inflation and dollar debasement are acknowledged as necessary for economic normalization. This suggests risks for US Treasuries, the dollar and overvalued long-duration assets. At the same time, it points to renewal for sectors in which capital investment is likely to be transformative. **Watch** shifting sector leadership to inform the new cycle and a new policy regime. **Consider** positioning portfolios toward financials, industrials, clean energy, construction, consumer durables and service-sector automation while taking profits in the smart phone/social media ecosystem and 2020's work-from-home leaders.

Chart of the Week: Market Volatility Indicators Suggest Regime Shift

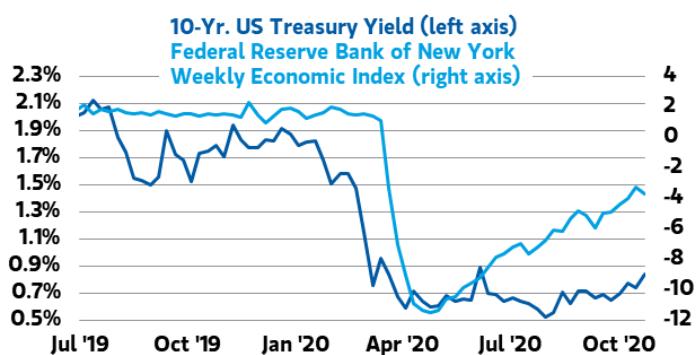
The volatility of volatility—the rate at which volatility itself is changing—can often signal even bigger market shifts. Most recently, we have seen volatility of the VIX, the major metric of stock market volatility, hit its third-highest level in five years (see chart). The last two times this occurred, in December 2018 and February 2020, we saw structural change: the Federal Reserve's reversal of monetary policy to easing from tightening and the acknowledgement that COVID-19 was leading toward national lockdown. Could the VIX volatility be signaling a structural shift or a shift in the business cycle? We think chances are decent of both, which is why we don't recommend sticking with yesterday's leaders.



Source: Bloomberg as of Oct. 29, 2020

Fixed Income Insight: 10-Yr. US Treasuries Detach From Fundamentals

Fed policy has always operated on interest rates, but the impact has usually been at the short end of the yield curve. In contrast, the 10-year US Treasury—the benchmark for pricing longer-duration risk assets—is typically linked to the economy and market forces. The 10-year's correlation with economic activity started to break down in 2019, when the Fed reversed its tightening policy (see chart). But since the introduction of new Fed bond-buying programs in April, the 10-year has decoupled from economic fundamentals. In the short run, this may not be problematic. However, the longer it goes on, the likelier it could lead to profound valuation distortions and possibly dash the diversification benefits of long-term Treasuries.



Source: Bloomberg as of Oct. 29, 2020

Market Factor Data Points (for the week ending Oct. 30, 2020)

Report	Period	Consensus	Actual	Prior	Trend
US third quarter GDP, quarter over quarter	Q3 2020	32.0%	33.1%	-31.4%	↑
US third quarter Core PCE, quarter over quarter	Q3 2020	4.0%	3.5%	-0.8%	↑
US durable goods orders, month over month	Sep '20	0.5%	1.9%	0.4%	↑
Conf. Board Consumer Confidence Index	Oct '20	102	100.9	101.3	↓
Richmond Fed Manufacturing Survey	Oct '20	18	29	21	↑
Dallas Fed Manufacturing Activity Index	Oct '20	13.5	19.8	13.6	↑
Chicago Fed National Activity Index	Sep '20	0.73	0.27	1.11	↓
FHFA House Price Index	Aug. '20	0.7%	1.5%	1.1%	↑
US new home sales	Sep '20	1,025,000	959,000	994,000	↓
US initial jobless claims	Wk. of Oct. 24	770,000	751,000	791,000	↓
US continuing claims	Wk. of Oct. 17	7,775,000	7,756,000	8,465,000	↓

Color coding shows how actual data compares with consensus estimates. Green implies better than expected, red implies worse than expected. Trend shows the one period change between actual and prior reports.

Source: Morgan Stanley Wealth Management GIC

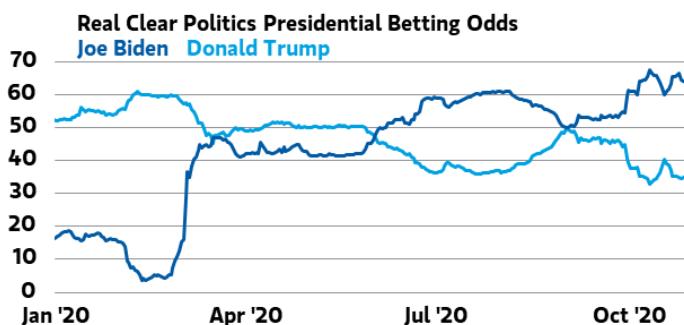
Macro Factor Heat Map (as of Oct. 30, 2020)

	Economic Growth	Rates	Inflation / Deflation	Liquidity	Sentiment And Risk	Valuation	Earnings	GIC Conclusion
Europe	↑	↓	↓	↑	↓	↑	↓	Awaiting Fiscal Stimulus
China	↑	↓	↓	↓	↓	↓	↓	Could Benefit from Post Coronavirus Stimulus and V-Shaped Recovery
Japan	↑	↑	↓	↑	↓	↓	↑	Valuations Still Discounting Recession, Fundamentals Improving on Margins
Brazil	↑	↓	↓	↓	↓	↓	↓	Could Benefit When Currency Markets Stabilize
	Risk Asset Positive	Neutral	Risk Asset Negative					

Note: Text in a factor box denotes a color; for further explanation of the chart, see page 10.
 Source: Morgan Stanley Wealth Management GIC

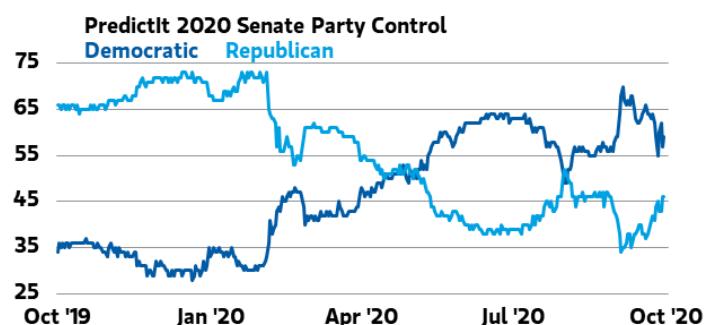
Charts in Focus: Election

Presidential Betting Odds Favor Biden



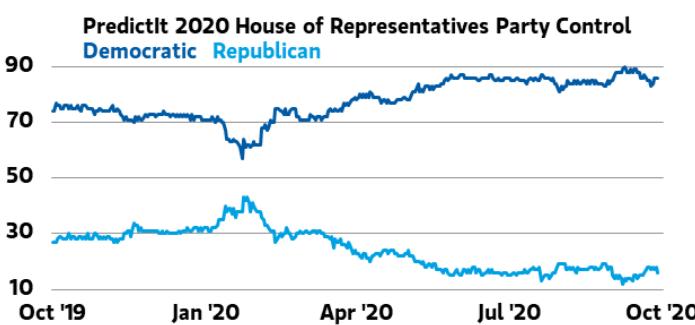
Source: Real Clear Politics as of Oct. 29, 2020

Senate Race Tightens Into Election Weekend



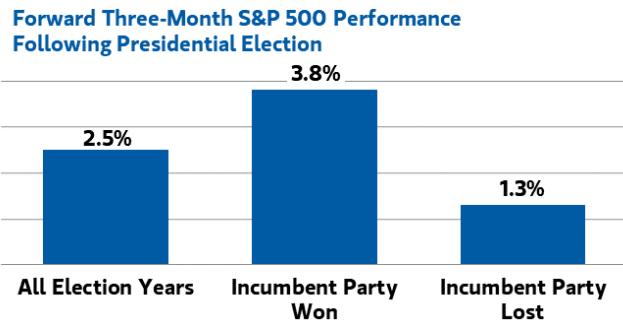
Source: Bloomberg, PredictIt as of Oct. 29, 2020

Democrats Projected to Take the House Again



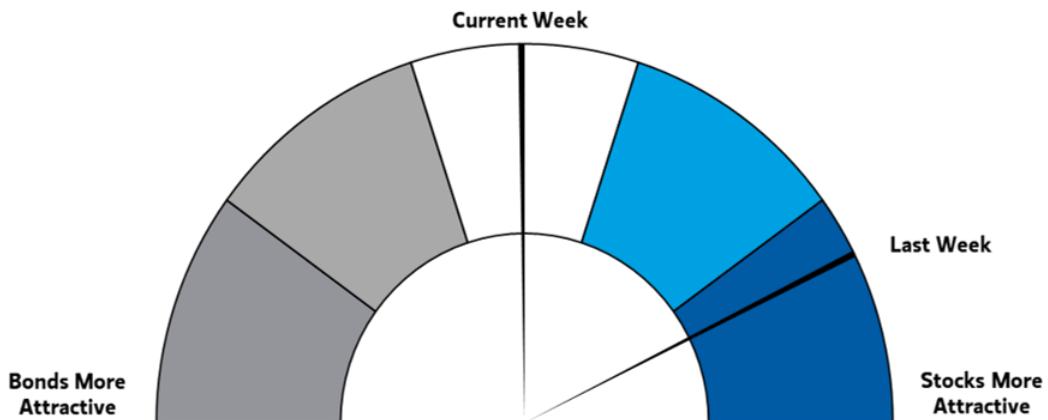
Source: Bloomberg, PredictIt as of Oct. 29, 2020

Stocks Have Done Better When Incumbent Party Wins



Source: Strategas as of Oct. 6, 2020

Short-Term Stock and Bond Indicator



MACRO		POLICY		FUNDAMENTALS		SENTIMENT & TECHNICALS										
	Growth	Inflation	Rates	Liquidity	Valuation & Market	Earnings	Sentiment	Technicals								
Current	Very Positive	Neutral	Very Positive	Neutral	Very Negative	Very Negative	Neutral	Neutral								
Last Week	Neutral	Very Positive	Very Positive	Very Positive	Neutral	Very Negative	Neutral	Very Positive								
CATEGORY	INDICATOR						READING									
Growth	PMI (+) Durable Goods (+) Retail Sales (+) Manufacturing Hours Worked (+)						Risk On									
	Commodity Prices (+)						Neutral									
	Yield Curve: 10-Yr./Three-Mo.(+)						Neutral									
	Yield Curve: Two-Yr./Three-Mo.(-) Pace of Interest Rate Hikes (-) Term Premium Model (-)						Risk Off									
Rates	High Yield Spreads (-)						Neutral									
	Investment Grade Spreads (-)						Neutral									
	Financial Conditions (-)						Neutral									
Liquidity	S&P 500 Earnings/Baa Yield (+)						Neutral									
	Large vs. Small Performance (-)						Neutral									
	High- vs. Low-Quality Performance (-)						Risk Off									
	High- vs. Low-Beta Performance (+)						Neutral									
Valuation & Market Behavior	S&P 500 Forward Price/Earnings Ratio (+)						Risk Off									
	Earnings Revisions Breadth (-)						Risk Off									
	Global Risk Demand (+)						Risk Off									
Earnings	Implied Currency Volatility (-)						Neutral									
	Five-Yr. Macro Sensitivity (-)						Risk Off									
	% Stocks Above 200-Day Moving Avg. (+)						Neutral									
Sentiment	Cumulative Advance/Decline (+)						Neutral									
	S&P 500 Put/Call Ratio (-)						Neutral									
	Emerging Market Fund Flows (+)						Neutral									
	Smart Money Flow Index (+)						Risk Off									
							Positive for Stocks Relative to Bonds									
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. Color coding is set in accordance with the impact on risk assets.																
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. Earnings revisions breadth is defined as the number of positive analyst revisions minus the number of negative analyst revisions divided by the total number of revisions.

Source: Morgan Stanley Wealth Management GIC, Morgan Stanley & Co, Haver Analytics, Bloomberg, FactSet as of Oct. 30, 2020

Asset Class Performance (as of Oct. 30, 2020)

ASSET CLASS	ANNUALIZED RETURNS (%)							YIELD Current YTM	VALUATION		VOLATILITY (%)		CORRELATION TO GLOBAL EQUITIES	
	YTD	1-Yr	2019	3-Yr ¹	5-Yr ¹	10-Yr ¹	20-Yr ¹		Current YTM	Avg. YTM ³	30 Days	20 Yrs. ¹	30 Days	20 Yrs. ¹
CASH														
90-Day US Treasury Bills	0.6	0.9	2.3	1.6	1.2	0.6	1.5	0.10	0.10	1.46	0.0	0.52	0.05	-0.08
GLOBAL EQUITIES														
US Large-Cap Growth	24.3	34.3	38.2	23.7	21.3	18.2	6.3	0.67	30.8	19.4	26.2	16.7	0.93	0.90
US Large-Cap Value	-13.4	-8.1	25.6	3.4	8.4	10.1	5.8	3.06	15.2	13.5	17.8	13.9	0.86	0.91
US Mid-Cap Growth	17.5	24.6	34.8	15.7	14.5	14.1	5.6	0.36	36.6	22.0	18.9	20.7	0.92	0.86
US Mid-Cap Value	-15.4	-11.3	26.7	0.0	6.7	9.9	8.6	2.40	16.5	14.4	19.9	16.1	0.78	0.89
US Small-Cap Growth	7.7	16.0	31.8	11.5	13.6	13.7	8.4	0.47	36.9	23.8	20.0	20.4	0.86	0.87
US Small-Cap Value	-18.5	-13.8	22.9	-4.6	4.0	8.0	8.1	2.30	19.9	17.5	23.4	17.5	0.75	0.86
Europe Equity	-13.6	-8.8	24.6	0.0	4.9	4.9	4.2	2.84	15.6	13.4	19.5	17.9	0.73	0.95
Japan Equity	-1.9	0.7	20.1	4.3	7.9	6.5	2.4	2.29	17.5	17.0	14.2	16.0	0.16	0.72
Asia Pacific ex Japan Equity	-11.7	-9.3	18.5	0.4	6.9	3.9	7.7	3.48	17.0	14.4	14.8	19.3	0.47	0.88
Emerging Markets	1.1	8.6	18.9	2.8	9.4	2.9	8.2	2.30	14.6	11.2	11.8	21.5	0.73	0.88
GLOBAL FIXED INCOME														
Short-Term Fixed Income	3.1	3.4	4.0	2.8	2.1	1.6	3.1	0.33	13.0	31.0	0.2	1.4	-0.27	-0.17
US Fixed Income	6.3	6.2	8.7	5.2	4.2	3.6	5.0	1.25	54.0	52.5	2.3	3.4	-0.32	-0.06
International Fixed Income	5.3	5.1	5.8	3.4	3.8	1.6	4.7	0.75	42.0	49.0	4.5	7.8	0.29	0.33
Inflation-Protected Securities	3.9	3.8	9.2	3.5	4.4	2.9	5.9	-	-	-	5.2	7.7	0.26	0.45
High Yield	-0.5	2.1	12.6	2.7	6.1	5.9	7.7	6.15	552.0	494.5	4.1	9.5	0.69	0.76
Emerging Markets Fixed Income	-5.9	-3.8	13.5	0.2	4.8	0.5	6.3	4.46	326.0	322.5	7.1	11.5	0.50	0.66
ALTERNATIVE INVESTMENTS														
Real Estate/REITs	-22.1	-21.5	23.6	-0.8	3.5	5.2	7.6	4.62	-	-	15.4	17.7	0.67	0.80
Master Limited Partnerships⁴	-43.8	-42.5	6.6	-20.8	-11.6	-4.2	-	17.38	-	-	39.4	17.6	0.56	0.50
Commodities ex Prec. Metals	-17.6	-15.3	5.9	-7.6	-5.8	-7.8	-2.1	-	-	-	14.7	16.7	0.43	0.49
Precious Metals	22.1	22.0	17.0	11.8	9.6	2.2	8.9	-	-	-	18.5	18.9	0.44	0.20
Hedged Strategies⁵	1.6	3.9	8.6	1.5	2.1	1.1	-	-	-	-	2.5	5.2	0.53	0.70
Managed Futures⁶	0.0	1.2	4.8	1.4	0.1	-0.2	-	-	-	-	3.0	7.1	0.08	0.13
S&P 500	2.8	9.7	31.5	12.3	14.1	13.7	6.4	1.76	20.6	15.4	20.66	14.6	0.96	0.96
Russell 2000	-6.8	-0.1	25.5	1.8	8.0	9.9	6.9	1.58	32.0	21.1	22.15	19.2	0.83	0.84
MSCI EAFE	-10.4	-6.5	22.7	1.1	5.8	5.1	4.0	2.75	16.2	14.0	14.30	16.3	0.73	0.97
MSCI AC World	-0.7	5.4	27.3	7.7	10.9	9.1	5.6	2.09	18.4	14.7	15.82	15.3	1.00	1.00

Note: Performance values calculated using USD. 1. As of Sep. 30, 2020. 2. Forward P/E using Next 12-month earnings 3. 20-year average as of Sep. 30, 2020. 4. Volatility and Correlation: June 30, 2006 – Present. 5. Volatility and Correlation: Jan 31, 1998 – Present Heded strategies consist of hedge funds and managed futures 6. Volatility and Correlation: February 28, 1998 – Present. 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

S&P 500 Earnings Estimates



Note: 2022 consensus is as of June 14, 2020
 Source: Refinitiv, S&P, MS & Co. Research as of Oct. 30, 2020

MS & Co. S&P 500 Price Target: Midyear 2021

LANDSCAPE	PRICE/EARNINGS EARNINGS	PRICE MULTIPLE TARGET	UPSIDE/ DOWNSIDE
Bull Case	\$176	21.0	3,700 13.2%
Base Case	\$168	20.0	3,350 2.4%
Bear Case	\$152	19.0	2,900 -11.3%
Current S&P 500 Price			3,270

Note: Price targets are based on estimated June 2021 earnings.
 Source: MS & Co. Research as of Oct. 30, 2020

S&P 500 Sector Performance and Valuation (as of Oct. 30, 2020)

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	-5.62	2.77	9.71	1.76		15.4	20.6
Energy	-5.55	-50.38	-46.44	8.06	1.31	13.8	3.8
Materials	-4.28	4.65	11.27	2.01	1.03	14.4	19.9
Industrials	-6.51	-5.36	-1.20	1.89	1.06	16.0	23.3
Consumer Discretionary	-6.23	19.76	24.69	0.93	0.91	18.4	33.9
Consumer Staples	-4.77	1.20	4.91	2.74	0.73	16.9	19.8
Health Care	-5.70	1.15	10.06	1.72	0.83	15.8	15.3
Financials	-5.49	-20.87	-14.65	2.55	1.21	12.5	12.7
Information Technology	-6.46	22.13	34.48	1.05	1.13	18.8	25.0
Telecommunication Services	-3.94	9.46	15.81	1.09	0.87	15.5	22.0
Utilities	-3.65	-0.93	0.59	3.23	0.94	14.6	19.0
Real Estate	-4.20	-9.88	-10.27	3.22	1.05	15.8	19.4

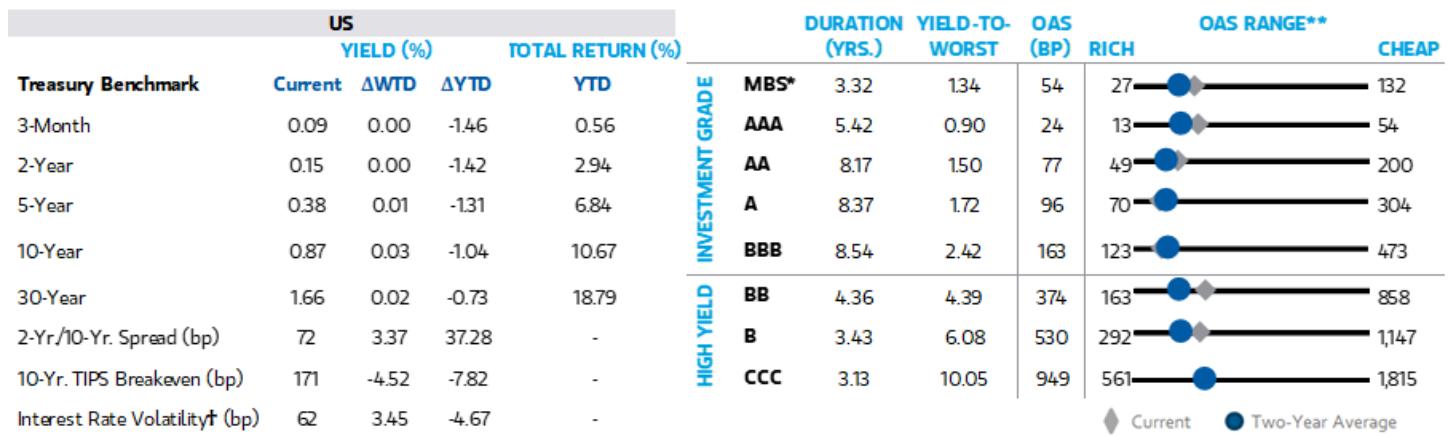
Source: Morgan Stanley & Co. Research

Equity Market Relative Valuation (as of Oct. 30, 2020)

	Forward 12 Months									
	Price/Earnings Level	%-ile	Price/Cash Flow Level	%-ile	Price/Sales Level	%-ile	Price/Book Value Level	%-ile	Equity Risk Premium Level	%-ile
US Equities										
Large Cap Growth	28.7	98%	21.0	97%	4.0	99%	9.3	97%	281	38%
Large-Cap Value	17.0	97%	10.6	95%	1.6	92%	1.9	82%	520	76%
Mid-Cap Growth	36.7	98%	25.8	97%	2.6	98%	8.5	97%	206	25%
Mid-Cap Value	18.2	91%	10.1	95%	1.3	71%	1.8	80%	482	84%
Small-Cap Growth	94.5	98%	0.1	0%	1.9	98%	4.3	92%	39	26%
Small-Cap Value	19.3	74%	6.3	18%	0.6	20%	1.0	8%	452	88%
International Equities										
Europe	16.6	98%	8.6	75%	1.2	86%	1.6	41%	652	57%
Japan	17.6	82%	10.1	100%	0.9	96%	1.2	56%	568	28%
Asia Pacific ex Japan	17.3	98%	8.3	4%	2.3	70%	1.4	10%	498	89%
Emerging & Frontier Markets										
Total Equities										
US	22.1	98%	4.0	1%	2.2	99%	3.2	98%	386	63%
International	16.8	98%	8.9	84%	1.2	89%	1.5	35%	550	30%
Emerging Markets	14.1	96%	7.7	78%	1.3	77%	1.5	63%	663	30%

Note: Dark blue, light blue and gray fill denotes whether the group is relatively attractive, neutral or unattractive to other groups under the same metric.
 Source: Bloomberg

Government Debt Monitor & Fixed Income Spread Dashboard



Unless stated, indexes utilized are FTSE Broad Investment Grade, FTSE High Yield, and FTSE 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. © 2020 FTSE Index LLC. All rights reserved. Data as of Oct. 30, 2020

Government Debt Monitor & Benchmark Returns

10-Year Govt. Bond	Global			Index	YTD	MTD	2019	
	Current	ΔWTD	ΔYTD					
France	-0.34	-0.04	0.00	5.03	Bloomberg Barclays US Aggregate	6.32	0.00	8.72
Germany	-0.63	-0.05	0.00	4.35	Bloomberg Barclays US MBS	3.58	0.00	6.35
Japan	0.04	0.00	0.06	0.71	Bloomberg Barclays US IG Corporate	6.45	0.00	14.54
Spain	0.13	-0.06	0.00	4.78	Bloomberg Barclays Municipal	3.02	0.00	7.54
UK	0.26	-0.02	-0.56	5.55	Bloomberg Barclays US High Yield	1.13	0.00	14.32
3-Month LIBOR	0.22	0.00	-2.59	-	Bloomberg Barclays Global Aggregate	5.82	0.00	6.84
US Tax Exempt					JPMorgan Emerging Market	0.25	-0.12	14.42
10-Year AAA Muni	0.94	-1.22	-1.38	3.02				
10-Yr. Muni/UST Ratio	107.70	25.66	21.38	-				

*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 Oct. 30, 2020

Morgan Stanley & Co. Forecasts (as of Oct. 30, 2020)

	REAL GDP GROWTH (%)			10-YR. GOVT. BOND YIELD (%)		HEADLINE INFLATION (%)		
	2019	2020E	2021E	Q1 '21E	Q3 '21E	2019	2020E	2021E
Global	3.1	-3.6	6.3			2.6	2.3	2.6
US	2.2	-3.6	5.5	0.95	1.05	1.8	1.1	2.2
Euro Zone	1.3	-7.2	5.0			1.2	0.3	1.0
UK	1.4	-11.0	4.1	0.35	0.50	1.8	0.8	1.3
Japan	0.7	-5.8	1.7	-0.05	0.00	0.5	0.1	-0.2
Emerging Markets	4.1	-2.2	7.4			3.4	3.4	3.4
China	6.1	2.3	8.9			2.9	2.9	3.1

Source: Morgan Stanley & Co. Research

Tactical Asset Allocation Reasoning

Global Equities	Relative Weight Within Equities	
US	Overweight	Global stock markets have entered a bear market on concerns about the negative growth impact of the coronavirus. Although we expect US and global recessions in the second quarter of 2020, our base case is that recent extraordinary policy actions from both central banks and national governments will help cushion the economic impact. Markets are already pricing the most likely scenarios. We recently upgraded our exposure to large-cap growth and small- and mid-cap equities, believing that active stock pickers have a good entry point over the next several months.
International Equities (Developed Markets)	Market Weight	We recently reduced exposure to both Europe and Japan believing that, while policy responses were meaningful, their impact may ultimately be lumpy and diluted by additional headwinds—in the case of Europe, the lack of fiscal integration, and in Japan, the strength of yen.
Emerging Markets	Overweight	China was the first country to enter the COVID-19 crisis and appears poised to be the first out. Resumption of economic activity during the second quarter should jump-start global growth, especially given huge government stimulus programs. Ample liquidity from the Fed and a weakening dollar should catalyze investor interest. China stands to gain the most from US tariff rollbacks and global trade dynamics should improve. Valuations are attractive and local central banks should be able to maintain accommodation and stimulus. For most countries, especially China, the collapse in oil prices is a material tailwind for consumer purchasing power.
Global Fixed Income	Relative Weight Within Fixed Income	
US Investment Grade	Market Weight	We have recommended shorter-duration* (maturities) since March 2018, given the extremely low yields and potential capital losses associated with rising interest rates from such low levels, and had been pairing that position with a large exposure to long-term US Treasuries to hedge what we expected would be a modest correction in stocks. With long-term Treasury yields troughing for the cycle, we recently removed that position and resumed a benchmark exposure to duration. Recent dislocation of investment grade credit spreads and market illiquidity have created opportunities. Fed programs aimed at backstopping this market give reason to be an active bond selector.
International Investment Grade	Underweight	Negative interest rates suggest that this is not a preferred asset class for US-dollar clients at this time. Actively managed funds may provide very patient, risk-tolerant clients with income opportunities in select corporate credits.
Inflation-Protection Securities	Underweight	The “sudden stop” recession has caused a severe pricing of real interest rates, pushing them negative and near all-time lows. In the near term, upside appears limited.
High Yield	Overweight	High yield bonds remain at the epicenter of the dual risks from COVID-19 and the collapse in oil prices from the failure of OPEC negotiations. In our view, some of the most extreme risks have been discounted, especially in light of unprecedented monetary and fiscal policy intervention aimed not only at market liquidity but in bridging cash flow requirements. It’s time to ease in opportunistically, using active managers.
Alternative Investments	Relative Weight Within Alternative Investments	
REITs	Underweight	Real estate investment trusts (REITs) have performed very well as global growth slowed and interest rates fell. However, REITs remain expensive and are vulnerable to credit risks. We will revisit our position as nominal GDP troughs and/or valuations become more attractive.
Commodities	Overweight	The “sudden stop” global recession has driven commodities such as oil to multidecade lows. The rush to the “safe haven” US dollar, which is near its multiyear high, has exacerbated these dynamics. While we recognize the complexity of the geopolitical issues that surround oil, we believe that on a six-to-12-month basis the outlook for the global economy and overall demand will improve materially. Thus, we suggest risk-oriented clients establish exposure to the broad diversified asset class through the use of active managers. Pure passive exposure is not advised at this time.
Hedged Strategies (Hedge Funds and Managed Futures)	Overweight	The bear market associated with COVID-19 has driven volatility to historic extremes and led to wide dispersion in price performance and stock-level idiosyncratic risk. These factors tend to create a constructive environment for hedge fund managers who are good stock-pickers and can use leverage and risk management techniques to amplify returns. We prefer very active and fundamental strategies, especially equity long/short.

*For more about the risks to Duration, please see the Risk Considerations section beginning on page 11 of this report.
Source: Morgan Stanley Wealth Management GLC as of Oct. 30, 2020

Macro Factor Heat Map Key

	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

Disclosure Section

The **Global Investment Committee (GIC)** is a group of seasoned investment professionals from Morgan Stanley & Co. and Morgan Stanley Wealth Management who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend asset allocation model weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

Index Definitions

For index, indicator and survey definitions referenced in this report please visit the following: <https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions>

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.

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.

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 appropriate 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. 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.

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.

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.

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.

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 appropriate 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.

Hedge funds may involve a high degree of risk, often engage in leveraging and other speculative investment practices that may increase the risk of investment loss, can be highly illiquid, are not required to provide periodic pricing or valuation information to investors, may involve complex tax structures and delays in distributing important tax information, are not subject to the same regulatory requirements as mutual funds, often charge high fees which may offset any trading profits, and in many cases the underlying investments are not transparent and are known only to the investment manager.

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 (vi) 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 appropriate 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.

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.

Credit ratings are subject to change.

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

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies. **Technology stocks** may be especially volatile. Risks applicable to companies in the **energy and natural resources** sectors include commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

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

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

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.

Disclosures

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

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

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

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

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

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

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

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

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

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

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

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

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

© 2020 Morgan Stanley Smith Barney LLC. Member SIPC.

RSI1604267780171 11/2020