MARKET INSIGHTS

Guide to the Markets®

U.S. | 4Q 2020 | As of September 30, 2020

J.P.Morgan
Asset Management

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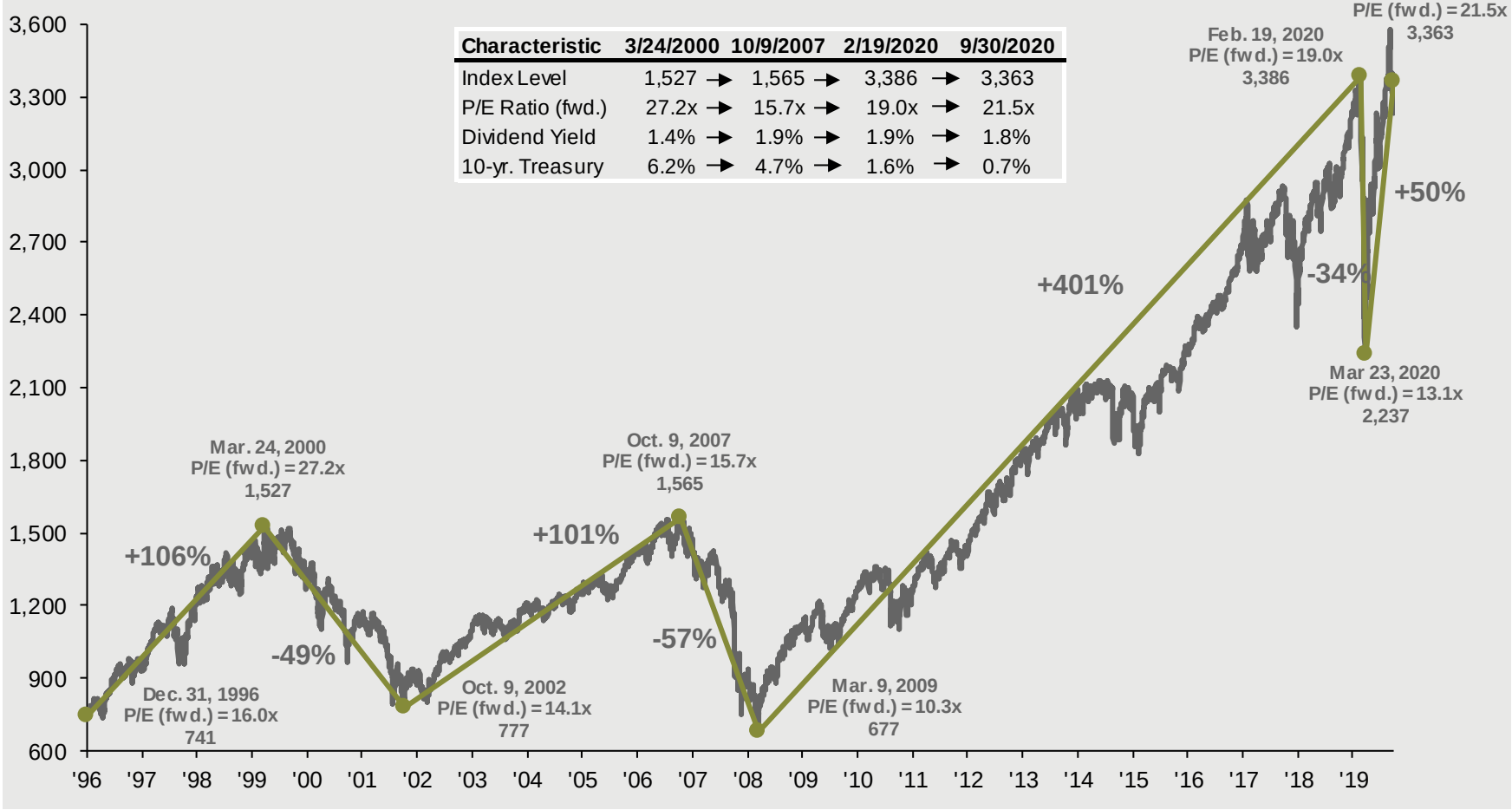
S&P 500 Index at inflection points

Equities

S&P 500 Price Index



Source: Compustat, FactSet, Federal Reserve, Standard & Poor's, J.P. Morgan Asset Management.
Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price to earnings ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns.
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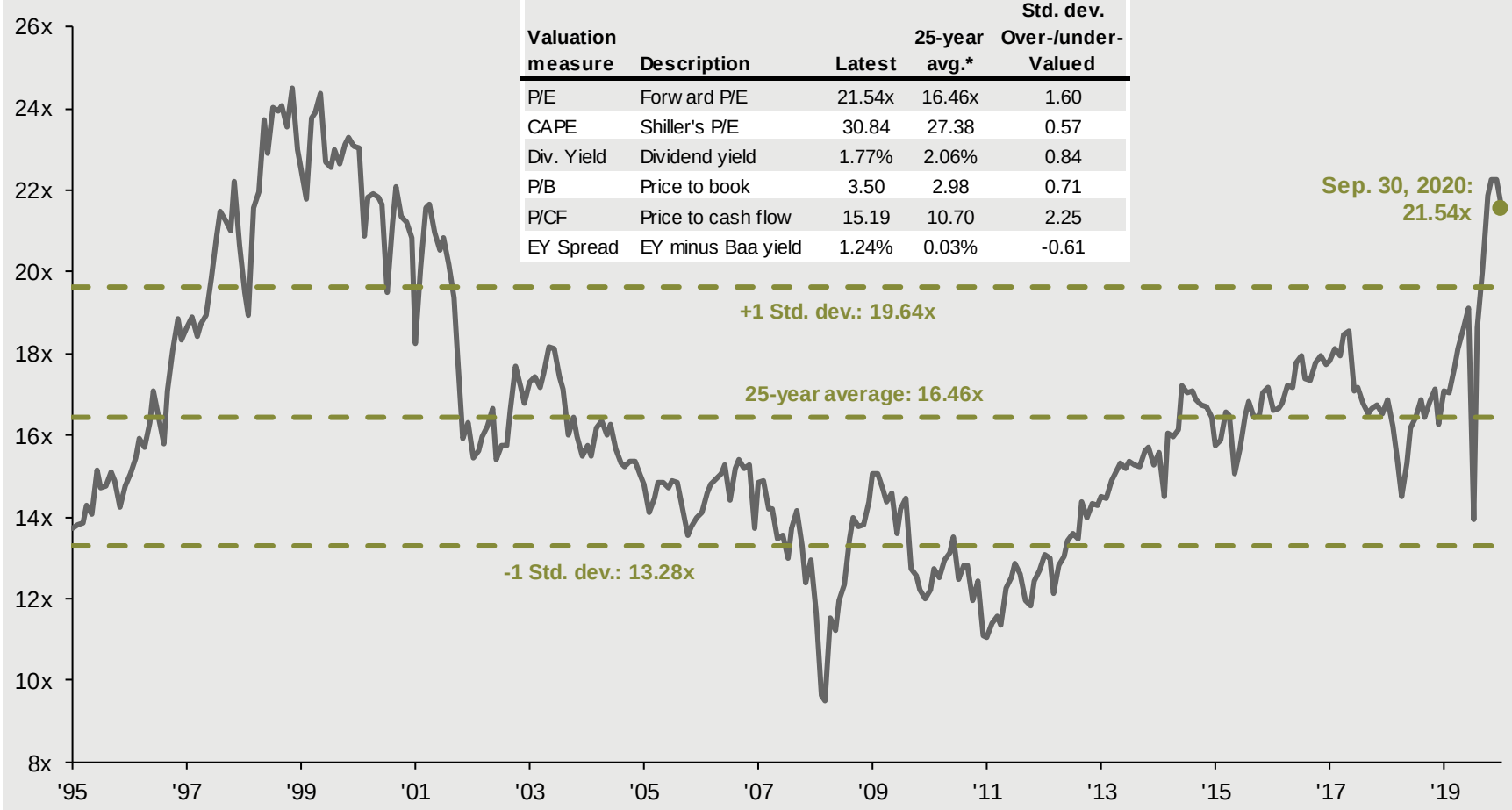
S&P 500 valuation measures

Equities

S&P 500 Index: Forward P/E ratio

Valuation measure	Description	Latest	25-year avg.*	Std. dev. Over-/under-Valued
P/E	Forward P/E	21.54x	16.46x	1.60
CAPE	Shiller's P/E	30.84	27.38	0.57
Div. Yield	Dividend yield	1.77%	2.06%	0.84
P/B	Price to book	3.50	2.98	0.71
P/CF	Price to cash flow	15.19	10.70	2.25
EY Spread	EY minus Baa yield	1.24%	0.03%	-0.61



Source: FactSet, FRB, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
Price to earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since September 1995, and FactSet for September 30, 2020. Current next 12-months consensus earnings estimates are $156. Average P/E and standard deviations are calculated using 25 years of IBES history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price to book ratio is the price divided by book value per share. Price to cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure.
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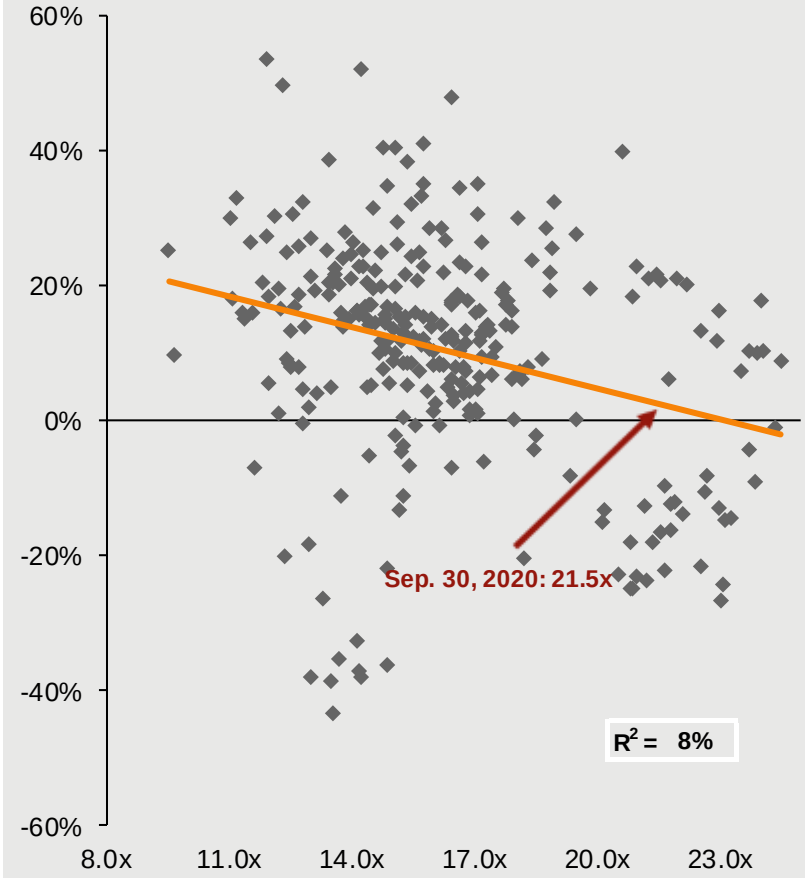
P/E ratios and equity returns

Equities

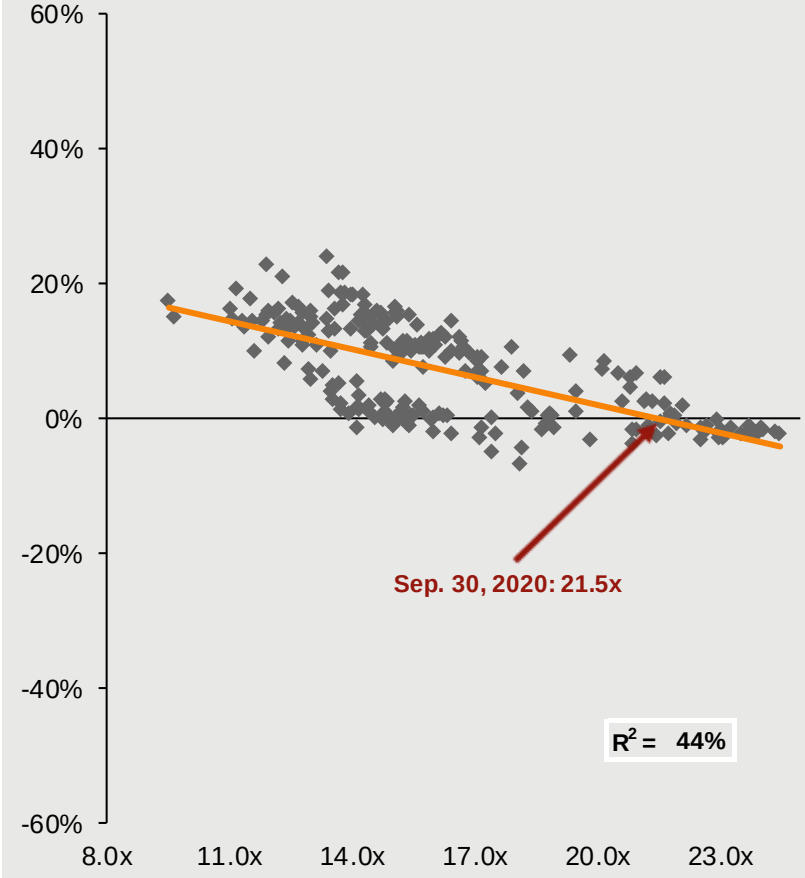
Forward P/E and subsequent 1-yr. returns

S&P 500 Total Return Index



Forward P/E and subsequent 5-yr. annualized returns

S&P 500 Total Return Index



Source: FactSet, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
Returns are 12-month and 60-month annualized total returns, measured monthly, beginning September 30, 1995. R^2 represents the percent of total variation in total returns that can be explained by forward P/E ratios.
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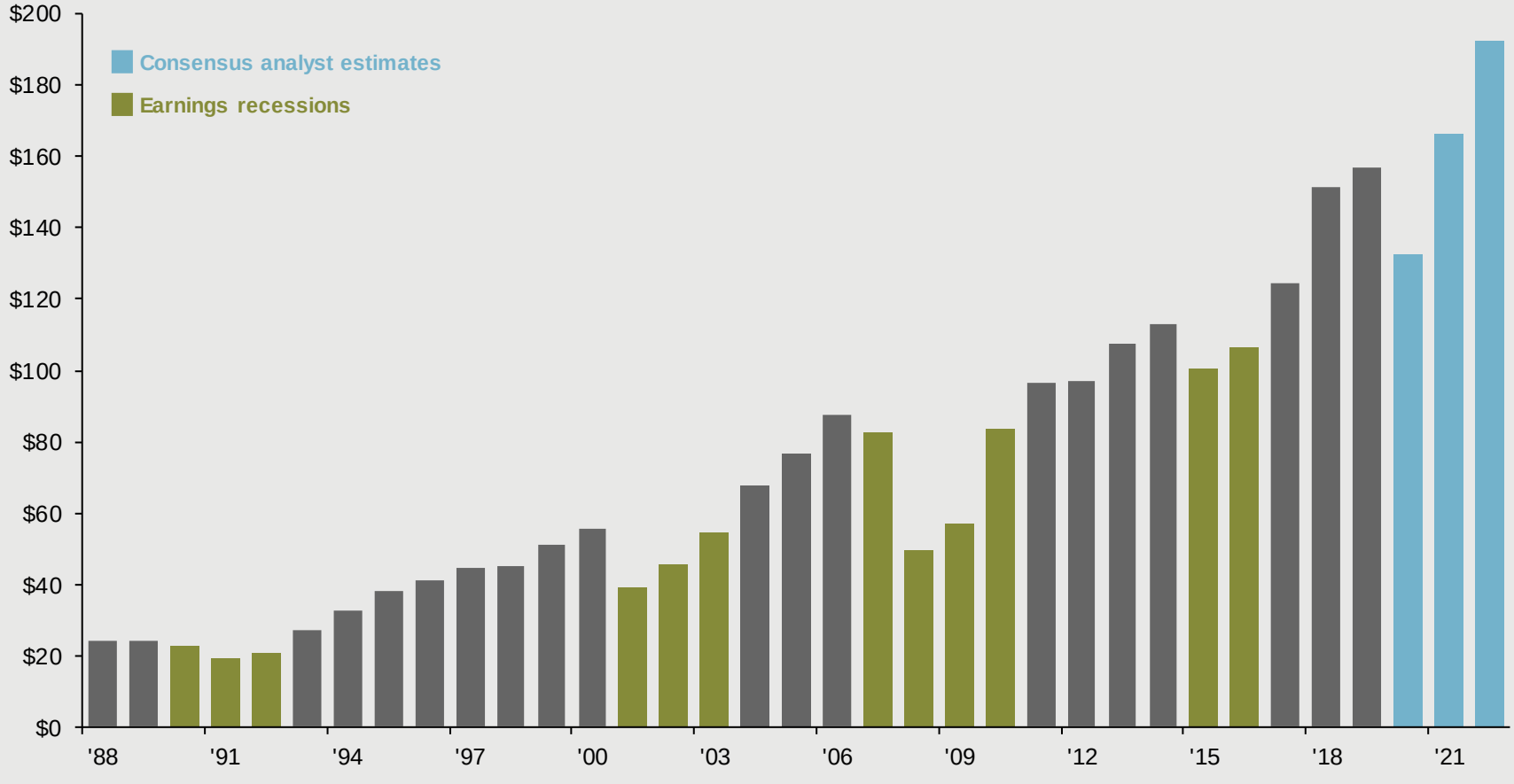
Corporate profits

Equities

S&P 500 earnings per share

Index annual operating earnings



Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Historical EPS levels are based on annual operating earnings per share. Earnings estimates are based on estimates from FactSet Market Aggregates. Past performance is not indicative of future returns.
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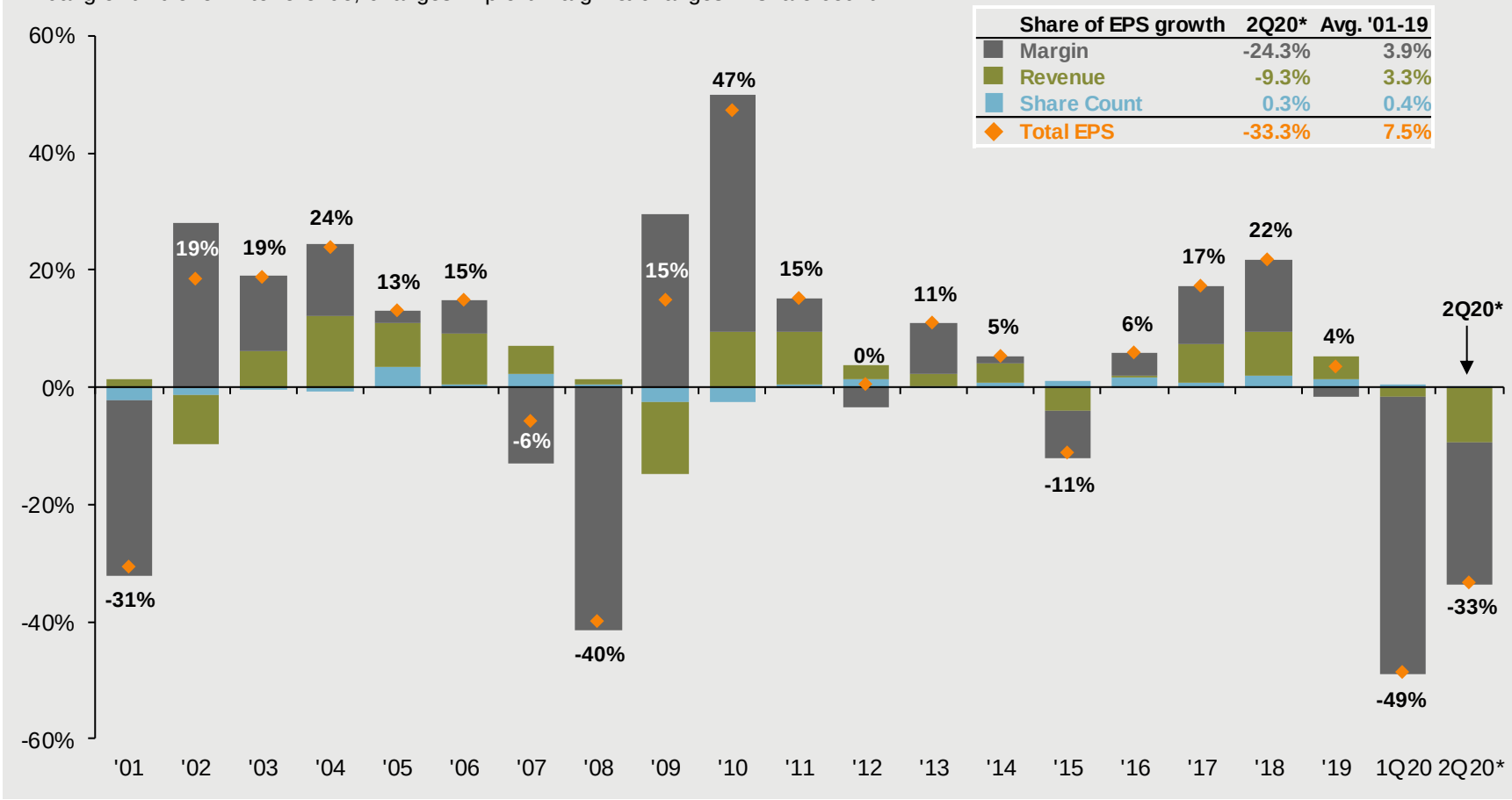
Equities

S&P 500 year-over-year operating EPS growth

Annual growth broken into revenue, changes in profit margin & changes in share count



Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management.
EPS levels are based on annual operating earnings per share. Percentages may not sum due to rounding. Past performance is not indicative of future returns. *2Q20 earnings are calculated using actual earnings for 98.4% of S&P 500 market cap and earnings estimates for the remaining companies.

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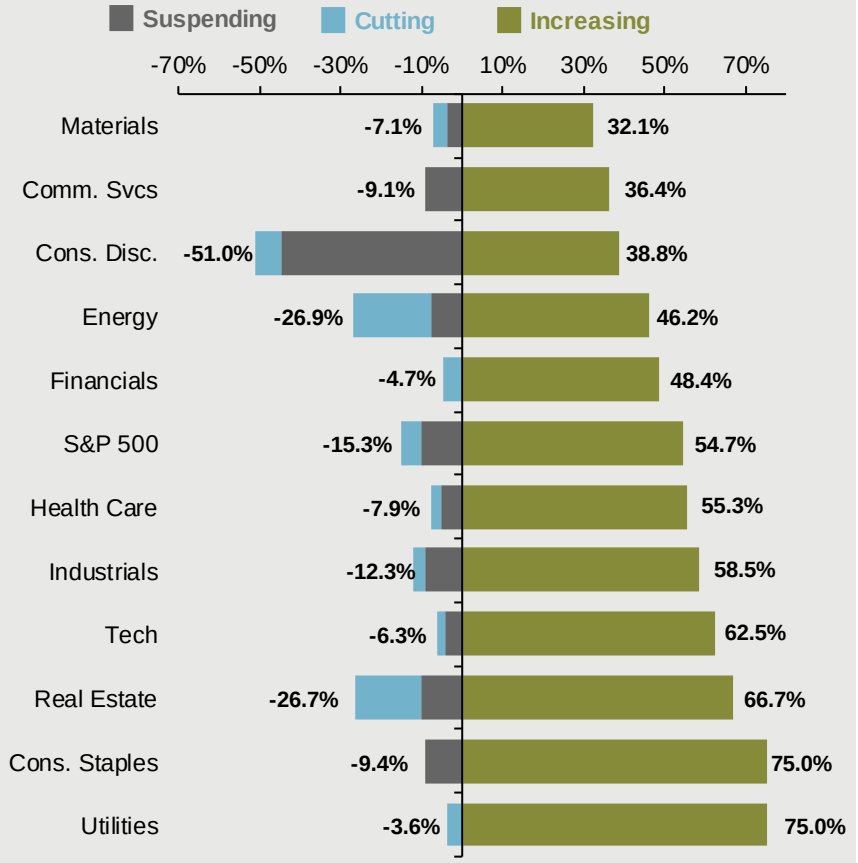
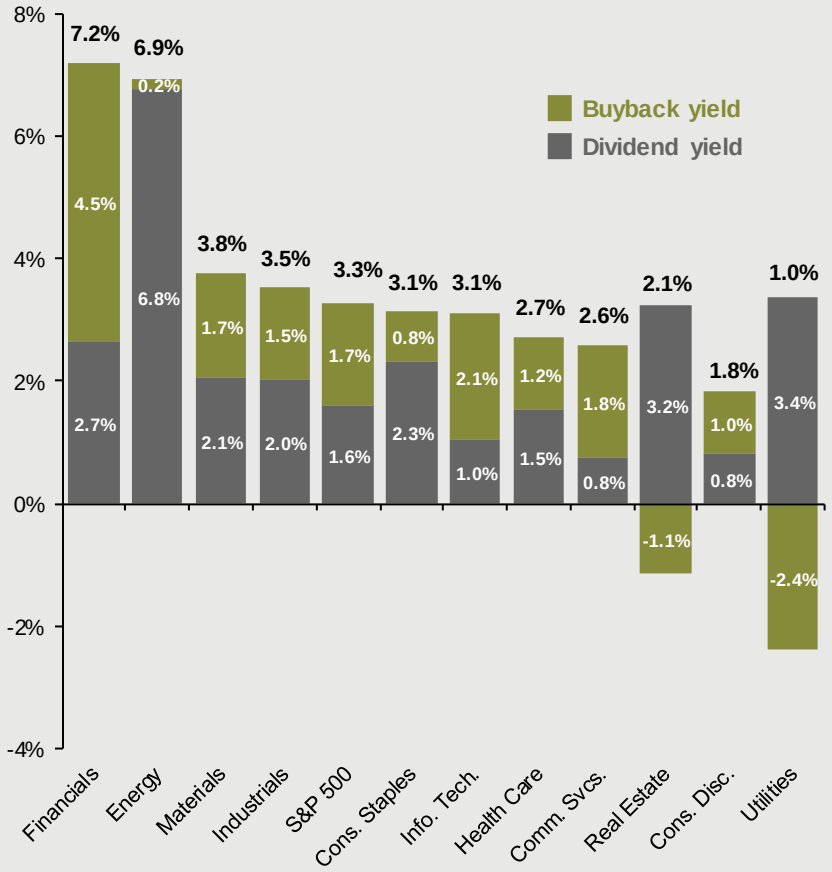
S&P 500 dividend cuts, suspensions and increases

2020, % of dividend paying companies by sector



Total shareholder yield by sector

Last 12-months dividends and buybacks minus iss. divided by mkt. cap



Source: Bloomberg, Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Buyback yield is net of share issuance and is based on last 12-months net issuance divided by market capitalization. Dividend yield is calculated as the last 12-months dividend divided by market capitalization. Dividends cuts, suspensions and increases are based on announcements in 2020 and on current index constituents.
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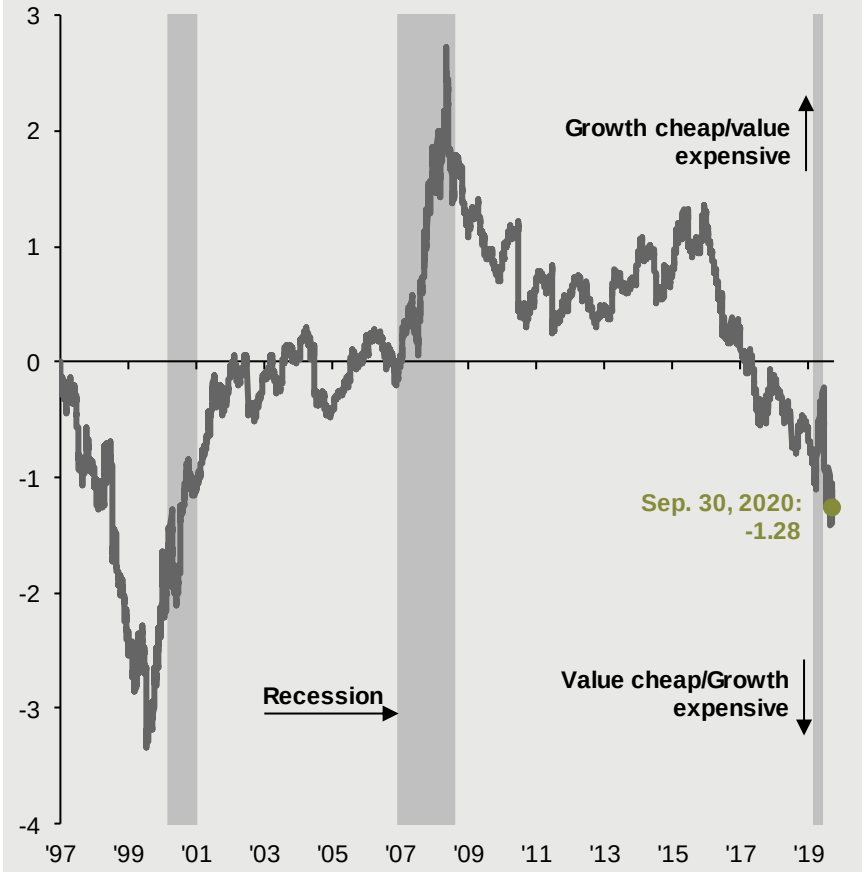
Equities

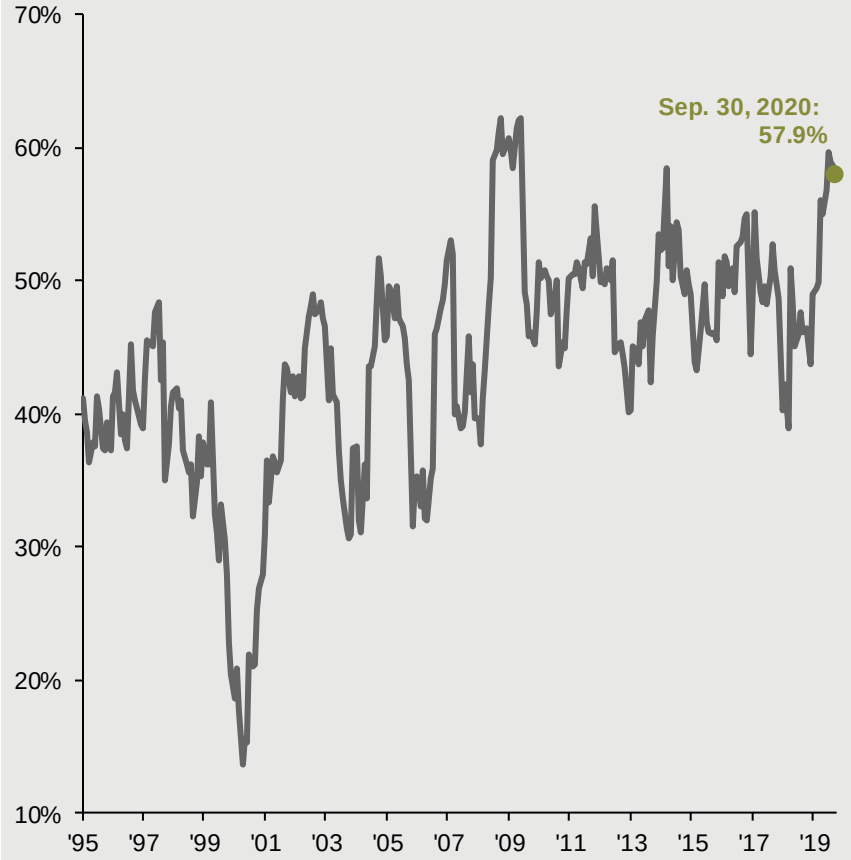
Value vs. Growth relative valuations

Relative fwd. P/E ratio of Value vs. Growth, z-score, Dec. 1997 - present



Share of Value index with beta greater than 1

Beta is based on weekly returns over a 52-week rolling period



Source: FactSet, FTSE Russell, NBER, J.P. Morgan Asset Management.
Growth is represented by the Russell 1000 Growth Index and Value is represented by the Russell 1000 Value Index. Beta is calculated relative to the Russell 1000 Index.
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S&P 500: Index concentration and earnings

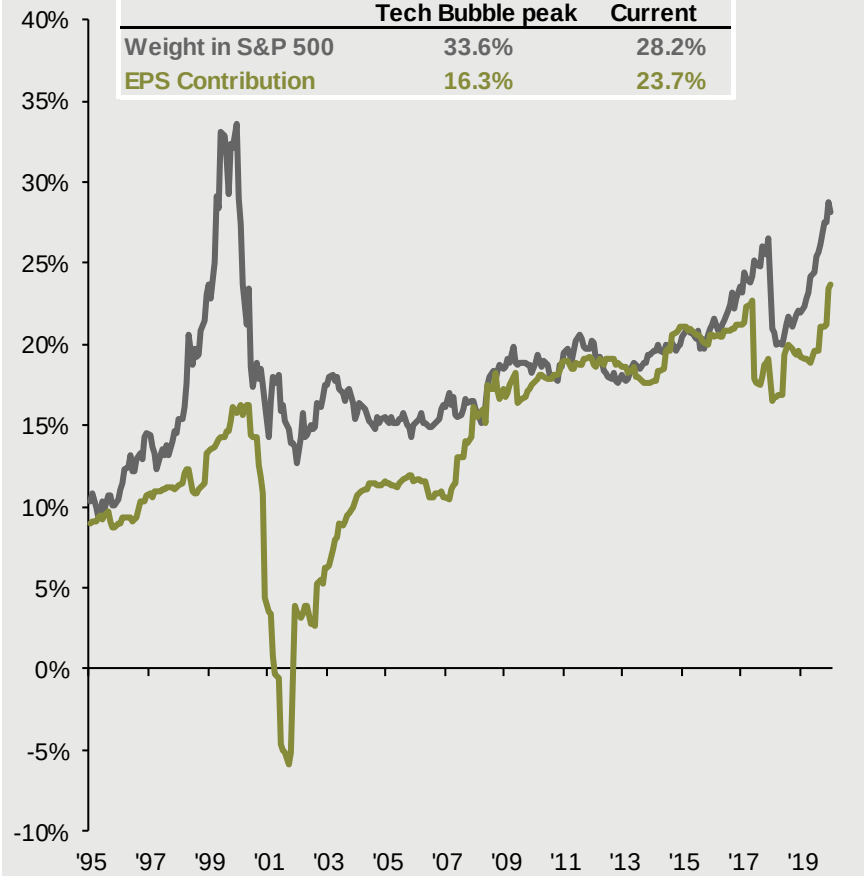
Equities

Weight of the top 5 and top 10 stocks in the S&P 500

% of market capitalization of the S&P 500

Info Tech. market cap vs. share of S&P 500 earnings

% market cap. of S&P 500 index, based on last 12 months earnings



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Information Technology sector's peak weight in the S&P 500 during the Tech bubble was in 8/31/2000, and peak EPS contribution to the S&P 500 was in 10/31/2000.
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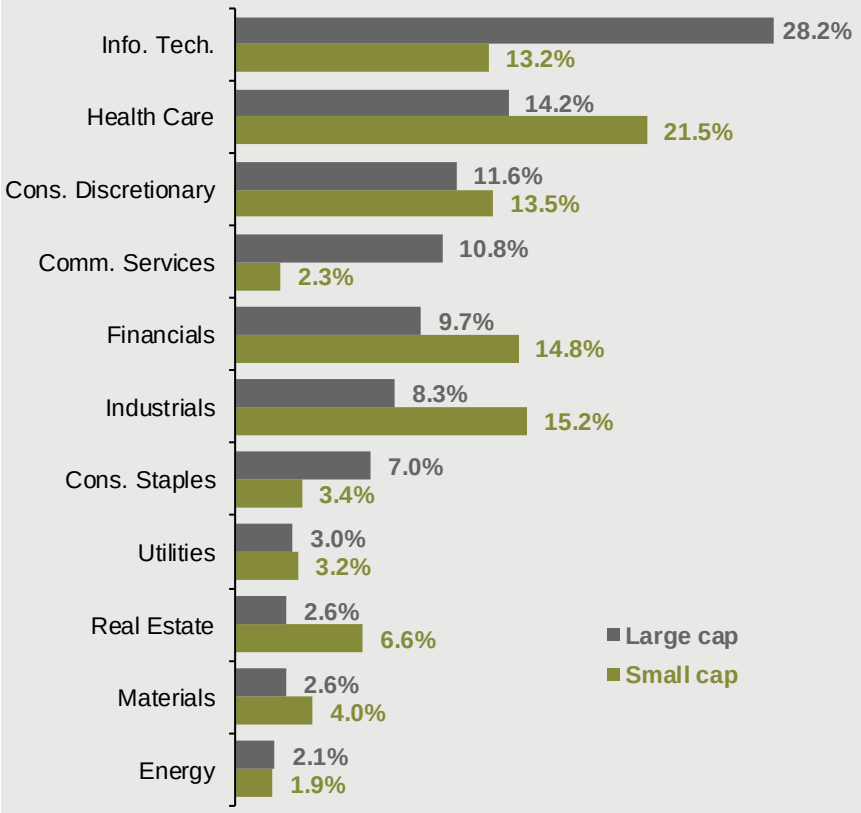
Small cap vs. Large cap stocks

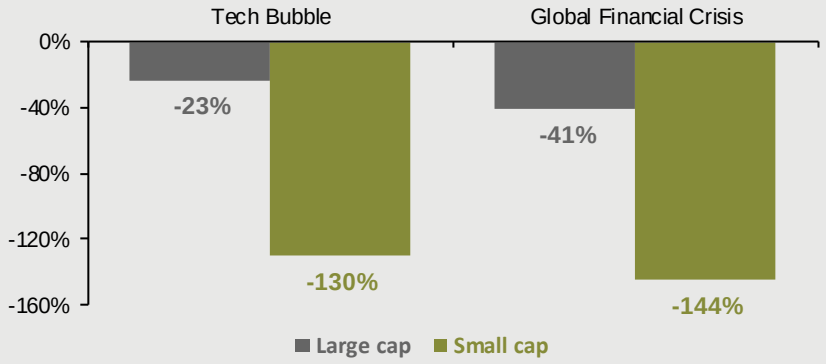
Sector composition

% of index market capitalization



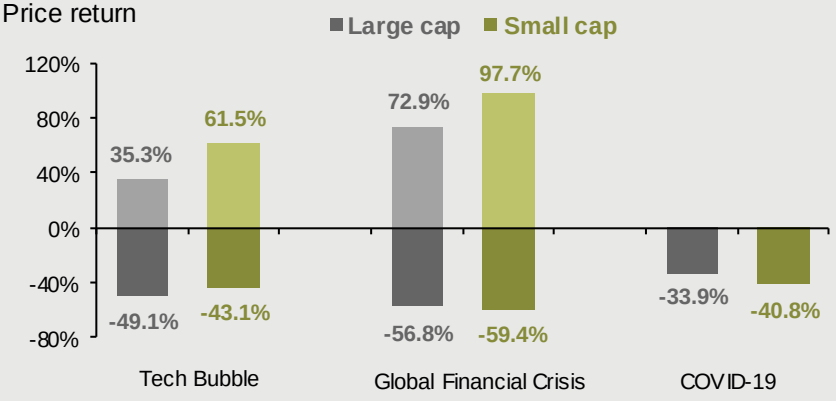
Historical earnings drawdown

Change in LTM EPS during NBER-designated recessions



Historical markets drawdown and next 12-month rebound

Price return



Source: FactSet, FTSE Russell, NBER, J.P. Morgan Asset Management.
The S&P 500 is used for large cap and the Russell 2000 is used for small cap. Market drawdowns during the Tech Bubble, Great Financial Crisis and COVID-19 were calculated for the periods between 3/24/00 – 10/9/02, 10/9/07 – 3/9/09 and 2/19/20 –3/23/20, respectively.
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Returns and valuations by style

Equities

QTD

	Value	Blend	Growth
Large	5.6%	8.9%	13.2%
Mid	6.4%	7.5%	9.4%
Small	2.6%	4.9%	7.2%

YTD

	Value	Blend	Growth
Large	-11.6%	5.6%	24.3%
Mid	-12.8%	-2.3%	13.9%
Small	-21.5%	-8.7%	3.9%

Since market peak (February 2020)

	Value	Blend	Growth
Large	-12.6%	0.5%	13.8%
Mid	-14.3%	-5.9%	6.5%
Small	-19.9%	-10.1%	-1.2%

Since market low (March 2020)

	Value	Blend	Growth
Large	41.3%	51.7%	66.0%
Mid	51.4%	57.5%	65.6%
Small	40.9%	51.5%	60.6%

Current P/E vs. 20-year avg. P/E

	Value	Blend	Growth
Large	17.2 / 13.7	21.5 / 15.4	30.5 / 18.6
Mid	18.0 / 14.3	22.2 / 16.2	38.0 / 20.3
Small	20.6 / 16.6	36.8 / 21.1	124.4 / 64.2

Current P/E as % of 20-year avg. P/E

	Value	Blend	Growth
Large	126.3%	139.7%	163.6%
Mid	125.6%	136.9%	187.4%
Small	123.9%	174.6%	193.8%

Source: FactSet, Russell Investment Group, Standard & Poor's, J.P. Morgan Asset Management.
All calculations are cumulative total return, including dividends reinvested for the stated period. Since Market Peak represents period between February 19, 2020, and September 30, 2020. Since Market Low represents period between March 23, 2020, and September 30, 2020. Returns are cumulative returns, not annualized. For all time periods, total return is based on Russell style indices with the exception of the large blend category, which is based on the S&P 500 Index. Past performance is not indicative of future returns. The price to earnings is a bottom-up calculation based on the most recent index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates.
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Returns and valuations by sector

	Energy	Materials	Financials	Industrials	Cons. Discr.	Technology	Comm. Services*	Real Estate	Health Care	Cons. Staples	Utilities	S&P 500 Index	
S&P weight	**2.1%**	**2.6%**	**9.7%**	**8.3%**	**11.6%**	**28.2%**	**10.8%**	**2.6%**	**14.2%**	**7.0%**	**3.0%**	**100.0%**	Weight
Russell Growth weight	0.1%	0.8%	2.0%	4.6%	16.5%	44.5%	10.9%	1.8%	14.0%	4.8%	0.0%	100.0%	
Russell Value weight	4.0%	4.7%	18.1%	13.1%	7.6%	9.7%	9.6%	4.6%	14.3%	8.4%	6.0%	100.0%	
QTD	-19.7	13.3	4.4	12.5	15.1	12.0	8.9	1.9	5.9	10.4	6.1	8.9	Return (%)
YTD	-48.1	5.5	-20.2	-4.0	23.4	28.7	8.6	-6.8	5.0	4.1	-5.7	5.6	
Since market peak (February 2020)	-43.0	7.1	-21.1	-7.0	16.0	14.8	2.0	-12.6	2.9	1.5	-13.1	0.5	
Since market low (March 2020)	29.3	67.5	38.2	59.5	69.8	66.8	42.8	40.4	42.7	33.6	34.9	51.7	
Beta to S&P 500	1.47	1.18	1.19	1.14	1.13	1.07	0.99*	0.74	0.79	0.59	0.32	1.00	β
Correl. to Treas. yields	0.50	0.53	0.68	0.57	0.39	0.50	0.49	0.23	0.32	0.48	0.22	0.53	ρ
Foreign % of sales	51.3	56.8	30.1	43.8	34.0	58.2	44.7	-	38.5	32.7	-	42.9	%
NTM earnings growth	48.2%	16.6%	8.9%	33.4%	26.7%	11.5%	11.0%	2.8%	10.2%	5.4%	4.0%	12.6%	EPS
20-yr avg.	**10.6%**	**18.4%**	**21.8%**	**10.6%**	**14.9%**	**13.6%**	**9.4%***	**7.5%****	**9.3%**	**8.3%**	**4.5%**	**11.0%**	
Forward P/E ratio	-	21.3x	13.6x	24.7x	36.7x	26.1x	22.0x	19.9x	16.2x	20.7x	18.1x	21.5x	P/E
20-yr avg.	**13.9x**	**14.3x**	**12.5x**	**16.0x**	**18.2x**	**18.9x**	**18.6x***	**15.8x**	**15.9x**	**16.9x**	**14.6x**	**15.4x**	
Buyback yield	0.2%	1.7%	4.5%	1.5%	1.0%	2.1%	1.8%	-1.1%	1.2%	0.8%	-2.4%	1.7%	Bbk
20-yr avg.	**1.5%**	**0.7%**	**0.1%**	**2.1%**	**2.4%**	**2.8%**	**1.2%**	**-1.0%**	**1.9%**	**1.8%**	**-1.0%**	**1.6%**	
Dividend yield	7.2%	2.1%	2.5%	1.8%	0.8%	1.1%	1.2%	3.1%	1.8%	2.8%	3.5%	1.8%	Div
20-yr avg.	**2.5%**	**2.6%**	**2.3%**	**2.2%**	**1.4%**	**1.1%**	**1.5%***	**4.3%**	**1.8%**	**2.8%**	**3.9%**	**2.1%**	

Source: FactSet, Russell Investment Group, Standard & Poor's, J.P. Morgan Asset Management. All calculations are cumulative total return, not annualized, including dividends for the stated period. Since market peak represents period between February 19, 2020, and September 30, 2020. Since market low represents period between March 23, 2020, and September 30, 2020. Correlation to Treasury yields are trailing 2-year monthly correlations between S&P 500 sector price returns and 10-year Treasury yield movements. Foreign percent of sales is from Standard & Poor's, S&P 500 2018: Global Sales report as of August 2019. Real Estate and Comm. Services foreign sales are not included due to lack of availability. NTM earnings growth is the percent change in next 12-months earnings estimates compared to last 12-months earnings provided by brokers. Forward P/E ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Buyback yield is net of share issuance and is calculated as last 12-months net buybacks divided by market cap. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Beta calculations are based on 10-years of monthly price returns for the S&P 500 and its sub-indices. *Communication Services (formerly Telecom) averages and beta are based on 5-years of backtested data by JPMAM. **Real estate NTM earnings growth is a 15-year average due to data availability. Past performance is not indicative of future returns. Energy P/E not available due to negative NTM earnings.
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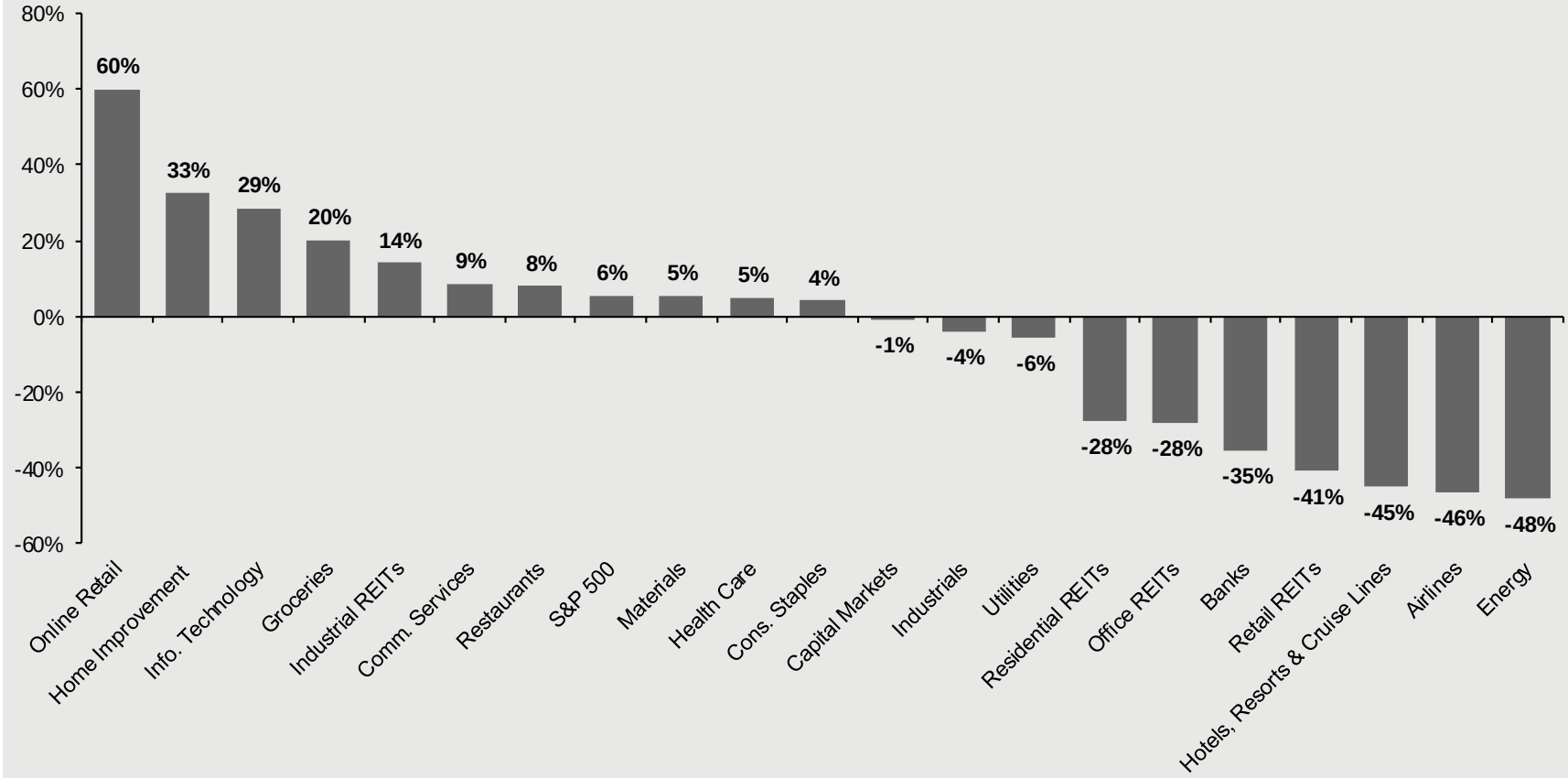
S&P 500 performance by sector

Equities

Year-to-date returns

Total returns by sector and industry



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
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Factor performance

Equities

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	2005 - 2019 Ann.	2005 - 2019 Vol.
Momen. 19.3%	High Div. 21.1%	Momen. 17.8%	Min. Vol. -25.7%	Value 38.8%	Small Cap 26.9%	High Div. 14.3%	Cyclical 20.1%	Value 43.2%	Value 17.7%	Momen. 9.3%	Small Cap 21.3%	Momen. 37.8%	Min. Vol. 1.5%	Cyclical 36.3%	Momen. 18.5%	Momen. 11.0%	Small Cap 18.7%
Multi-Factor 15.7%	Value 19.7%	Defens. 17.7%	Defens. -26.7%	Cyclical 36.9%	Multi-Factor 18.3%	Min. Vol. 12.9%	Value 16.8%	Small Cap 38.8%	Min. Vol. 16.5%	Min. Vol. 5.6%	High Div. 16.3%	Cyclical 27.3%	Momen. -1.6%	Quality 34.4%	Cyclical 11.5%	Min. Vol. 10.2%	Value 17.7%
Value 13.2%	Small Cap 18.4%	Quality 10.1%	High Div. -27.6%	Multi-Factor 29.8%	Momen. 18.2%	Defens. 10.1%	Small Cap 16.3%	Multi-Factor 37.4%	High Div. 14.9%	Quality 4.6%	Value 15.9%	Quality 22.5%	High Div. -2.3%	Momen. 28.1%	Quality 4.2%	Multi-Factor 9.9%	Cyclical 17.7%
Defens. 11.1%	Multi-Factor 16.6%	Multi-Factor 5.5%	Quality -31.2%	Small Cap 27.2%	Cyclical 17.9%	Quality 7.5%	Multi-Factor 15.7%	Cyclical 35.0%	Multi-Factor 14.8%	Cyclical 2.6%	Cyclical 14.0%	Value 22.2%	Defens. -2.9%	Min. Vol. 28.0%	Min. Vol. -1.1%	Quality 9.9%	Momen. 16.3%
Min. Vol. 6.6%	Defens. 15.9%	Min. Vol. 4.3%	Small Cap -33.8%	Quality 24.9%	High Div. 15.9%	Multi-Factor 7.3%	Momen. 15.1%	Momen. 34.8%	Momen. 14.7%	High Div. 0.7%	Multi-Factor 13.7%	Multi-Factor 21.5%	Cyclical -5.3%	Value 27.7%	Multi-Factor -2.2%	High Div. 9.5%	Multi-Factor 15.4%
Quality 5.4%	Cyclical 15.0%	Value 1.1%	Value -36.9%	High Div. 18.4%	Min. Vol. 14.7%	Momen. 6.1%	Quality 12.8%	Quality 34.3%	Cyclical 13.6%	Multi-Factor 0.4%	Min. Vol. 10.7%	High Div. 19.5%	Quality -5.6%	Multi-Factor 26.6%	Defens. -3.5%	Value 9.5%	Quality 13.6%
Small Cap 4.6%	Min. Vol. 15.0%	High Div. 0.0%	Multi-Factor -39.3%	Min. Vol. 18.4%	Quality 14.2%	Value -2.7%	Min. Vol. 11.2%	High Div. 28.9%	Defens. 13.0%	Defens. -0.9%	Quality 9.4%	Min. Vol. 19.2%	Multi-Factor -9.7%	Small Cap 25.5%	High Div. -7.2%	Defens. 9.0%	High Div. 13.3%
High Div. 3.7%	Quality 12.8%	Cyclical -0.8%	Momen. -40.9%	Momen. 17.6%	Value 12.7%	Cyclical -3.4%	Defens. 10.7%	Defens. 28.9%	Quality 10.7%	Small Cap -4.4%	Defens. 7.7%	Small Cap 14.6%	Small Cap -11.0%	High Div. 22.5%	Small Cap -8.7%	Cyclical 8.8%	Defens. 12.3%
Cyclical 2.5%	Momen. 10.7%	Small Cap -1.6%	Cyclical -44.8%	Defens. 16.5%	Defens. 12.0%	Small Cap -4.2%	High Div. 10.6%	Min. Vol. 25.3%	Small Cap 4.9%	Value -6.4%	Momen. 5.1%	Defens. 12.3%	Value -11.1%	Defens. 21.4%	Value -15.8%	Small Cap 7.9%	Min. Vol. 11.7%

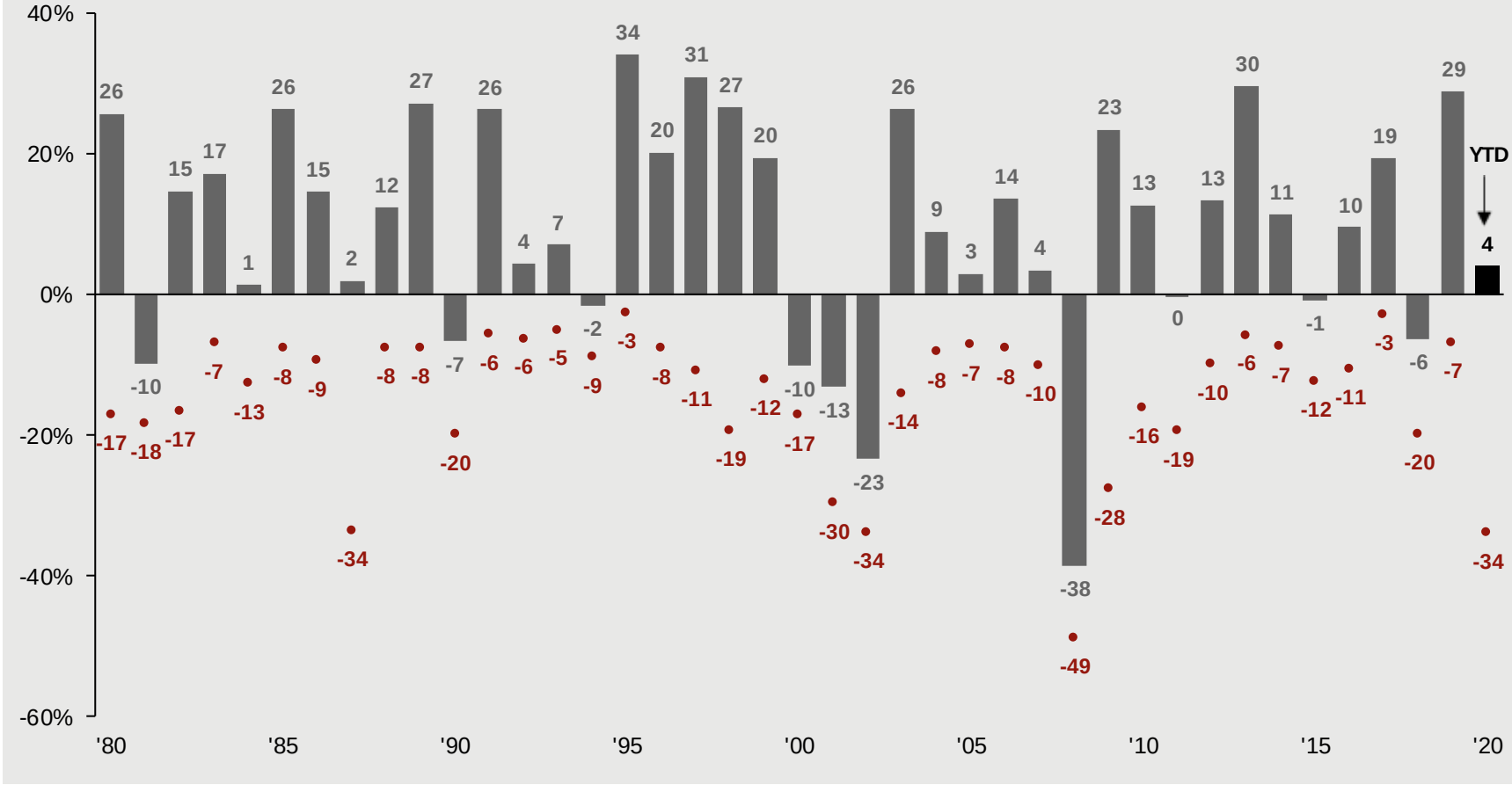
Source: FactSet, MSCI, Russell, Standard & Poor's, J.P. Morgan Asset Management. The MSCI High Dividend Yield Index aims to offer a higher than average dividend yield relative to the parent index that passes dividend sustainability and persistence screens. The MSCI Minimum Volatility Index optimizes the MSCI USA Index using an estimated security co-variance matrix to produce low absolute volatility for a given set of constraints. The MSCI Defensive Sectors Index includes: Consumer Staples, Energy, Health Care and Utilities. The MSCI Cyclical Sectors Index contains: Consumer Discretionary, Communication Services, Financials, Industrials, Information Technology and Materials. Securities in the MSCI Momentum Index are selected based on a momentum value of 12-month and 6-month price performance. Constituents of the MSCI Sector Neutral Quality Index are selected based on stronger quality characteristics to their peers within the same GICS sector by using three main variables: high return-on-equity, low leverage and low earnings variability. Constituents of the MSCI Enhanced Value Index are based on three variables: price-to-book value, price-to-forward earnings and enterprise value-to-cash flow from operations. The Russell 2000 is used for small cap. The MSCI USA Diversified Multiple Factor Index aims to maximize exposure to four factors – Value, Momentum, Quality and Size. Annualized volatility is calculated as the standard deviation of quarterly returns multiplied by the square root of 4. *Guide to the Markets – U.S.* Data are as of September 30, 2020.

J.P.Morgan Asset Management

Equities

S&P 500 intra-year declines vs. calendar year returns

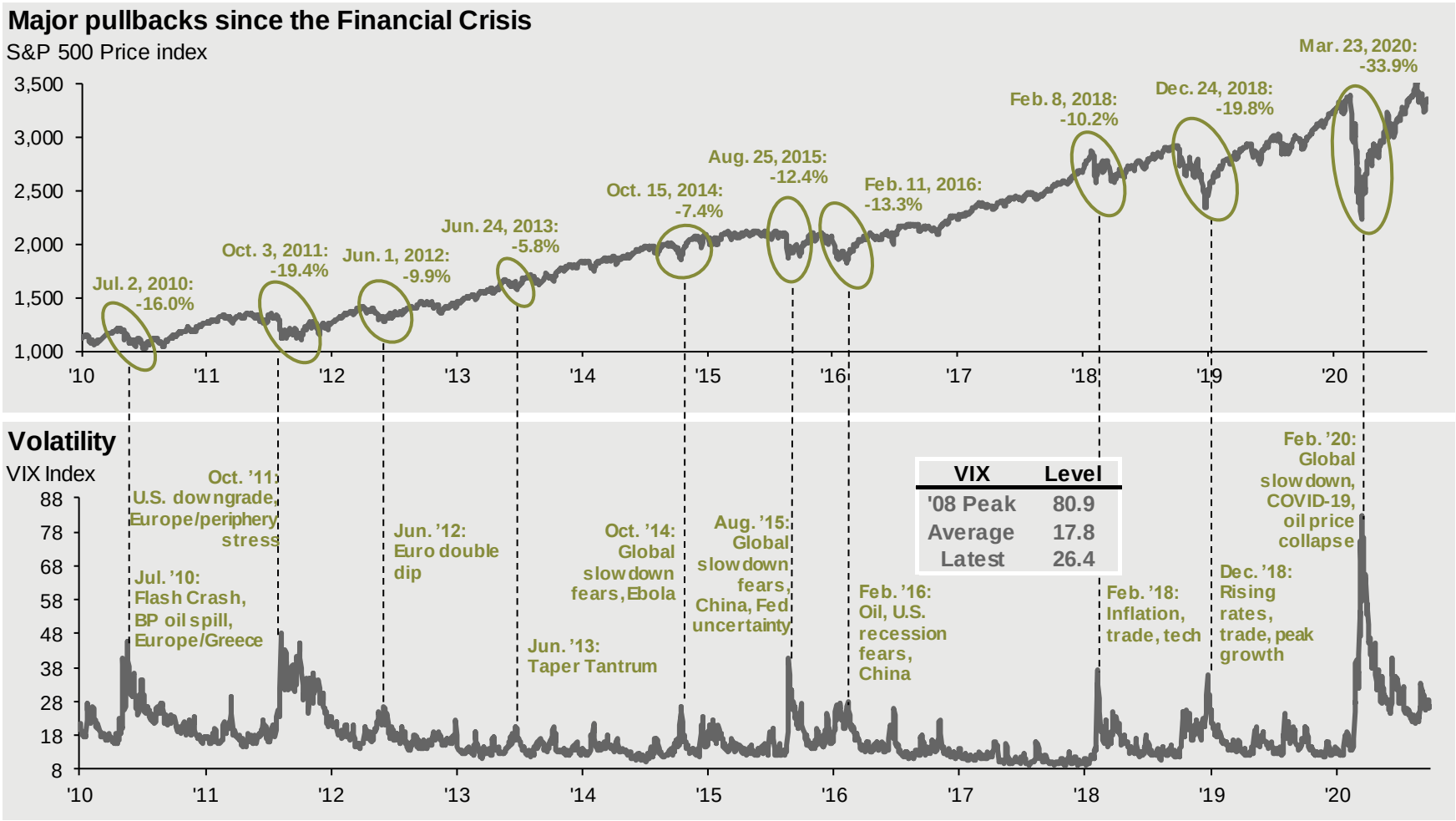
Despite average intra-year drops of 13.8%, annual returns positive in 30 of 40 years



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2019, over which time period the average annual return was 8.9%.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Equities



Source: CBOE, FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Drawdowns are calculated as the prior peak to the lowest point.
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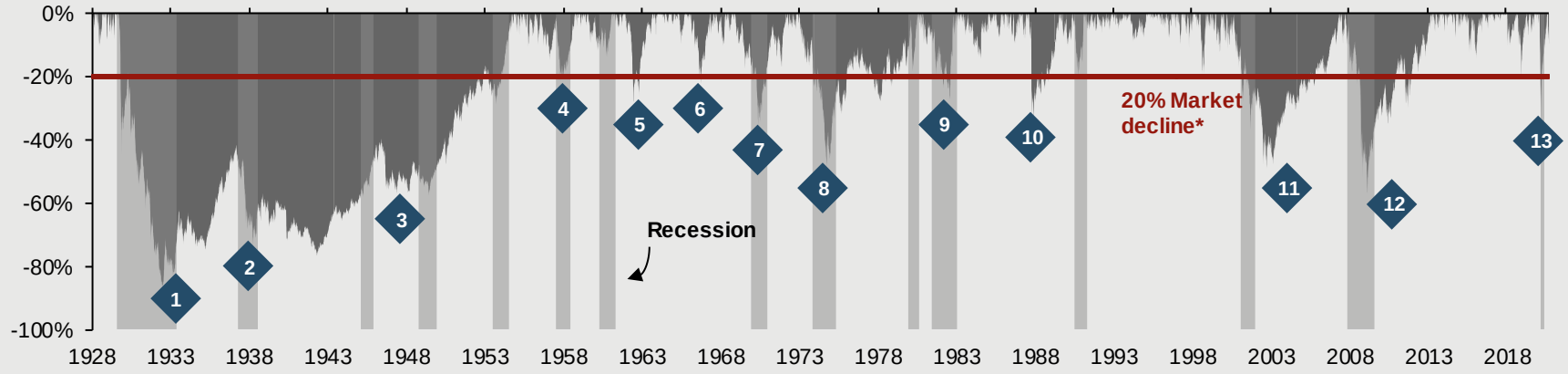
J.P.Morgan
Asset Management

Equities

U.S. recessions and S&P 500 composite declines from all-time highs



Characteristics of bull and bear markets

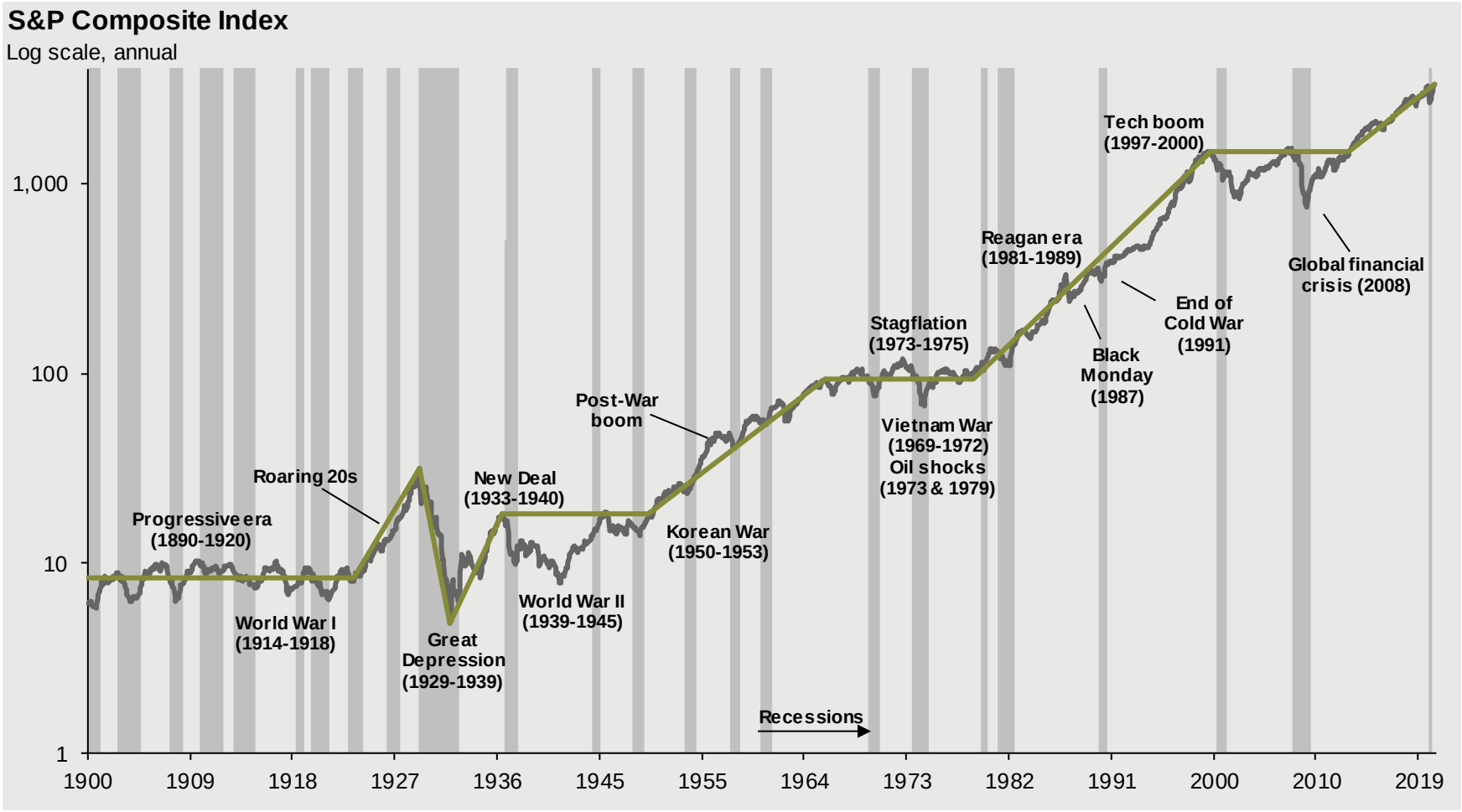
	Market correction	Bear Market: Market peak	Bear Market: Bear return*	Bear Market: Duration (months)*	Macro environment: Recession	Macro environment: Commodity Spike	Macro environment: Aggressive Fed	Macro environment: Extreme Valuation	Bull markets: Bull begin date	Bull markets: Bull return	Bull markets: Duration (months)
1	Crash of 1929 - Excessive leverage, irrational exuberance	Sep 1929	-86%	32	◆			◆	Jul 1926	152%	37
2	1937 Fed Tightening - Premature policy tightening	Mar 1937	-60%	61	◆		◆		Mar 1935	129%	23
3	Post WWII Crash - Post-war demobilization, recession fears	May 1946	-30%	36	◆			◆	Apr 1942	158%	49
4	Eisenhower Recession - Worldwide recession	Aug 1956	-22%	14	◆		◆	◆	Jun 1949	267%	85
5	Flash Crash of 1962 - Flash crash, Cuban Missile Crisis	Dec 1961	-28%	6				◆	Oct 1960	39%	13
6	1966 Financial Crisis - Credit crunch	Feb 1966	-22%	7			◆	◆	Oct 1962	76%	39
7	Tech Crash of 1970 - Economic overheating, civil unrest	Nov 1968	-36%	17	◆	◆	◆		Oct 1966	48%	25
8	Stagflation - OPEC oil embargo	Jan 1973	-48%	20	◆	◆			May 1970	74%	31
9	Volcker Tightening - Whip Inflation Now	Nov 1980	-27%	20	◆	◆	◆		Mar 1978	62%	32
10	1987 Crash - Program trading, overheating markets	Aug 1987	-34%	3				◆	Aug 1982	229%	60
11	Tech Bubble - Extreme valuations, .com boom/bust	Mar 2000	-49%	30	◆			◆	Oct 1990	417%	113
12	Global Financial Crisis - Leverage/housing, Lehman collapse	Oct 2007	-57%	17	◆	◆	◆		Oct 2002	101%	60
13	Global Slowdown - COVID-19, oil price war	Feb 2020	-34%	1	◆				Mar 2009	401%	138
	Averages	-	**-42%**	**22**					-	**166%**	**54**

Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management.
*A bear market is defined as a 20% or more decline from the previous market high. The related market return is the peak to trough return over the cycle. Periods of "Recession" are defined using NBER business cycle dates. "Commodity spikes" are defined as movement in oil prices of over 100% over an 18-month period. Periods of "Extreme Valuations" are those where S&P 500 last 12-months P/E levels were approximately two standard deviations above long-run averages, or time periods where equity market valuations appeared expensive given the broader macroeconomic environment. "Aggressive Fed Tightening" is defined as Federal Reserve monetary tightening that was unexpected and/or significant in magnitude. Bear and bull returns are price returns.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Stock market since 1900

Equities



Source: FactSet, NBER, Robert Shiller, J.P. Morgan Asset Management.
Data shown in log scale to best illustrate long-term index patterns. Past performance is not indicative of future returns. Chart is for illustrative purposes only.
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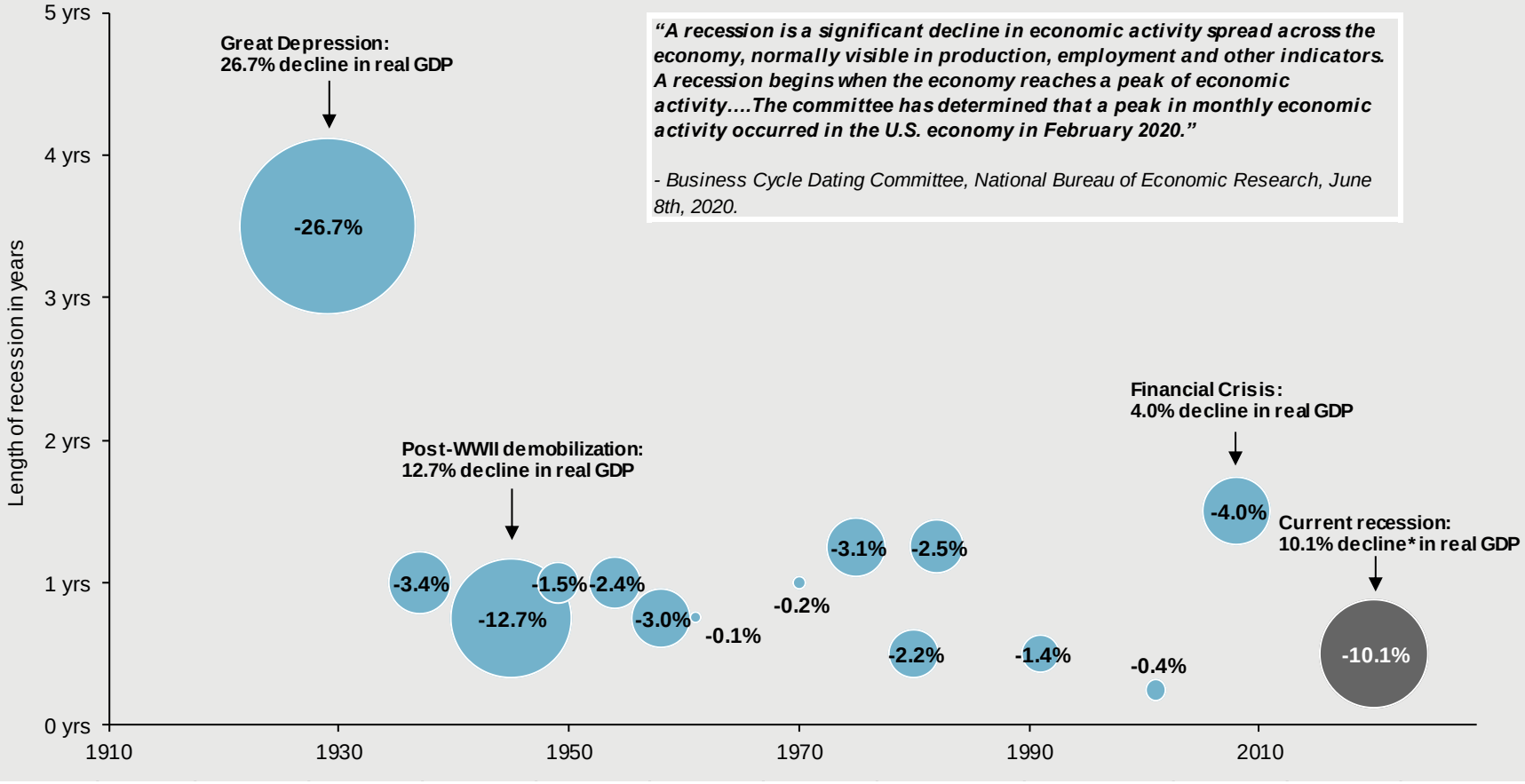
J.P.Morgan
Asset Management

U.S. economic recessions

The Great Depression and post-war recessions

Length and severity of recession



"A recession is a significant decline in economic activity spread across the economy, normally visible in production, employment and other indicators. A recession begins when the economy reaches a peak of economic activity....The committee has determined that a peak in monthly economic activity occurred in the U.S. economy in February 2020."

- Business Cycle Dating Committee, National Bureau of Economic Research, June 8th, 2020.

Source: BEA, NBER, J.P. Morgan Asset Management.
Bubble size reflects the severity of the recession, which is calculated as the decline in real GDP from the peak quarter to the trough quarter except in the case of the Great Depression, where it is calculated from the peak year (1929) to the trough year (1933), due to a lack of available quarterly data.
*Current recession reflects peak (1Q20) to trough (2Q20) decline.
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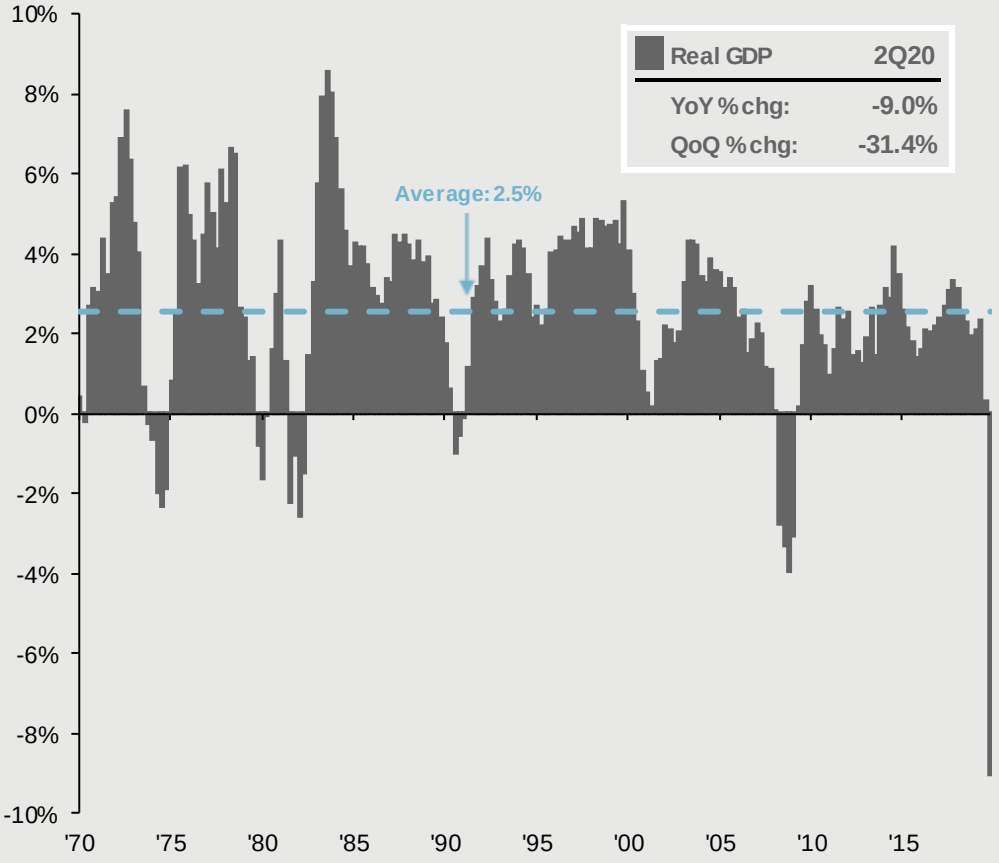
J.P.Morgan
Asset Management

Economic growth and the composition of GDP

Economy

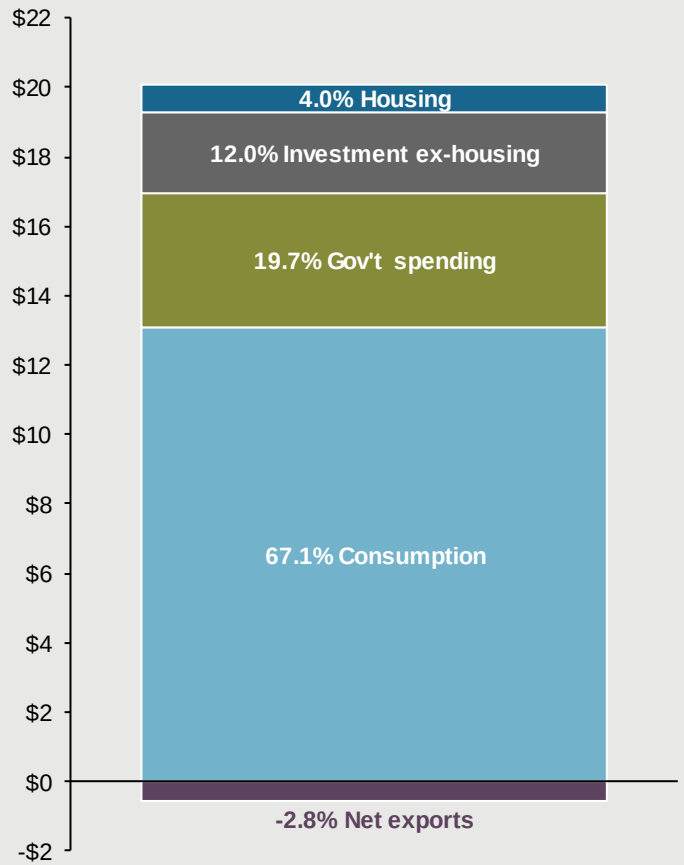
Real GDP

Year-over-year % change



Components of GDP

2Q20 nominal GDP, USD trillions



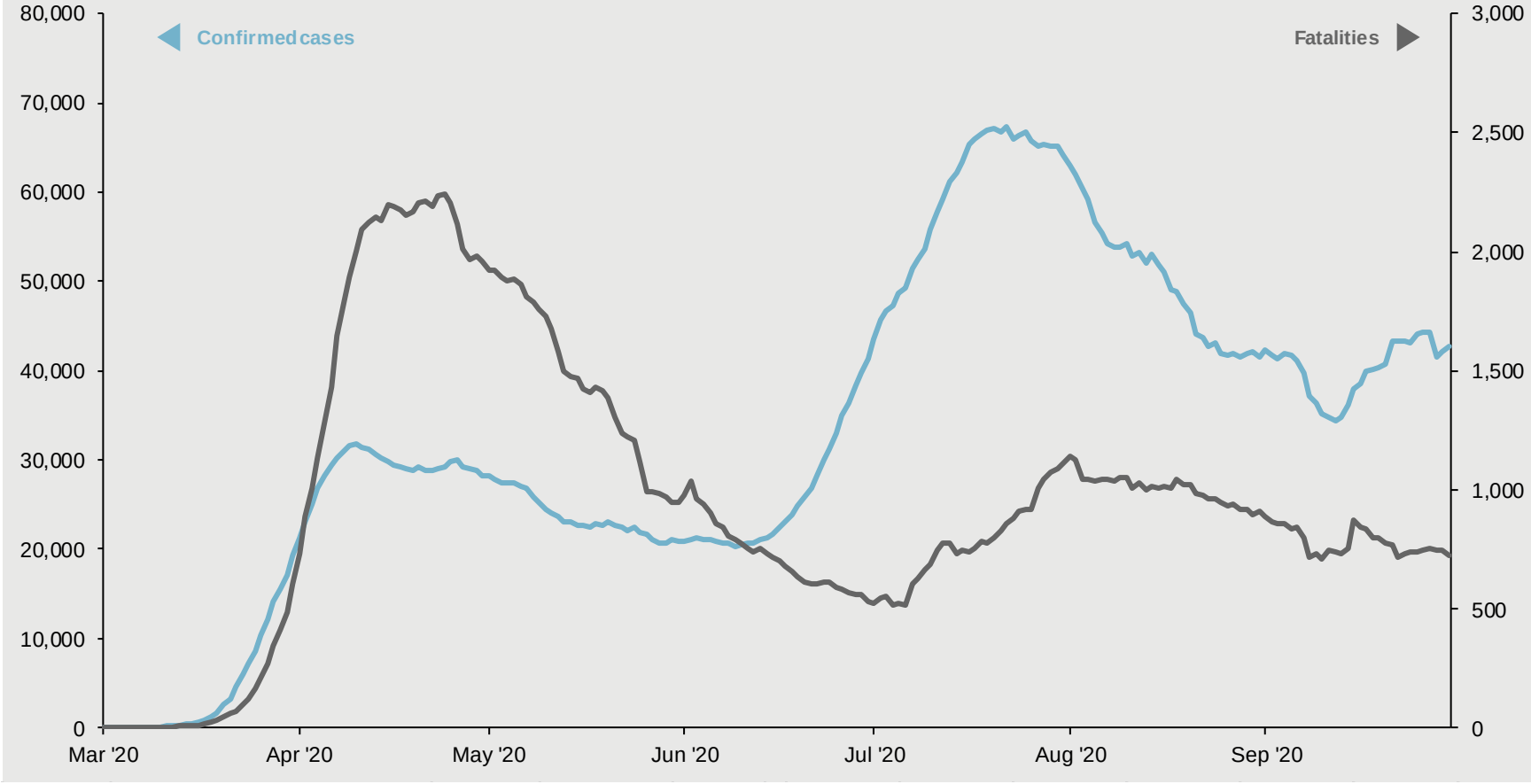
Source: BEA, FactSet, J.P. Morgan Asset Management.
Values may not sum to 100% due to rounding. Quarter-over-quarter percent changes are at an annualized rate. Average represents the annualized growth rate for the full period.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

COVID-19: U.S. confirmed cases and fatalities

Change in confirmed cases and fatalities in the U.S.

7-day moving average, as of September 30, 2020



Source: Johns Hopkins CSSE, J.P. Morgan Asset Management.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

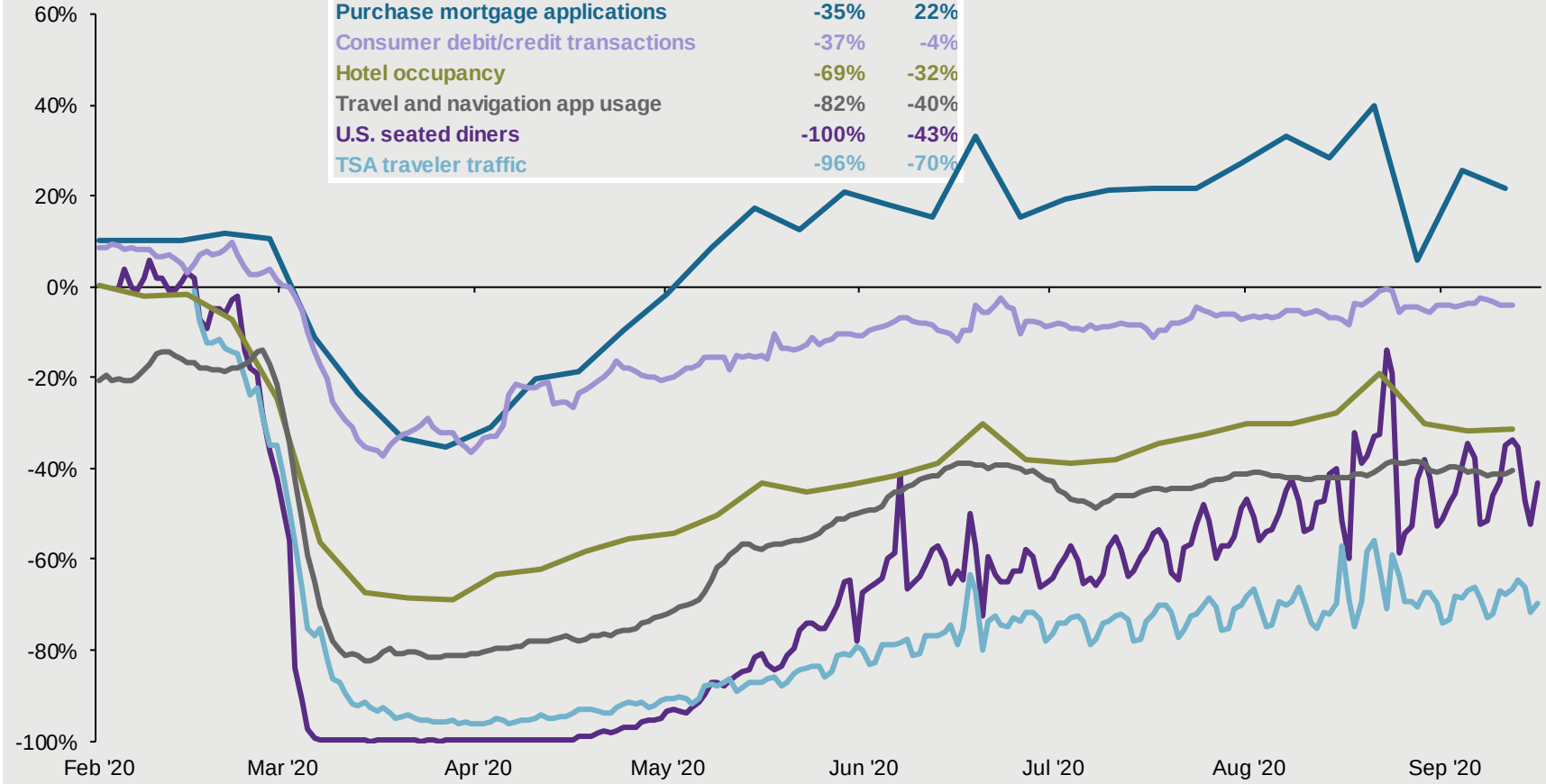
High-frequency economic activity

Economy

High-frequency data

Year-over-year % change*

	Min.	Current
Purchase mortgage applications	-35%	22%
Consumer debit/credit transactions	-37%	-4%
Hotel occupancy	-69%	-32%
Travel and navigation app usage	-82%	-40%
U.S. seated diners	-100%	-43%
TSA traveler traffic	-96%	-70%



Source: App Annie, Chase, Mortgage Bankers Association (MBA), OpenTable, STR, Transportation Security Administration (TSA), J.P. Morgan Asset Management. *App Annie data is compared to 2019 average and includes over 600 travel and navigation apps globally, including Google Maps, Uber, Airbnb and Booking.com. Consumer spending: This report uses rigorous security protocols for selected data sourced from Chase credit and debit card transactions to ensure all information is kept confidential and secure. All selected data is highly aggregated and all unique identifiable information—including names, account numbers, addresses, dates of birth, and Social Security Numbers—is removed from the data before the report's author receives it.

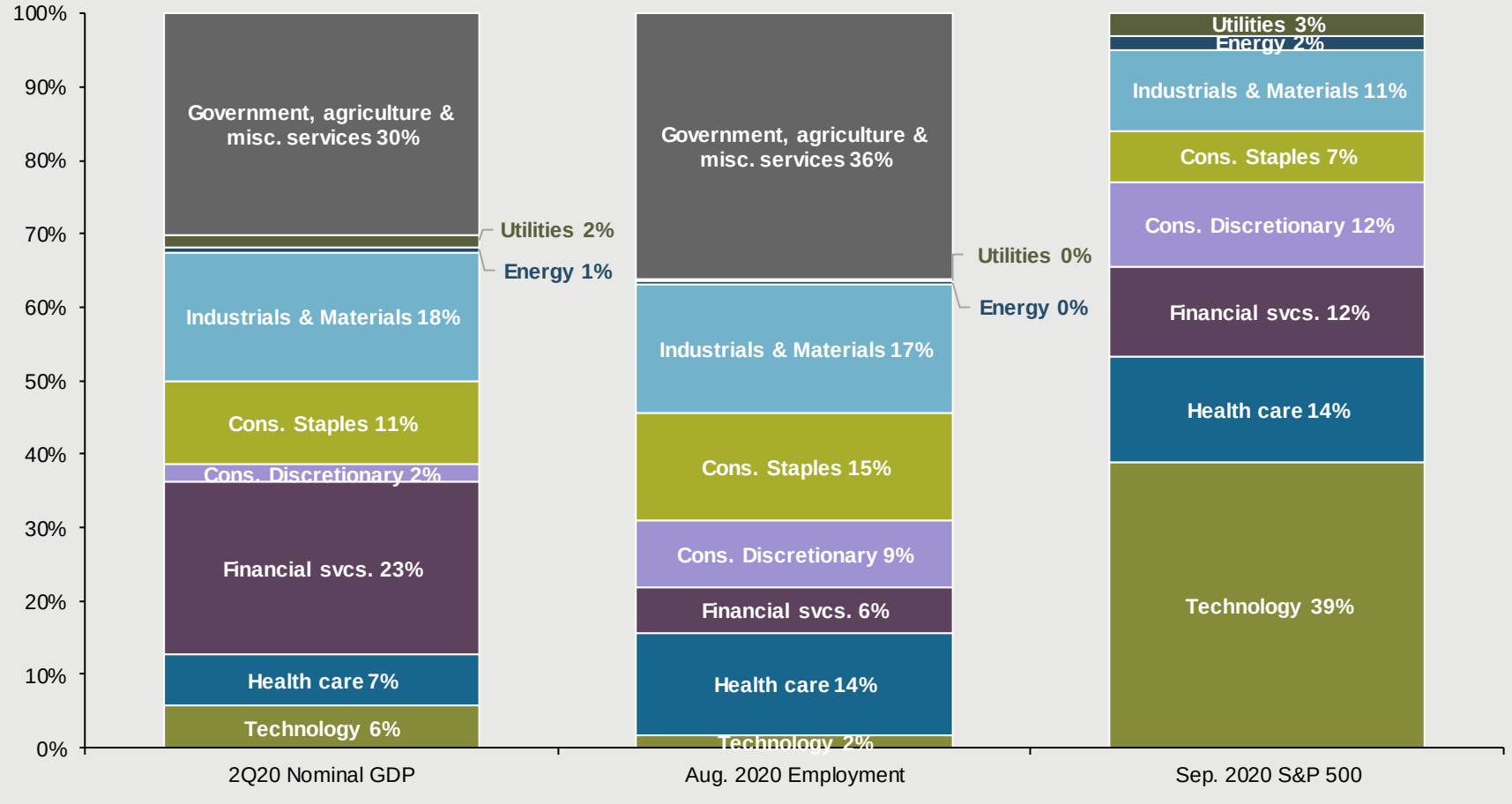
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Sector share of GDP, employment and S&P 500

Economy

Sector share of GDP, employment, S&P 500



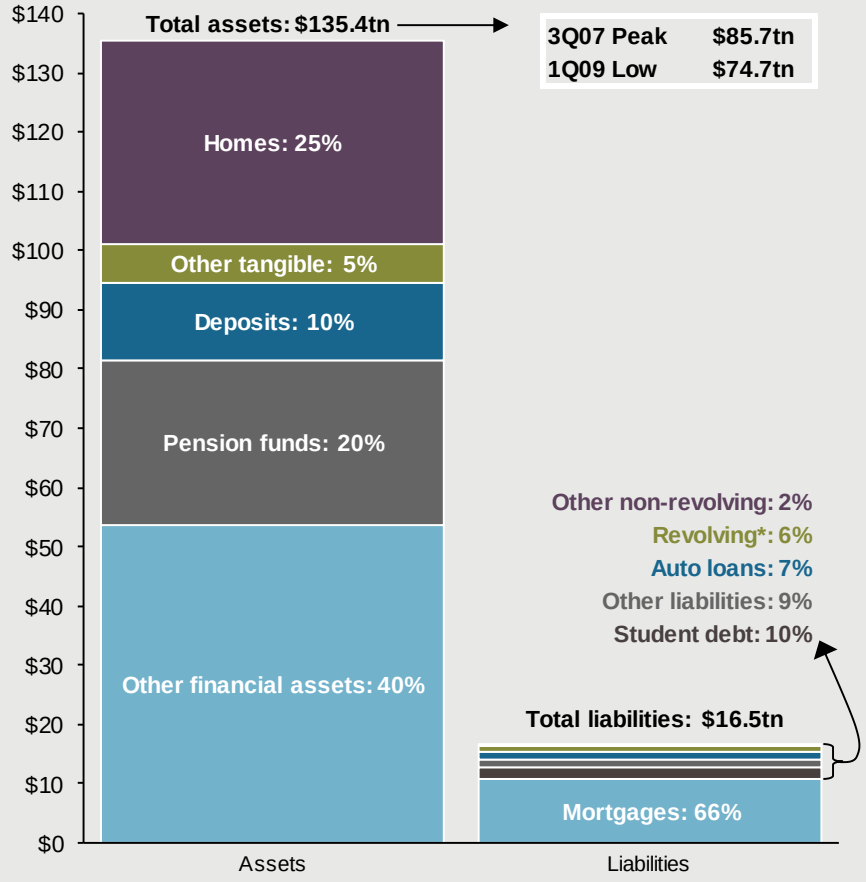
Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Standard & Poor's, J.P. Morgan Asset Management. Technology: information (economy, employment), technology and communication services (S&P 500). Financial services includes real estate (S&P 500). Consumer discretionary: Arts, entertainment, recreation, accommodation, and food services (economy), leisure and hospitality (employment). Consumer staples: wholesale trade and retail trade (economy, employment). Industrials and materials: construction, manufacturing, transportation and warehousing (economy, employment). Energy: mining (economy), mining and logging (employment). Government, agriculture & misc. services: government, other services, professional and business services, education and agriculture, forestry, fishing, and hunting (economy), government, other services, professional and business services, and education (employment). *Guide to the Markets – U.S.* Data are as of September 30, 2020.

J.P.Morgan Asset Management

Consumer finances

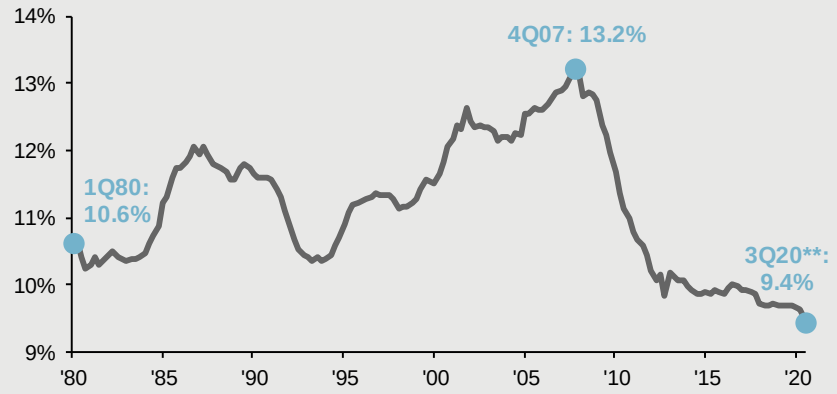
Consumer balance sheet

2Q20, trillions of dollars outstanding, not seasonally adjusted



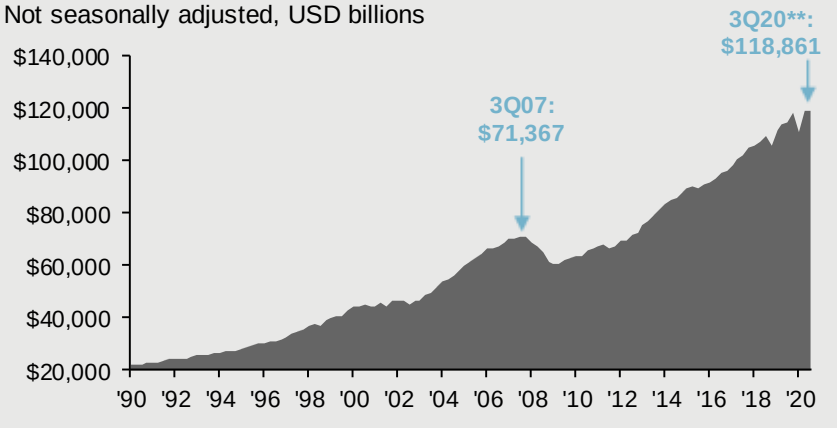
Household debt service ratio

Debt payments as % of disposable personal income, SA



Household net worth

Not seasonally adjusted, USD billions

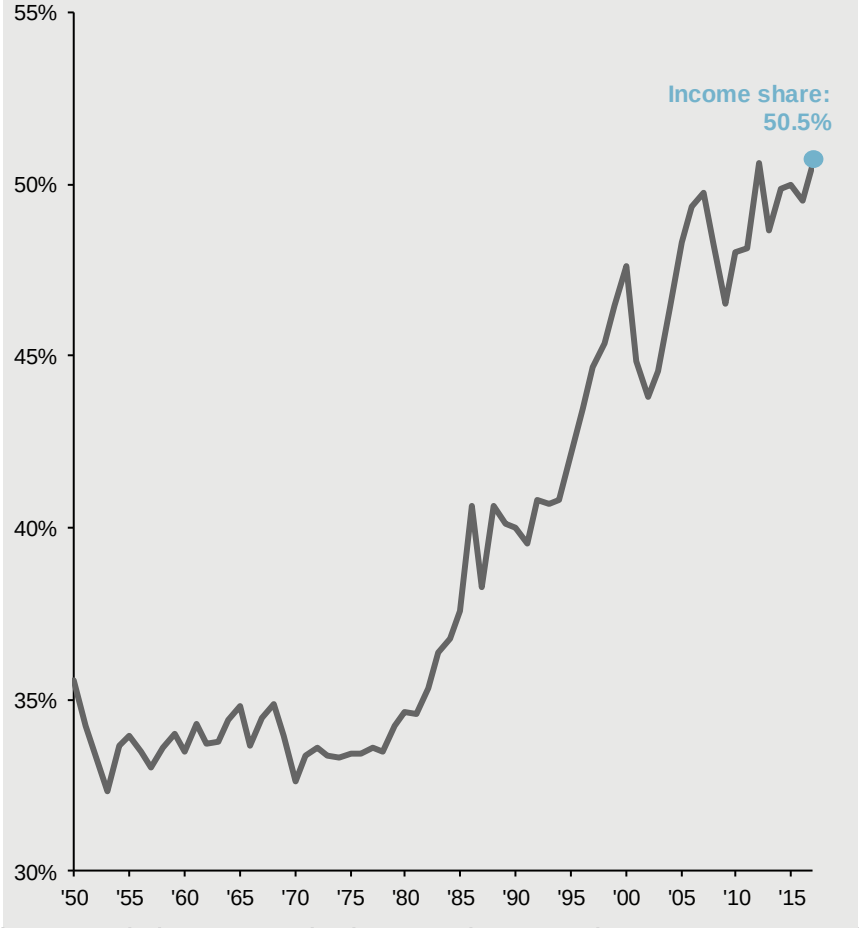


Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA.
Data include households and nonprofit organizations. SA – seasonally adjusted. *Revolving includes credit cards. Values may not sum to 100% due to rounding. **3Q20 figures for debt service ratio and household net worth are J.P. Morgan Asset Management estimates.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

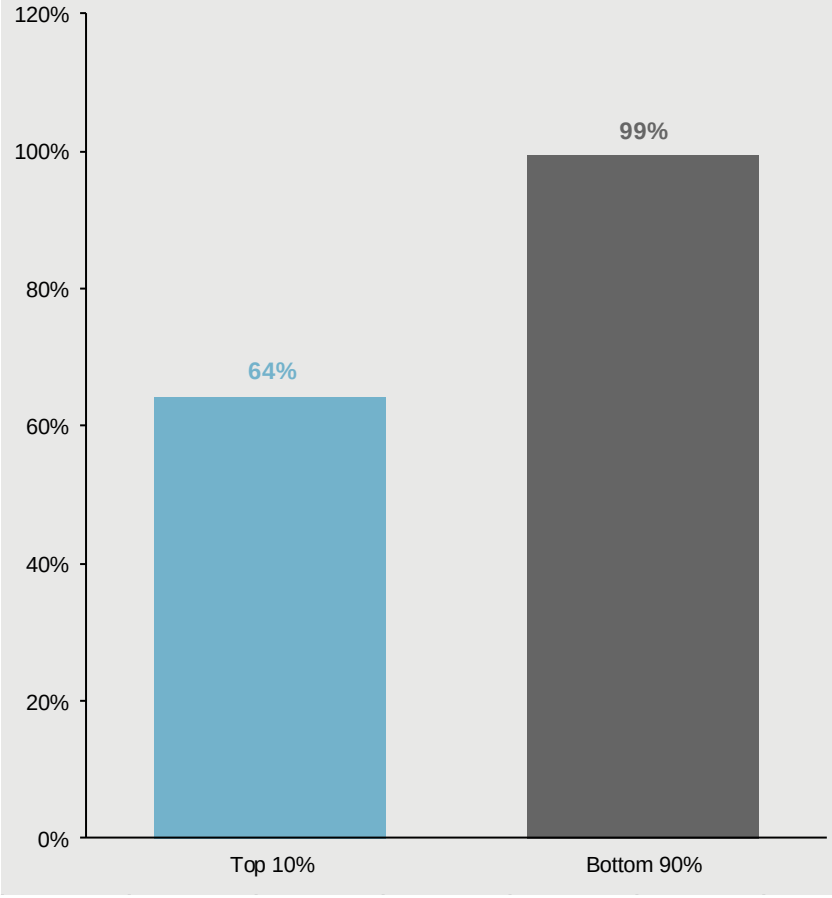
Income inequality in the U.S.

Top 10% share of pre-tax national income



Spending as a share of income after tax

Consumer expenditure survey, 2019



Source: Bureau of Labor Statistics, Piketty, Saez, J.P. Morgan Asset Management; (Left) "Income Inequality in the United States, 1913-1998" by Thomas Piketty and Emmanuel Saez, updated to 2018. Income is defined as market income and excludes government transfers but includes capital gains. In 2018, top decile includes all families with annual income above $135,000; (Right) Consumer Expenditure Survey 2019.
Guide to the Markets – U.S. Data are as of September 30, 2020.

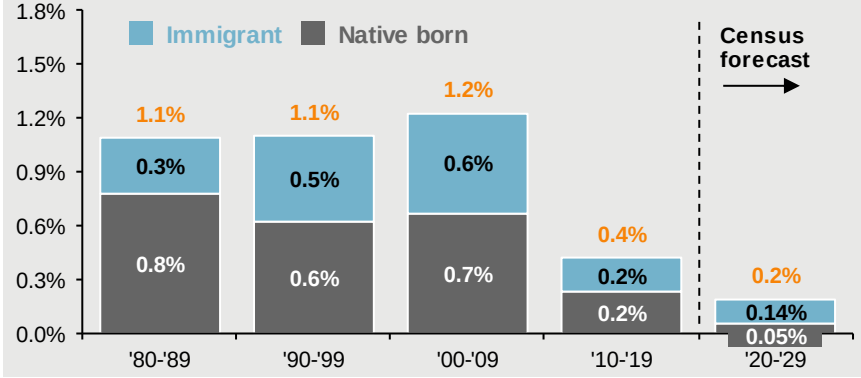
J.P.Morgan
Asset Management

Long-term drivers of economic growth

Economy

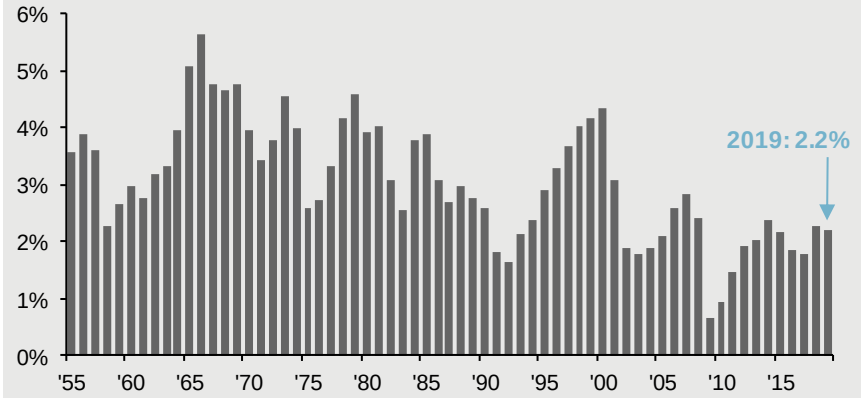
Growth in working-age population

Percent increase in civilian non-institutional population ages 16-64



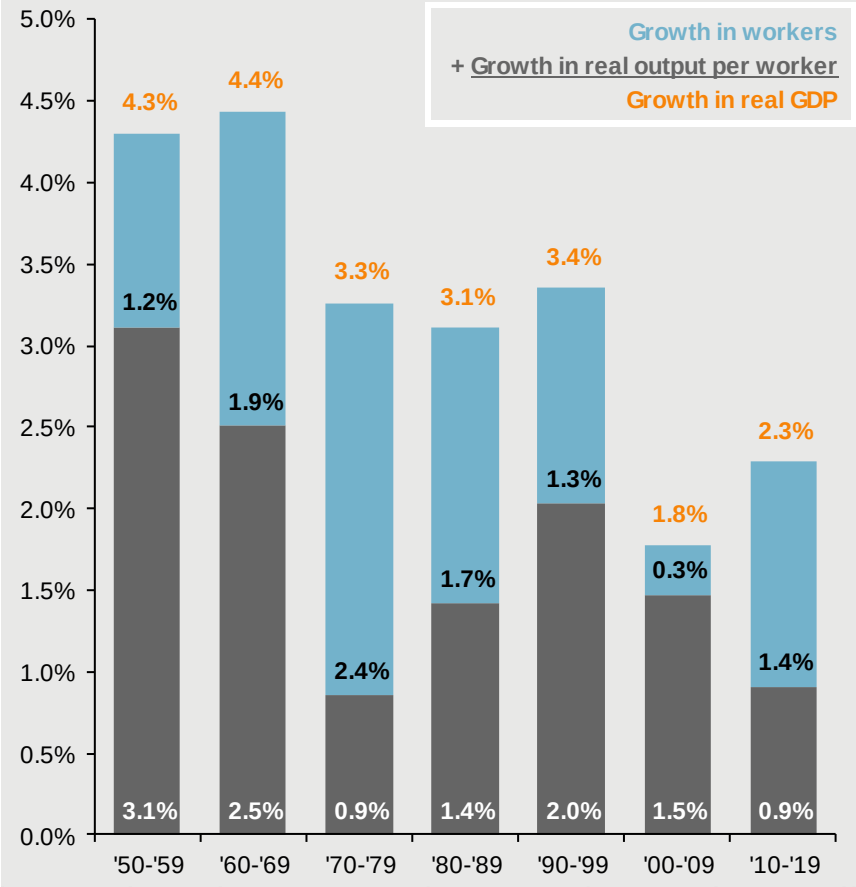
Growth in private non-residential capital stock

Non-residential fixed assets, year-over-year % change



Drivers of GDP growth

Average year-over-year % change



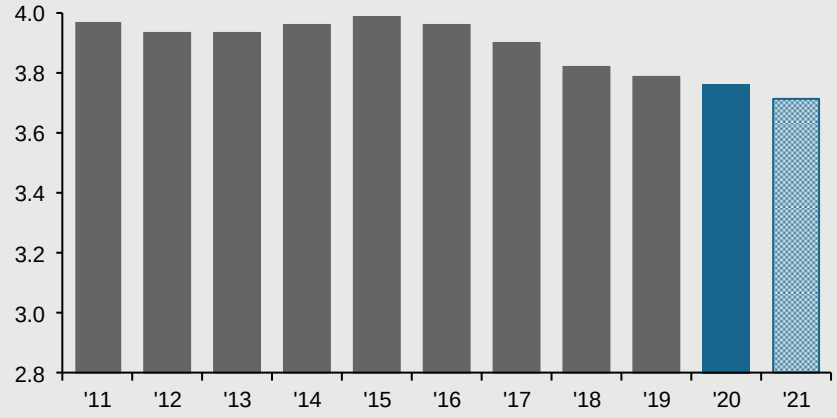
Source: J.P. Morgan Asset Management; (Top left) Census Bureau, DOD, DOJ; (Top left and right) BLS; (Right and bottom left) BEA.
GDP drivers are calculated as the average annualized growth in the 10 years ending in 4Q19. Future working-age population is calculated as the total estimated number of Americans from the Census Bureau, per the February 2020 report, controlled for military enrollment, growth in institutionalized population and demographic trends. Growth in working-age population does not include illegal immigration; DOD Troop Readiness reports used to estimate percent of population enlisted. Numbers may not sum due to rounding.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

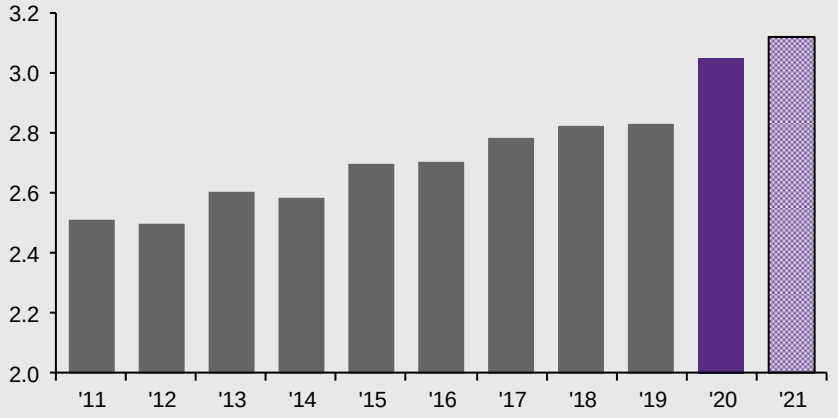
U.S. demographics

Economy

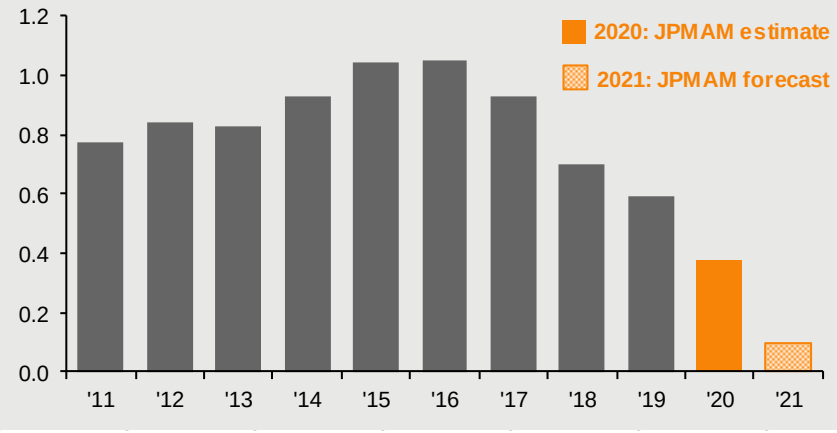
Births, millions



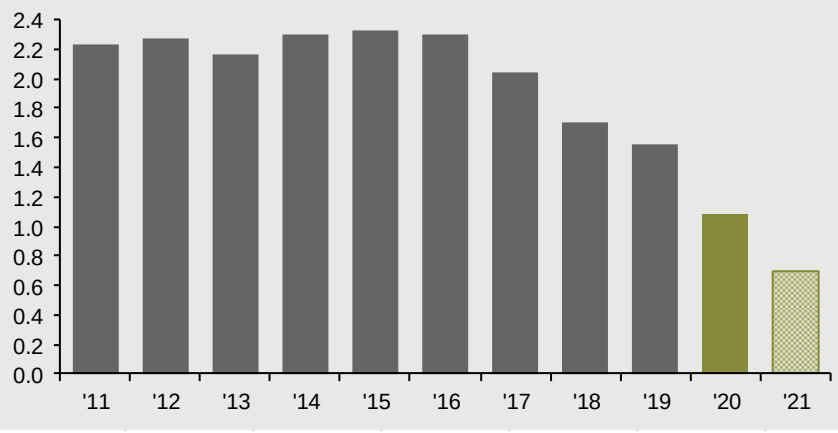
Deaths, millions



Net international immigration, millions



Change in total population, millions

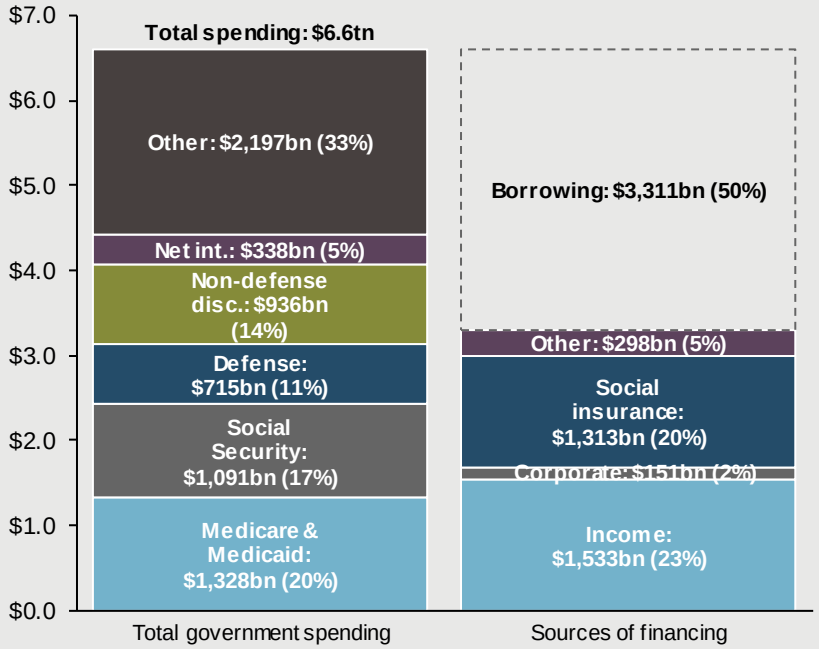


Source: U.S. Census Bureau, J.P. Morgan Asset Management. Reported population components are used from 2011 to 2019. Years end on July 1, 2020 is a JPMAM estimate and 2021 is a JPMAM forecast.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

The 2020 federal budget

CBO Baseline forecast, USD trillions

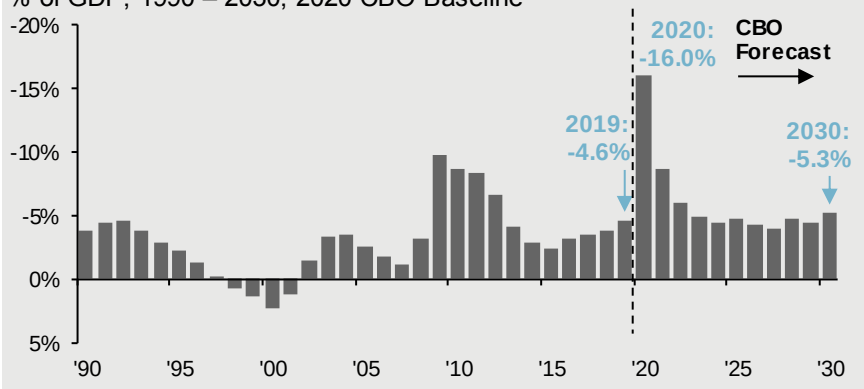


CBO's Baseline economic assumptions

	2020	'21-'22	'23-'24	'25-'30
Real GDP growth	-3.8%	2.4%	2.2%	2.2%
10-year Treasury	1.1%	0.9%	1.4%	2.6%
Headline inflation (CPI)	1.4%	1.3%	2.2%	2.2%
Unemployment	8.8%	8.2%	6.4%	4.9%

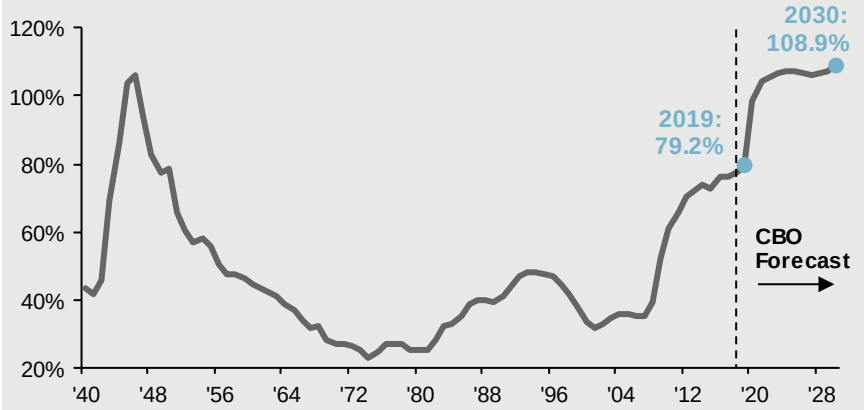
Federal budget surplus/deficit

% of GDP, 1990 – 2030, 2020 CBO Baseline



Federal net debt (accumulated deficits)

% of GDP, 1940 – 2030, 2020 CBO Baseline, end of fiscal year



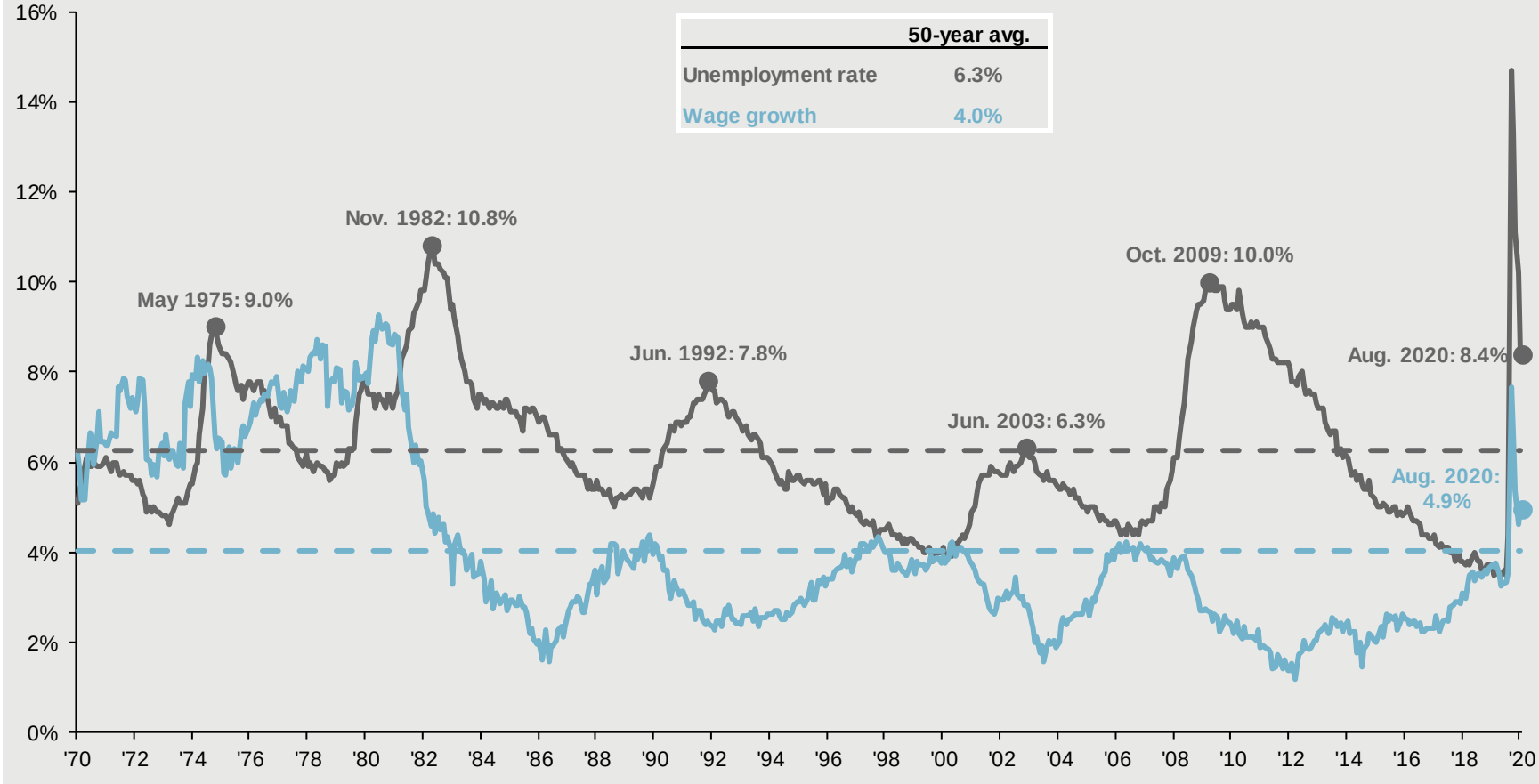
Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department.
2020 Federal Budget is based on the Congressional Budget Office (CBO) September 2020 Baseline Budget Forecast. CBO Baseline economic assumptions are based on the Congressional Budget Office (CBO) July 2020 Update to Economic Outlook. Other spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Note: Years shown are fiscal years (Oct. 1 through Sep. 30).
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Unemployment and wages

Civilian unemployment rate and year-over-year wage growth for private production and non-supervisory workers

Seasonally adjusted, percent



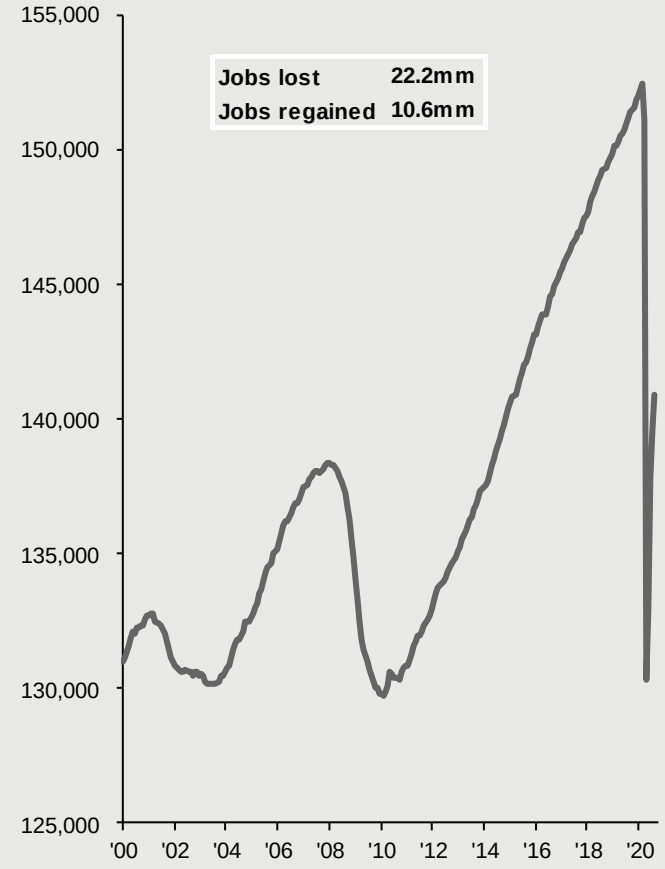
Source: BLS, FactSet, J.P. Morgan Asset Management.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Economy

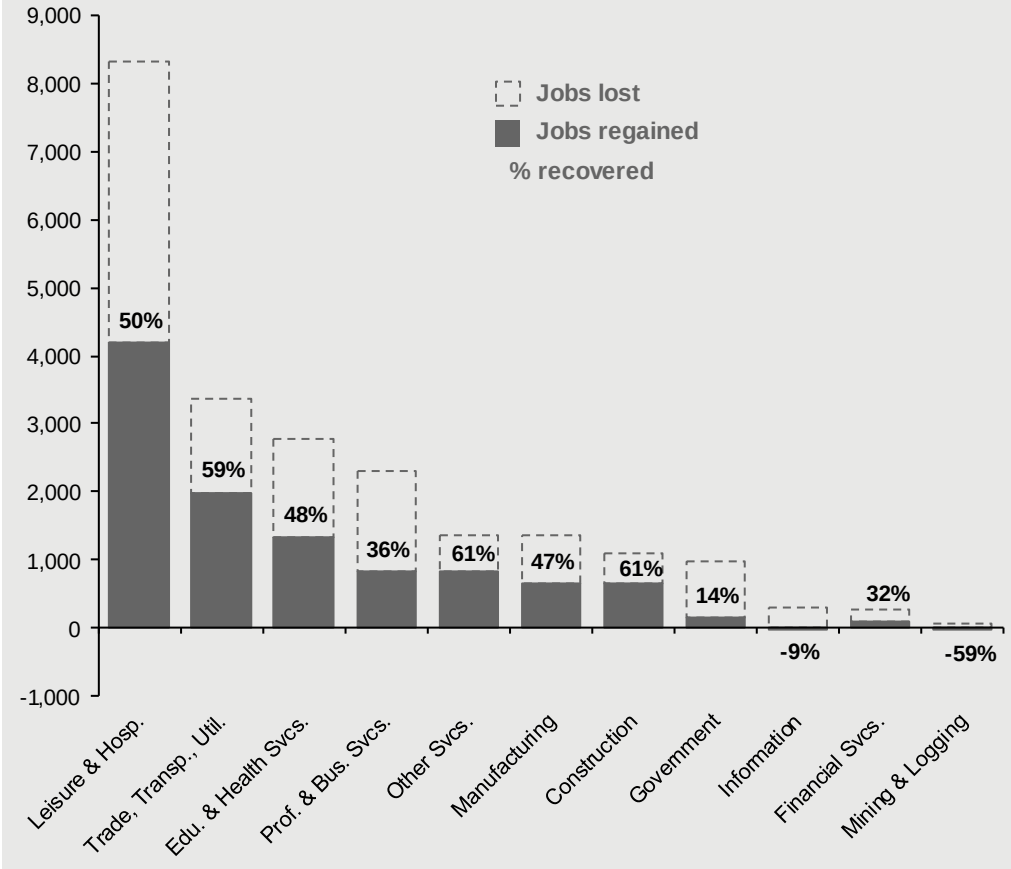
Employees on total nonfarm payrolls

Thousands



Payroll employment lost and regained by industry

Thousands, % recovered



Source: Bureau of Labor Statistics, J.P. Morgan Asset Management. Jobs lost from February 2020 to April 2020, job regained from April 2020 to present.
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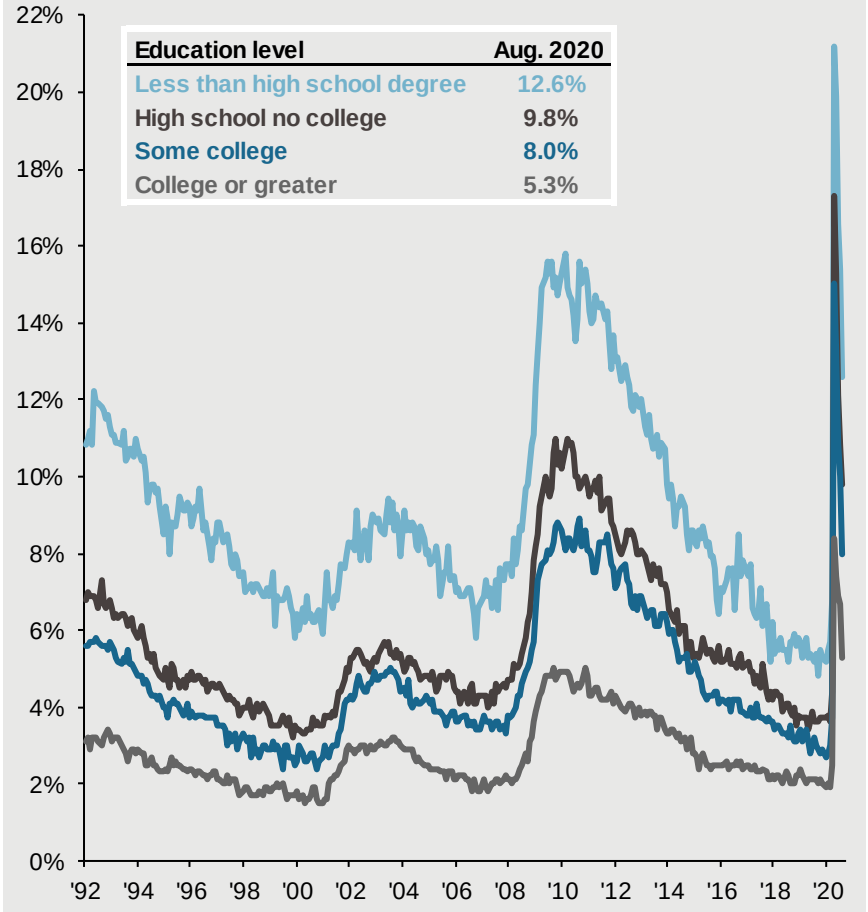
J.P.Morgan
Asset Management

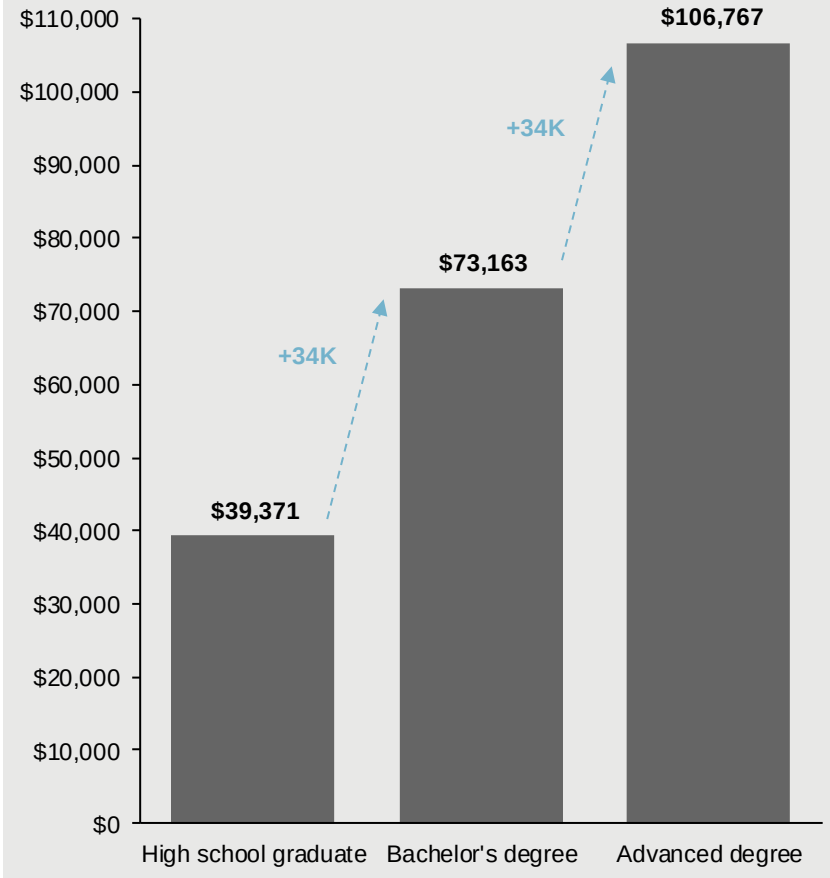
Employment and income by educational attainment

Unemployment rate by education level



Average annual earnings by highest degree earned

Workers aged 18 and older, 2019

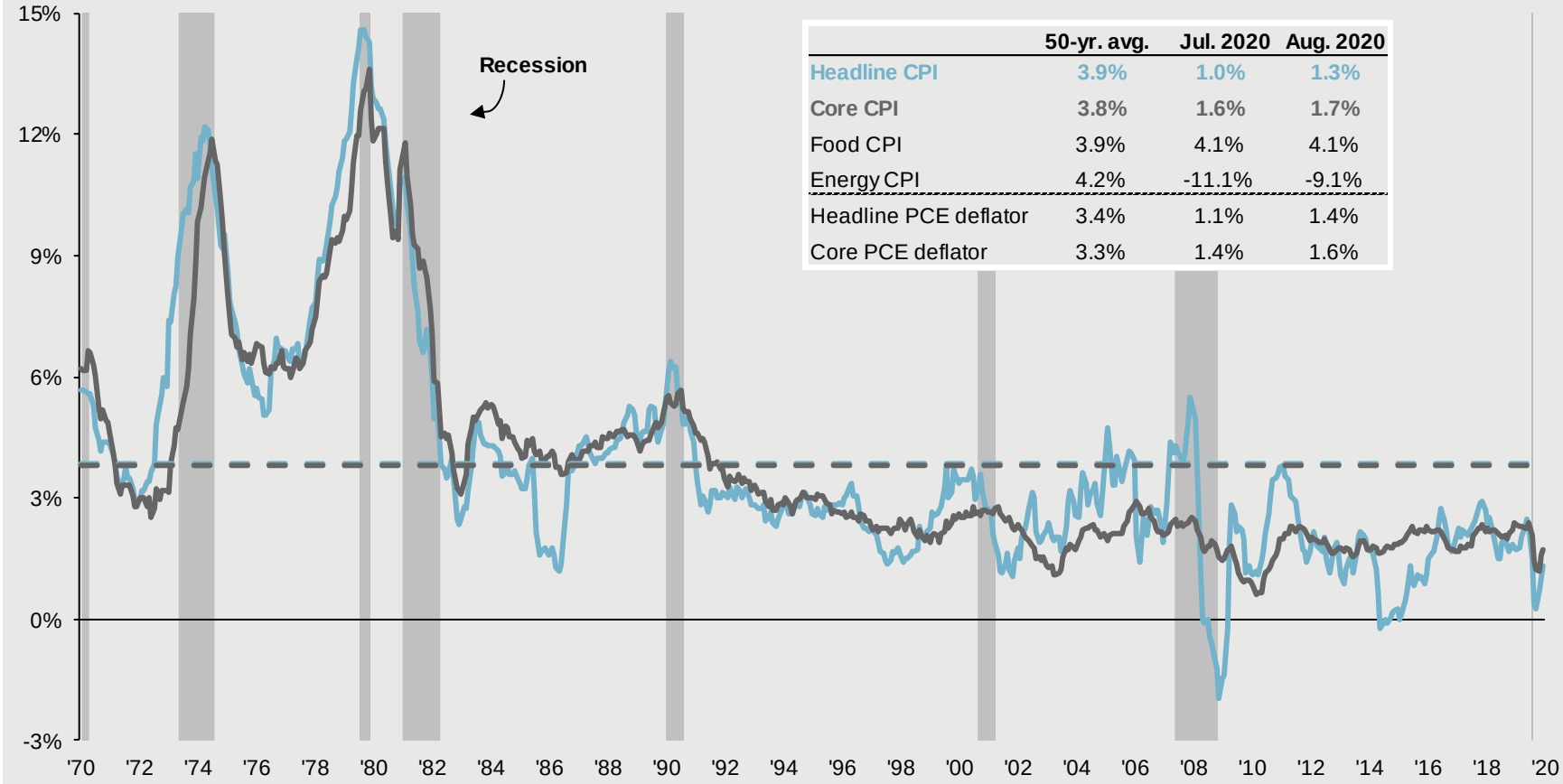


Source: J.P. Morgan Asset Management; (Left) BLS, FactSet; (Right) Census Bureau.
Unemployment rates shown are for civilians aged 25 and older. Earnings by educational attainment comes from the Current Population Survey and is published under historical income tables by person by the Census Bureau.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

CPI and core CPI

% change vs. prior year, seasonally adjusted



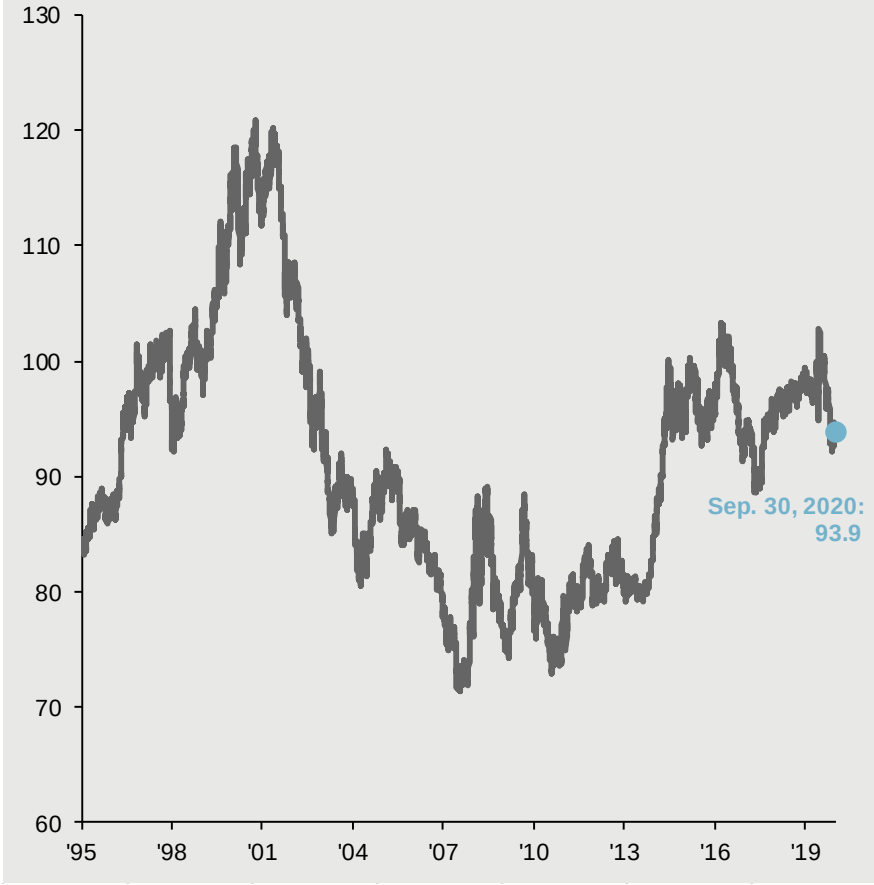
	50-yr. avg.	Jul. 2020	Aug. 2020
Headline CPI	3.9%	1.0%	1.3%
Core CPI	3.8%	1.6%	1.7%
Food CPI	3.9%	4.1%	4.1%
Energy CPI	4.2%	-11.1%	-9.1%
Headline PCE deflator	3.4%	1.1%	1.4%
Core PCE deflator	3.3%	1.4%	1.6%

Source: BLS, FactSet, J.P. Morgan Asset Management.
CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations.
Guide to the Markets – U.S. Data are as of September 30, 2020.

Dollar drivers

The U.S. dollar

U.S. Dollar Index

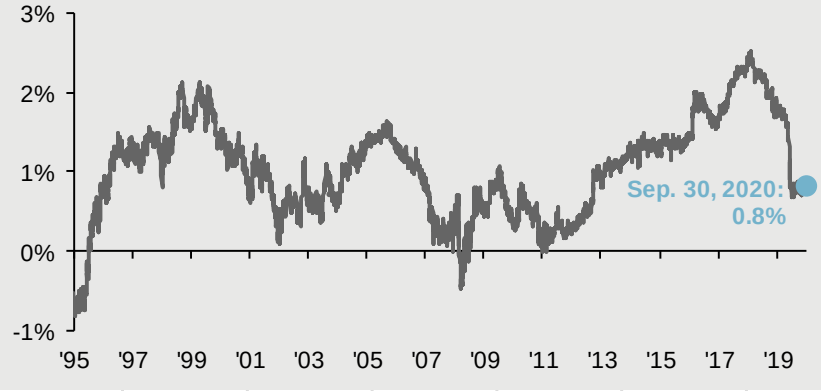


The U.S. trade balance

Current account balance, % of GDP

Developed markets interest rate differentials

Difference between U.S. and international 10-year yields*



Source: J.P. Morgan Asset Management; (Left) FactSet, ICE; (Top right) Bureau of Economic Analysis, FactSet; (Bottom right) Tullett Prebon. Currencies in the DXY Index are: British pound, Canadian dollar, euro, Japanese yen, Swedish krona and Swiss franc. *Interest rate differential is the difference between the 10-year U.S. Treasury yield and a basket of the 10-year yields of each major trading partner (Australia, Canada, Europe, Japan, Sweden, Switzerland and UK). Weights on the basket are calculated using the 10-year average of total government bonds outstanding in each region. Europe is defined as the 19 countries in the euro area.
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Asset Management

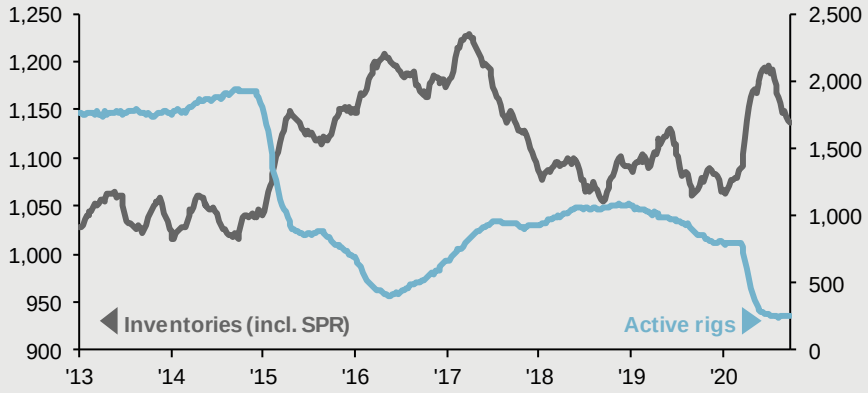
Change in production and consumption of liquid fuels

Production, consumption and inventories, millions of barrels per day

Production	2017	2018	2019	2020*	2021*	Growth since '17
U.S.	15.7	17.9	19.5	18.7	18.8	20.2%
OPEC	36.8	36.8	34.7	30.8	34.0	-7.8%
Russia	11.2	11.4	11.5	10.5	11.1	-1.1%
Global	**98.2**	**100.8**	**100.7**	**94.6**	**99.3**	**1.2%**
Consumption						
U.S.	20.0	20.5	20.5	18.4	20.1	0.5%
China	13.6	14.0	14.5	13.9	15.0	10.2%
Global	**98.8**	**100.6**	**101.4**	**93.1**	**99.6**	**0.8%**
Inventory Change	-0.7	0.3	-0.7	1.5	-0.3	

U.S. crude oil inventories and rig count**

Million barrels, number of active rigs



Price of oil

WTI crude, nominal prices, USD/barrel

Source: J.P. Morgan Asset Management; (Top and bottom left) EIA; (Right) FactSet; (Bottom left) Baker Hughes.
*Forecasts are from the September 2020 EIA Short-Term Energy Outlook and start in 2020. **U.S. crude oil inventories include the Strategic Petroleum Reserve (SPR). Active rig count includes both natural gas and oil rigs. WTI crude prices are continuous contract NYM prices in USD.
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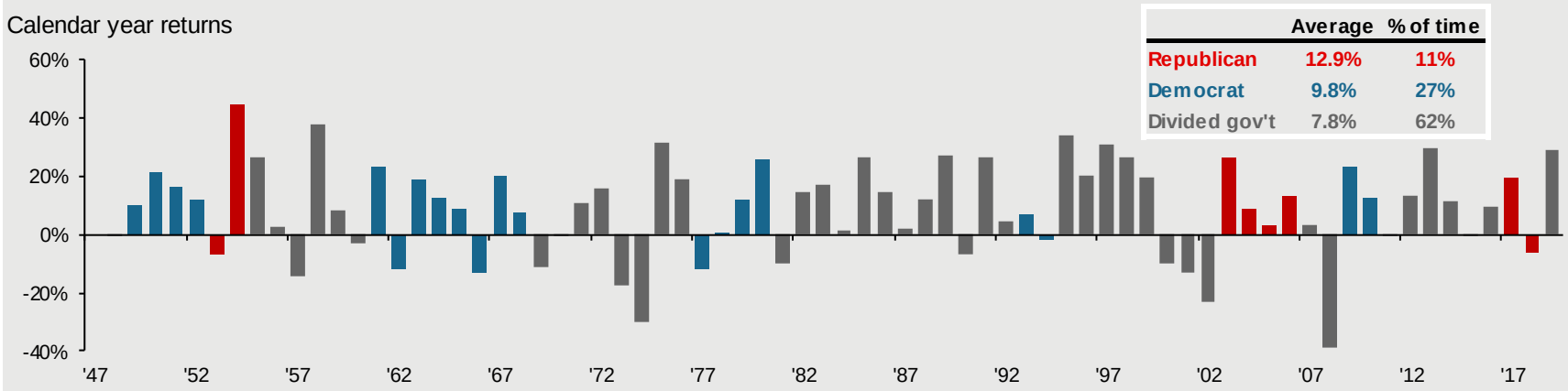
Asset Management

S&P 500 Price Index

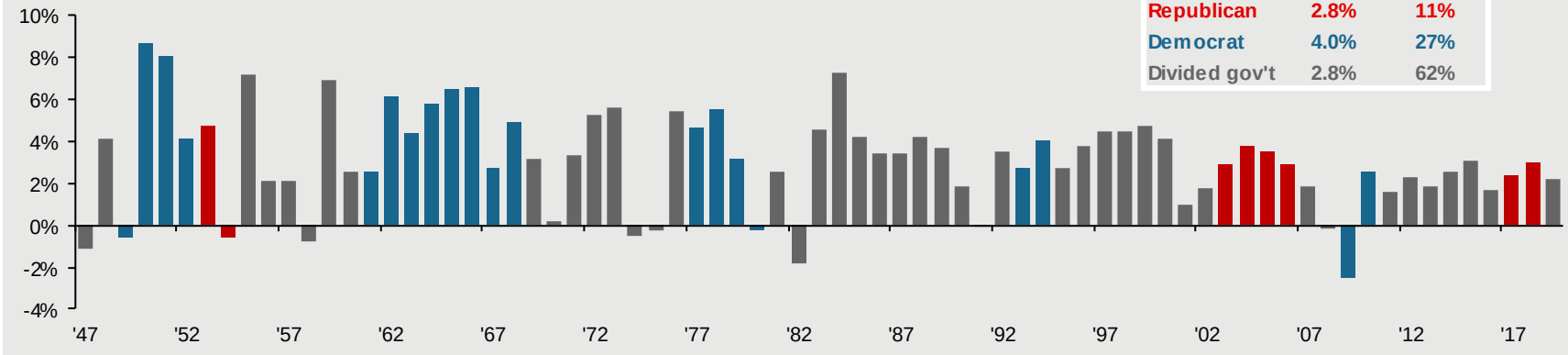
Calendar year returns



	Average	% of time
Republican	12.9%	11%
Democrat	9.8%	27%
Divided gov't	7.8%	62%

Real GDP

Year-over-year % change, annual



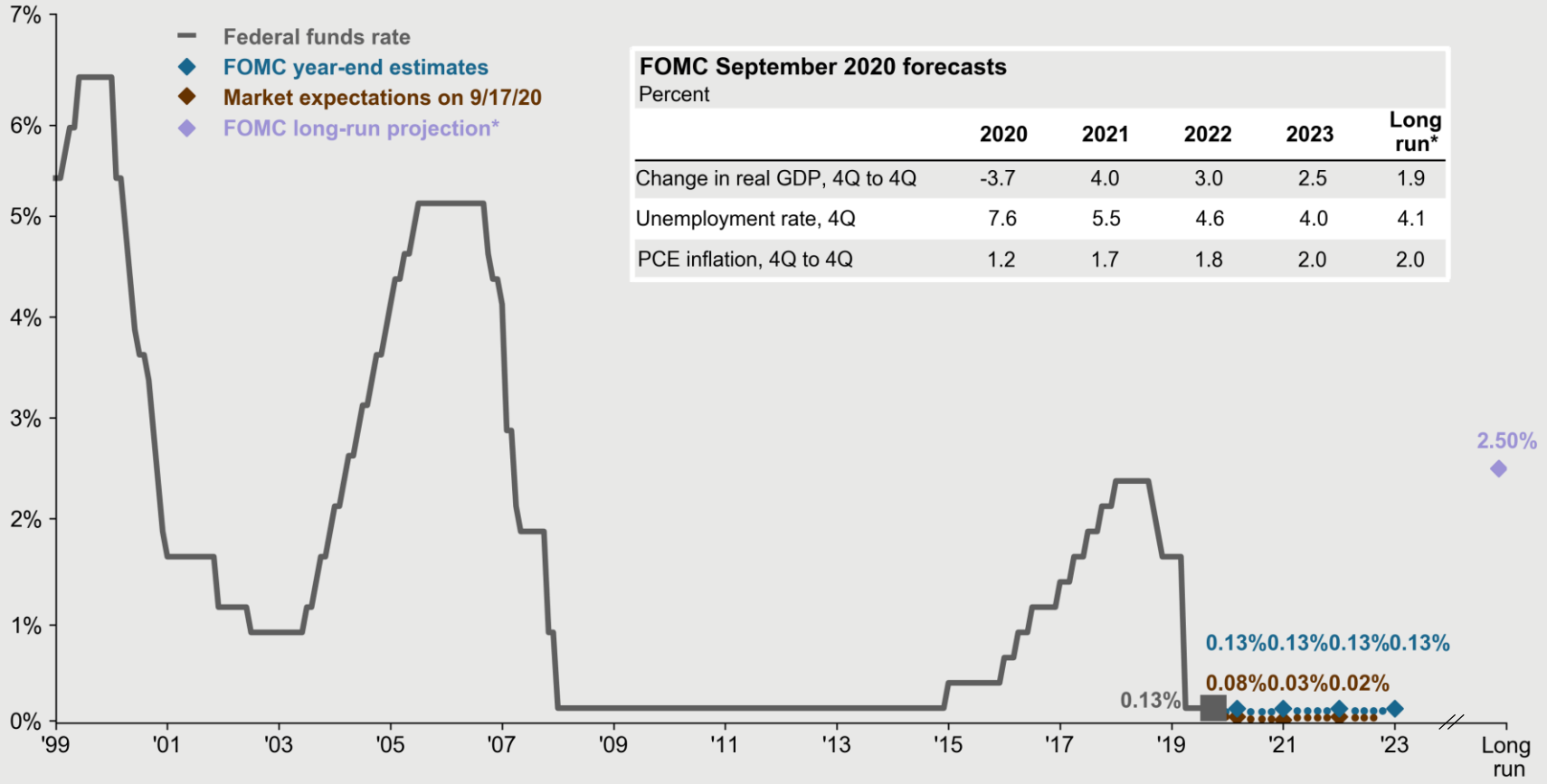
	Average	% of time
Republican	2.8%	11%
Democrat	4.0%	27%
Divided gov't	2.8%	62%

Source: FactSet, Office of the President, J.P. Morgan Asset Management; (Top) Standard & Poor's; (Bottom) Bureau of Economic Analysis. Top chart shows S&P 500 price returns.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



FOMC September 2020 forecasts

Percent

	2020	2021	2022	2023	Long run*
Change in real GDP, 4Q to 4Q	-3.7	4.0	3.0	2.5	1.9
Unemployment rate, 4Q	7.6	5.5	4.6	4.0	4.1
PCE inflation, 4Q to 4Q	1.2	1.7	1.8	2.0	2.0

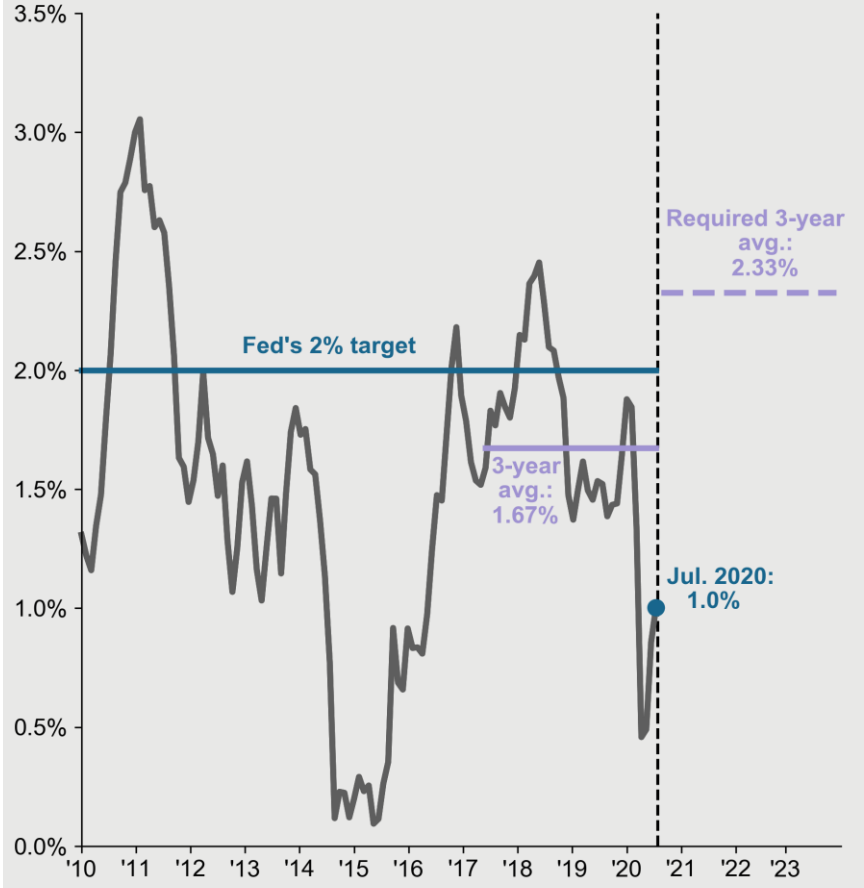
Source: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management.
Market expectations are the federal funds rates priced into the fed futures market as of the following date of the September 2020 FOMC meeting and are through August 2023 due to data availability. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Average inflation targeting

5-Year, 5-Year forward inflation expectation rate
Percent, not seasonally adjusted

Headline personal consumption deflator
Year-over-year percent change



Source: Bureau of Economic Analysis, Federal Reserve, Federal Reserve Bank of St. Louis, J.P. Morgan Asset Management. The 5 year, 5 year forward inflation expectation rate measures the expected inflation rate (on average) over the five-year period that begins five years from today. *Guide to the Markets – U.S.* Data are as of September 30, 2020.

J.P.Morgan
Asset Management

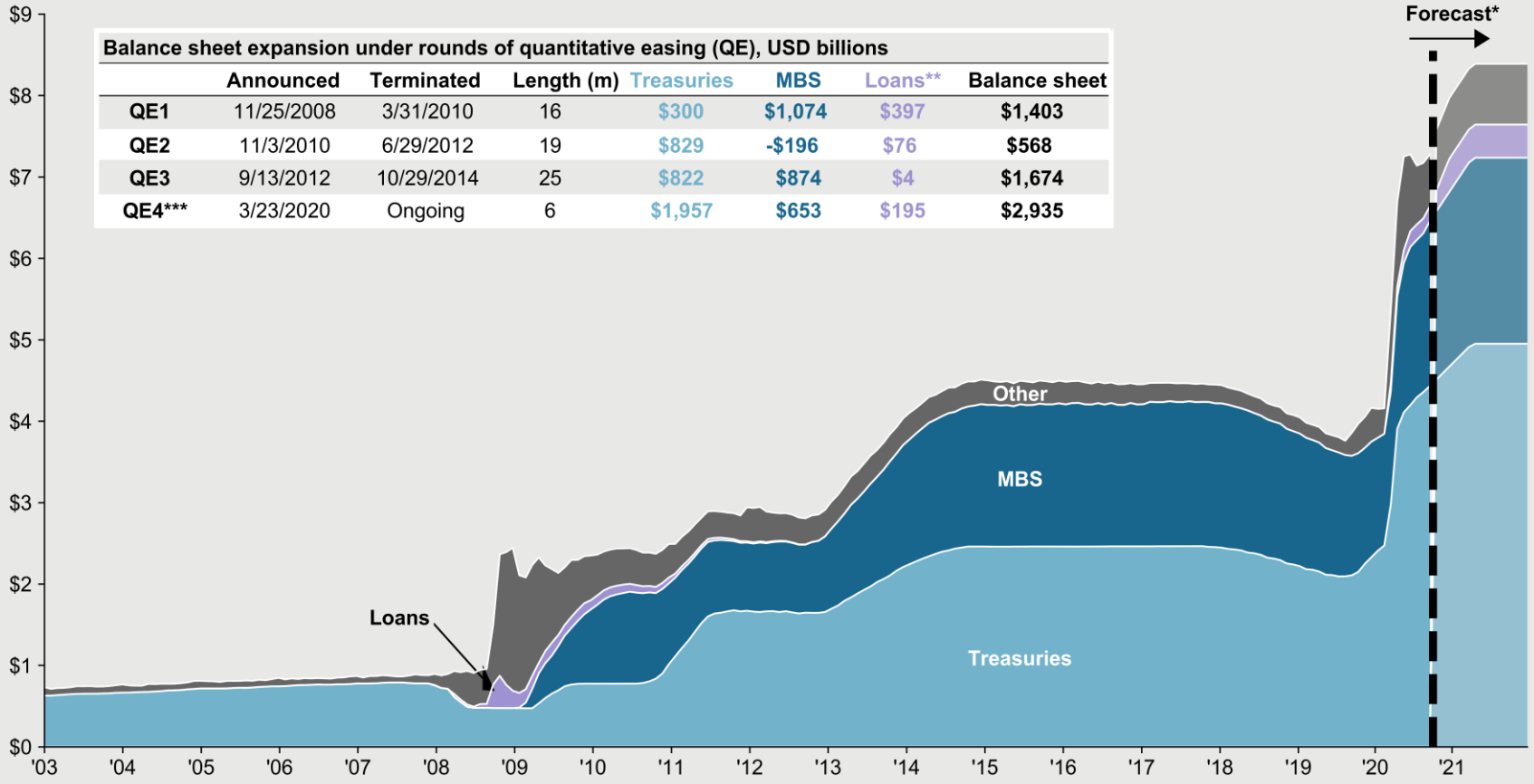
The Federal Reserve balance sheet

The Federal Reserve balance sheet

USD trillions

Balance sheet expansion under rounds of quantitative easing (QE), USD billions

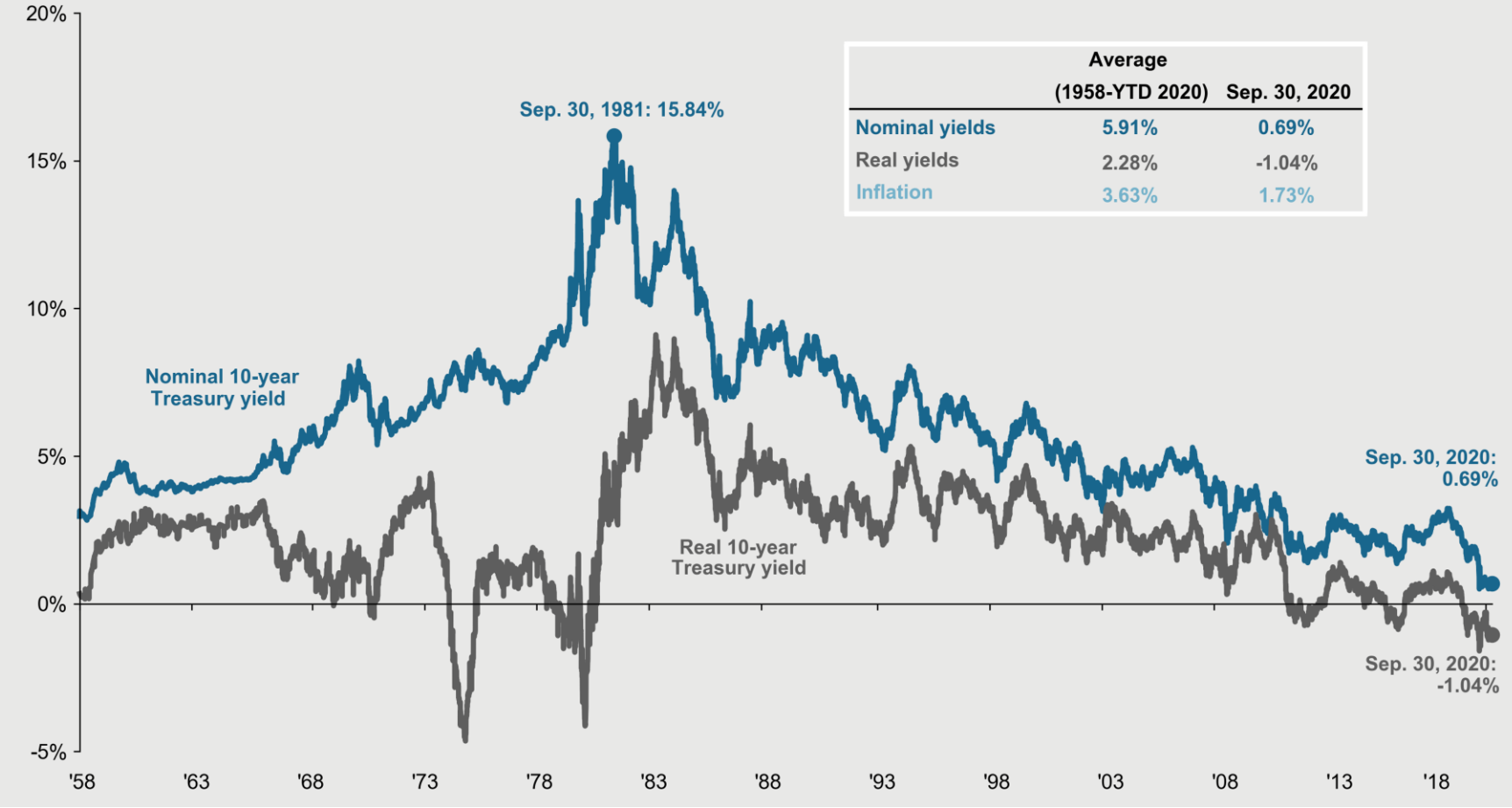
	Announced	Terminated	Length (m)	Treasuries	MBS	Loans**	Balance sheet
QE1	11/25/2008	3/31/2010	16	$300	$1,074	$397	$1,403
QE2	11/3/2010	6/29/2012	19	$829	-$196	$76	$568
QE3	9/13/2012	10/29/2014	25	$822	$874	$4	$1,674
QE4***	3/23/2020	Ongoing	6	$1,957	$653	$195	$2,935



Source: FactSet, Federal Reserve, J.P. Morgan Investment Bank, J.P. Morgan Asset Management.
Currently, the balance sheet contains $4.4 trillion in Treasuries and $2.0 trillion in MBS. The end balance forecast is $5.4 trillion in Treasuries and $2.5 trillion in MBS by December 2021. *Balance sheet forecast assumes the Federal Reserve maintains its current pace of purchases of Treasuries and MBS through June 2021 as suggested in the September 2020 FOMC meeting. **Loans include primary, secondary and seasonal loans, maiden lane securities and loans extended through newly established corporate credit facilities. Loan figures shown are max usage over the QE period referenced and are not growth of loan portfolio over the period. ***QE4 is ongoing and the expansion figures are as of the most recent Wednesday close as reported by the Federal Reserve.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Nominal and real 10-year Treasury yields



	Average (1958-YTD 2020)	Sep. 30, 2020
Nominal yields	5.91%	0.69%
Real yields	2.28%	-1.04%
Inflation	3.63%	1.73%

Source: BLS, FactSet, Federal Reserve, J.P. Morgan Asset Management.
Real 10-year Treasury yields are calculated as the daily Treasury yield less year-over-year core CPI inflation for that month except for September 2020 where real yields are calculated by subtracting out August 2020 year-over-year core inflation.
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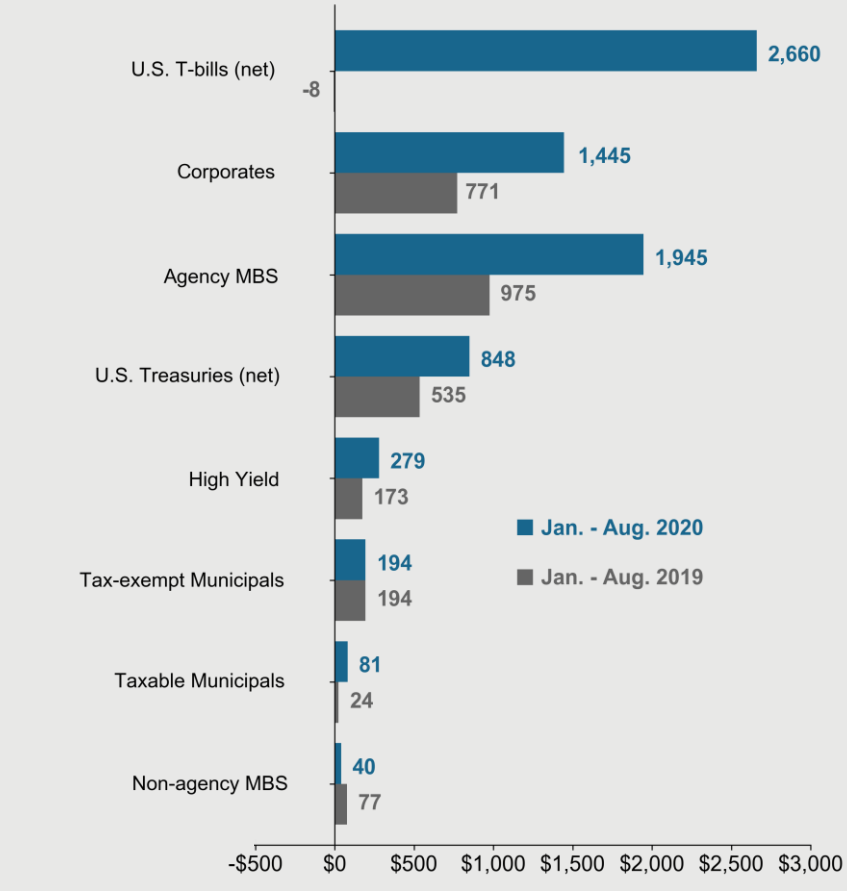
J.P.Morgan
Asset Management

Fixed income market dynamics

U.S. Treasuries	Yield 9/30/2020	Yield 6/30/2020	Return 2020 YTD	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
2-Year	0.13%	0.16%	3.03%	2 years	0.67	-0.39
5-Year	0.28%	0.29%	7.50%	5	0.92	-0.35
TIPS	-0.94%	-0.68%	9.22%	10	0.58	0.19
10-Year	0.69%	0.66%	12.77%	10	1.00	-0.33
30-Year	1.46%	1.41%	23.91%	30	0.93	-0.34
Sector						
Corporates	2.01%	2.15%	6.64%	12.2	0.42	0.38
U.S. Aggregate	1.18%	1.25%	6.79%	8.2	0.85	0.02
Convertibles	4.98%	6.83%	23.11%	-	-0.30	0.89
High Yield	5.77%	6.87%	0.62%	6.3	-0.25	0.74
Municipals	1.32%	1.50%	3.33%	13.0	0.38	0.09
MBS	1.29%	1.36%	3.62%	3.7	0.81	-0.14
ABS	2.50%	3.10%	2.41%	2.2	-0.01	0.28
Floating Rate	0.63%	0.94%	1.01%	1.7	-0.23	0.45

Issuance by sector

USD billions, gross issuance through August 2020 vs. August 2019



Source: Barclays, Bloomberg, FactSet, SIFMA, Standard & Poor's, U.S. Treasury, J.P. Morgan Asset Management. Sectors shown above are provided by Bloomberg unless otherwise noted and are represented by – U.S. Aggregate; MBS: U.S. Aggregate Securitized - MBS; ABS: J.P. Morgan ABS Index; Corporates: U.S. Corporates; Municipals: Muni Bond; High Yield: Corporate High Yield; TIPS: Treasury Inflation-Protected Securities (TIPS); U.S. Floating rate index; Convertibles: U.S. Convertibles Composite. Convertibles yield is as of August 2020 due to data availability. Yield and return information based on bellwethers for Treasury securities. Sector yields reflect yield to worst. Convertibles yield is based on U.S. portion of Bloomberg Barclays Global Convertibles. Correlations are based on 15-years of monthly returns for all sectors. Issuance is based on monthly data provided by SIFMA. Past performance is not indicative of future results.
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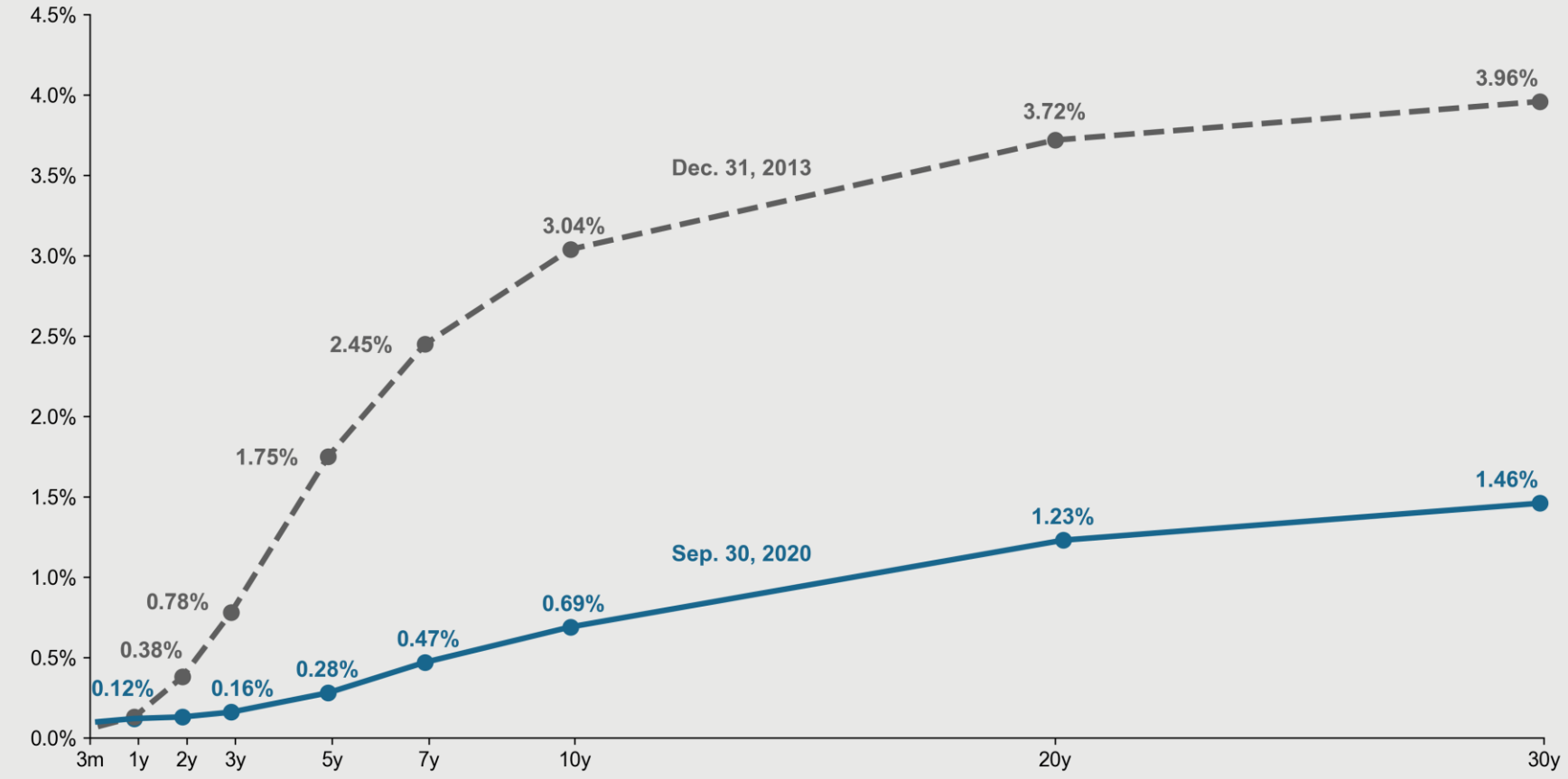
J.P.Morgan Asset Management

Yield curve

Yield curve

U.S. Treasury yield curve

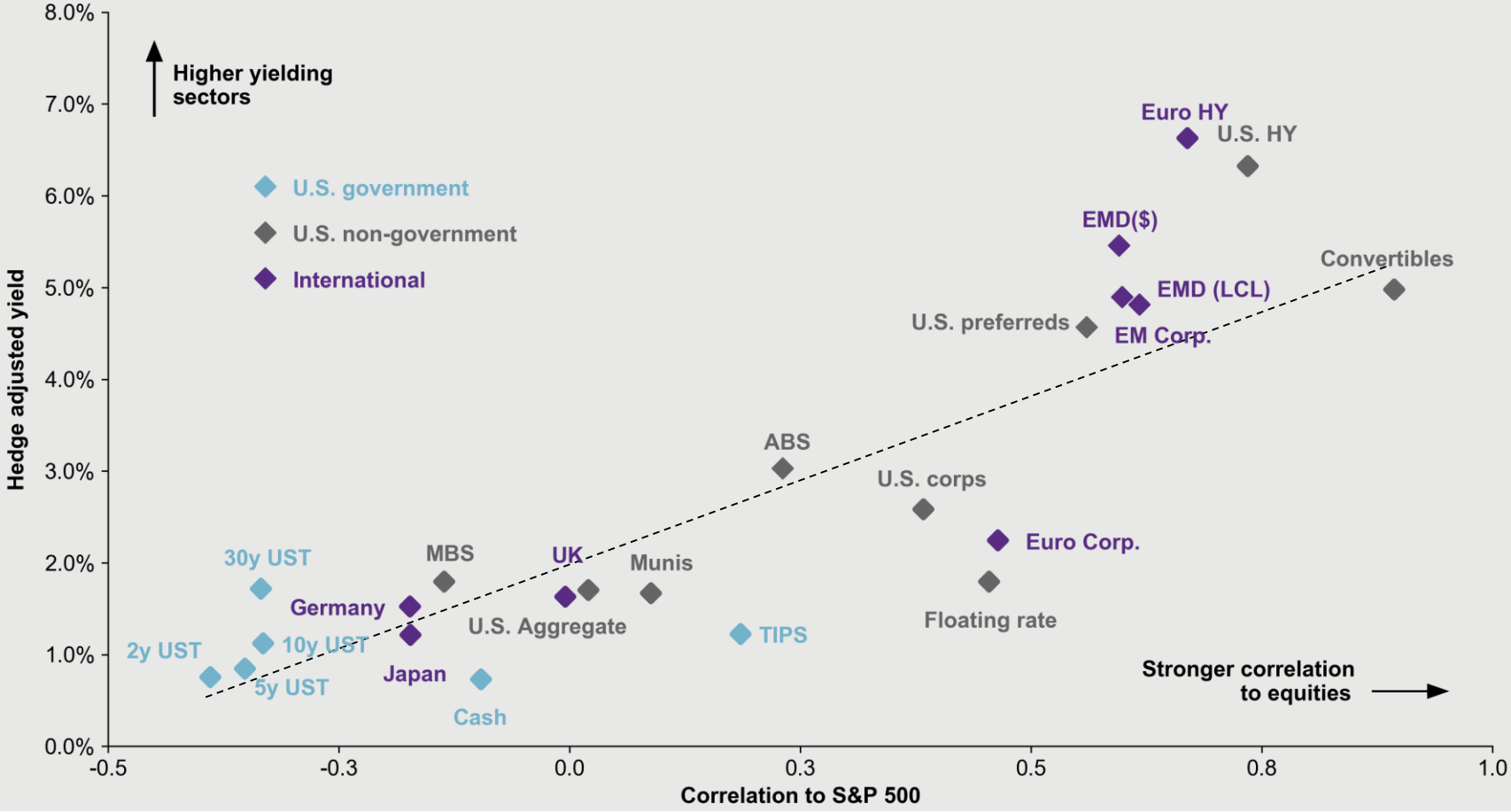


Source: FactSet, Federal Reserve, J.P. Morgan Asset Management.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Fixed income yields and correlation to the equity market

Correlation of fixed income sectors vs. S&P 500 and yields



Source: Bloomberg, FactSet, ICE, J.P. Morgan Asset Management. Sectors are Bloomberg indices except for EMD and ABS – U.S. Aggregate; MBS: U.S. Aggregate Securitized - MBS; U.S. Preferreds: S&P U.S. Preferred Stock Index; U.S. corps: U.S. Corporates; Munis: Muni Bond; Cash: 1-3m Treasury; U.S. HY: Corporate High Yield; TIPS: Treasury Inflation-Protected Securities (TIPS); Floating Rate: U.S. Floating Rate; Convertibles: U.S. Convertibles Composite; ABS: J.P. Morgan ABS; EMD ($): J.P. Morgan EMBIG Diversified; EMD (LCL): J.P. Morgan GBI EM Global Diversified; EM Corp: J.P. Morgan CEMBI Broad Diversified; Euro Corp.: Euro Aggregate Corporate; Euro HY: Pan-European High Yield. Convertibles yield is based on the U.S. portion of the Bloomberg Barclays Global Convertibles. Country yields are represented by the global aggregate for each country. Yield and return information based on bellwethers for Treasury securities. Correlations are based on 15-years of monthly returns for all sectors. International fixed income sector correlations are in hedged U.S. dollar returns except EMD local index. Yields for all indices are hedged using three-month LIBOR rates between the U.S. and international LIBOR and are a 12-month average. *Guide to the Markets – U.S.* Data are as of September 30, 2020.

J.P.Morgan Asset Management

High yield bonds

Default rate and spread to worst

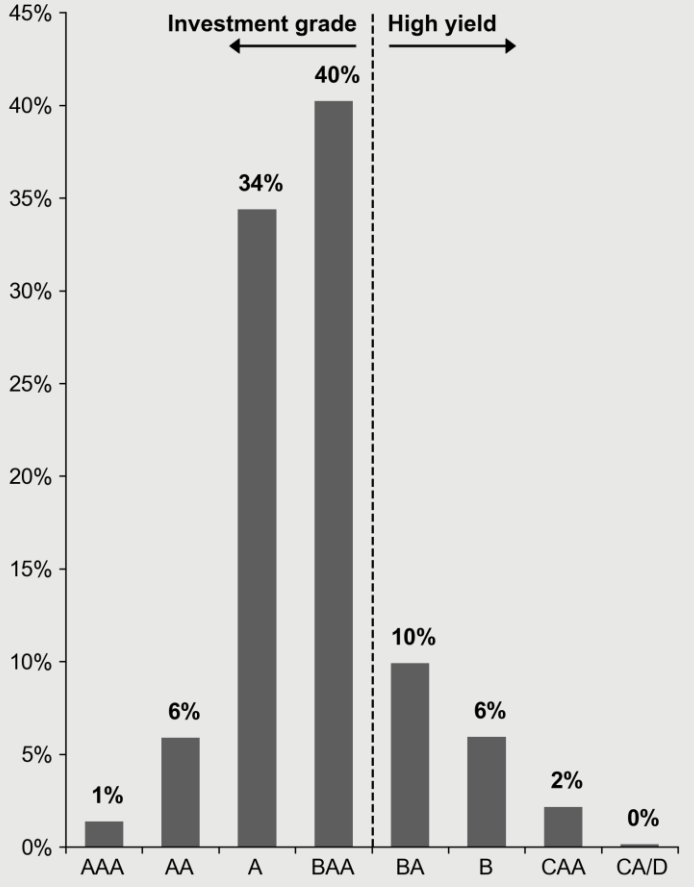
Percent

Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.
Default rates are defined as the par value percentage of the total market trading at or below 50% of par value and include any Chapter 11 filing, prepackaged filing or missed interest payments. The default rate is an LTM figure (last twelve months) and tracks the % of defaults over the period. Recovery rates are based on the price of the defaulted bonds or loans 30-days post the default date. Default and recovery rates are as of August 2020 due to data availability. Spread to worst indicated are the difference between the yield-to-worst of a bond and yield-to-worst of a U.S. Treasury security with a similar duration. High yield is represented by the J.P. Morgan Domestic High Yield Index.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

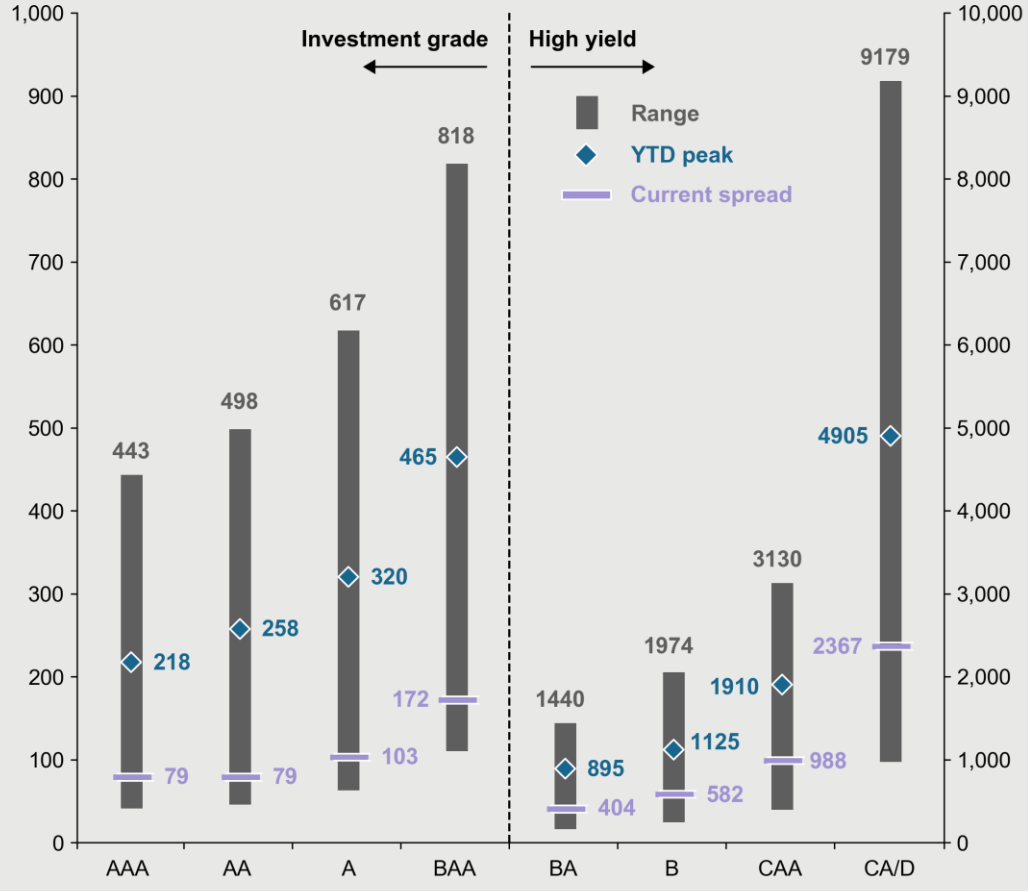
U.S. corporate credit markets by rating

Based on Bloomberg IG Corp. and High Yield indices



U.S. corporate credit spreads by rating

Basis points, spread to Treasuries, range over previous 20 years



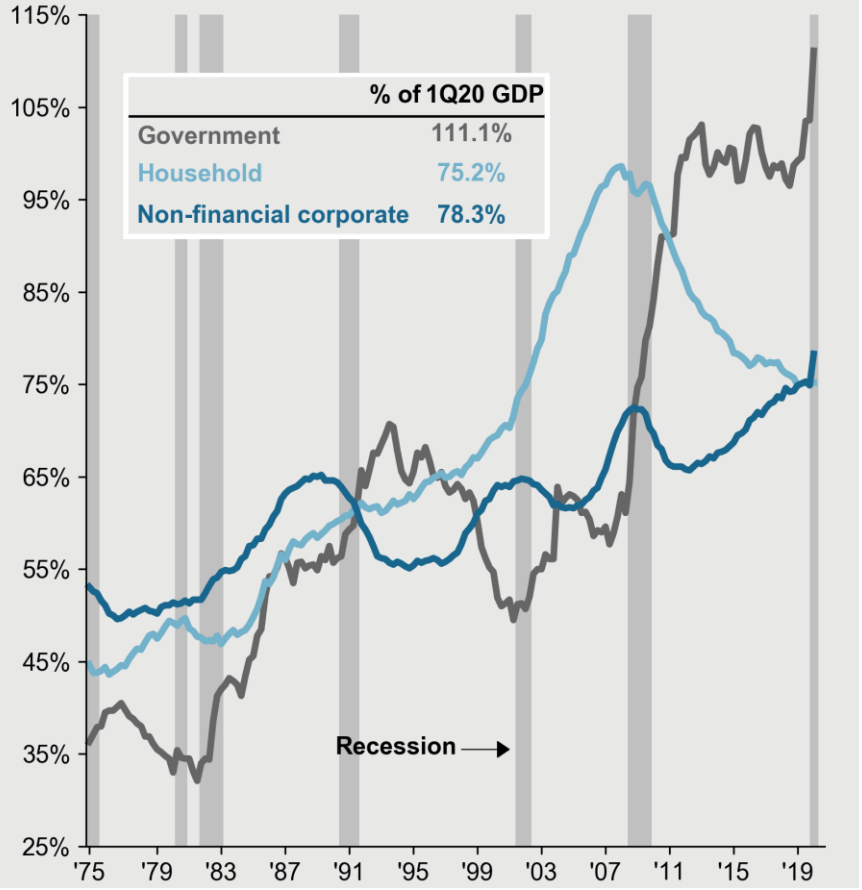
Source: Barclays, Bloomberg, FactSet, J.P. Morgan Asset Management. Distribution of corporate credit is based on the current market value of the Bloomberg US Corporate Investment Grade and U.S. High Yield sub-indices. Spread to worst indicated is the difference between the yield-to-worst of a bond and yield-to-worst of a U.S. Treasury security with a similar duration.
Guide to the Markets – U.S. Data are as of September 30, 2020

J.P.Morgan
Asset Management

Corporate debt

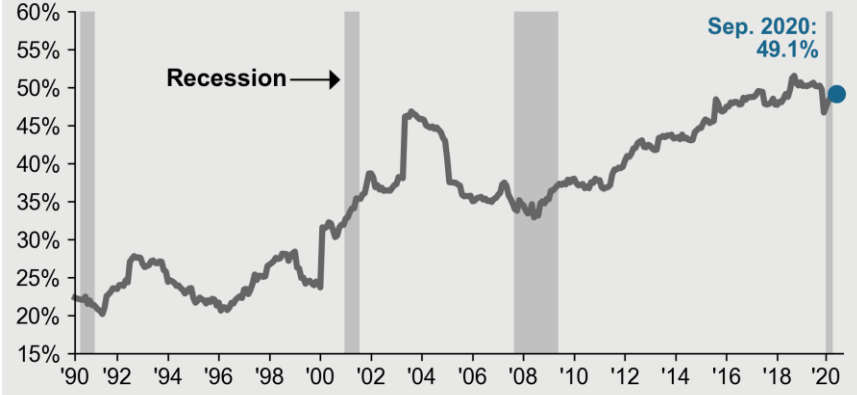
U.S. debt to GDP ratios

Percentage of nominal GDP



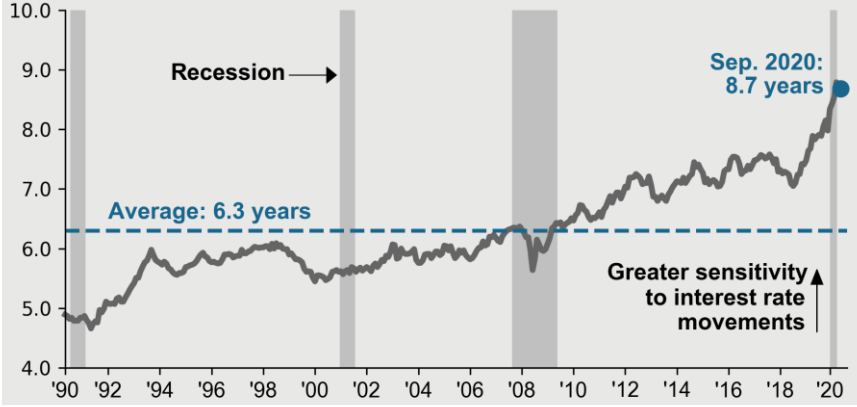
Baa corporate debt*

Percentage of Baa-rated investment-grade corporate debt outstanding



Duration of investment-grade corporate credit universe

Years



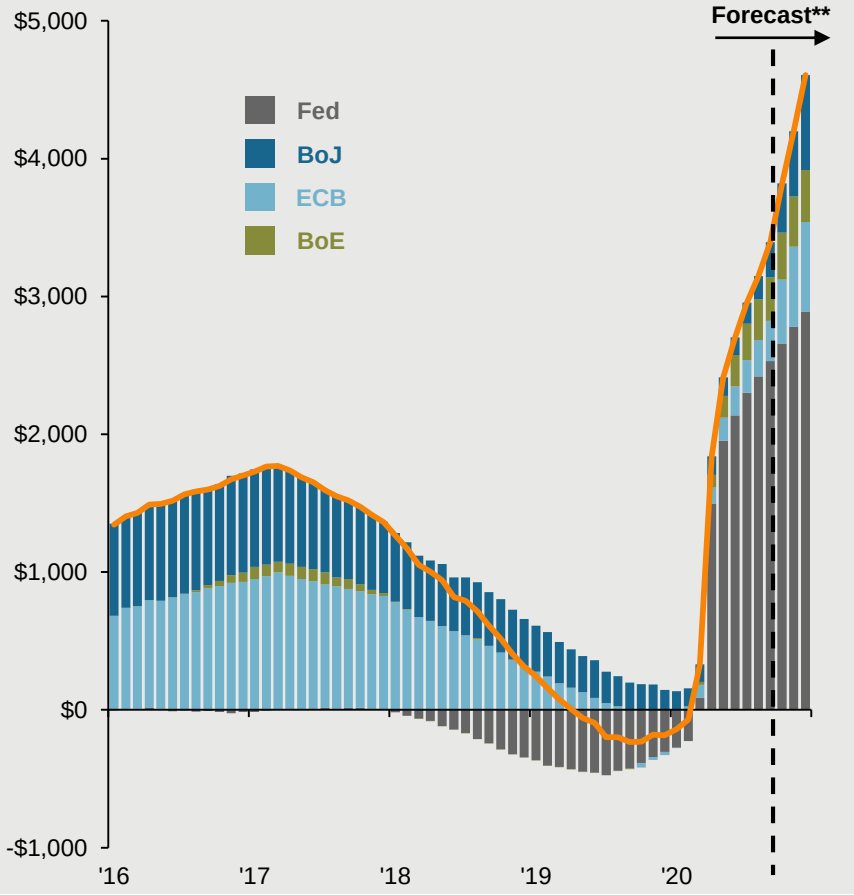
Source: FactSet, J.P. Morgan Asset Management; (Left) Bank for International Settlements (BIS); (Top and bottom right) Barclays, Bloomberg. Government, household and non-financial corporate debt refers to gross debt. General government debt is comprised of core debt instruments that include currency and deposits, loans and debt securities. All debt values are shown at market value. *Baa debt outstanding and duration of investment grade is based on the Bloomberg Barclays U.S. Aggregate Investment Grade Corporate Credit Index. Baa debt is the lowest credit rating issued by Moody's for investment-grade debt.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

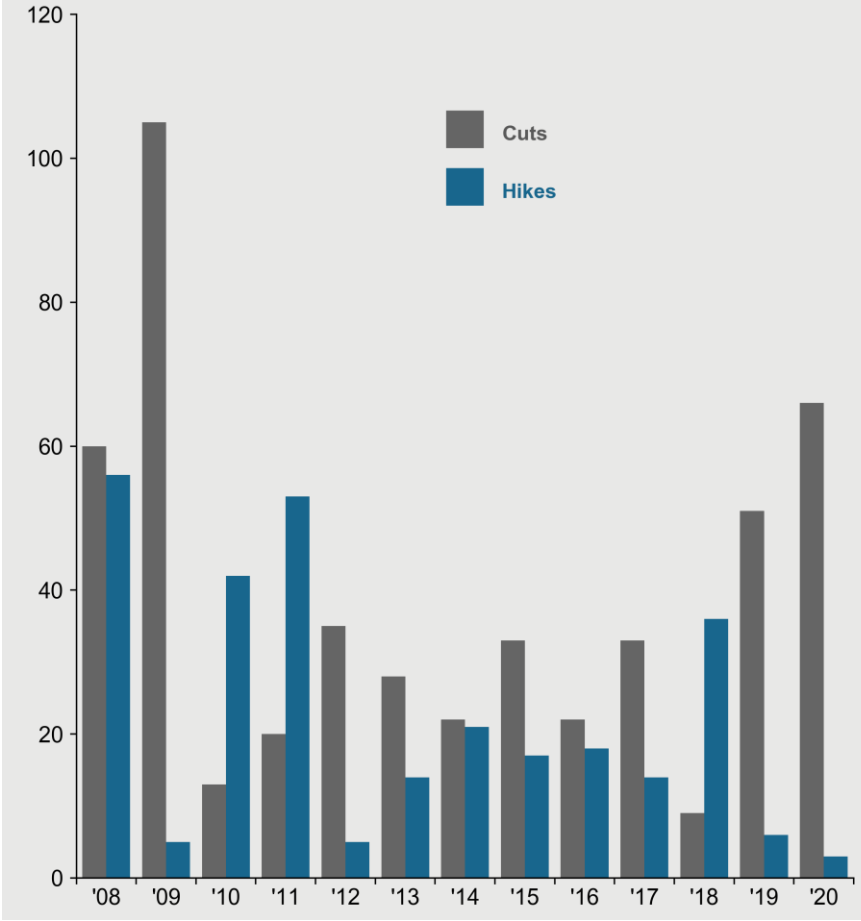
Global monetary policy

Developed market central bank bond purchases*

USD billions, 12-month rolling flow



Number of rate changes by EM and DM central banks***

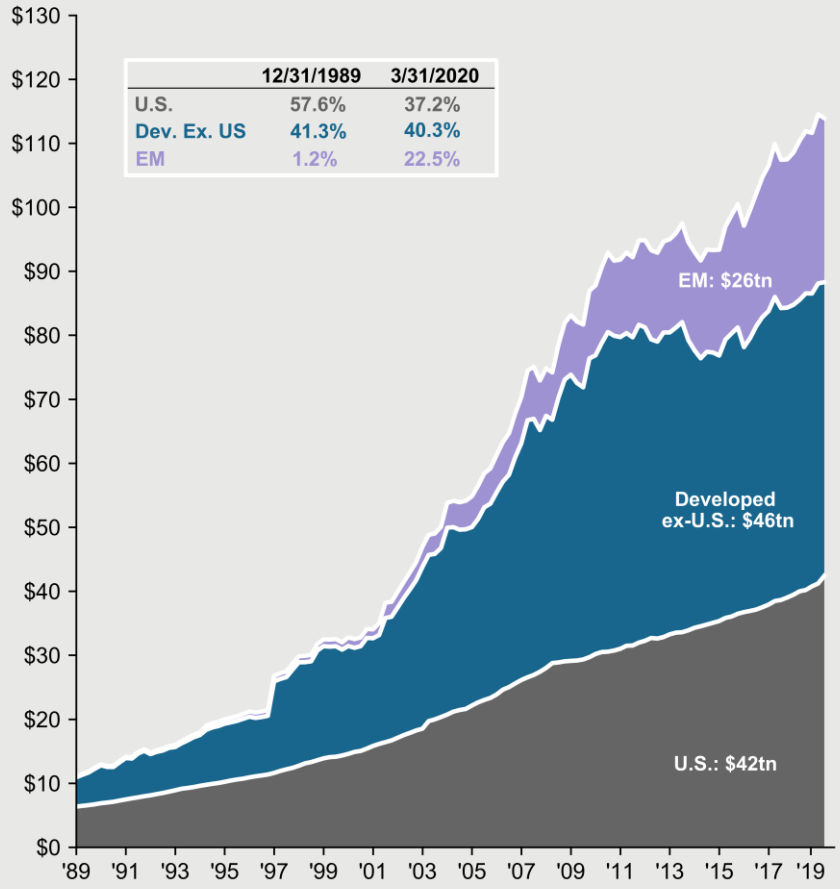


Source: J.P. Morgan Asset Management; (Left) Bank of England, Bank of Japan, European Central Bank, FactSet, Federal Reserve System, J.P. Morgan Global Economic Research; (Right) Bloomberg. *Includes the Bank of Japan (BoJ), Bank of England (BoE), European Central Bank (ECB) and Federal Reserve. **Bond purchase forecast assumes $110bn GBP in net purchases from BoE through June 2021; BoJ QE of $200trn JPY ann. for 2020 and $65trn JPY ann. through mid-2021; $950trn EUR in net purchases from the ECB through June 2021; and the Federal Reserve to purchase $720bn of Treasuries, $360bn of agency MBS through June 2021. Fed assumptions are based on purchase activity through 3Q20 and previous QE announcements. ***Central banks include Australia, Brazil, Canada, Chile, China, Colombia, Denmark, euro area, Hong Kong SAR, Indonesia, India, Japan, Korea, Malaysia, Mexico, Norway, Peru, Philippines, Poland, Russia, Saudi Arabia, South Africa, Sweden, Switzerland, Thailand, Turkey, United Kingdom and the United States. *Guide to the Markets – U.S.* Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Global fixed income

Aggregates	Yield 9/30/2020	Yield 12/31/2019	YTD Return Local	YTD Return USD	Duration	Correl. to 10-year
U.S.	1.18%	2.31%	6.79%	6.79%	6.1 years	0.88
Gbl. ex-U.S.	0.76%	0.94%	-	4.86%	8.1	0.25
Japan	0.11%	0.08%	-0.65%	2.31%	9.6	0.46
Germany	-0.18%	0.20%	1.93%	6.49%	7.3	0.06
UK	0.77%	1.30%	7.72%	5.12%	11.3	0.19
Italy	0.59%	0.97%	4.65%	9.33%	7.2	-0.08
Spain	0.18%	0.35%	2.32%	6.89%	7.7	-0.07
Sector						
Euro Corp.	0.55%	0.51%	0.78%	5.28%	5.3 years	0.09
Euro HY	4.80%	3.46%	-3.39%	0.92%	4.0	-0.30
EMD($)	5.14%	4.91%	-	-0.51%	7.7	0.09
EMD(LCL)	4.48%	5.22%	5.46%	-6.32%	5.4	-0.04
EM Corp.	4.26%	4.51%	-	2.58%	5.9	-0.05



Source: J.P. Morgan Asset Management; (Left) Barclays, Bloomberg, FactSet; (Right) BIS.
Fixed income sectors shown above are provided by Bloomberg and are represented by the global aggregate for each country except where noted. EMD sectors are represented by the J.P. Morgan EMBIG Diversified Index (USD), the J.P. Morgan GBI EM Global Diversified Index (LCL) and the J.P. Morgan CEMBI Broad Diversified Index (Corp). European Corporates are represented by the Bloomberg Barclays Euro Aggregate Corporate Index and the Bloomberg Barclays Pan-European High Yield Index. Sector yields reflect yield to worst. Correlations are based on 10 years of monthly returns for all sectors. Past performance is not indicative of future results. Global bond market regional breakdown may not sum to 100% due to rounding.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Fixed income sector returns

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	2005-2019 Ann.	2005-2019 Vol.
EMD USD 10.2%	EMD LCL. 15.2%	EMD LCL. 18.1%	Treas. 13.7%	High Yield 58.2%	EMD LCL. 15.7%	TIPS 13.6%	EMD USD 17.4%	High Yield 7.4%	Muni 9.1%	Muni 3.3%	High Yield 17.1%	EMD LCL. 15.2%	ABS 2.7%	EMD USD 15.0%	TIPS 9.2%	EMD USD 7.3%	EMD LCL. 10.6%
EMD LCL. 6.3%	High Yield 11.8%	TIPS 11.6%	MBS 8.3%	EMD USD 29.8%	High Yield 15.1%	Muni 10.7%	EMD LCL. 16.8%	ABS 1.3%	Corp. 7.5%	MBS 1.5%	EMD USD 10.2%	EMD USD 10.3%	Muni 1.3%	Corp. 14.5%	Treas. 8.9%	High Yield 7.2%	High Yield 10.3%
Muni 3.5%	EMD USD 9.9%	Treas. 9.0%	Barclays Agg 5.2%	ABS 24.7%	EMD USD 12.2%	Treas. 9.8%	High Yield 15.8%	MBS -1.4%	EMD USD 7.4%	EMD USD 1.2%	EMD LCL. 9.9%	High Yield 7.5%	MBS 1.0%	High Yield 14.3%	Barclays Agg 6.8%	EMD LCL. 5.3%	EMD USD 7.2%
Asset Alloc. 3.1%	Asset Alloc. 5.8%	Barclays Agg 7.0%	Asset Alloc. -1.9%	EMD LCL. 22.0%	Corp. 9.0%	Corp. 8.2%	Corp. 9.8%	Corp. -1.5%	MBS 6.1%	Treas. 0.8%	Corp. 6.1%	Corp. 6.4%	Treas. 0.9%	EMD LCL. 13.5%	Corp. 6.6%	Corp. 5.2%	Corp. 5.5%
TIPS 2.8%	MBS 5.2%	MBS 6.9%	TIPS -2.4%	Corp. 18.7%	Asset Alloc. 7.6%	Barclays Agg 7.8%	Asset Alloc. 7.6%	Asset Alloc. -1.7%	Barclays Agg 6.0%	Barclays Agg 0.6%	Asset Alloc. 4.8%	Muni 5.4%	Barclays Agg 0.0%	Asset Alloc. 9.8%	Asset Alloc. 4.2%	Asset Alloc. 4.9%	TIPS 4.8%
Treas. 2.8%	Muni 4.8%	Asset Alloc. 6.2%	Muni -2.5%	Asset Alloc. 16.5%	Barclays Agg 6.5%	Asset Alloc. 7.7%	TIPS 7.0%	Barclays Agg -2.0%	Asset Alloc. 5.4%	ABS 0.2%	TIPS 4.7%	Asset Alloc. 5.3%	Asset Alloc. -0.6%	Barclays Agg 8.7%	MBS 3.6%	Muni 4.3%	Treas. 4.6%
High Yield 2.7%	ABS 4.7%	EMD USD 6.2%	Corp. -4.9%	Muni 12.9%	TIPS 6.3%	EMD USD 7.3%	Muni 6.8%	Muni -2.6%	Treas. 5.0%	Asset Alloc. -0.4%	Barclays Agg 2.6%	Barclays Agg 3.5%	TIPS -1.3%	TIPS 8.4%	Muni 3.3%	Barclays Agg 4.2%	ABS 4.1%
MBS 2.6%	Barclays Agg 4.3%	Corp. 4.6%	EMD LCL. -5.2%	TIPS 11.4%	Treas. 5.9%	MBS 6.2%	Barclays Agg 4.2%	Treas. -2.8%	TIPS 3.6%	Corp. -0.7%	ABS 2.0%	TIPS 3.0%	High Yield -2.1%	Muni 7.5%	ABS 2.4%	MBS 4.0%	Muni 3.8%
Barclays Agg 2.4%	Corp. 4.3%	Muni 3.4%	EMD USD -12.0%	Barclays Agg 5.9%	ABS 5.8%	ABS 5.1%	ABS 3.7%	EMD USD -5.2%	High Yield 2.5%	TIPS -1.4%	MBS 1.7%	ABS 3.0%	Corp. -2.5%	Treas. 6.9%	High Yield 0.6%	TIPS 3.8%	Asset Alloc. 3.6%
ABS 2.1%	Treas. 3.1%	ABS 2.2%	ABS -12.7%	MBS 5.9%	MBS 5.4%	High Yield 5.0%	MBS 2.6%	TIPS -8.6%	ABS 1.7%	High Yield -4.5%	Treas. 1.0%	MBS 2.5%	EMD USD -4.3%	MBS 6.4%	EMD USD -0.5%	Treas. 3.7%	Barclays Agg 3.3%
Corp. 1.7%	TIPS 0.4%	High Yield 1.9%	High Yield -26.2%	Treas. -3.6%	Muni 2.4%	EMD LCL. -1.8%	Treas. 2.0%	EMD LCL. -9.0%	EMD LCL. -5.7%	EMD LCL. -14.9%	Muni 0.2%	Treas. 2.3%	EMD LCL. -6.2%	ABS 3.8%	EMD LCL. -6.3%	ABS 3.1%	MBS 2.5%

Source: Barclays, Bloomberg, FactSet, J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.
Past performance is not indicative of future returns. Fixed income sectors shown above are provided by Bloomberg unless otherwise noted and are represented by Broad Market: U.S. Aggregate Index; MBS: US Aggregate Securitized - MBS Index; ABS: J.P. Morgan ABS Index; Corporate: U.S. Aggregate Credit - Corporates - Investment Grade; Municipals: Municipal Bond Index; High Yield: U.S. Aggregate Credit - Corporate - High Yield Index; Treasuries: Global U.S. Treasury; TIPS: U.S. Treasury Inflation-Protected Notes Index; Emerging Debt USD: J.P. Morgan EMBIG Diversified Index; Emerging Debt LCL: J.P. Morgan EM Global Index. The "Asset Allocation" portfolio assumes the following weights: 20% in MBS, 5% in ABS, 20% in Corporate, 15% in Municipals, 5% in Emerging Debt USD, 5% in Emerging Debt LCL, 10% in High Yield, 15% in Treasuries, 5% in TIPS. Asset allocation portfolio assumes annual rebalancing.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

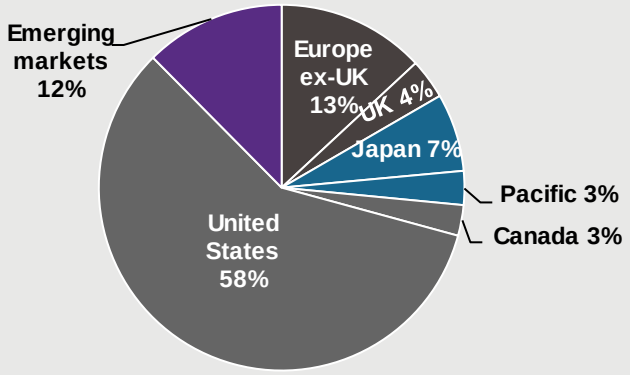
Global equity markets

International

Returns	2020 YTD		2019		15-years	
	Local	USD	Local	USD	Ann.	Beta
Regions						
U.S. (S&P 500)	-	5.6	-	31.5	9.0	0.87
AC World ex-U.S.	-5.5	-5.1	21.4	22.1	5.7	1.10
EAFE	-9.1	-6.7	22.3	22.7	5.3	1.06
Europe ex-UK	-7.4	-3.2	27.5	25.9	5.9	1.20
Emerging markets	2.9	-0.9	18.5	18.9	7.8	1.26
Selected Countries						
United Kingdom	-21.5	-23.4	16.5	21.1	4.2	1.01
France	-16.8	-13.0	29.3	27.0	5.9	1.22
Germany	-3.6	0.7	23.9	21.7	6.4	1.32
Japan	-3.2	-0.3	18.9	20.1	4.3	0.75
China	15.9	16.6	23.3	23.7	11.3	1.26
India	-1.1	-4.4	10.0	7.6	9.2	1.31
Brazil	-17.1	-40.8	31.5	26.7	9.5	1.47
Russia	-11.6	-27.6	38.8	52.7	7.4	1.53

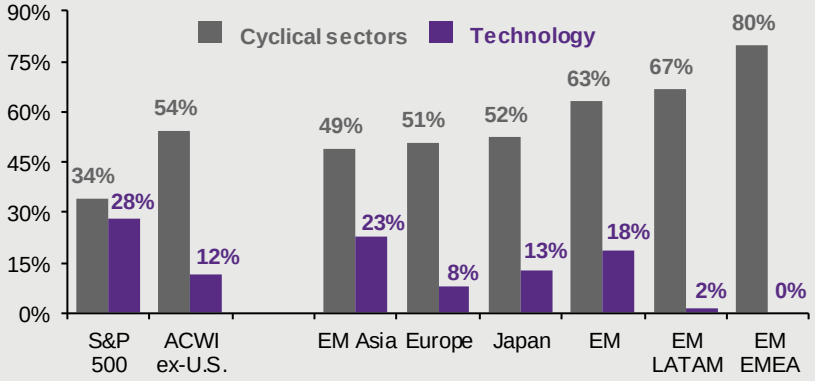
Weights in MSCI All Country World Index

% global market capitalization, float adjusted



Representation of cyclical and technology sectors

% of index market capitalization



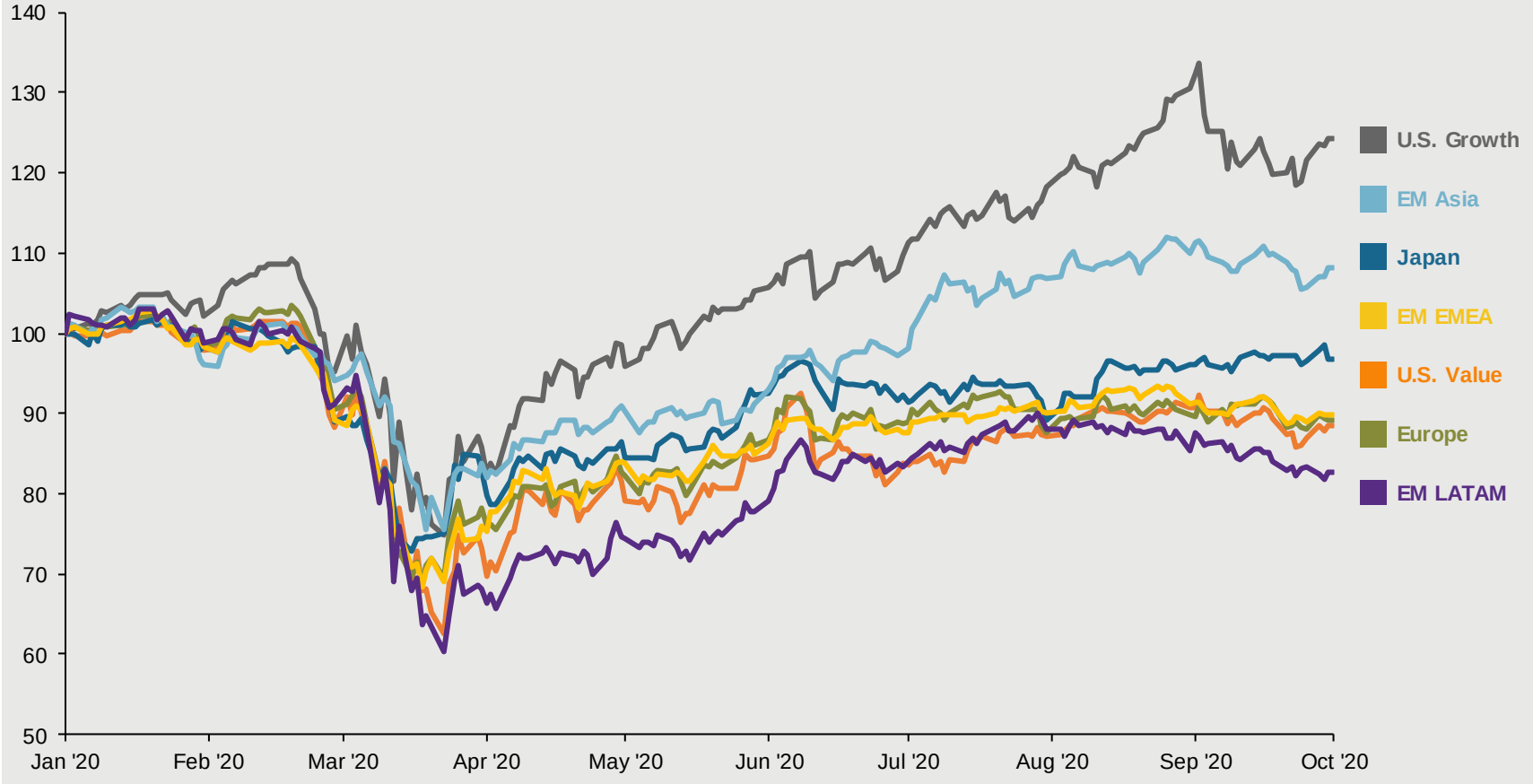
Source: FactSet, Federal Reserve, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
All return values are MSCI Gross Index (official) data. 15-year history based on U.S. dollar returns. 15-year return and beta figures are calculated for the time period 12/31/04-12/31/19. Beta is for monthly returns relative to the MSCI AC World Index. Annualized volatility is calculated as the standard deviation of quarterly returns multiplied by the square root of 4. Chart is for illustrative purposes only. Please see disclosure page for index definitions. Past performance is not a reliable indicator of current and future results. Sector breakdown includes the following aggregates: Technology (Information Technology) and cyclicals (Consumer Discretionary, Financials, Industrials, Energy and Materials).
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Global equity performance by region

Global equity returns

Total returns, local currency, Dec. 31, 2019=100



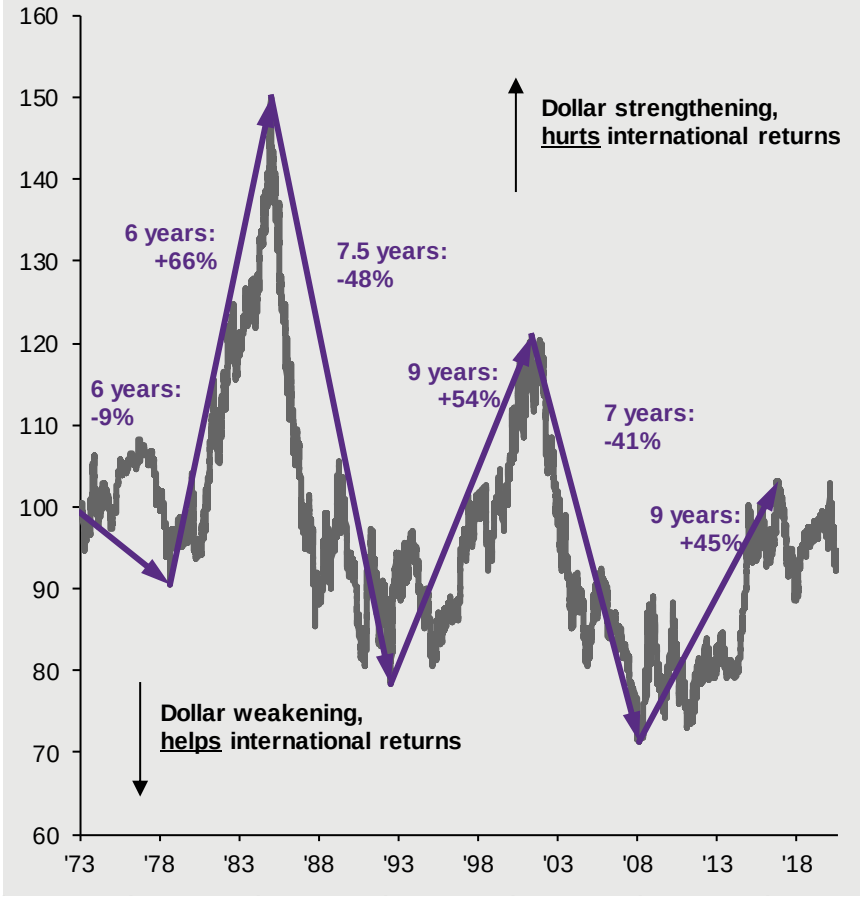
Source: FactSet, FTSE Russell, MSCI, J.P. Morgan Asset Management.
Growth is represented by the Russell 1000 Growth Index and Value is represented by the Russell 1000 Value Index.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Currency and international equity returns

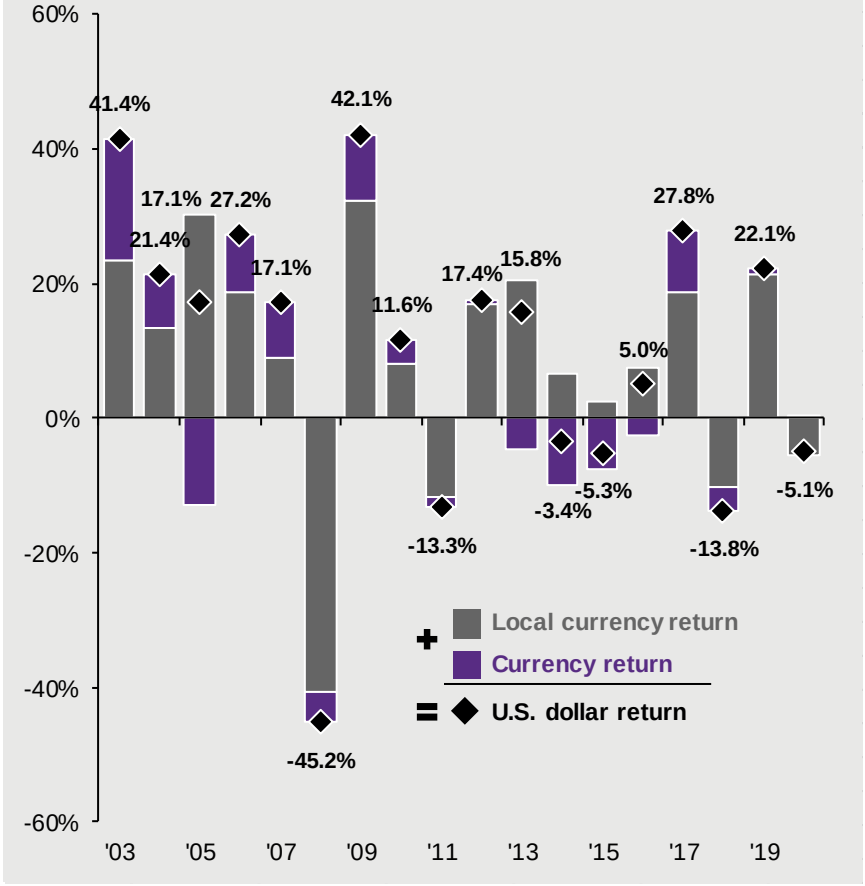
U.S. dollar in historical perspective

Index level, U.S. dollar index



Currency impact on international returns

MSCI All Country World ex-U.S. Index, total return



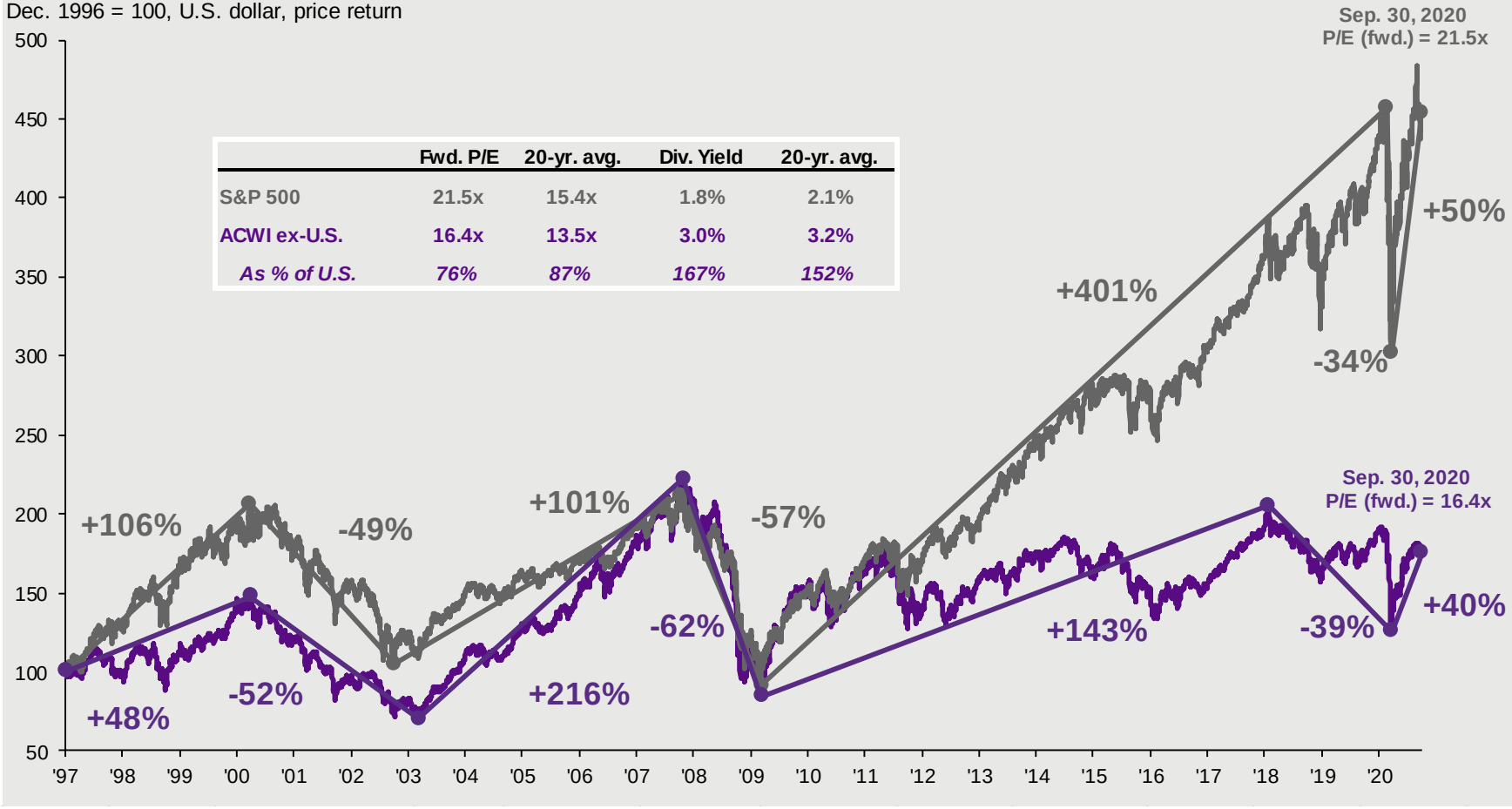
Source: FactSet, J.P. Morgan Asset Management; (Left) Federal Reserve, ICE; (Right) MSCI.
Currencies in the U.S. Dollar Index are: British pound, Canadian dollar, euro, Japanese yen, Swedish krona and Swiss franc. Data for the U.S. Dollar Index are back-tested and filled in from March 9, 1973 and January 17, 1986 using the Federal Reserve's nominal trade-weighted broad currency index. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

U.S. and international equities at inflection points

MSCI All Country World ex-U.S. and S&P 500 Indices

Dec. 1996 = 100, U.S. dollar, price return



	Fwd. P/E	20-yr. avg.	Div. Yield	20-yr. avg.
S&P 500	21.5x	15.4x	1.8%	2.1%
ACWI ex-U.S.	16.4x	13.5x	3.0%	3.2%
As % of U.S.	*76%*	*87%*	*167%*	*152%*

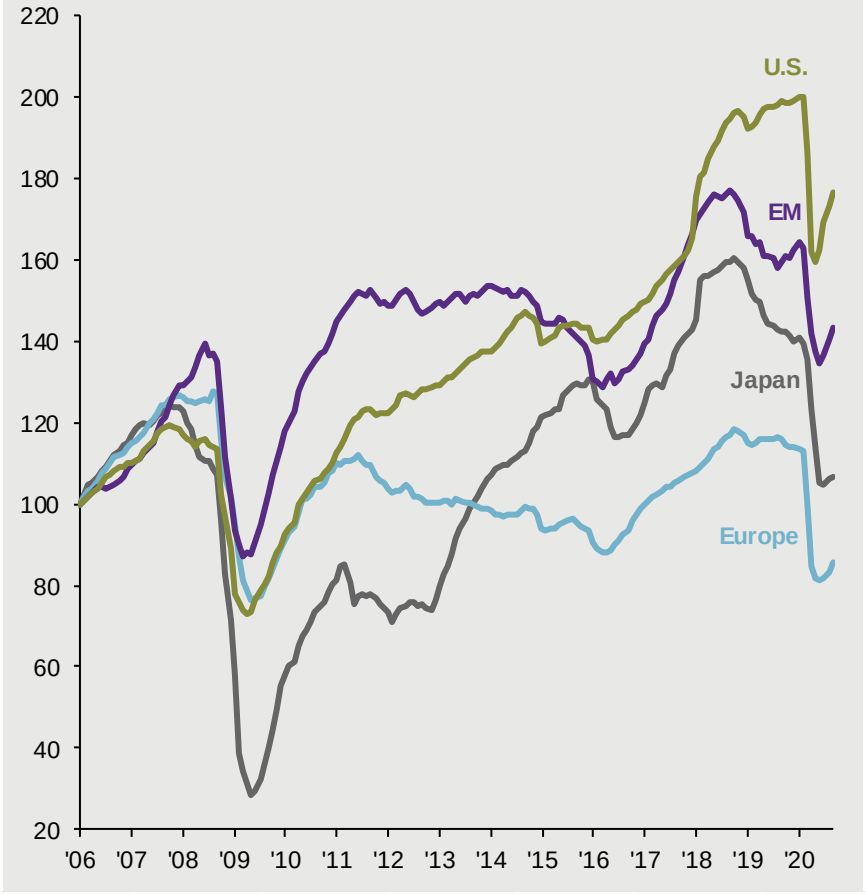
Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Forward price to earnings ratio is a bottom-up calculation based on the most recent index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on price movement only, and do not include the reinvestment of dividends. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by FactSet Market Aggregates. Past performance is not a reliable indicator of current and future results.
Guide to the Markets –U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

International equity earnings and valuations

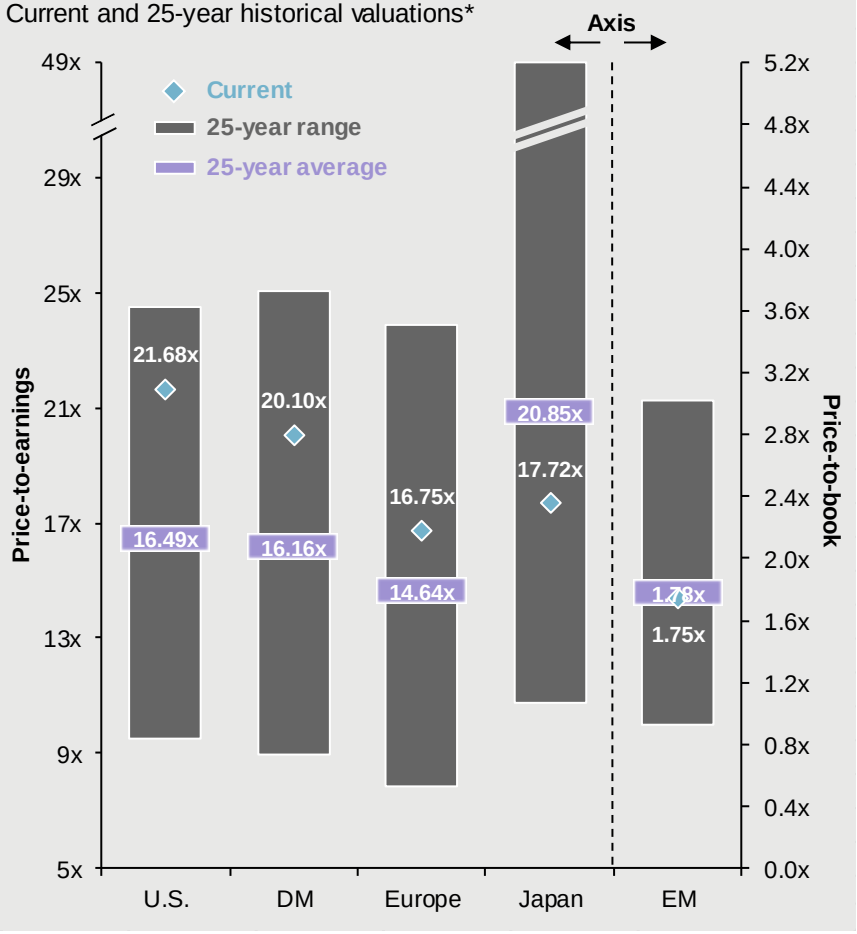
Global earnings

EPS, local currency, next 12 months, Jan. 2006 = 100



Global valuations

Current and 25-year historical valuations*

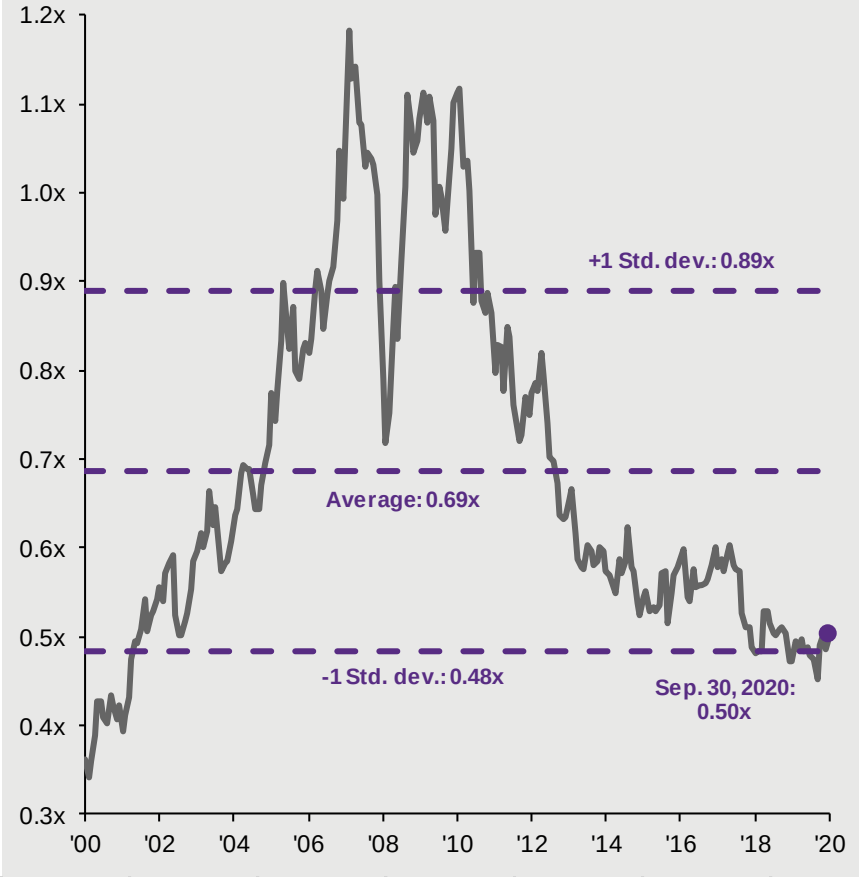


Source: FactSet, MSCI, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
*Valuations refer to NTMA P/E for Europe, U.S., Japan and developed markets and P/B for emerging markets. Valuation and earnings charts use MSCI indices for all regions/countries, except for the U.S., which is the S&P 500. All indices use IBES aggregate earnings estimates, which may differ from earnings estimates used elsewhere in the book. MSCI Europe includes the eurozone as well as countries not in the currency bloc, such as Norway, Sweden, Switzerland and the UK (which collectively make up 44% of the overall index). Past performance is not a reliable indicator of current and future results.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

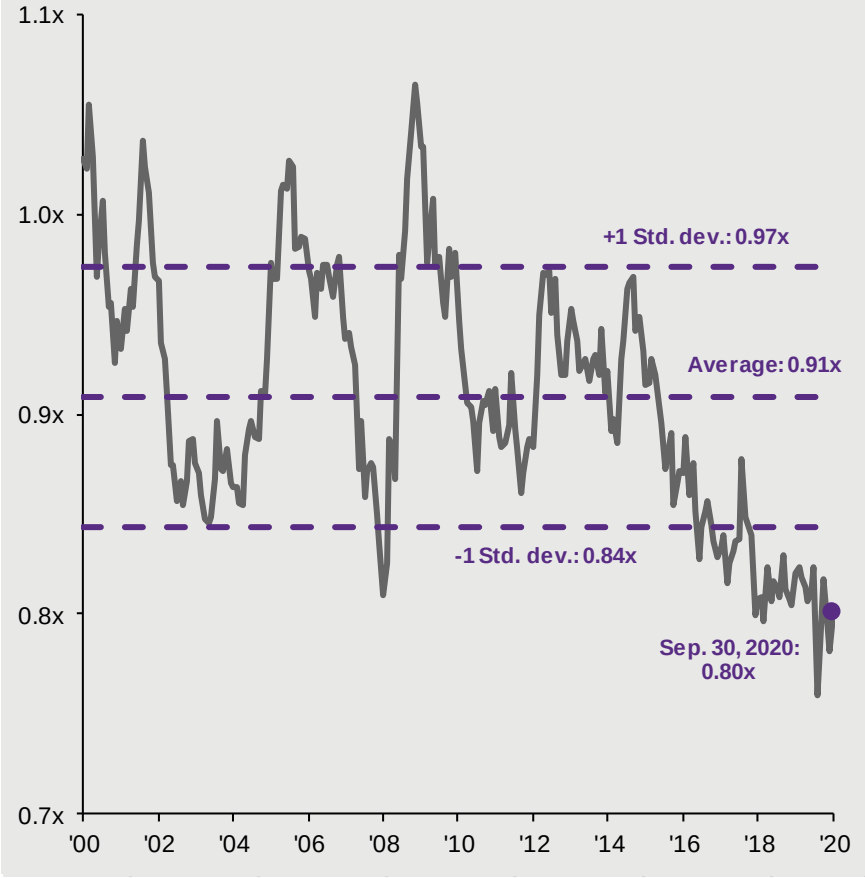
Emerging markets: Relative price-to-book ratio

MSCI Emerging Markets vs. S&P 500, last 12 months



Developed markets: Relative price-to-earnings ratio

MSCI EAFE vs. S&P 500, next 12 months



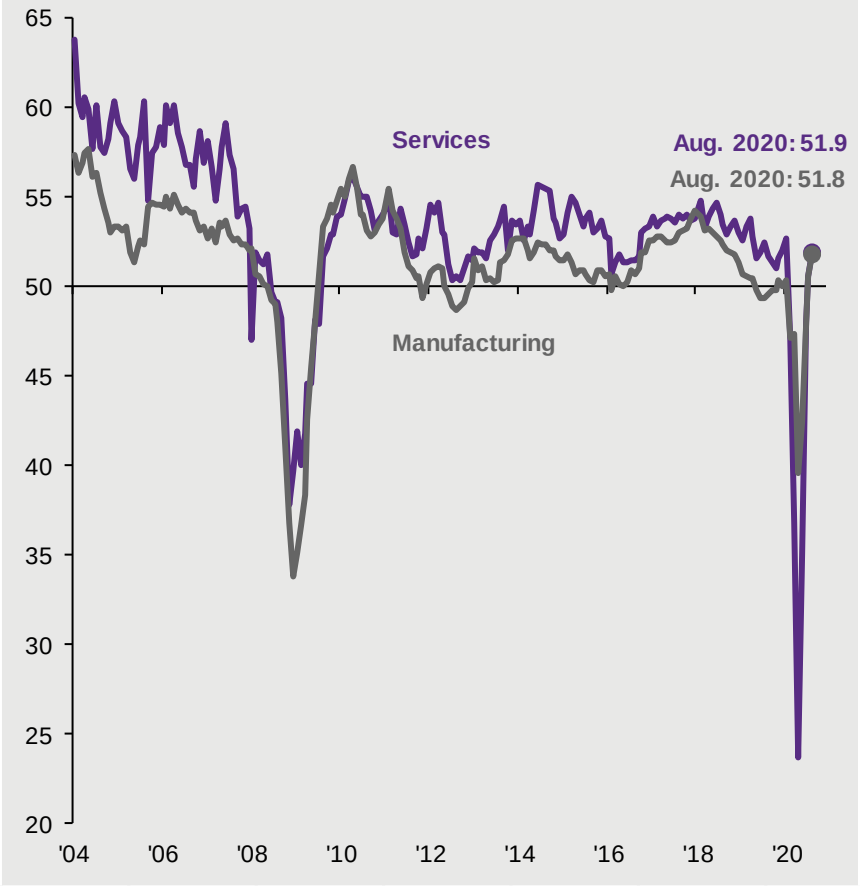
Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Global economic growth

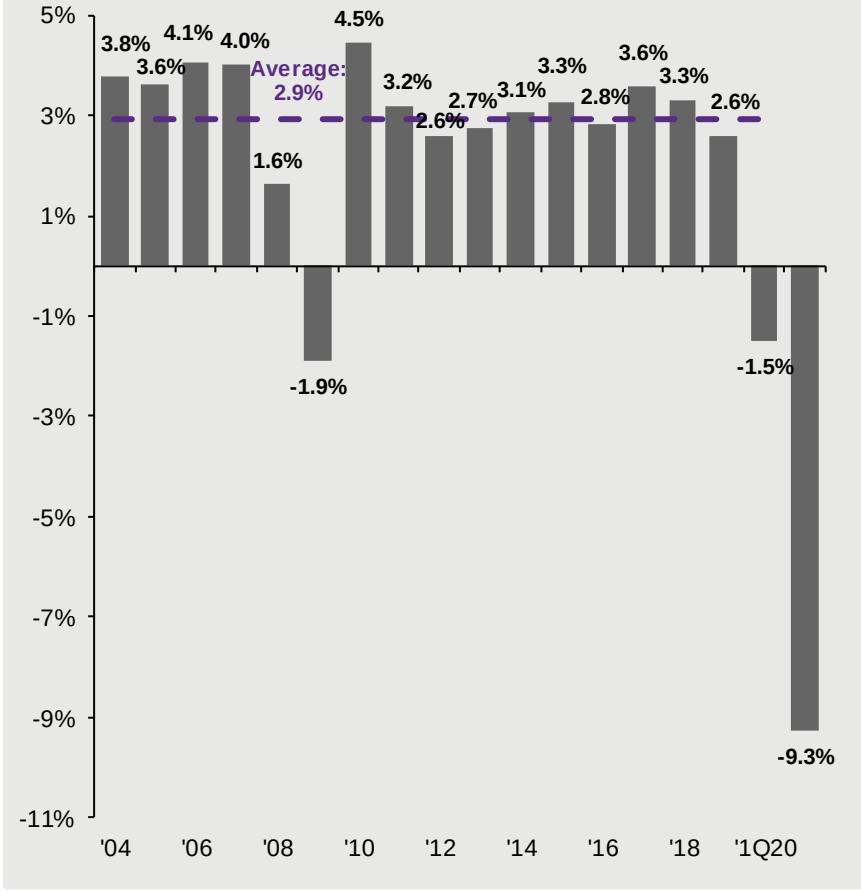
Global PMI for manufacturing and services

Monthly



Global real GDP growth

% change, year-over-year



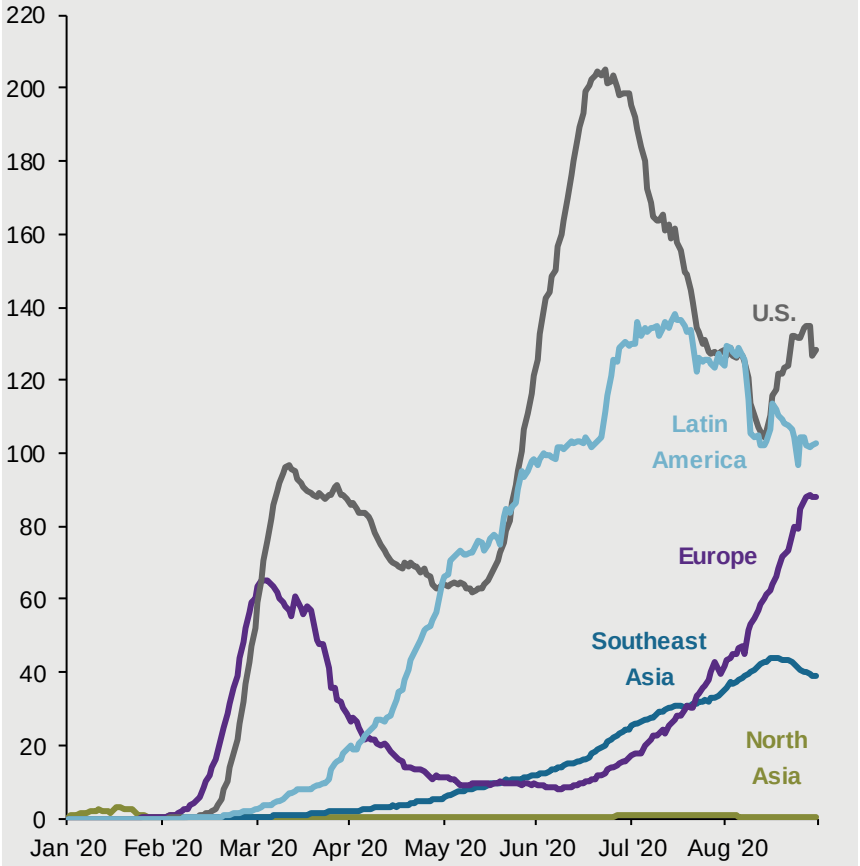
Source: J.P. Morgan Asset Management; (Left) Markit; (Right) J.P. Morgan Global Economic Research.
PMI is the Purchasing Managers' Index. Global GDP growth is a GDP-weighted measure of real GDP at U.S. dollar market exchange rates. *1Q20 is a forecast.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

COVID-19: Global confirmed cases and fatalities

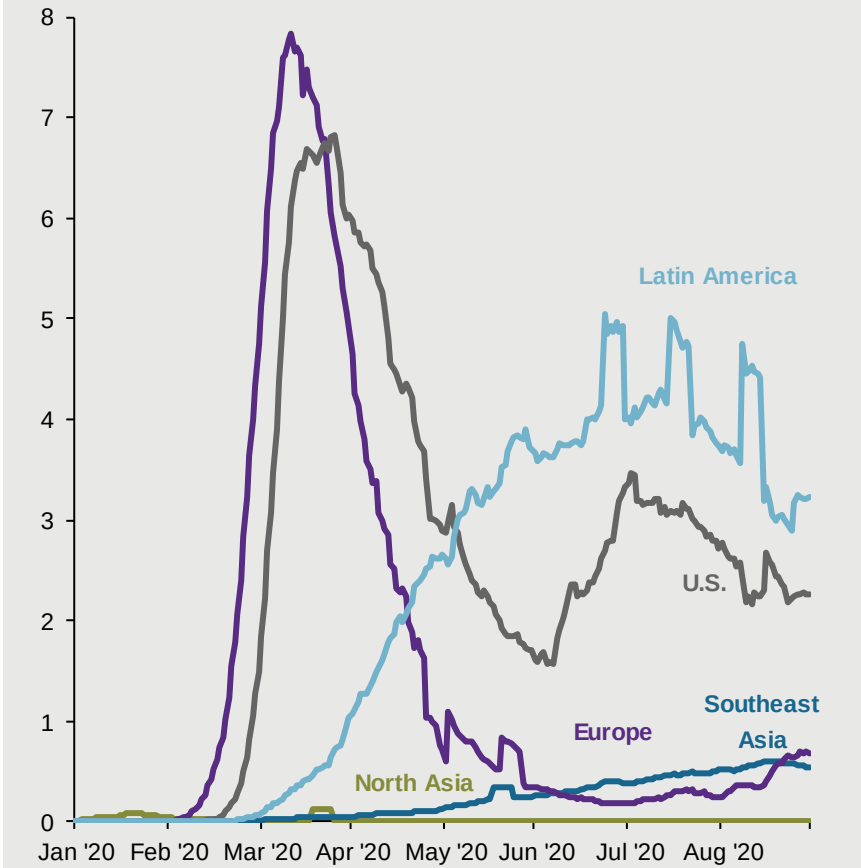
Daily increase in cases

7-day moving average, per million people



Daily increase in fatalities

7-day moving average, per million people



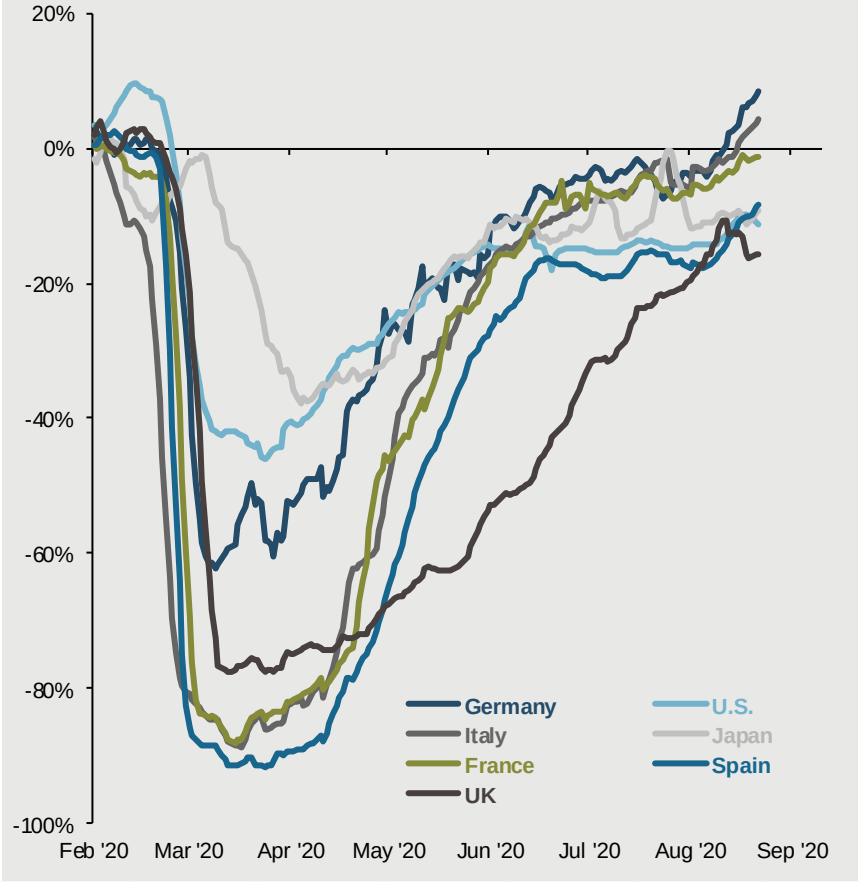
Source: Johns Hopkins CSSE, The World Bank, Worldometers, J.P. Morgan Asset Management. Cases include both laboratory confirmed and "presumptive positive" cases.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Global high-frequency economic activity

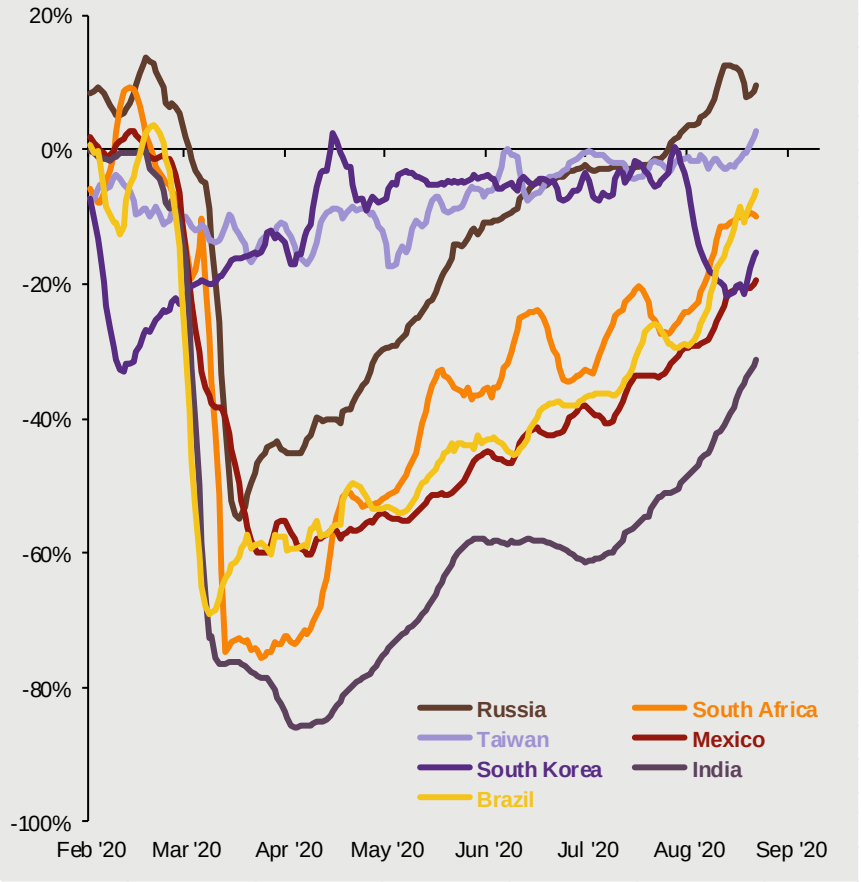
Mobility in DM countries

% from baseline*, retail and recreation, 7-day moving average



Mobility in EM countries

% from baseline*, retail and recreation, 7-day moving average

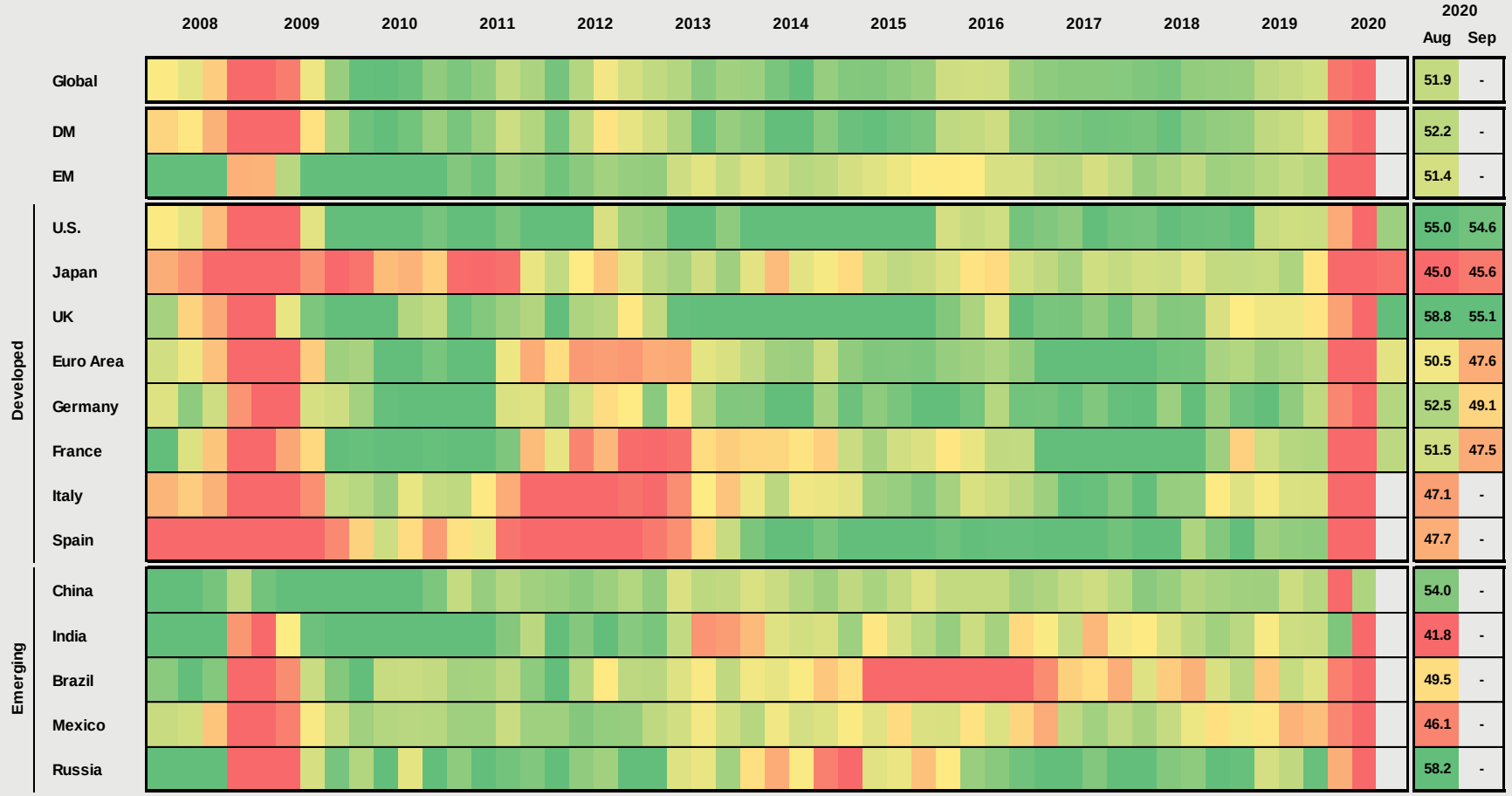


Source: Google Mobility Reports, J.P. Morgan Asset Management.
*The baseline is the median for the corresponding day of the week, during the 5-week period between January 3 and February 6 of 2020.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Services momentum

Global Purchasing Managers' Index for services, quarterly

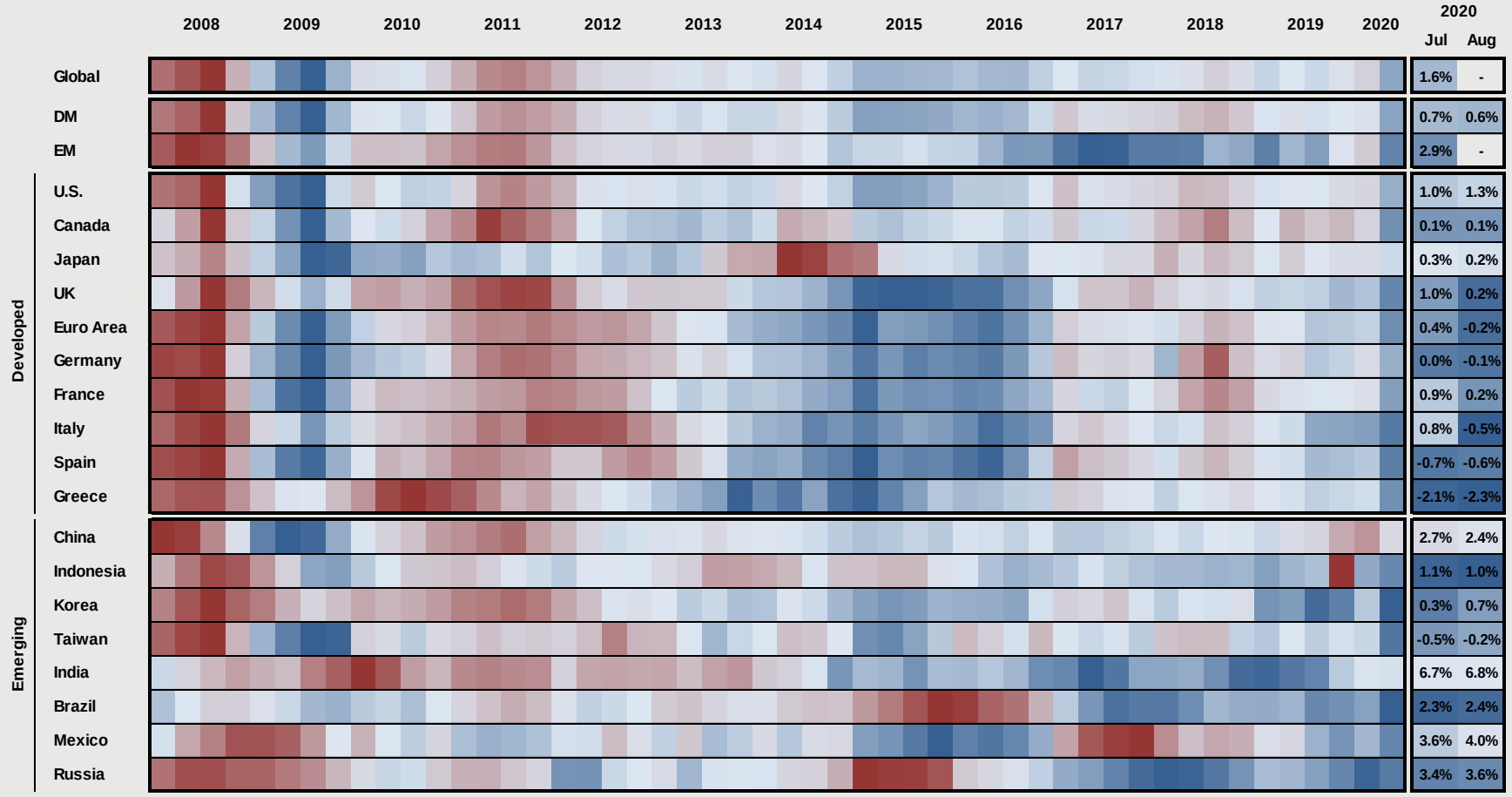


Source: Markit, J.P. Morgan Asset Management.
Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heatmap is based on quarterly averages, with the exception of the two most recent figures, which are single month readings. Data for the U.S. are back-tested and filled in from December 2007 to September 2008 due to lack of existing PMI figures. DM and EM represent developed markets and emerging markets, respectively. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Global inflation

Year-over-year headline inflation by country and region, quarterly



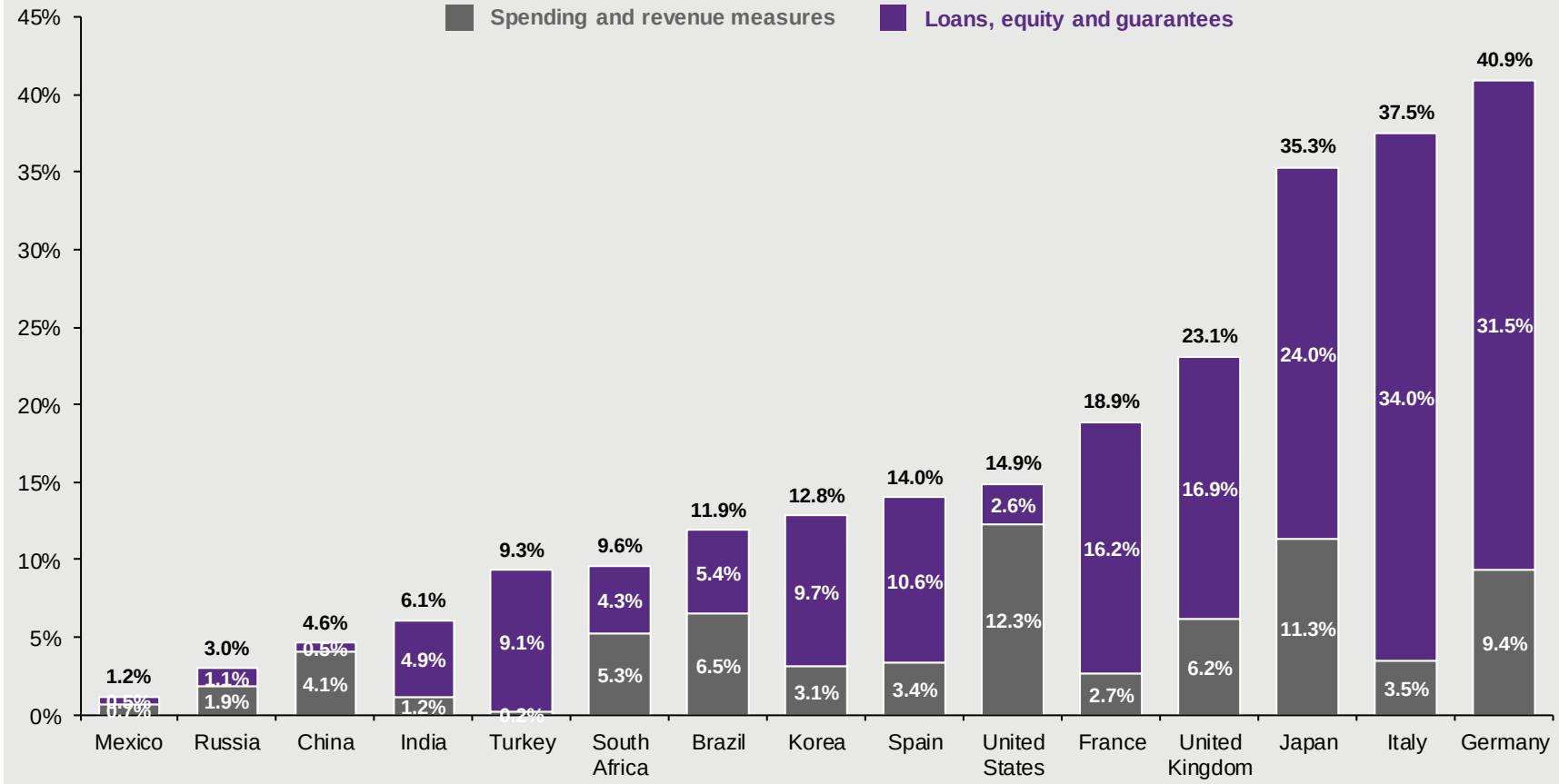
Source: Bank of Mexico, DGBAS, Eurostat, FactSet, Federal Reserve, Goskomstat of Russia, IBGE, India Ministry of Statistics & Programme Implementation, Japan Ministry of Internal Affairs & Communications, Korean National Statistical Office, Melbourne Institute, National Bureau of Statistics China, Statistics Canada, Statistics Indonesia, UK Office for National Statistics (ONS), J.P. Morgan Asset Management.
Heatmap is based on quarterly averages, with the exception of the two most recent figures, which are single month readings. Colors determined by percentiles of inflation values over the last 10 years. Deep blue = lowest value, light blue = median, deep red = highest value. DM and EM represent developed markets and emerging markets, respectively.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

Global fiscal support

Fiscal response to COVID-19

% of GDP



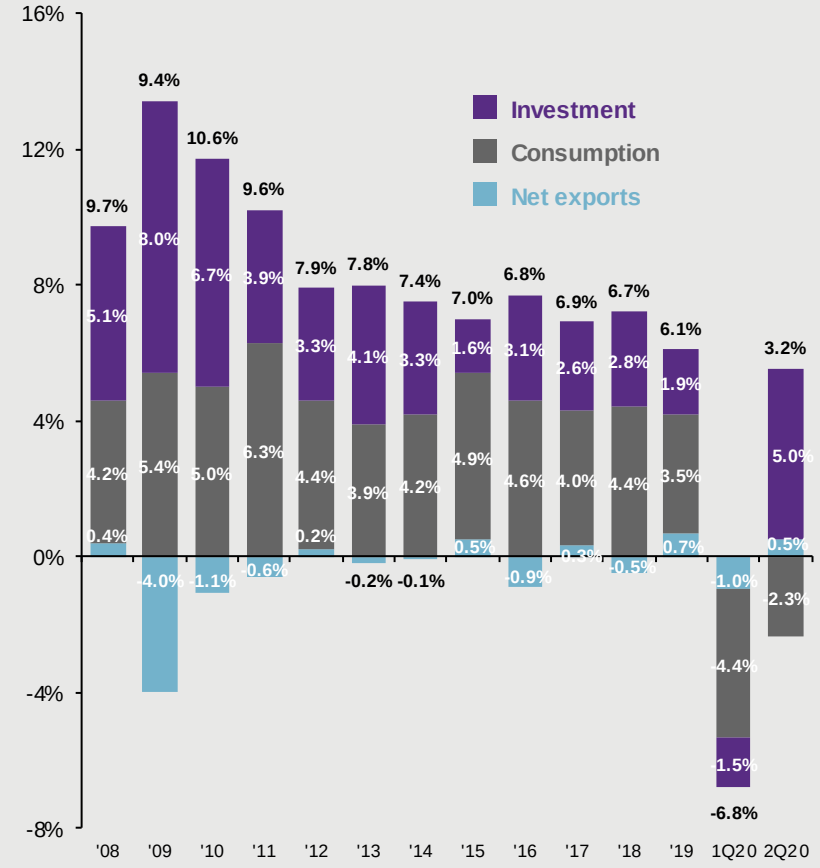
Source: IMF Fiscal Monitor, J.P. Morgan Asset Management.
Fiscal measures are estimates from the IMF's Fiscal Monitor Database from June 2020.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

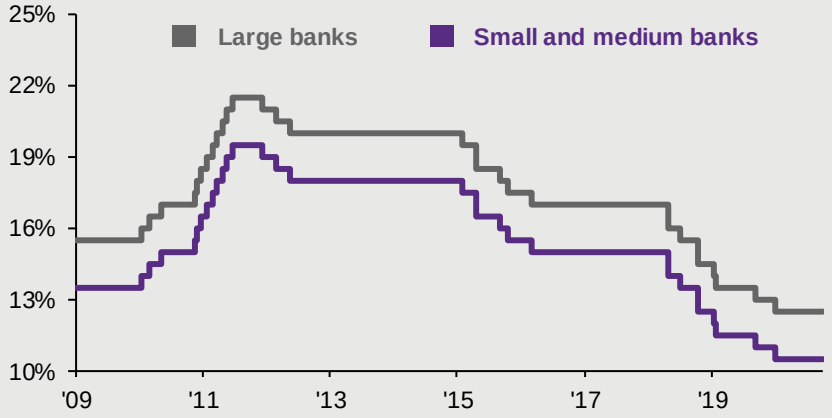
China: Economic growth

China real GDP contribution

Year-over-year % change

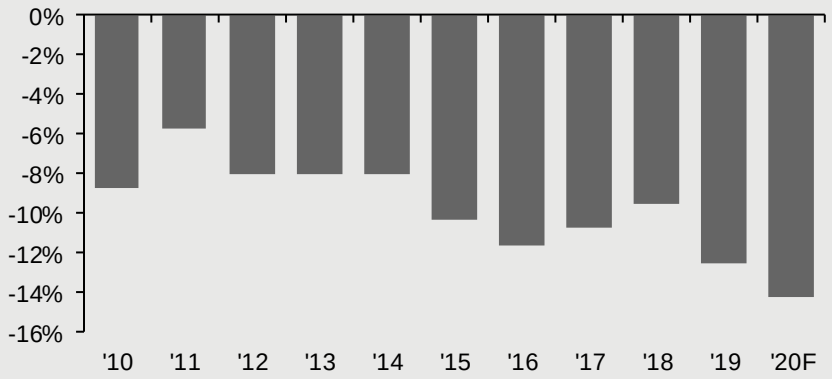


Monetary stimulus: Reserve requirement ratio



Fiscal stimulus: Fiscal deficit*

% GDP

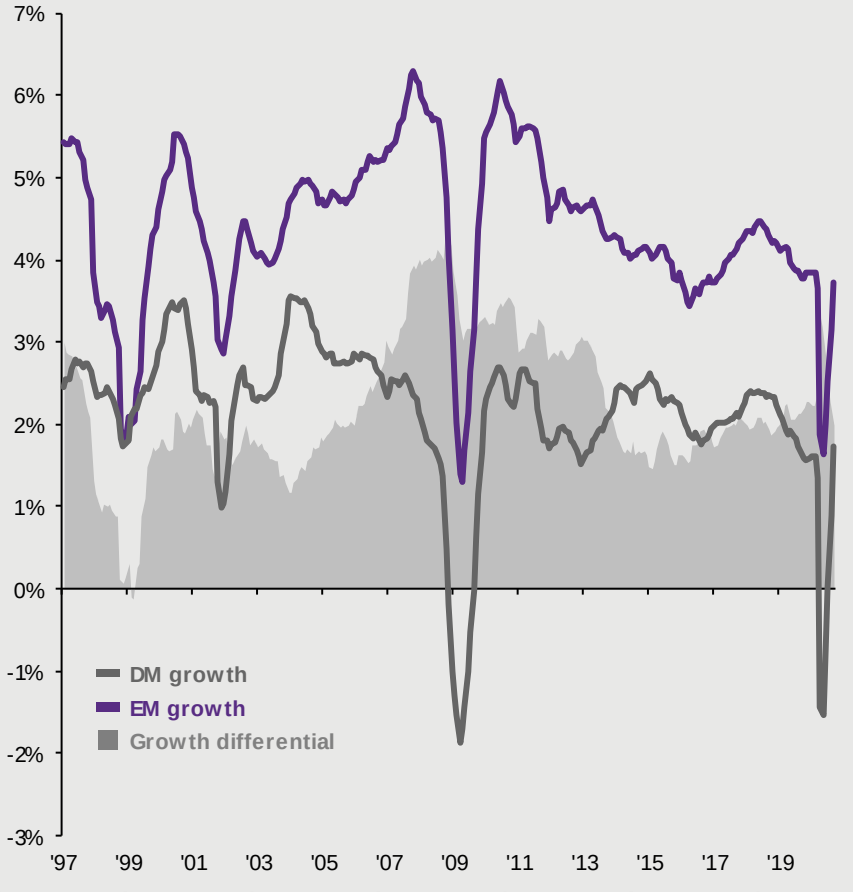


Source: FactSet, J.P. Morgan Asset Management; (Left) CEIC; (Top right) People's Bank of China; (Bottom right) China Agriculture Development Bank, China Development Bank, Ministry of Finance, People's Bank of China, Wind. *The fiscal deficit is a J.P. Morgan Asset Management estimate of the augmented fiscal deficit. It measures the aggregate resources controlled by the government and used to support economic growth. It consists of the official budgetary deficit of the central and local governments, and additional funding raised and spent by local governments through Local Government Financing Vehicles (LGFVs) and various government-guided funds, whose activities are considered quasi-fiscal.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

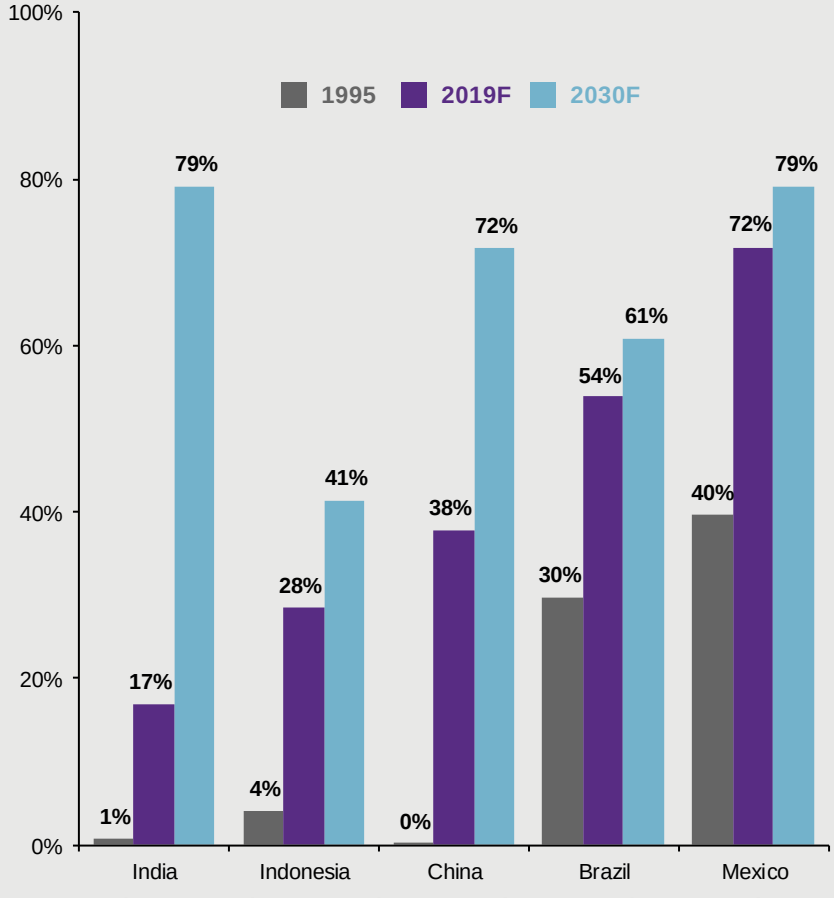
EM vs. DM growth

Monthly, consensus expectations for GDP growth in 12 months



Growth of the middle class

Percent of total population



Source: J.P. Morgan Asset Management; (Left) Consensus Economics; (Right) Brookings Institute. "Growth differential" is consensus estimates for EM growth in the next 12 months minus consensus estimates for DM growth in the next 12 months, provided by Consensus Economics. Middle class is defined as $3,600-$36,000 annual per capita income in purchasing power parity terms. Historical and forecast figures come from the Brookings Development, Aid and Governance Indicators.
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J.P.Morgan
Asset Management

Correlations and volatility

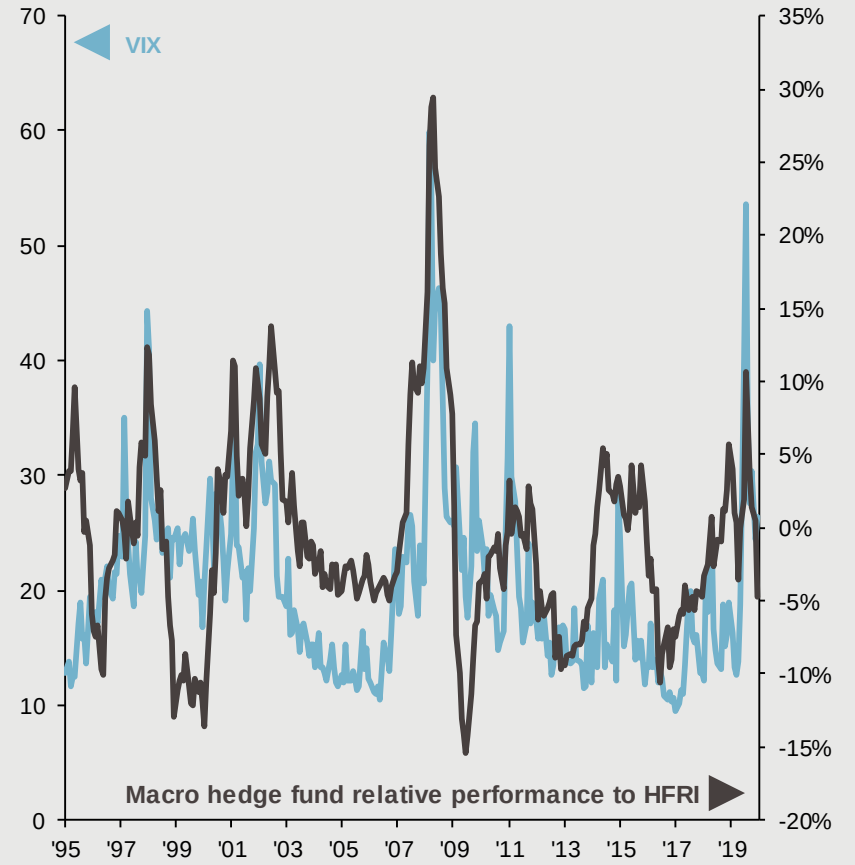
	U.S. Large Cap	EAFE	EME	Bonds	Corp. HY	Munis	Currcy.	EMD	Cmdty.	REITs	Hedge funds	Private equity	Gold	Ann. Volatility
U.S. Large Cap	1.00	0.89	0.80	-0.20	0.85	0.02	-0.36	0.66	0.63	0.74	0.91	0.83	-0.03	15%
EAFE		1.00	0.91	-0.22	0.84	0.01	-0.52	0.72	0.64	0.61	0.91	0.91	0.09	15%
EME			1.00	-0.10	0.83	0.09	-0.64	0.81	0.68	0.54	0.82	0.82	0.31	18%
Bonds				1.00	0.00	0.82	-0.07	0.31	-0.10	0.13	-0.22	-0.37	0.68	3%
Corp. HY					1.00	0.19	-0.44	0.86	0.77	0.73	0.85	0.77	0.18	8%
Munis						1.00	-0.15	0.51	0.06	0.38	-0.01	-0.08	0.57	4%
Currencies							1.00	-0.55	-0.52	-0.13	-0.31	-0.55	-0.49	6%
EMD								1.00	0.65	0.65	0.67	0.61	0.50	7%
Commodities									1.00	0.43	0.67	0.66	0.32	16%
REITs										1.00	0.63	0.55	0.03	16%
Hedge funds											1.00	0.85	0.00	6%
Private equity												1.00	-0.07	7%
Gold													1.00	15%

Source: Barclays Inc., Bloomberg, Cambridge Associates, Credit Suisse/Tremont, FactSet, Federal Reserve, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Indices used – Large Cap: S&P 500 Index; Currencies: Federal Reserve Trade-Weighted Dollar; EAFE: MSCI EAFE; EME: MSCI Emerging Markets; Bonds: Bloomberg Barclays Aggregate; Corp HY: Bloomberg Barclays Corporate High Yield; EMD: Bloomberg Barclays Emerging Market; Cmdty.: Bloomberg Commodity Index; REIT: NAREIT All equity Index; Hedge funds: CS/Tremont Hedge Fund Index; Private equity: Cambridge Associates Global Buyout & Growth Index; Gold: Gold continuous contract ($/oz). Private equity data are reported on a one- to two-quarter lag. All correlation coefficients and annualized volatility are calculated based on quarterly total return data for period 9/30/10 to 9/30/20, except for Private equity, which is based on the period from 3/31/10 to 3/31/20. This chart is for illustrative purposes only.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

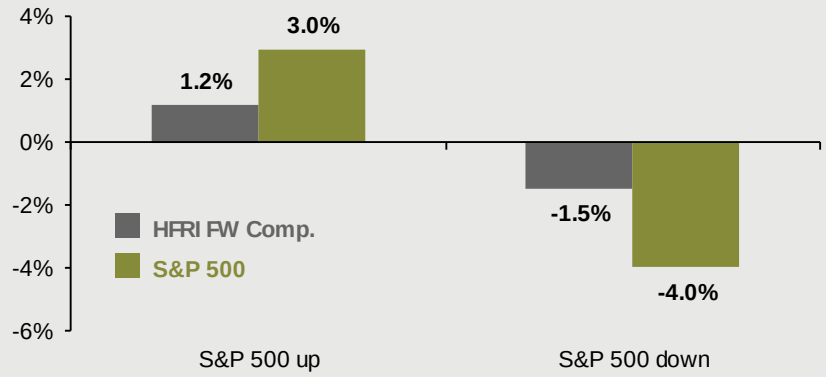
Macro hedge fund relative performance & volatility

VIX index level, y/y change in rel. perf. of HFRI Macro index



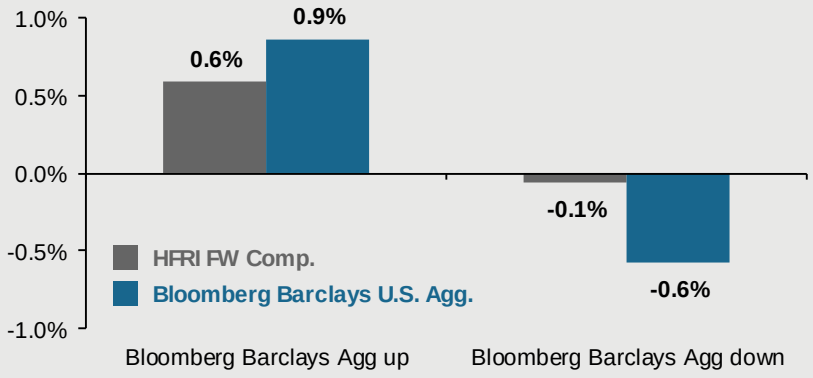
Hedge fund returns in different market environments

Average return in up and down months for S&P 500



Hedge fund returns in different market environments

Average return in up and down months for Bloomberg Barclays Agg.



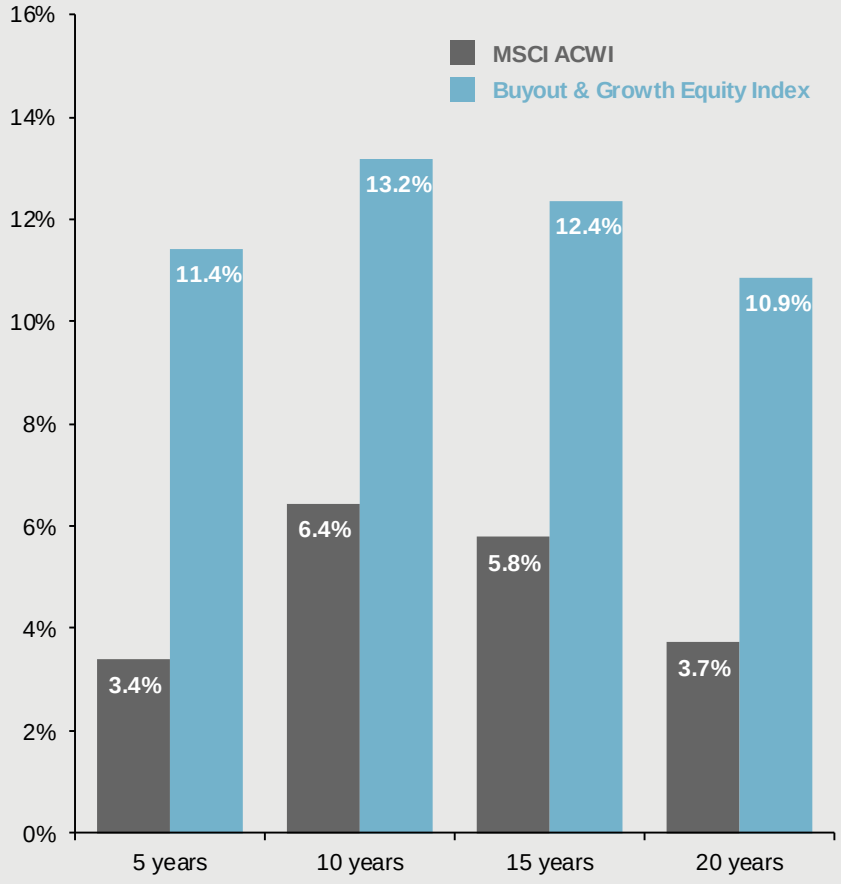
Source: Barclays, Bloomberg, FactSet, Hedge Fund Research Indices (HFRI), Standard & Poor's, J.P. Morgan Asset Management. HFRI Macro Index - Investment managers that trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches and long- and short-term holding periods.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

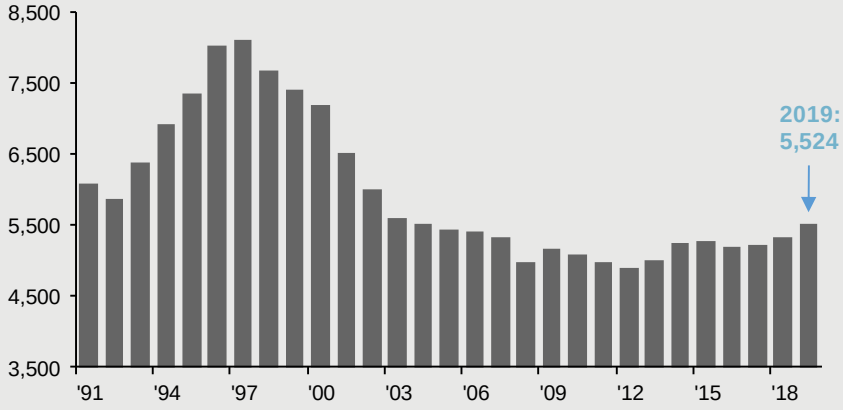
Private equity

Public vs. private equity returns

MSCI AC World total return and Global Buyout & Growth Equity Index*

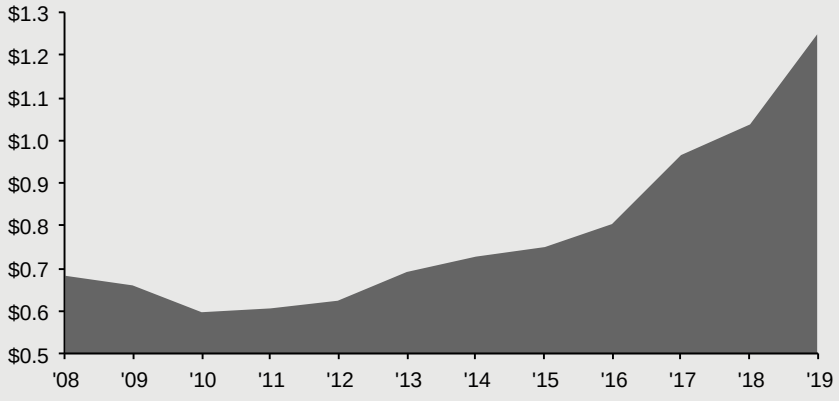


Number of U.S. listed companies**



U.S. private equity dry powder

Trillions USD



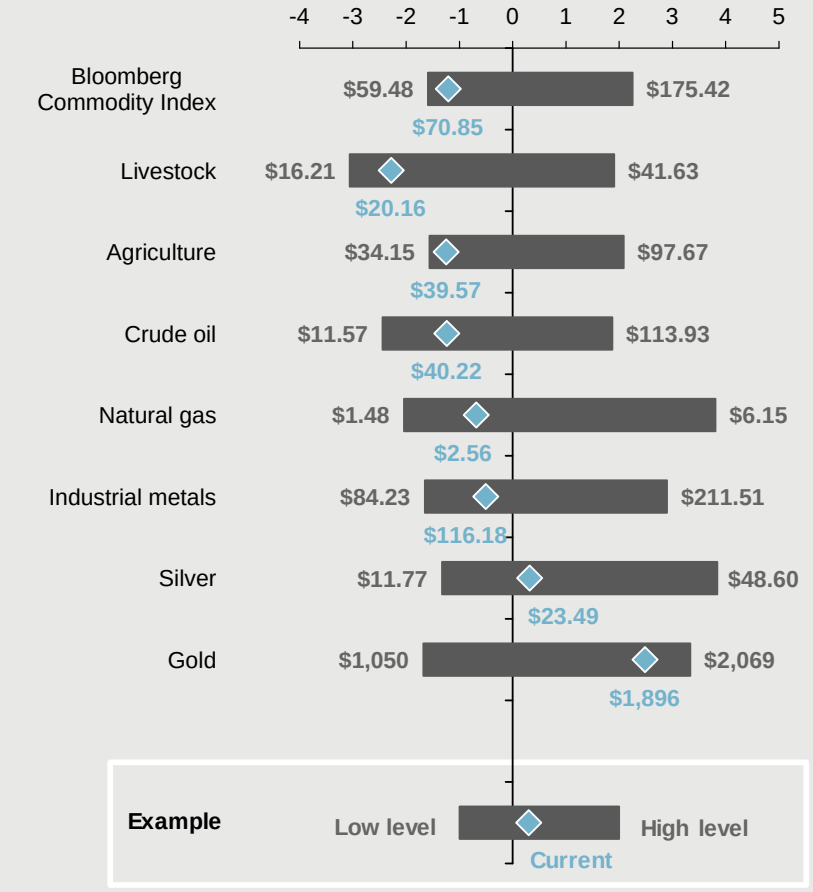
Sources: Cambridge Associates, Prequin, Standard & Poor's, World Federation of Exchanges, J.P. Morgan Asset Management.
*Global Buyout & Growth Equity and MSCI AC World total return data are as of March 31, 2020. **Number of listed U.S. companies is represented by the sum of number of companies listed on the NYSE and the NASDAQ.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Global commodities

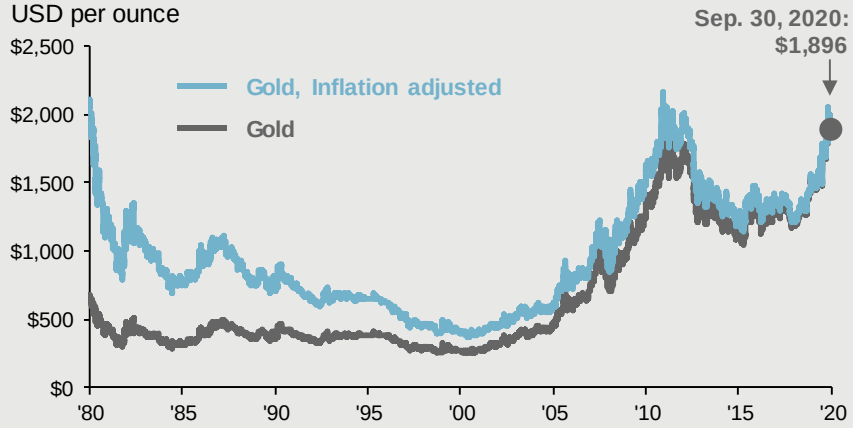
Commodity prices

Commodity price z-scores



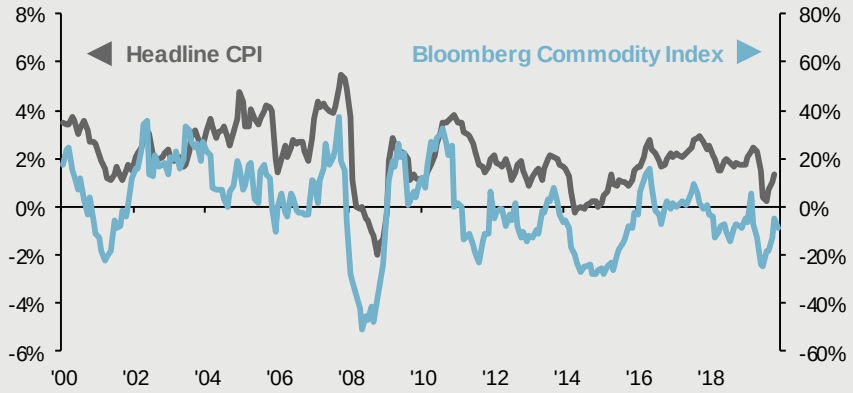
Gold prices

USD per ounce



Commodity prices and inflation

Year-over-year % change



Source: FactSet, J.P. Morgan Asset Management; (Left) Bloomberg, CME; (Top right) BLS, CME; (Bottom right) Bloomberg, BLS.
Commodity prices are represented by the appropriate Bloomberg Commodity sub-index. Crude oil shown is WTI. Other commodity prices are represented by futures contracts. Z-scores are calculated using daily prices over the past 10 years.
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J.P.Morgan Asset Management

Asset class returns

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	2005 - 2019 Ann.	2005 - 2019 Vol.
EM Equity 34.5%	REITs 35.1%	EM Equity 39.8%	Fixed Income 5.2%	EM Equity 79.0%	REITs 27.9%	REITs 8.3%	REITs 19.7%	Small Cap 38.8%	REITs 28.0%	REITs 2.8%	Small Cap 21.3%	EM Equity 37.8%	Cash 1.8%	Large Cap 31.5%	Fixed Income 6.8%	Large Cap 9.0%	REITs 22.2%
Comdty. 21.4%	EM Equity 32.6%	Comdty. 16.2%	Cash 1.8%	High Yield 59.4%	Small Cap 26.9%	Fixed Income 7.8%	High Yield 19.6%	Large Cap 32.4%	Large Cap 13.7%	Large Cap 1.4%	High Yield 14.3%	DM Equity 25.6%	Fixed Income 0.0%	REITs 28.7%	Large Cap 5.6%	REITs 8.3%	EM Equity 22.1%
DM Equity 14.0%	DM Equity 26.9%	DM Equity 11.6%	Asset Alloc. -25.4%	DM Equity 32.5%	EM Equity 19.2%	High Yield 3.1%	EM Equity 18.6%	DM Equity 23.3%	Fixed Income 6.0%	Fixed Income 0.5%	Large Cap 12.0%	Large Cap 21.8%	REITs -4.0%	Small Cap 25.5%	Cash 0.5%	Small Cap 7.9%	Comdty. 18.6%
REITs 12.2%	Small Cap 18.4%	Asset Alloc. 7.1%	High Yield -26.9%	REITs 28.0%	Comdty. 16.8%	Large Cap 2.1%	DM Equity 17.9%	Asset Alloc. 14.9%	Asset Alloc. 5.2%	Cash 0.0%	Comdty. 11.8%	Small Cap 14.6%	High Yield -4.1%	DM Equity 22.7%	Asset Alloc. -0.1%	EM Equity 7.8%	Small Cap 17.7%
Asset Alloc. 8.1%	Large Cap 15.8%	Fixed Income 7.0%	Small Cap -33.8%	Small Cap 27.2%	Large Cap 15.1%	Cash 0.1%	Small Cap 16.3%	High Yield 7.3%	Small Cap 4.9%	DM Equity -0.4%	EM Equity 11.6%	Asset Alloc. 14.6%	Large Cap -4.4%	Asset Alloc. 19.5%	High Yield -0.6%	High Yield 7.2%	DM Equity 17.3%
Large Cap 4.9%	Asset Alloc. 15.3%	Large Cap 5.5%	Comdty. -35.6%	Large Cap 26.5%	High Yield 14.8%	Asset Alloc. -0.7%	Large Cap 16.0%	REITs 2.9%	Cash 0.0%	Asset Alloc. -2.0%	REITs 8.6%	High Yield 10.4%	Asset Alloc. -5.8%	EM Equity 18.9%	EM Equity -0.9%	Asset Alloc. 6.6%	Large Cap 14.0%
Small Cap 4.6%	High Yield 13.7%	Cash 4.8%	Large Cap -37.0%	Asset Alloc. 25.0%	Asset Alloc. 13.3%	Small Cap -4.2%	Asset Alloc. 12.2%	Cash 0.0%	High Yield 0.0%	High Yield -2.7%	Asset Alloc. 8.3%	REITs 8.7%	Small Cap -11.0%	High Yield 12.6%	DM Equity -6.7%	DM Equity 5.3%	High Yield 10.9%
High Yield 3.6%	Cash 4.8%	High Yield 3.2%	REITs -37.7%	Comdty. 18.9%	DM Equity 8.2%	DM Equity -11.7%	Fixed Income 4.2%	Fixed Income -2.0%	EM Equity -1.8%	Small Cap -4.4%	Fixed Income 2.6%	Fixed Income 3.5%	Comdty. -11.2%	Fixed Income 8.7%	Small Cap -8.7%	Fixed Income 4.1%	Asset Alloc. 10.0%
Cash 3.0%	Fixed Income 4.3%	Small Cap -1.6%	DM Equity -43.1%	Fixed Income 5.9%	Fixed Income 6.5%	Comdty. -13.3%	Cash 0.1%	EM Equity -2.3%	DM Equity -4.5%	EM Equity -14.6%	DM Equity 1.5%	Comdty. 1.7%	DM Equity -13.4%	Comdty. 7.7%	Comdty. -12.1%	Cash 1.3%	Fixed Income 3.4%
Fixed Income 2.4%	Comdty. 2.1%	REITs -15.7%	EM Equity -53.2%	Cash 0.1%	Cash 0.1%	EM Equity -18.2%	Comdty. -1.1%	Comdty. -9.5%	Comdty. -17.0%	Comdty. -24.7%	Cash 0.3%	Cash 0.8%	EM Equity -14.2%	Cash 2.2%	REITs -12.3%	Comdty. -2.6%	Cash 1.0%

Source: Barclays, Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management.
Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Barclays Global HY Index, Fixed Income: Bloomberg Barclays US Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg Barclays 1-3m Treasury. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg Barclays US Aggregate, 5% in the Bloomberg Barclays 1-3m Treasury, 5% in the Bloomberg Barclays Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period of 12/31/04 – 12/31/19. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns.
Guide to the Markets – U.S. Data are as of September 30, 2020.

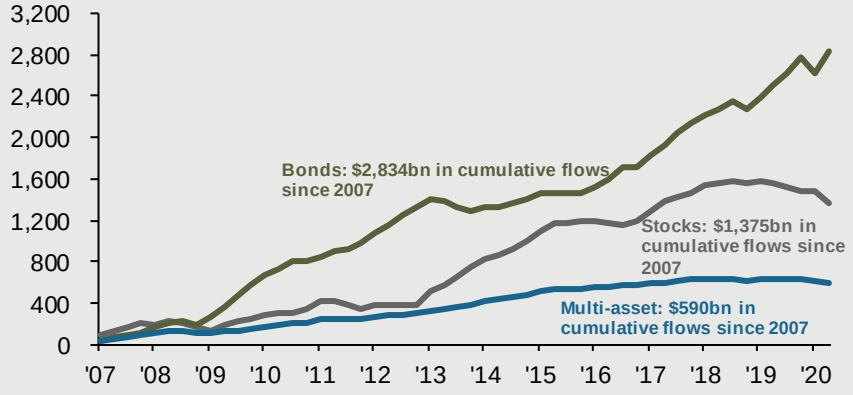
J.P.Morgan Asset Management

Fund flows

		Registered product flows																	
USD billions	**AUM**	**YTD**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**
U.S. equity	9,926	(165)	(84)	2	30	(7)	(8)	102	173	(31)	(33)	25	21	(2)	17	72	107	167	141
World equity	3,683	(51)	10	92	246	16	209	141	198	64	25	87	55	(35)	182	166	135	92	41
Taxable bond	4,689	214	414	122	388	214	44	74	20	298	169	226	309	61	106	54	46	30	45
Tax-free bond	890	21	105	11	34	32	22	34	(53)	50	(8)	13	71	12	14	17	7	(6)	(3)
Multi-asset	2,829	(60)	21	(9)	61	33	59	88	90	49	30	62	40	15	97	76	81	81	50
Liquidity	4,362	876	576	251	112	194	35	45	45	2	(34)	(338)	(261)	632	475	164	66	(33)	(86)

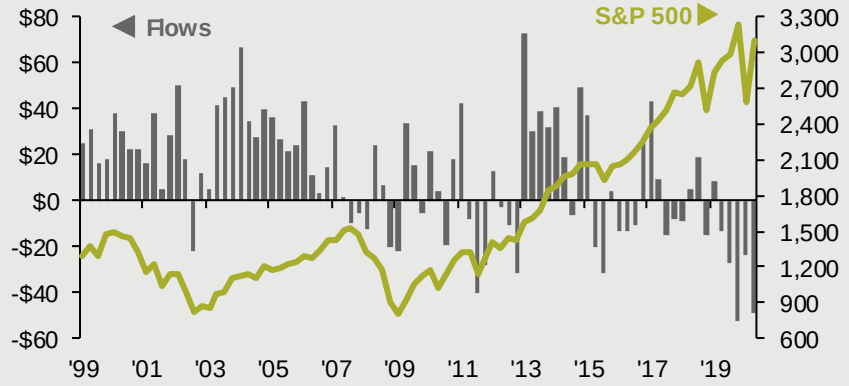
Cumulative flows into long-term asset products

Mutual fund and ETF flows, quarterly, USD billions



Flows into U.S. equity funds & S&P 500 performance

Mutual fund and ETF flows, price index, quarterly, USD billions

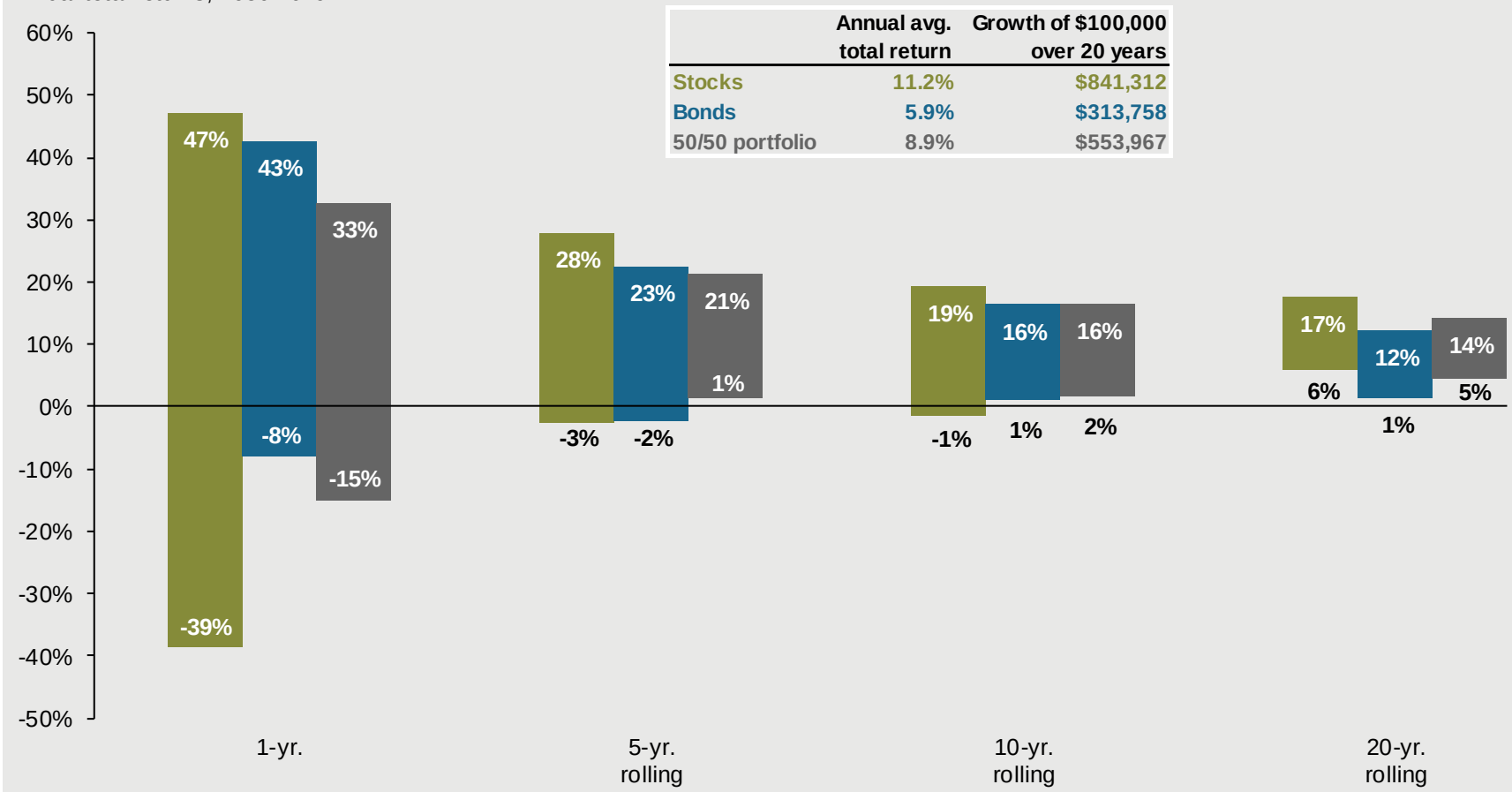


Source: Strategic Insight Simfund, J.P. Morgan Asset Management. All data include flows through August 2020 and capture all registered product flows (open-end mutual funds and ETFs). Simfund data are subject to periodic revisions. World equity flows are inclusive of emerging market, global equity and regional equity flows. Multi-asset flows include asset allocation, balanced fund, flexible portfolio and mixed income flows.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan
Asset Management

Range of stock, bond and blended total returns

Annual total returns, 1950-2019



	Annual avg. total return	Growth of $100,000 over 20 years
Stocks	11.2%	$841,312
Bonds	5.9%	$313,758
50/50 portfolio	8.9%	$553,967

Source: Barclays, Bloomberg, FactSet, Federal Reserve, Robert Shiller, Strategas/Ibbotson, J.P. Morgan Asset Management.
Returns shown are based on calendar year returns from 1950 to 2019. Stocks represent the S&P 500 Shiller Composite and Bonds represent Strategas/Ibbotson for periods from 1950 to 2010 and Bloomberg Barclays Aggregate thereafter. Growth of $100,000 is based on annual average total returns from 1950 to 2019.
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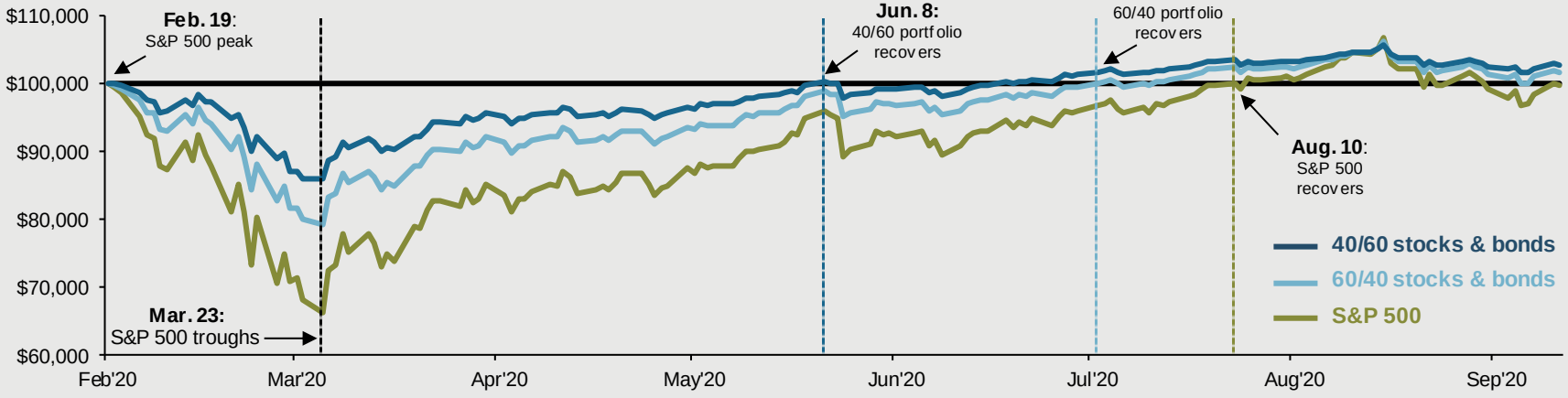
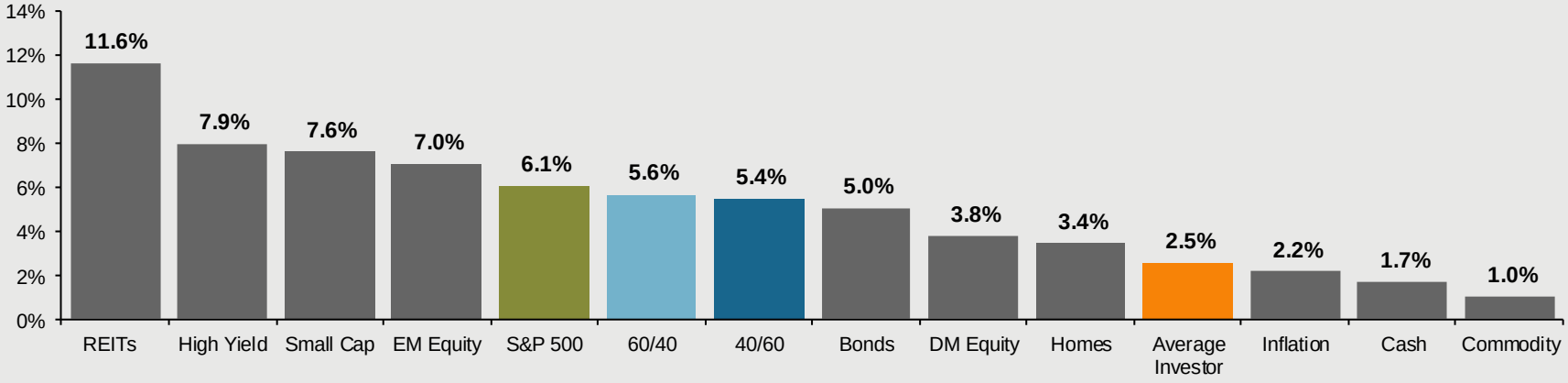
J.P.Morgan Asset Management

Diversification and the average investor

Portfolio returns: Equities vs. equity and fixed income blend



20-year annualized returns by asset class (1999 – 2019)



Source: Barclays, Bloomberg, FactSet, Standard & Poor's, J.P. Morgan Asset Management; (Bottom) Dalbar Inc, MSCI, NAREIT, Russell.
Indices used are as follows: REITs: NAREIT Equity REIT Index, Small cap: Russell 2000, EM Equity: MSCI EM, DM Equity: MSCI EAFE, Commodity: Bloomberg Commodity Index, High Yield: Bloomberg Barclays Global HY Index, Bonds: Bloomberg Barclays U.S. Aggregate Index, Homes: median sale price of existing single-family homes, Cash: Bloomberg Barclays 1-3m Treasury, Inflation: CPI. 60/40: A balanced portfolio with 60% invested in S&P 500 Index and 40% invested in high-quality U.S. fixed income, represented by the Bloomberg Barclays U.S. Aggregate Index. The portfolio is rebalanced annually. Average asset allocation investor return is based on an analysis by Dalbar Inc., which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Returns are annualized (and total return where applicable) and represent the 20-year period ending 12/31/19 to match Dalbar's most recent analysis.
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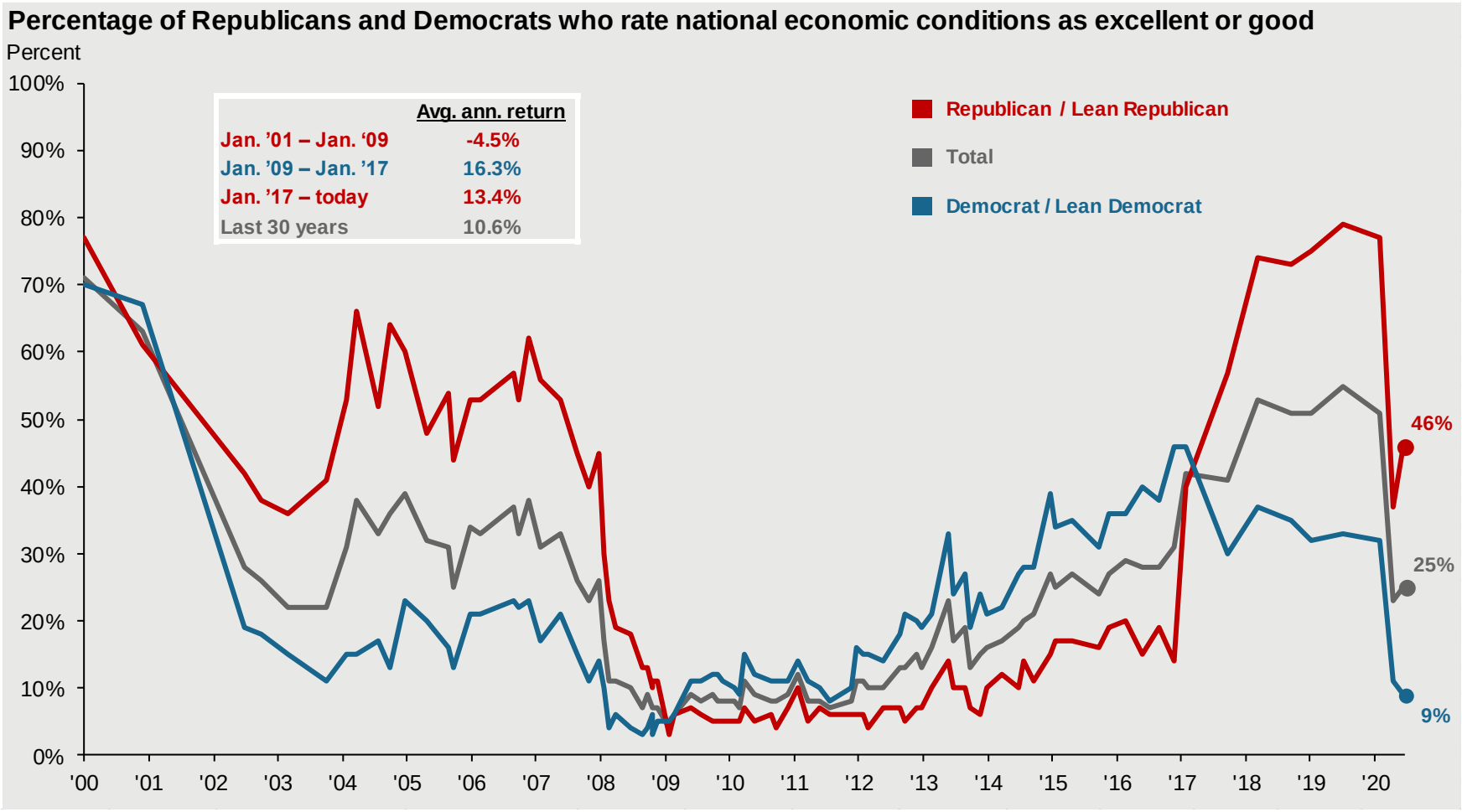
J.P.Morgan Asset Management

Consumer confidence by political affiliation

Percentage of Republicans and Democrats who rate national economic conditions as excellent or good



Source: Pew Research Center, J.P. Morgan Asset Management. Pew Research Center, June 2020, "Republicans, Democrats Move Even Further Apart in Coronavirus Concerns" Question: Thinking about the nation's economy, How would you rate economic conditions in this country today… as excellent, good, only fair, or poor?
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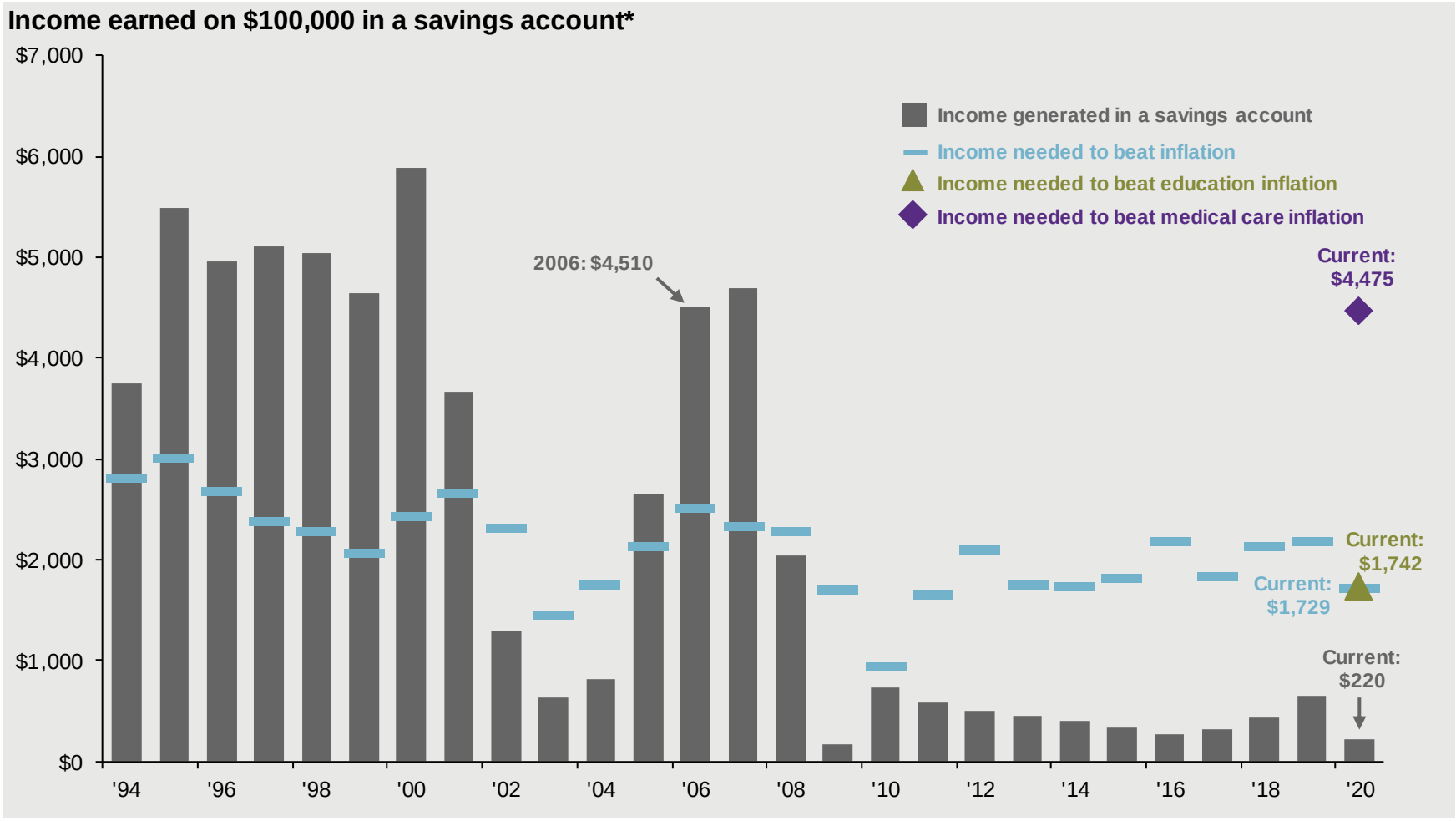
Investing principles

J.P.Morgan Asset Management

Cash account returns



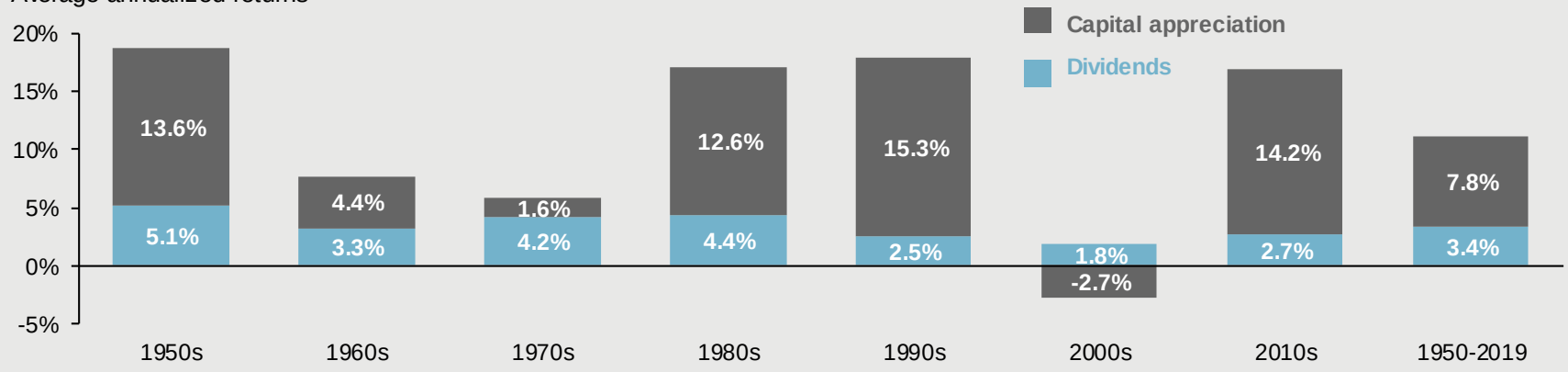
Source: Bankrate.com, BLS, FactSet, Federal Reserve System, J.P. Morgan Asset Management,
*Savings account is based on the national average annual percentage rate (APR) on money-market accounts from Bankrate.com from 2010 onward. Prior to 2010, money market yield is based on taxable money market funds return data from the Federal Reserve. Annual income is for illustrative purposes and is calculated based on the average money market yield during each year and $100,000 invested. Current inflation is based on August 2020 Core CPI, education inflation and medical care inflation. Current savings account is based on the September 2020 national average annual percentage rate (APR) on money-market accounts. Past performance is not indicative of comparable future results.
Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

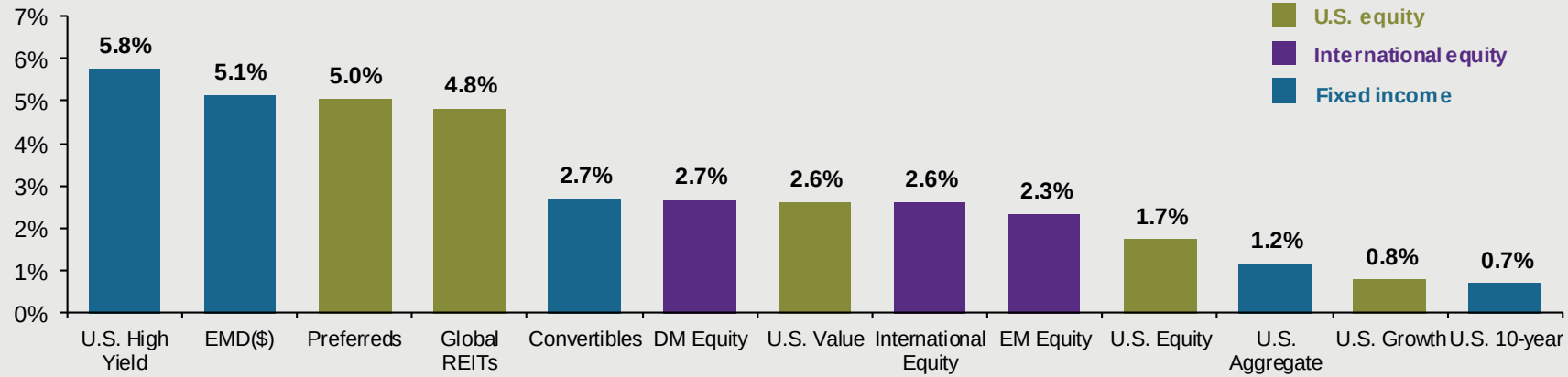
Yield alternatives: Domestic and global

S&P 500 total return: Dividends vs. capital appreciation

Average annualized returns



Asset class yields

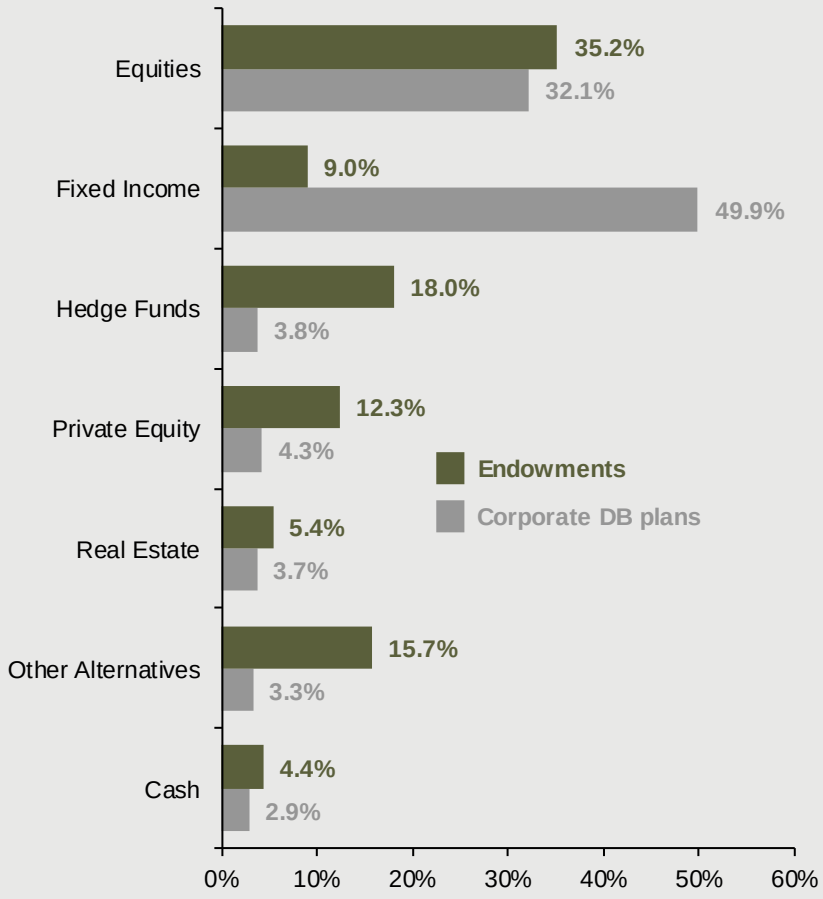


Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management; (Top) Ibbotson; (Bottom) BAML, Barclays, Bloomberg, Federal Reserve, FTSE, J.P. Morgan, MSCI, NCREIF, Russell. Dividend vs. capital appreciation returns are through 12/31/19. Yields are most current. Preferreds: BAML Hybrid Preferred Securities; U.S. High Yield: Bloomberg US Corporate High Yield; Global REITs: FTSE NAREIT Global REITs; U.S. Aggregate: Bloomberg Barclays US Aggregate; EMD($): J.P. Morgan EMBIG Diversified; Convertibles: Bloomberg Barclays U.S. Convertibles Composite; International Equity: MSCI AC World ex-U.S.; EM Equity: MSCI Emerging Markets; DM Equity: MSCI EAFE; U.S. Equity: S&P 500; U.S. Growth: Russell 1000 Growth; U.S. Value: Russell 1000 Value; U.S. 10-year: Tullett Prebon.
Guide to the Markets –U.S. Data are as of September 30, 2020.

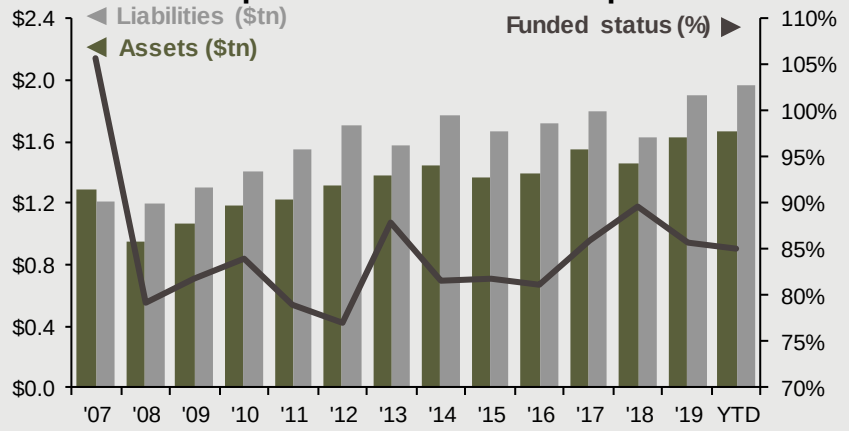
J.P.Morgan Asset Management

Institutional investor behavior

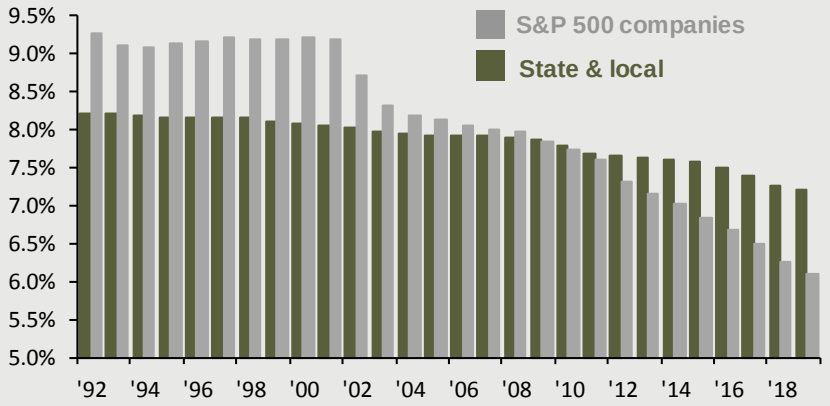
Asset allocation: Corporate DB plans vs. endowments



Defined benefit plans: Milliman 100 companies



Pension return assumptions



Source: J.P. Morgan Asset Management; (Left) NACUBO (National Association of College and University Business Officers), Towers Watson; (Top right) Milliman Pension Funding Index; (Bottom right) Census for Governments, Compustat, FactSet, S&P 500 corporate 10-Ks. Endowment asset allocation as of 2019. Corporate DB plan asset allocation as of 2018. Endowments represents dollar-weighted average data of 749 colleges and universities. Corporate DB plans represents aggregate asset allocation of Fortune 1000 pension plans. Pension return assumptions based on all available and reported data from S&P 500 Index companies. State and local pension return assumptions are weighted by plan size. Pension assets, liabilities and funded status based on Milliman 100 companies reporting pension data as of August 31, 2020. All information is shown for illustrative purposes only.

Guide to the Markets – U.S. Data are as of September 30, 2020.

J.P.Morgan Asset Management

J.P. Morgan Asset Management – Index definitions

All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The **MSCI EAFE Index (Europe, Australasia, Far East)** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **Russell 1000 Index**® measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Growth Index**® measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 1000 Value Index**® measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 2000 Index**® measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **Russell 2000 Growth Index**® measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index**® measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 3000 Index**® measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell Midcap Index**® measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index** ® measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index** ® measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

Fixed income:

The **Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have $250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Bloomberg Barclays Global High Yield Index** is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Bloomberg Barclays Municipal Index**: consists of a broad selection of investment- grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The **Bloomberg Barclays US Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.

The **Bloomberg Barclays US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least $250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Bloomberg Barclays US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Bloomberg Barclays US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The **Bloomberg Barclays US TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index (EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**. The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S. Treasury Index** is a component of the U.S. Government index.

J.P.Morgan
Asset Management

Other asset classes:

The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class.

The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc

The **Cambridge Associates U.S. Global Buyout and Growth Index®** is based on data compiled from 1,768 global (U.S. & ex – U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013.

The **CS/Tremont Hedge Fund Index** is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The **HFRI Monthly Indices (HFRI)** are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

The **NFI-ODCE**, short for NCREIF Fund Index - Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

Definitions:

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

Distressed Restructuring Strategies employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

Investments in **emerging markets** can be more volatile. The normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

Equity market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Global macro strategies trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certain short sale positions.

Merger arbitrage strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

Mid-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility than the average stock.

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

Relative Value Strategies maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

Small-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.

J.P.Morgan
Asset Management

J.P. Morgan Asset Management – Risks & disclosures

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Unless otherwise stated, all data are as of September 30, 2020 or most recently available.

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