

CAPITAL MARKET SUMMARY

Research Team

JANUARY 2021



NOESIS
Capital Management

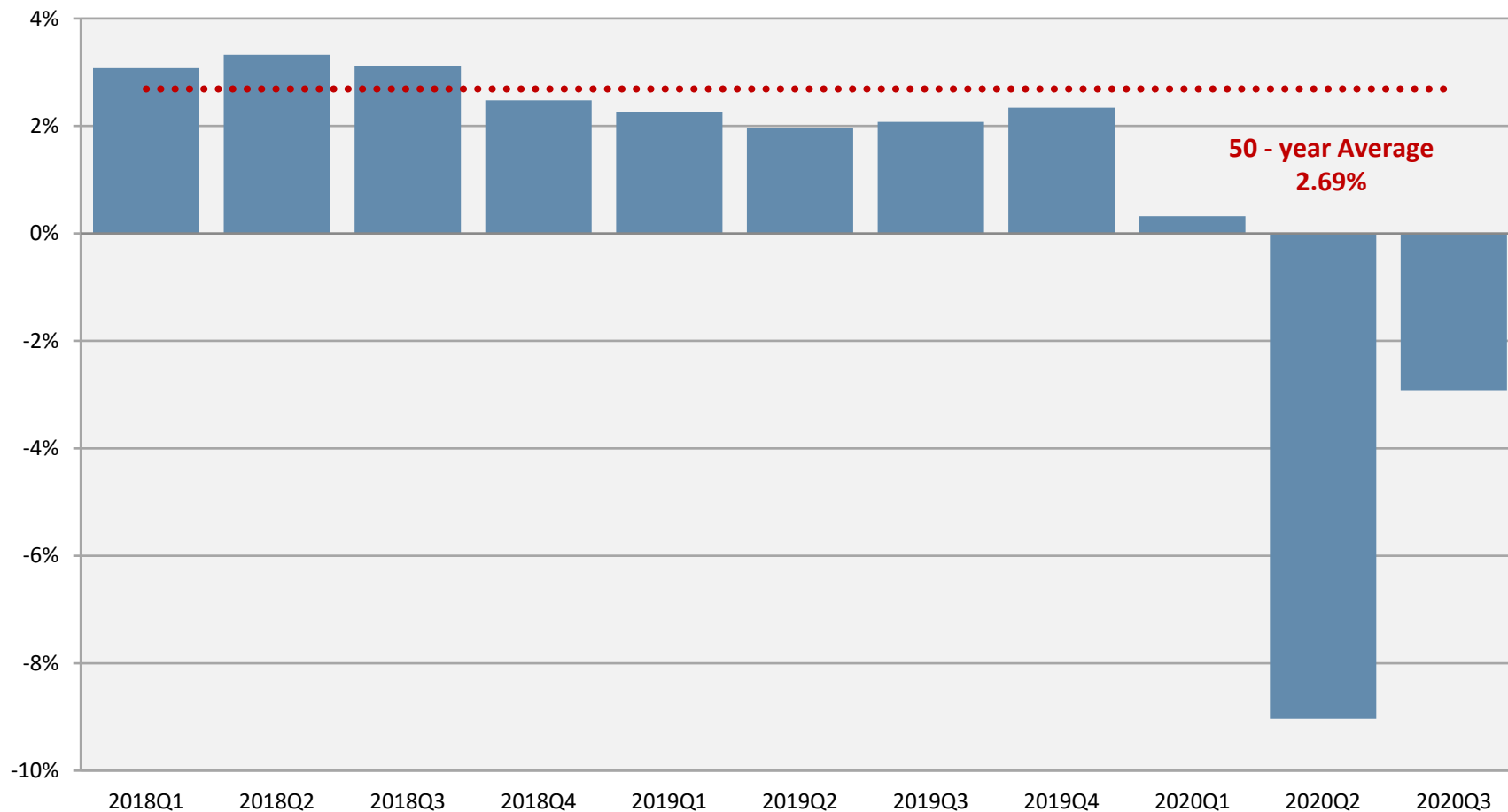
U.S ECONOMY

CAPITAL MARKET SUMMARY



Economic Growth – Real GDP (yoy % change)

U.S. Economy



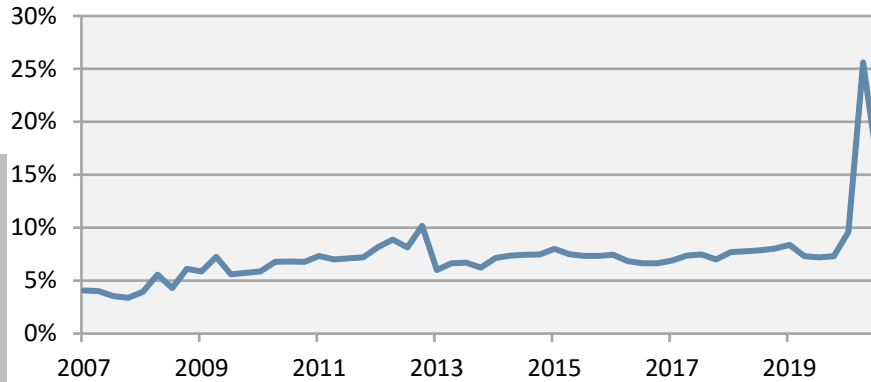
Source: U.S. Bureau of Economic Analysis



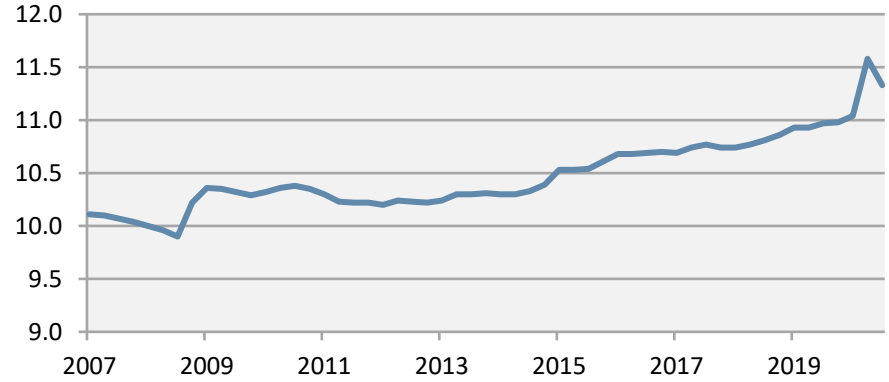
Fast, V-shaped recovery. The Fed expects a -2.4% decline in 2020 and +4.2% growth in 2021. Consumption remains the main driver for the U.S. economy (~70% share). Globally, the IMF expects a -4.4% decline in 2020 and +5.2% growth in 2021.

Keys to Consumer Consumption

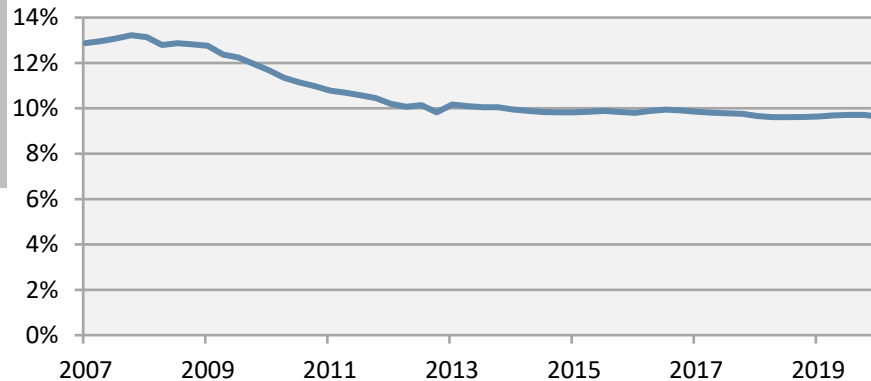
Saving Rate



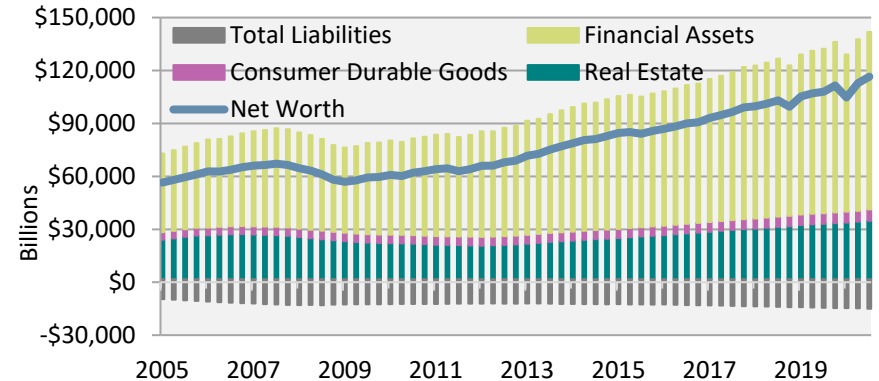
Hourly Wages (\$)



Household Debt Service Ratio



Balance Sheet

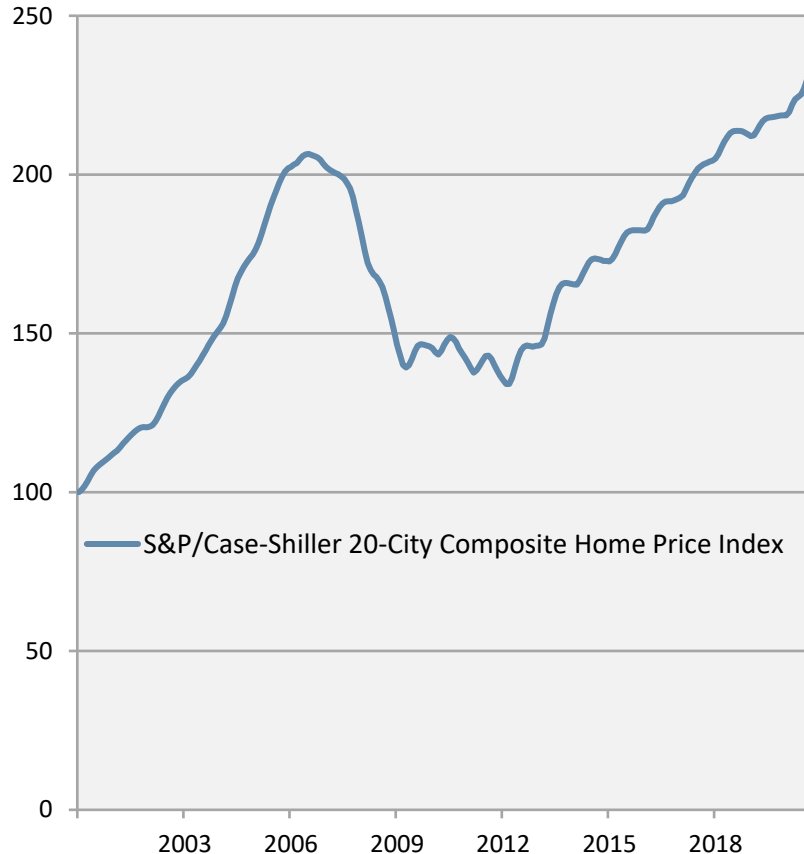


Source: U.S. Bureau of Economic Analysis (BEA), Thomson Reuters Datastream, J.P. Morgan Asset Management, Federal Reserve Bank of St. Louis.

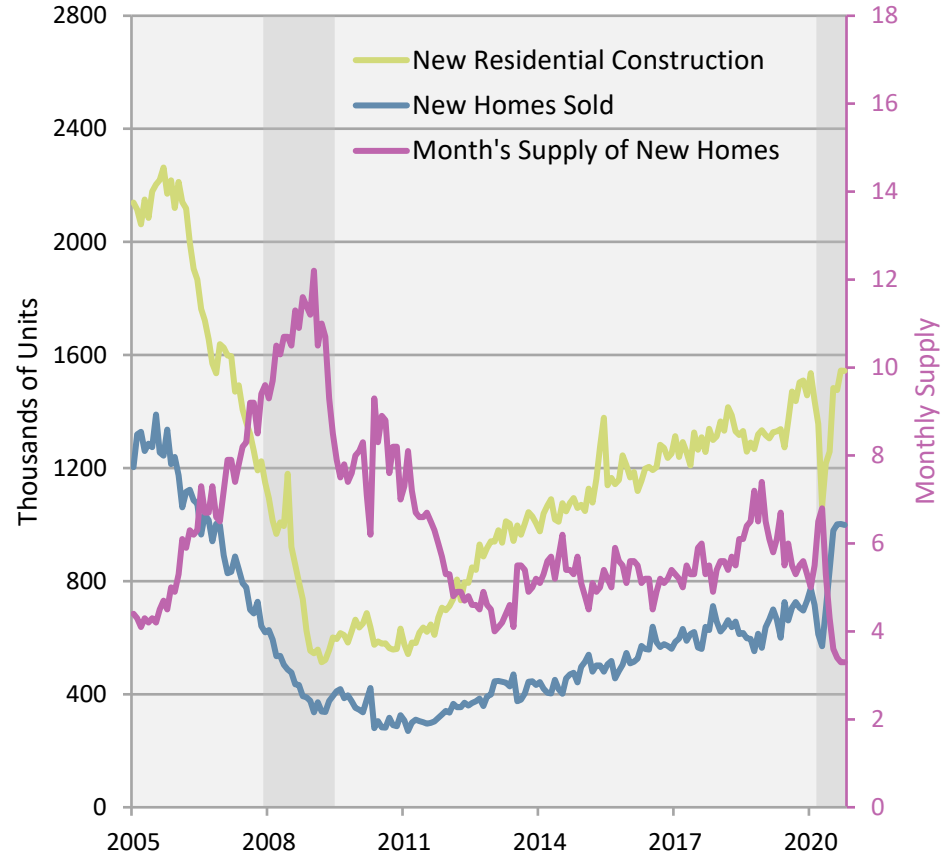


U.S. consumer had high reserves before the pandemic. With governments' support, strong housing and stock markets, it seems consumers' financial health remains in good standing. The true test will come when the inflation starts to rise, and borrowing is no longer cheap.

Home Price



New Home Sales

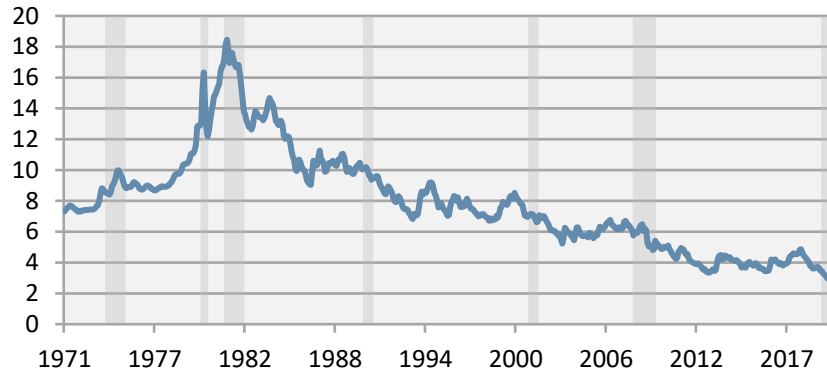


Source: S&P Dow Jones Indices LLC, U.S. Dept. of Commerce: Census Bureau, Federal Reserve Bank of St. Louis.

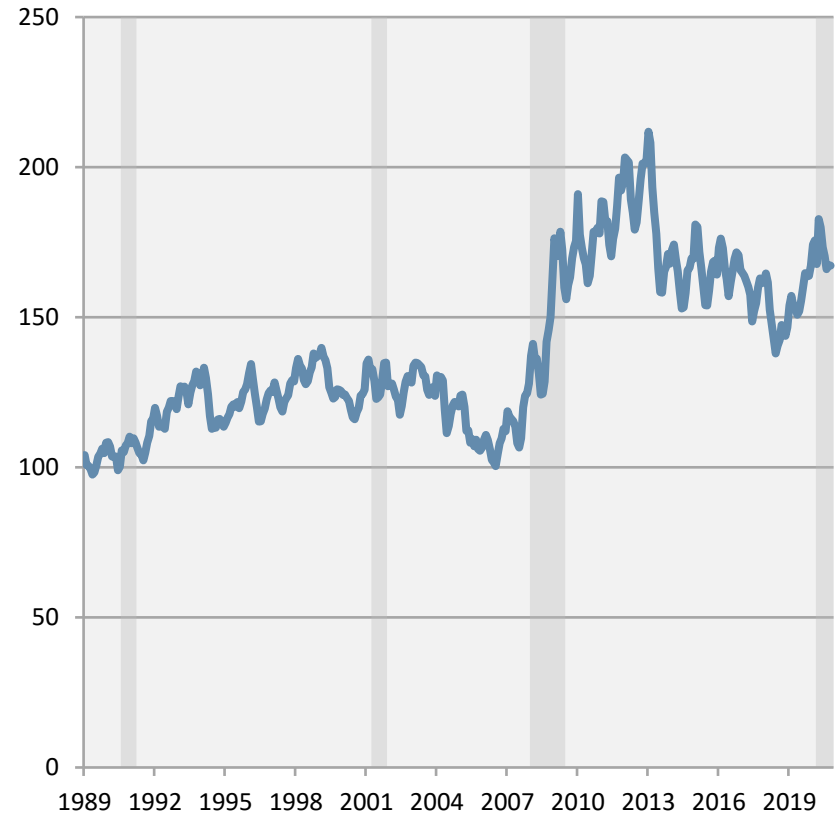


The supply of new homes declined (~3 months vs. long-term average 6 months) as house sales outpace the speed of new land development and house construction. Homes are 25% of consumer balance sheet.

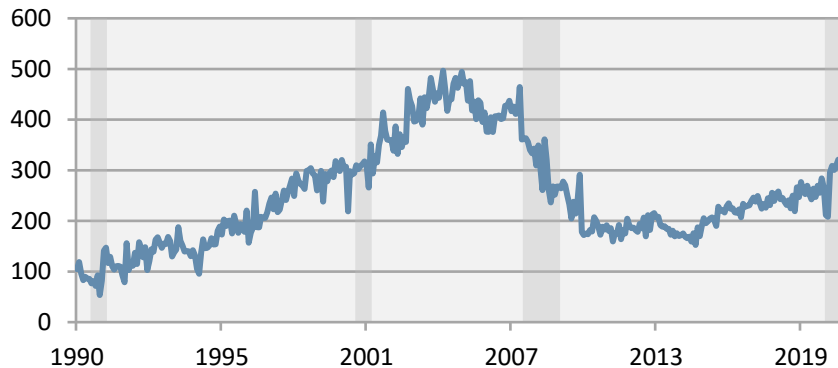
30-Year Fixed Rate Mortgage Average



Affordability Fixed Mortgage Index



MBA US Purchase Index



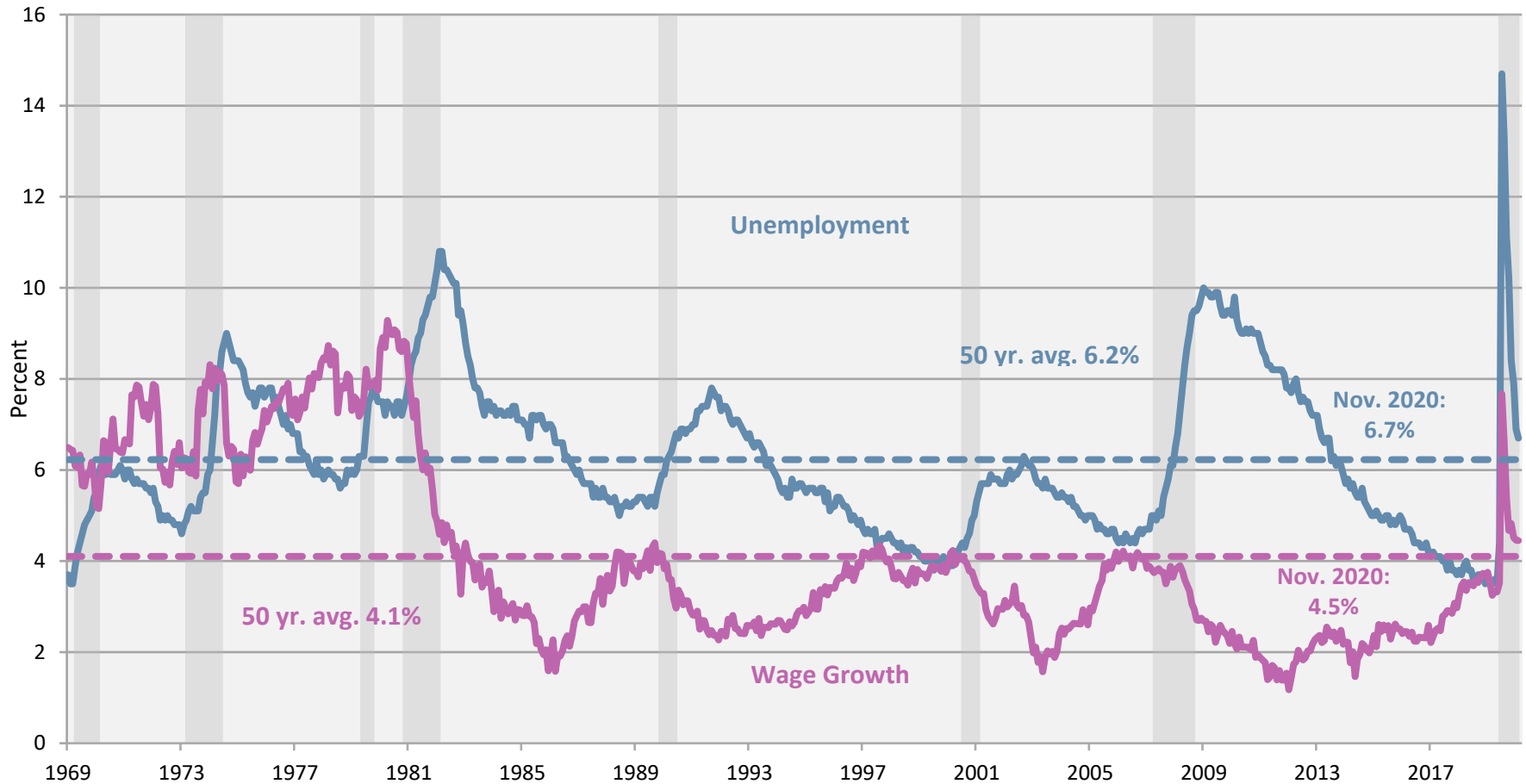
Source: Federal Reserve Bank of St. Louis, Freddie Mac, Bloomberg, Mortgage Bankers Association



Rising volume of mortgage loan applications with declining mortgage rates. Affordability Index is based on median home price, median income and mortgage rate (when index measures 100, a family earning the median income has exactly the amount needed to purchase a median-price resale home using conventional financing). Affordability declined recently but remains much higher compared to the last housing boom.

Unemployment Rate

U.S. Economy

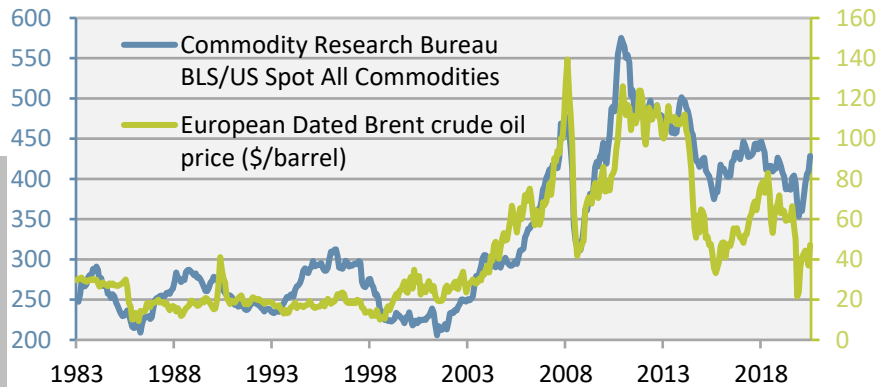


Source: U.S. Dept. of Labor, Federal Reserve Bank of St. Louis.

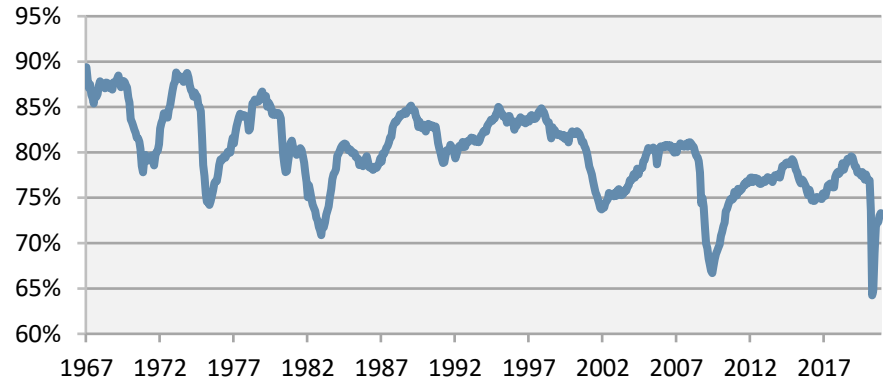


Dec 2020 6.7%, flat compared to Nov 2020. Job market remains highly dependent on progress of the pandemic (Leisure and Hospitality 16.7% unemployment rate). Hopefully with vaccine delivery, the unemployment rate can continue to go down. [Wage growth is for private production and non-supervisory workers.]

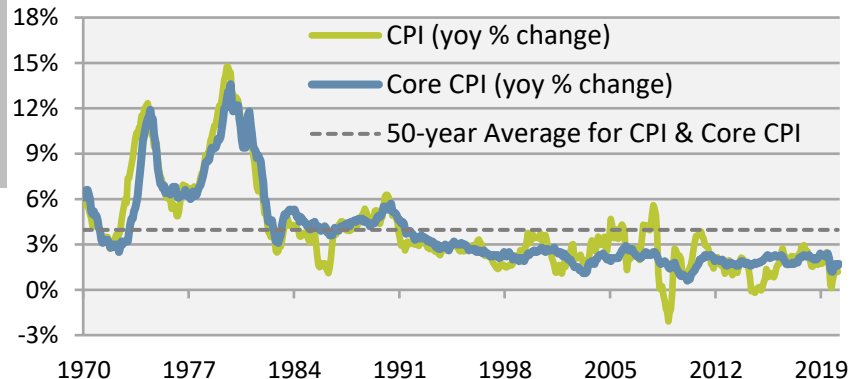
Commodities



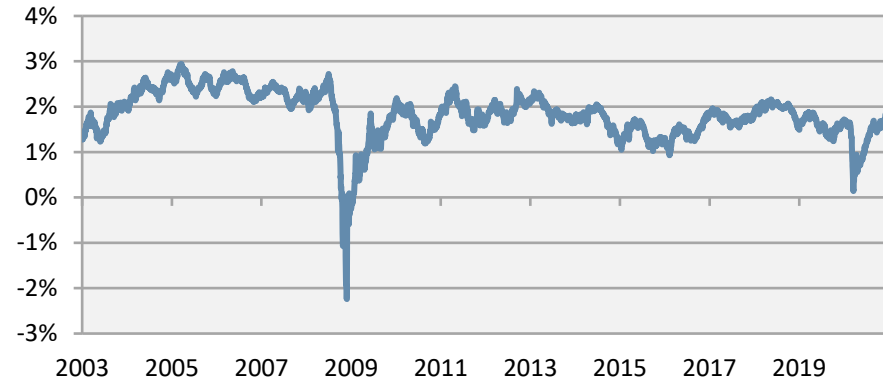
Capacity Utilization



CPI and Core CPI



Inflation Expectation



Source: Bloomberg, Commodity Research Bureau, Federal Reserve of St. Louis, U.S. Bureau of Labor Statistics.



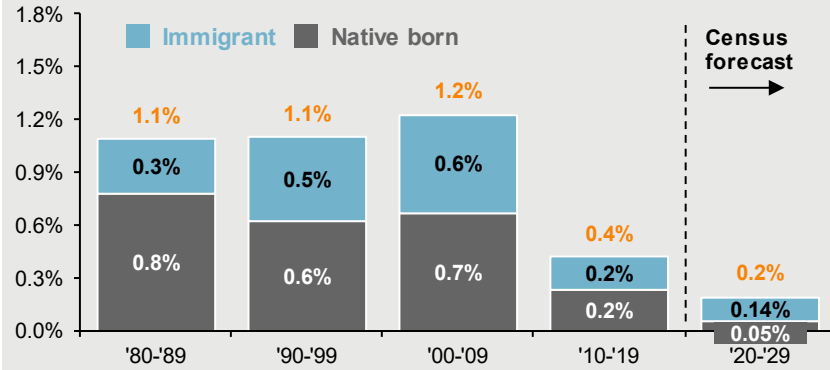
As of Dec 2020, core CPI 1.6% and CPI 1.4%. However, inflation expectation (5-year) is steadily rising since spring 2020 and recently surpassed the 2% level.

Long Term Drivers of Economic Growth

U.S. Economy

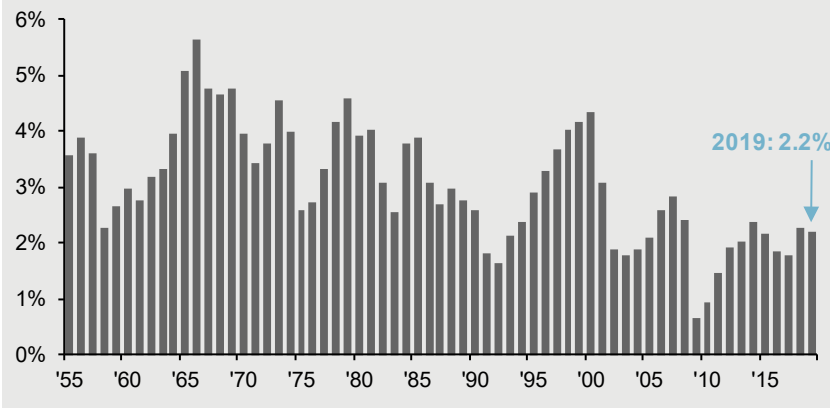
Growth in working-age population

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



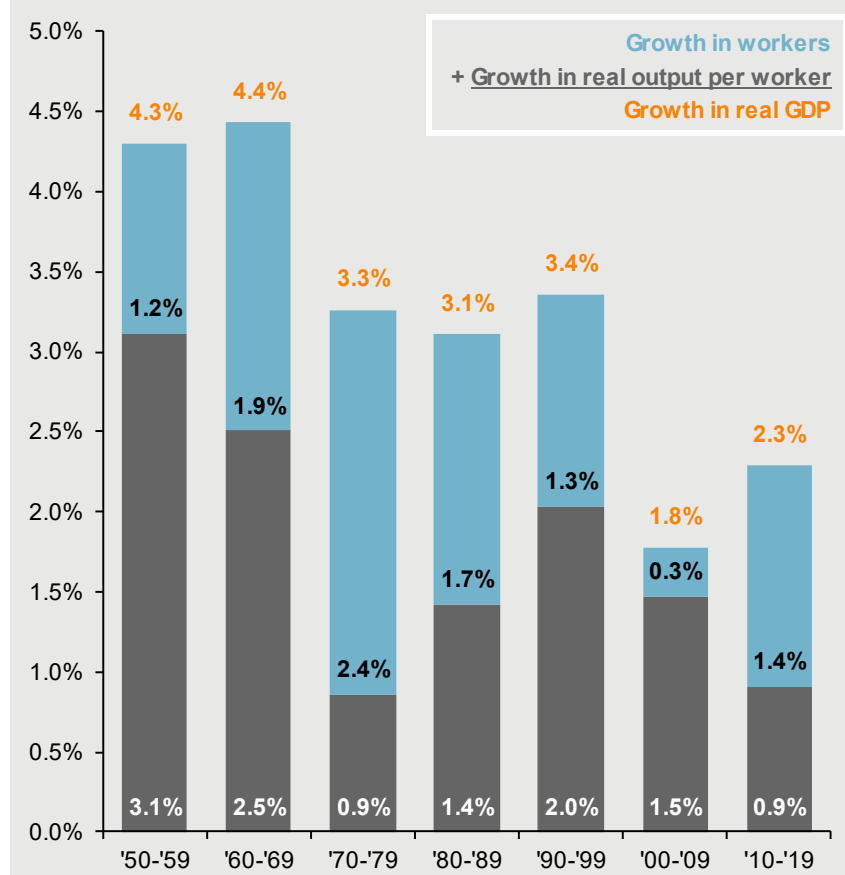
Growth in private non-residential capital stock

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



Drivers of GDP growth

Average year-over-year % change



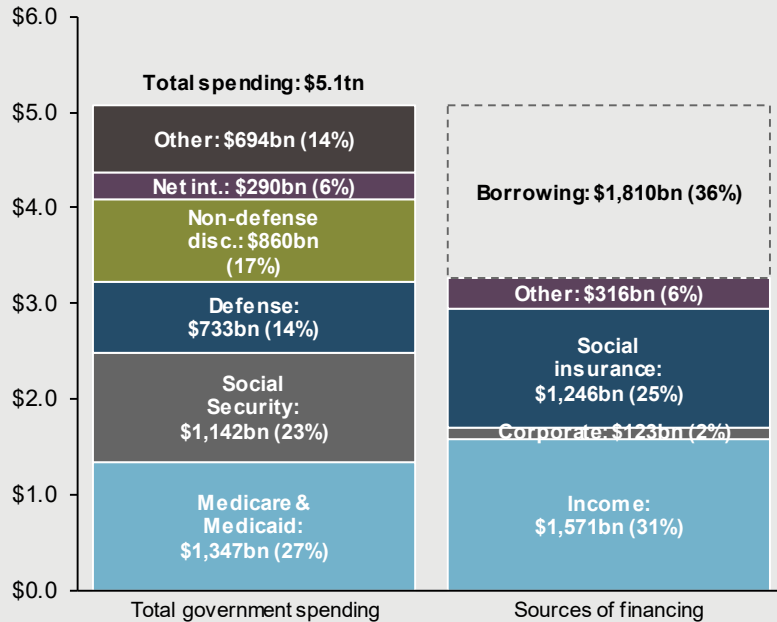
Source: J.P. Morgan Asset Management



Real economic output = TFP (total factor productivity, real output per hour) x K (capital stock) x L (labor input) | L = population growth and labor force participation rate
 Longer term, growth of working-age population and productivity are issues.

The 2021 federal budget

CBO Baseline forecast, USD trillions

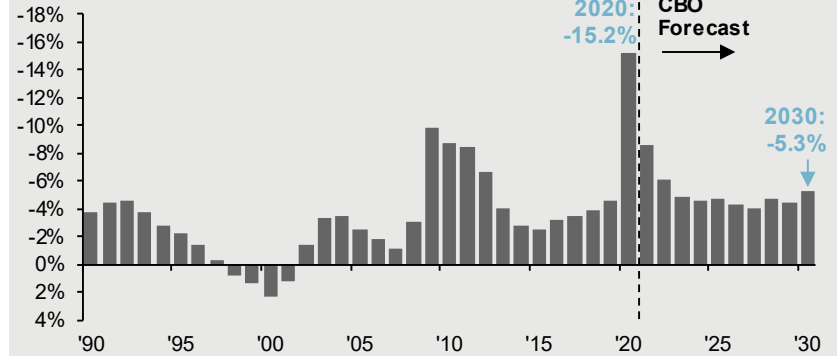


CBO's Baseline economic assumptions

	2021	'22-'23	'24-'25	'26-'30
Real GDP growth	1.1%	2.9%	2.3%	2.1%
10-year Treasury	0.8%	1.2%	1.7%	2.7%
Headline inflation (CPI)	0.9%	1.9%	2.3%	2.2%
Unemployment	9.1%	7.0%	5.9%	4.7%

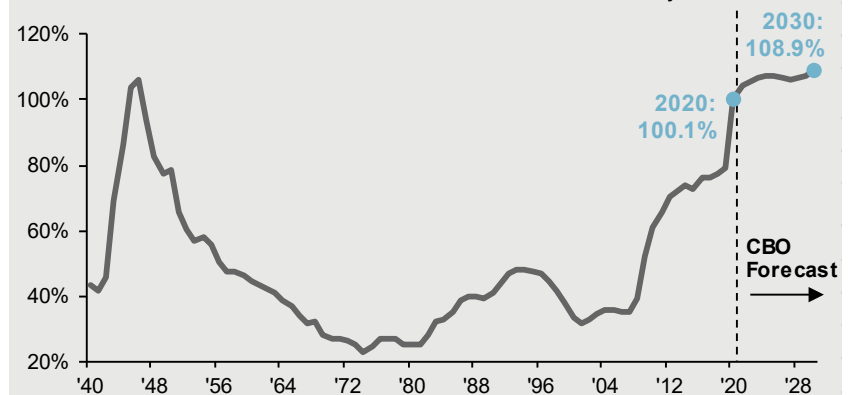
Federal budget surplus/deficit

% of GDP, 1990 – 2030, 2020 CBO Baseline



Federal net debt (accumulated deficits)

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



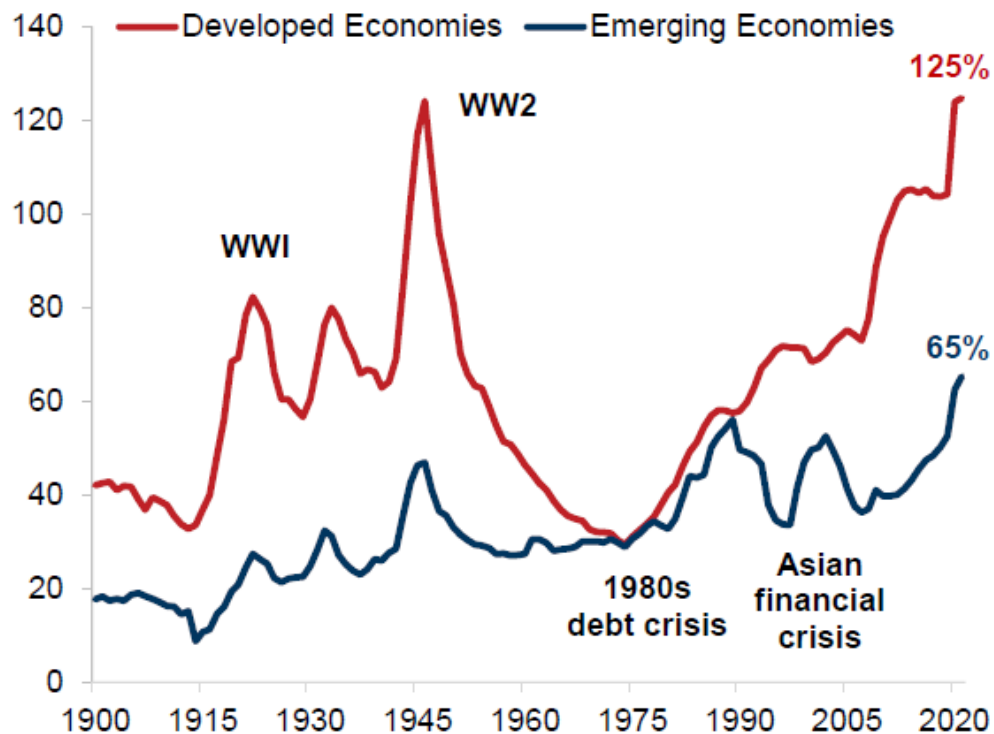
Source: J.P. Morgan Asset Management



An elevated federal budget deficit for the next years is forecasted by the Congressional Budget Office (CBO) leading to higher federal debt levels. This assumes very low government borrowing rates.

Public Debt

Public debt set to reach the highest level on record...
Median debt-to-GDP ratio in country grouping, % of GDP



Sources: IMF, Goldman Sachs Global Investment Research



The economic consequences of the pandemic required warlike government spending globally.

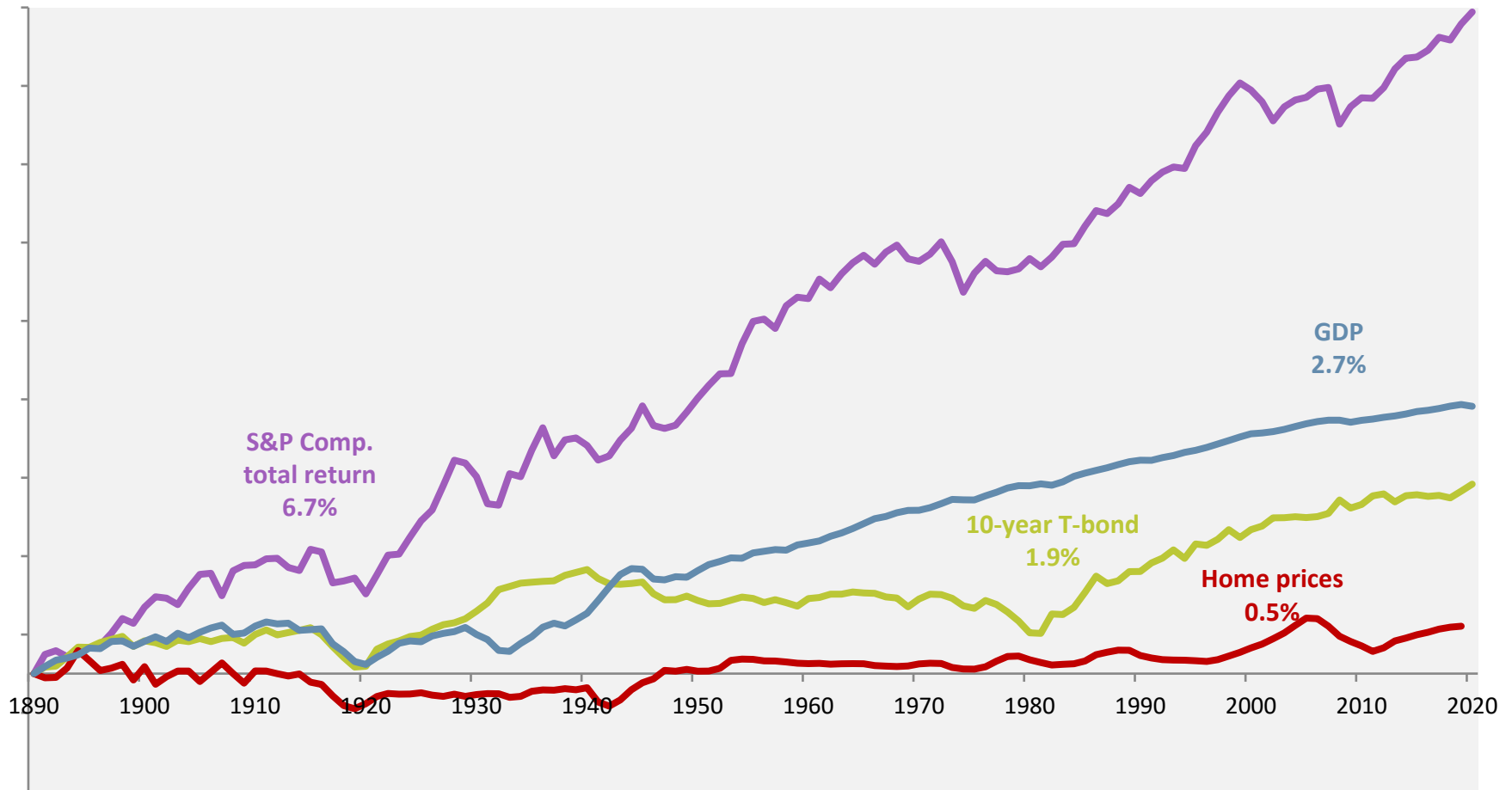
U.S. EQUITY MARKET

CAPITAL MARKET SUMMARY



Long-Term Trends, Real

U.S. Equity



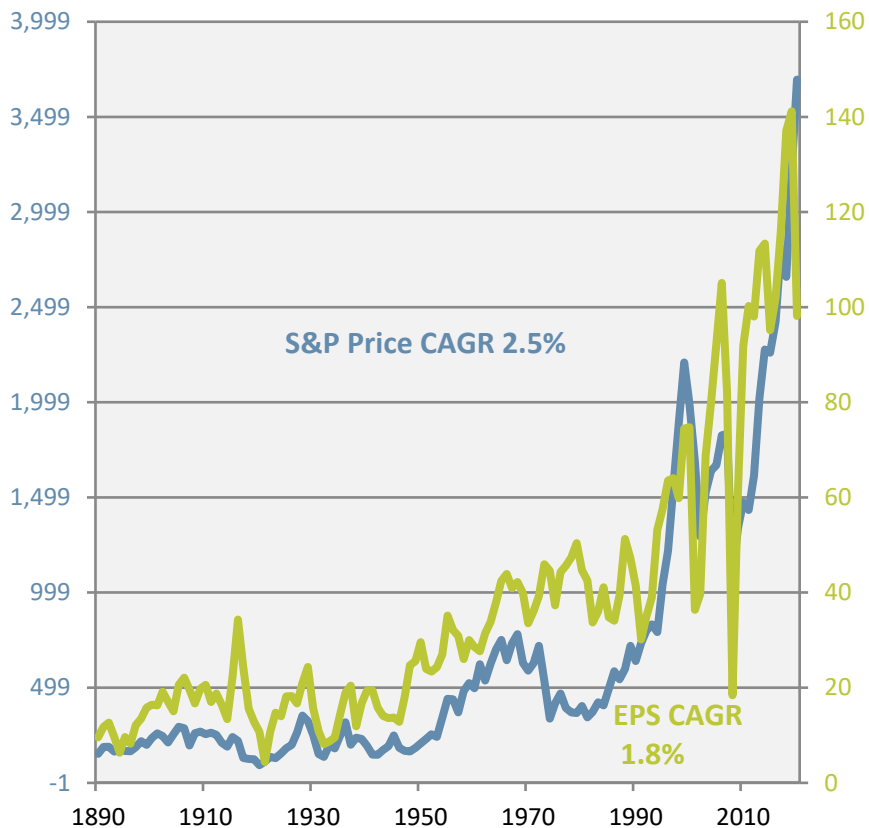
Source: "Irrational Exuberance" by Robert J. Shiller; Maddison Project. Note: the scale is in logarithm.



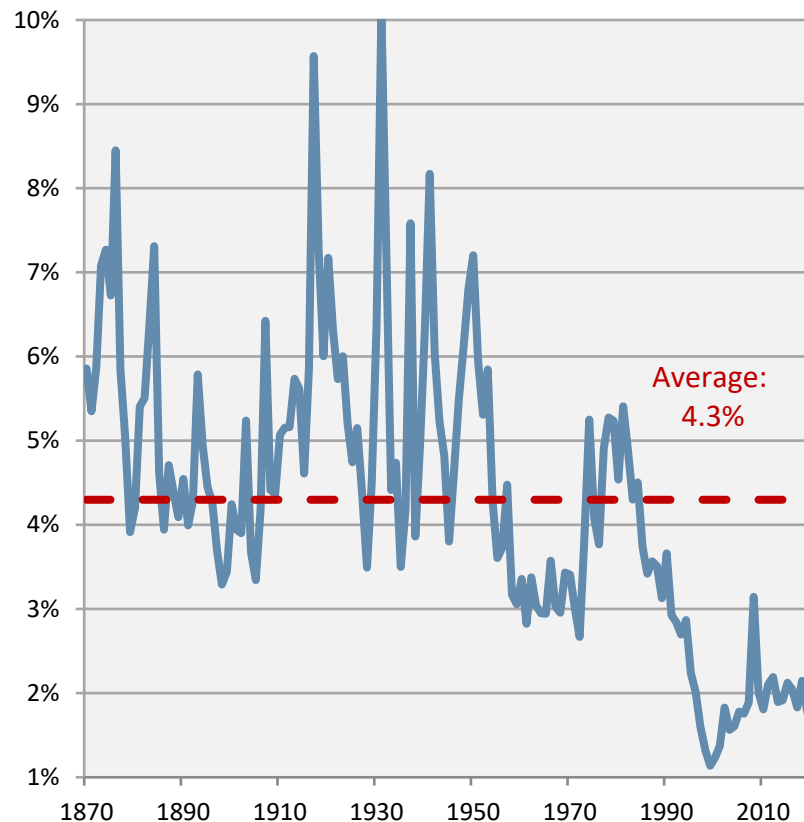
Asset class returns in historic, 130-year context. Data as of 12/2020; home prices as of 2019.

S&P 500 Real Return & Dividend Yield

S&P 500 Real Return



S&P 500 Dividend Yield



Source: Standard & Poor's, Robert J. Shiller of Yale University, Bloomberg, Federal Reserve Bank of St. Louis.

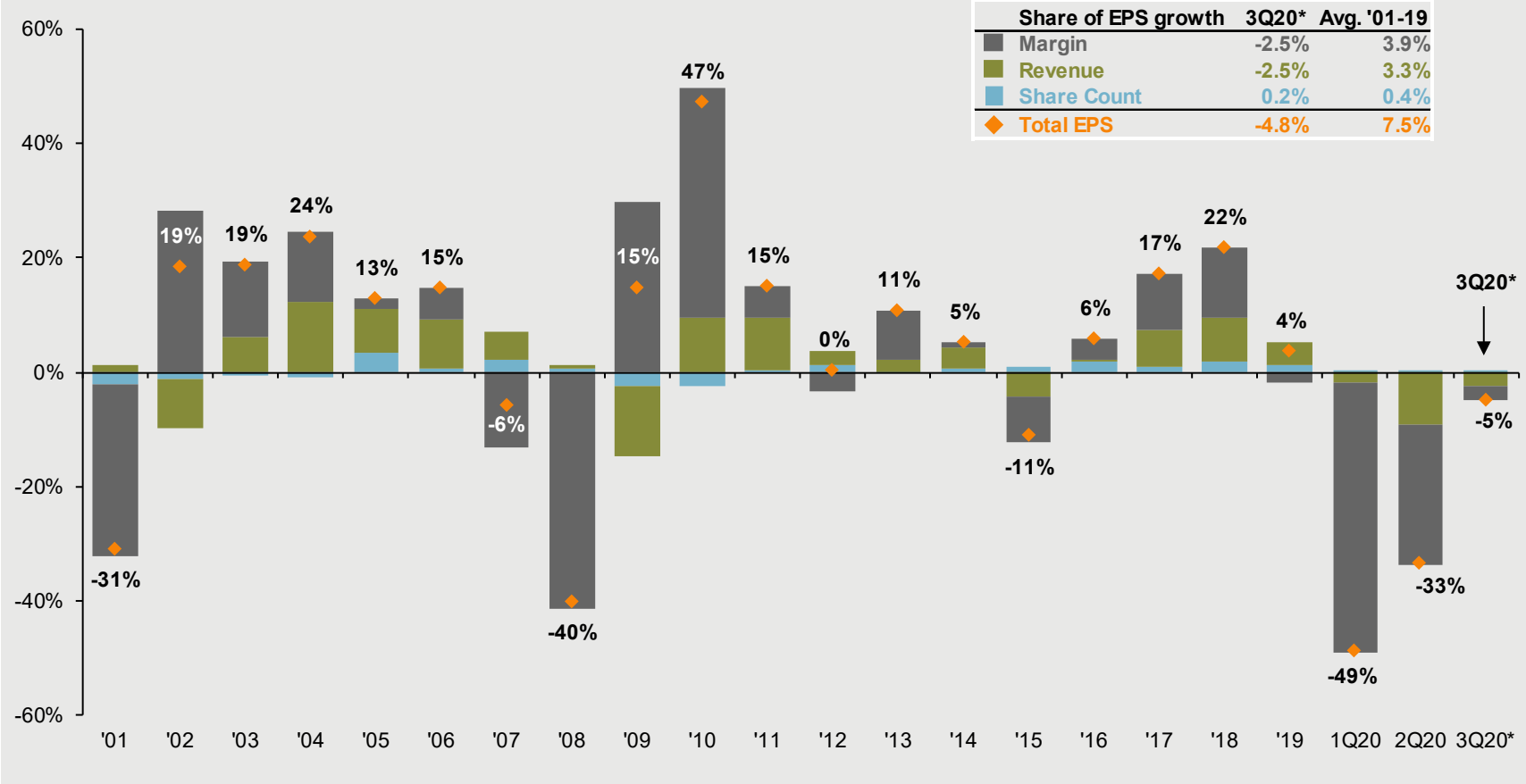


In the long-run stock prices move in-line with earnings growth.
Historically, dividends contributed the majority to the total return.

Sources of EPS Growth

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

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



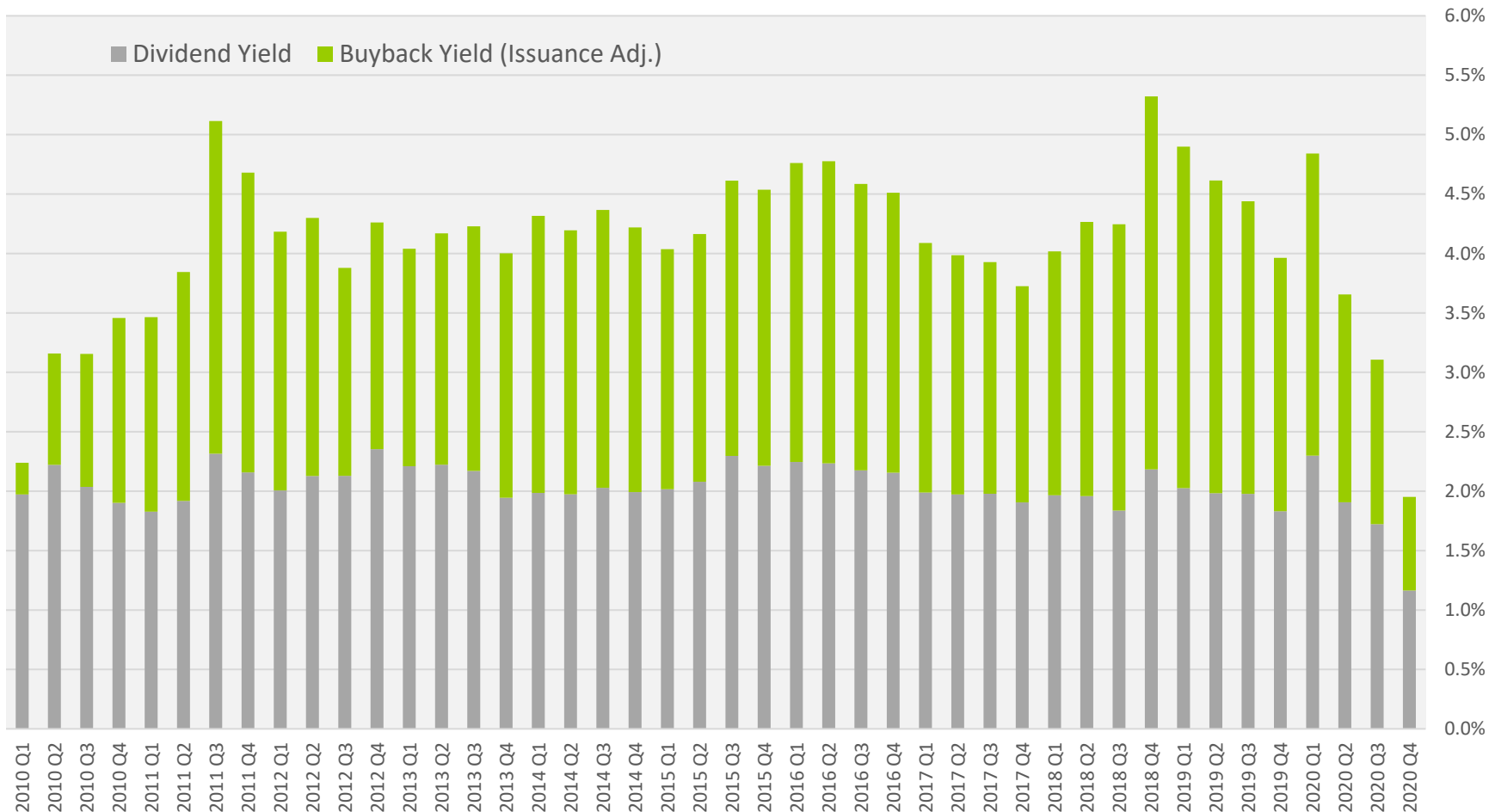
Source: J.P. Morgan Asset Management



Declining revenue led to shrinking margins in 2020, but the sequential trend is promising. Recovery in the topline might lead to operating leverage.

Total Shareholder Yield (S&P 500)

U.S. Equity

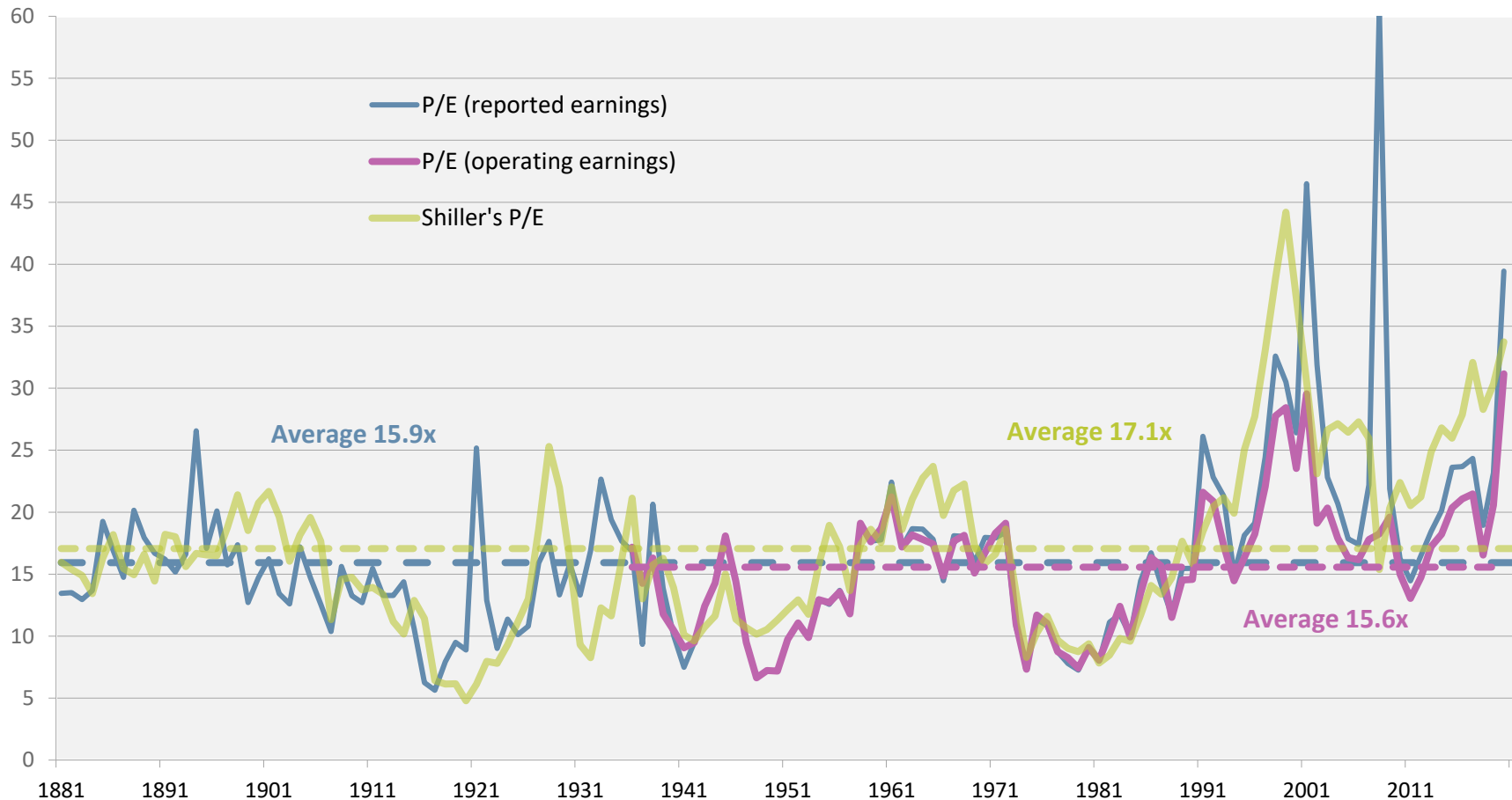


Sources: Bloomberg



In aggregate, companies lowered dividends and drastically reduced share buybacks in order to preserve capital. Shareholders can hope for a higher capital return going forward.

Price/Earning Ratio



Source: Standard & Poor's and Robert J. Shiller of Yale University.

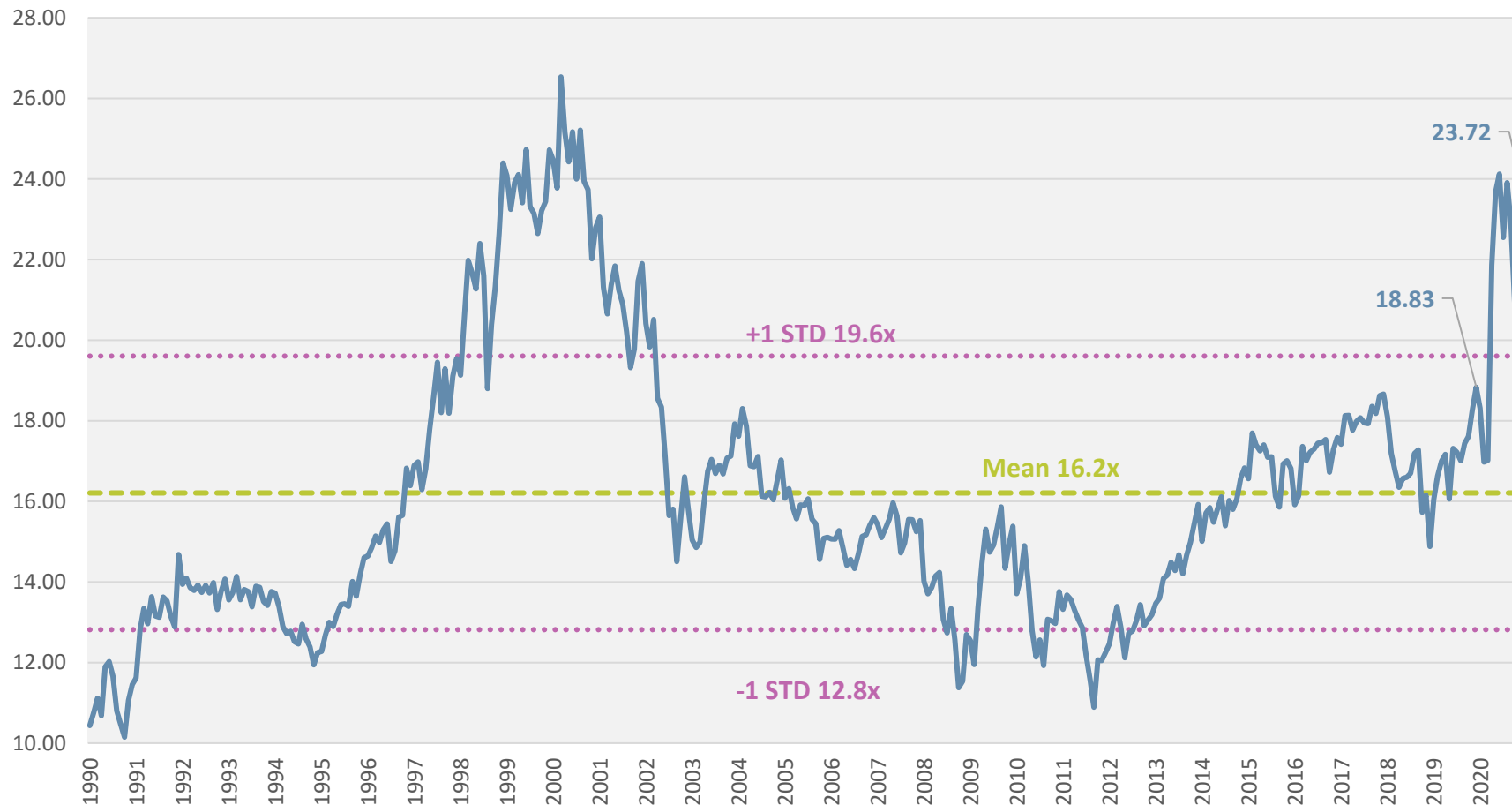


Valuation twice above its historic average (operating P/E 31.2x).

Current P/E based on Standard & Poor's reported/operating earnings, as of 12/2020. Cyclically-Adjusted 10-Year Average P/E (Shiller P/E), as of 12/2020.

S&P 500 Forward 12M P/E

U.S. Equity



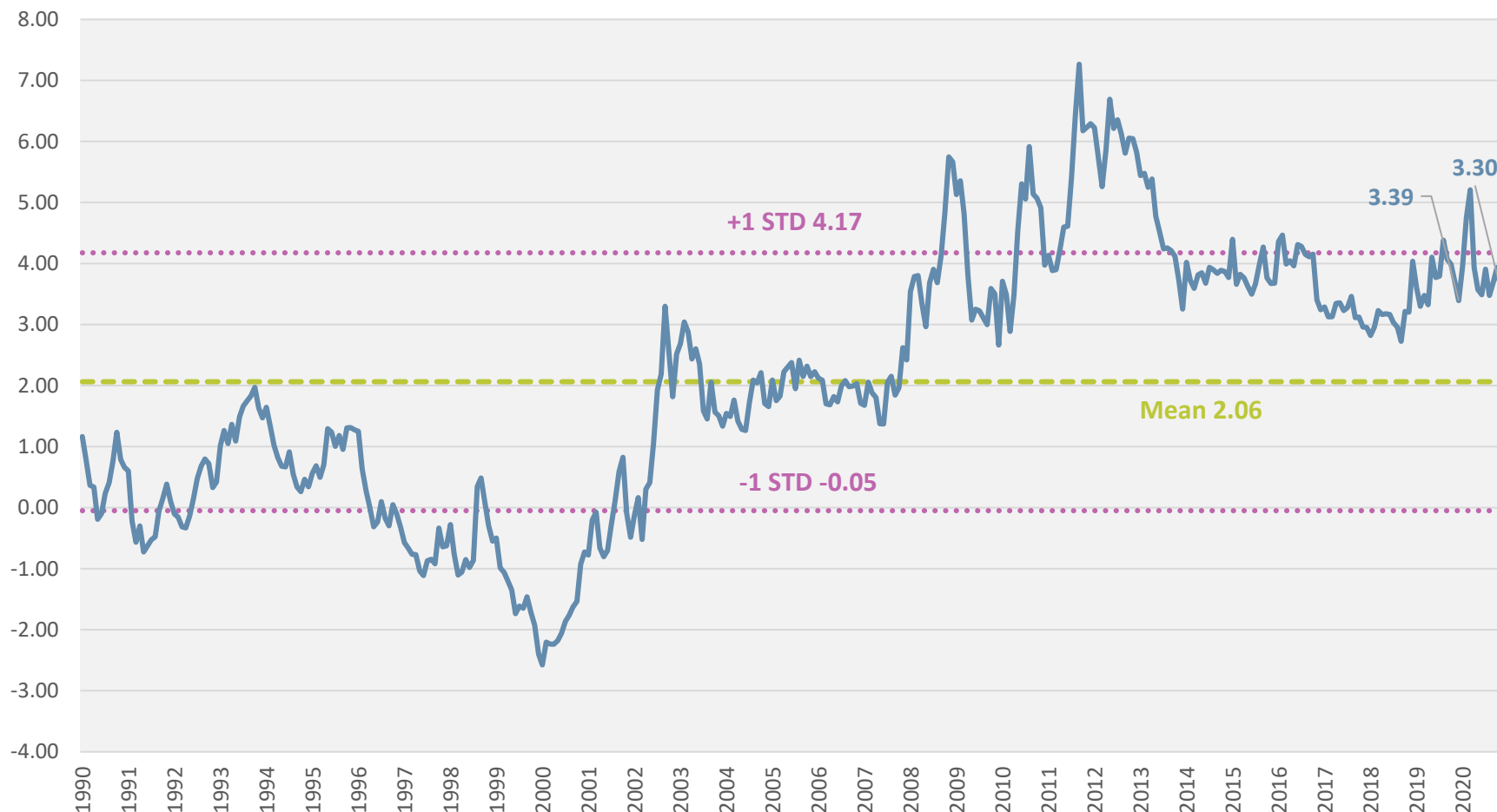
Source: Bloomberg



Forward P/E also elevated (2 standard deviations above mean). What earnings growth is priced in?

S&P 500 operating EPS growth: FY19a +3.6% yoy | FY20e -23.3% yoy | FY21e +31.0% yoy (Bloomberg) to +36.5% yoy (S&P DJ Indices)

S&P 500 Forward Earnings Yield – 10-Year Treasury Yield (nominal)



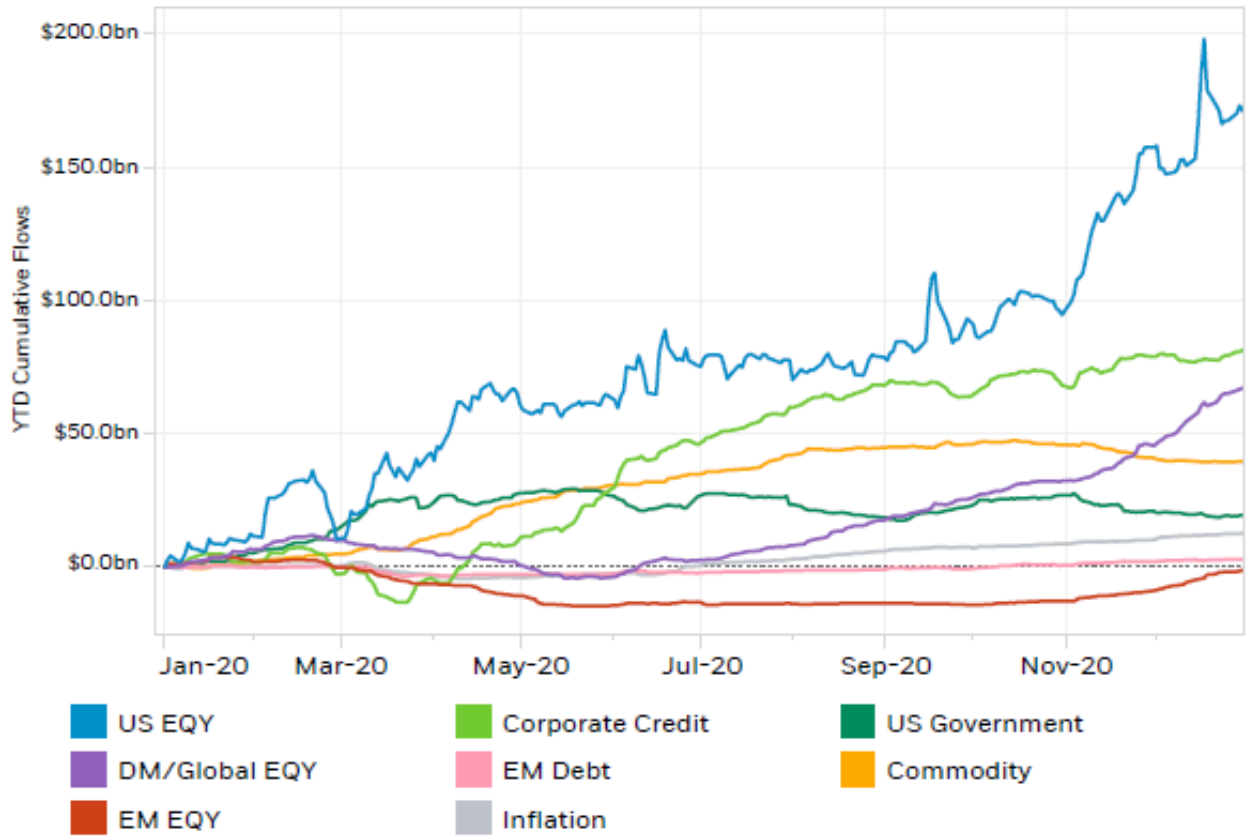
Source: Bloomberg



The spread or Equity Risk Premium is almost at the same level as in 12/2019 and remains attractive. The low discount / hurdle rate could continue to support equity valuations.

U.S. Domiciled ETP Flows 2020

U.S. Equity



Source: BlackRock. Flow data is calculated by BlackRock. ETP groupings and categories are determined by BlackRock.



Vaccine rollout gave another boost to US equity money inflow. Only US flows into Emerging market equity and debt are flat. As of 12/31/2020

Growth vs. Value

Relative **Forward** P/E ratio of Russel 1,000 Value to Growth



Russell 1,000 Growth Index **Trailing** P/S ratio



Source: Bloomberg



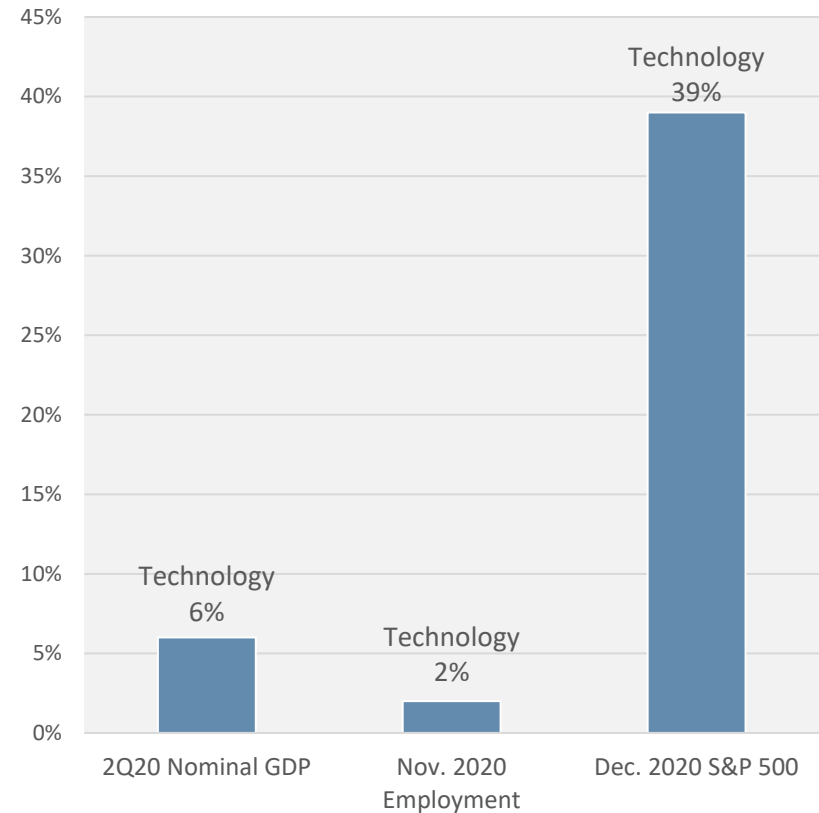
The valuation gap between Growth and Value stocks is close to historic level.

S&P 500 Index concentration

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



Technology sector share of GDP, Employment, S&P 500



Source: J.P. Morgan Asset Management

U.S. Equity



Elevated index concentration of a few mega-caps.

Disproportional market representation of the Technology sector (Information Technology and Communication Services) compared to its economic contribution.

Factor Performance

U.S. Equity

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2006 - 2020	
																Ann.	Vol.
High Div.	21.1%	Momen.	Min. Vol.	Value	Small Cap	High Div.	Cyclical	Value	Value	Momen.	Small Cap	Momen.	Min. Vol.	Cyclical	Momen.	Momen.	Small Cap
		17.8%	-25.7%	38.8%	26.9%	14.3%	20.1%	43.2%	17.7%	9.3%	21.3%	37.8%	1.5%	36.3%	29.6%	11.7%	22.6%
Value	19.7%	Defens.	Defens.	Cyclical	Multi-Factor	Min. Vol.	Value	Small Cap	Min. Vol.	Min. Vol.	High Div.	Cyclical	Momen.	Quality	Cyclical	Quality	Value
		17.7%	-26.7%	36.9%	18.3%	12.9%	16.8%	38.8%	16.5%	5.6%	16.3%	27.3%	-1.6%	34.4%	27.8%	10.7%	20.3%
Small Cap	18.4%	Quality	High Div.	Multi-Factor	Momen.	Defens.	Small Cap	Multi-Factor	High Div.	Quality	Value	Quality	High Div.	Momen.	Small Cap	Cyclical	Cyclical
		10.1%	-27.6%	29.8%	18.2%	10.1%	16.3%	37.4%	14.9%	4.6%	15.9%	22.5%	-2.3%	28.1%	20.0%	10.4%	19.8%
Multi-Factor	16.6%	Multi-Factor	Quality	Small Cap	Cyclical	Quality	Multi-Factor	Cyclical	Multi-Factor	Cyclical	Cyclical	Value	Defens.	Min. Vol.	Quality	Min. Vol.	Momen.
		5.5%	-31.2%	27.2%	17.9%	7.5%	15.7%	35.0%	14.8%	2.6%	14.0%	22.2%	-2.9%	28.0%	17.1%	10.1%	17.9%
Defens.	15.9%	Min. Vol.	Small Cap	Quality	High Div.	Multi-Factor	Momen.	Momen.	Momen.	High Div.	Multi-Factor	Multi-Factor	Cyclical	Value	Multi-Factor	Multi-Factor	Multi-Factor
		4.3%	-33.8%	24.9%	15.9%	7.3%	15.1%	34.8%	14.7%	0.7%	13.7%	21.5%	-5.3%	27.7%	11.4%	9.6%	17.5%
Cyclical	15.0%	Value	Value	High Div.	Min. Vol.	Momen.	Quality	Quality	Cyclical	Multi-Factor	Min. Vol.	High Div.	Quality	Multi-Factor	Min. Vol.	High Div.	Quality
		1.1%	-36.9%	18.4%	14.7%	6.1%	12.8%	34.3%	13.6%	0.4%	10.7%	19.5%	-5.6%	26.6%	5.8%	9.4%	15.6%
Min. Vol.	15.0%	High Div.	Multi-Factor	Min. Vol.	Quality	Value	Min. Vol.	High Div.	Defens.	Defens.	Quality	Min. Vol.	Multi-Factor	Small Cap	Defens.	Small Cap	High Div.
		0.0%	-39.3%	18.4%	14.2%	-2.7%	11.2%	28.9%	13.0%	-0.9%	9.4%	19.2%	-9.7%	25.5%	5.2%	8.9%	15.0%
Quality	12.8%	Cyclical	Momen.	Momen.	Value	Cyclical	Defens.	Defens.	Quality	Small Cap	Defens.	Small Cap	Small Cap	High Div.	High Div.	Defens.	Defens.
		-0.8%	-40.9%	17.6%	12.7%	-3.4%	10.7%	28.9%	10.7%	-4.4%	7.7%	14.6%	-11.0%	22.5%	1.7%	8.6%	13.7%
Momen.	10.7%	Small Cap	Cyclical	Defens.	Defens.	Small Cap	High Div.	Min. Vol.	Small Cap	Value	Momen.	Defens.	Value	Defens.	Value	Value	Min. Vol.
		-1.6%	-44.8%	16.5%	12.0%	-4.2%	10.6%	25.3%	4.9%	-6.4%	5.1%	12.3%	-11.1%	21.4%	-0.2%	8.6%	13.1%

Source: J.P. Morgan Asset Management



For the past 15 years, a Quality portfolio paid off from a risk-adjusted perspective compared to Momentum.

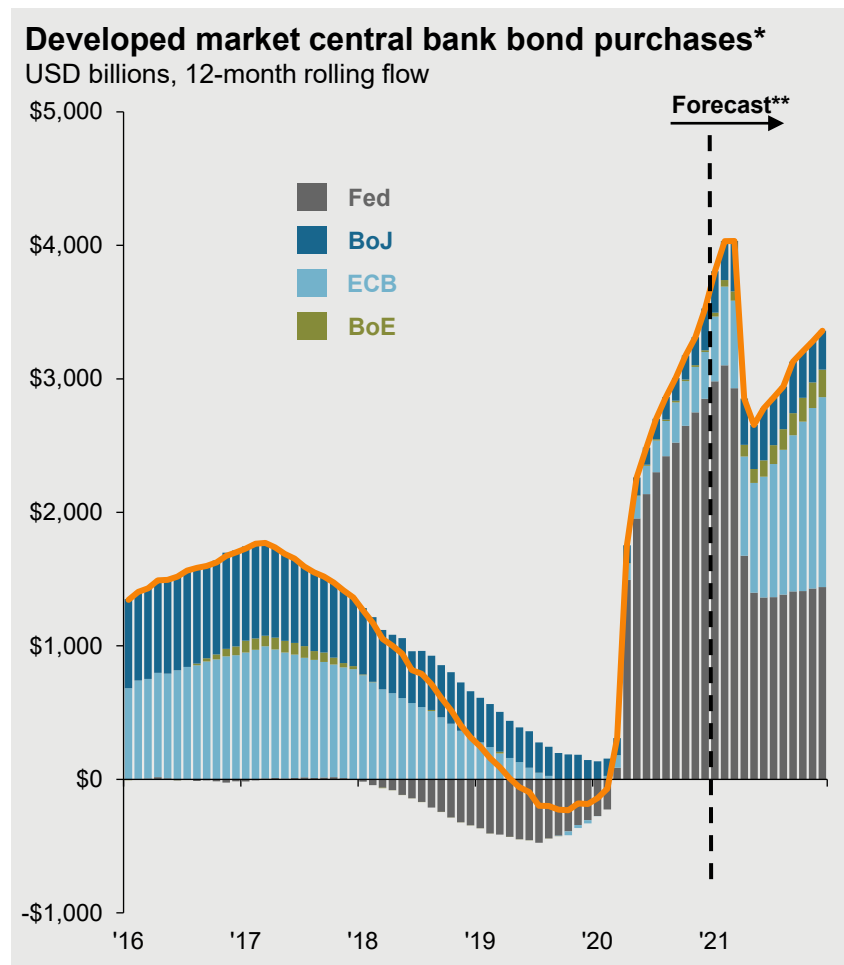
FIXED INCOME

CAPITAL MARKET SUMMARY



Global Monetary Policy

Fixed Income



Source: J.P. Morgan Asset Management

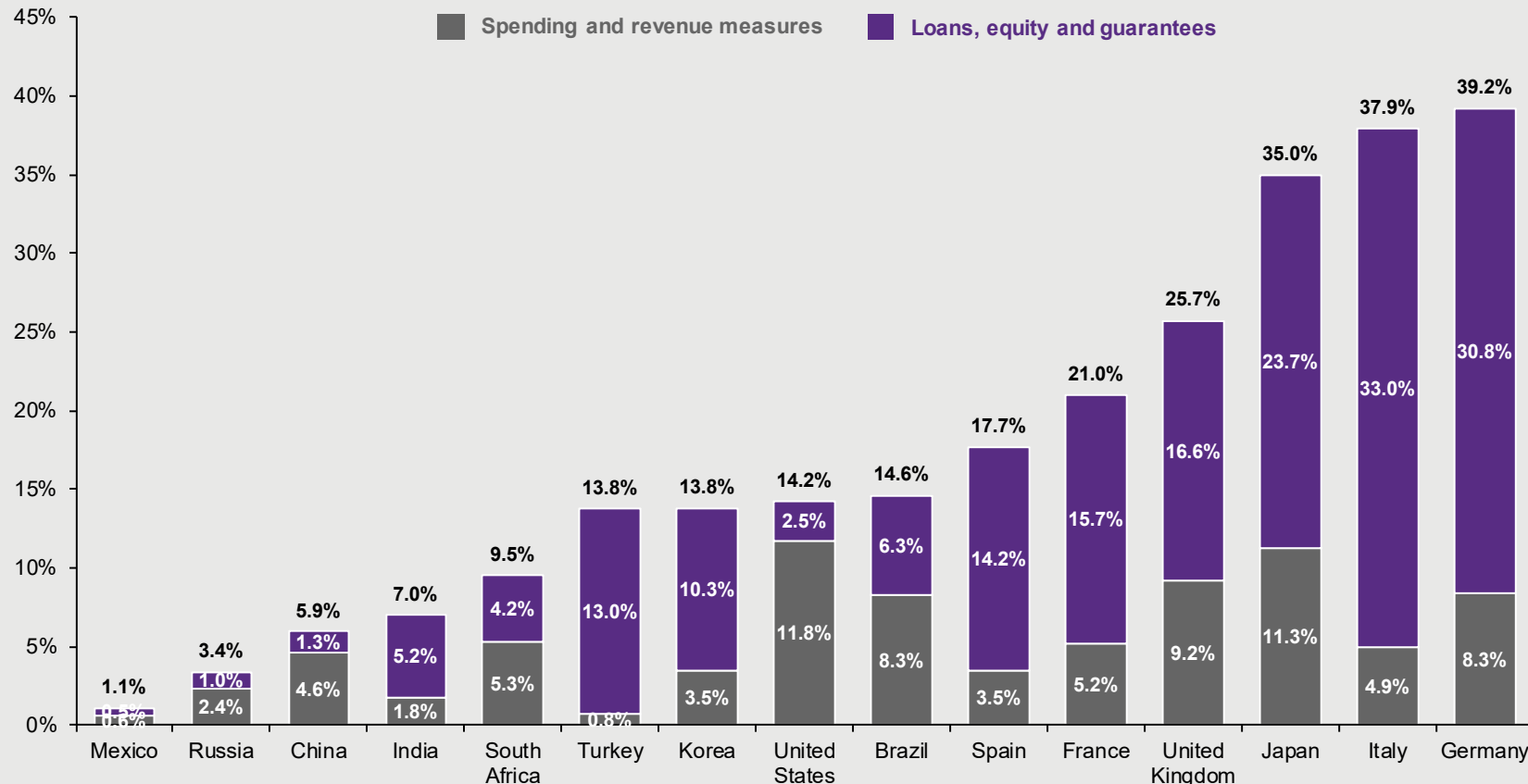


Renewed bond purchases by major central banks (purchase forecasts for 2021 based on policy announcements).

Global Fiscal Support

Fiscal response to COVID-19

% of GDP



Source: J.P. Morgan Asset Management

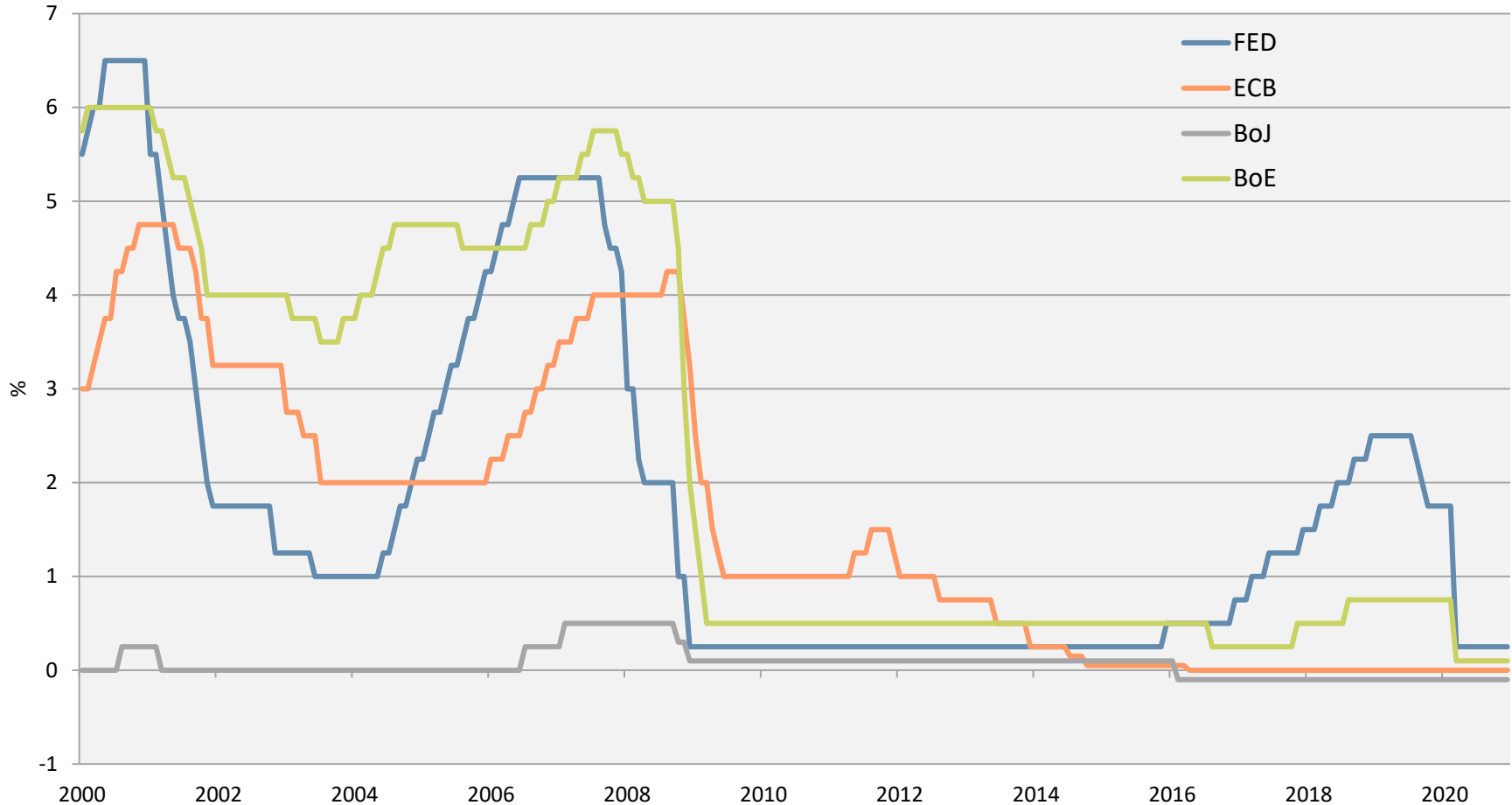


Global policymakers have acted quickly to counteract the economic effects from the pandemic. The U.S. has one of the largest discretionary fiscal support packages (excluding loan guarantees).

Fixed Income

Global Monetary Policy

Fixed Income



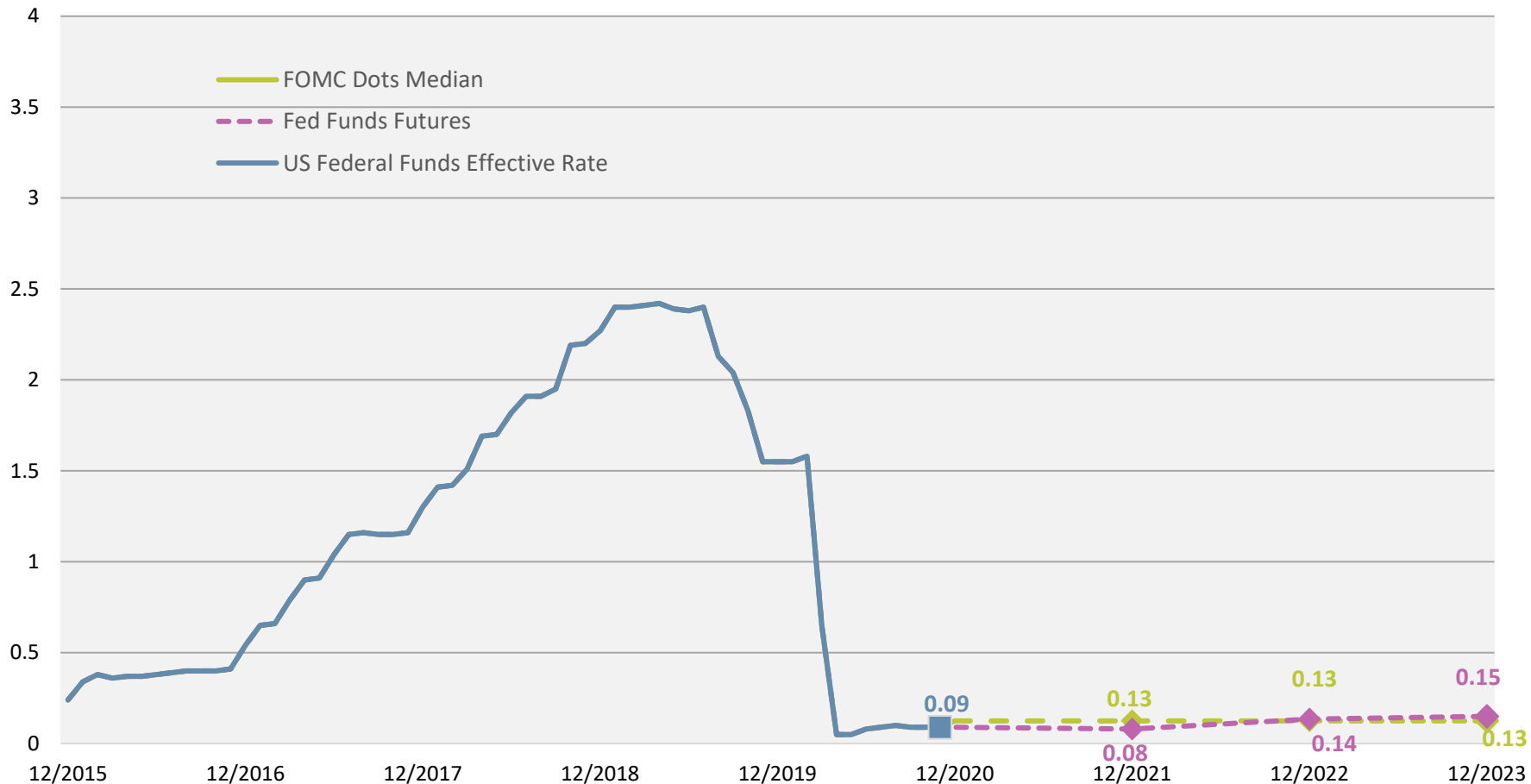
Source: Refinitiv Datastream



Short-term interest rates are set close to zero across Developed Markets.

Fed funds Past & Future

Fixed Income

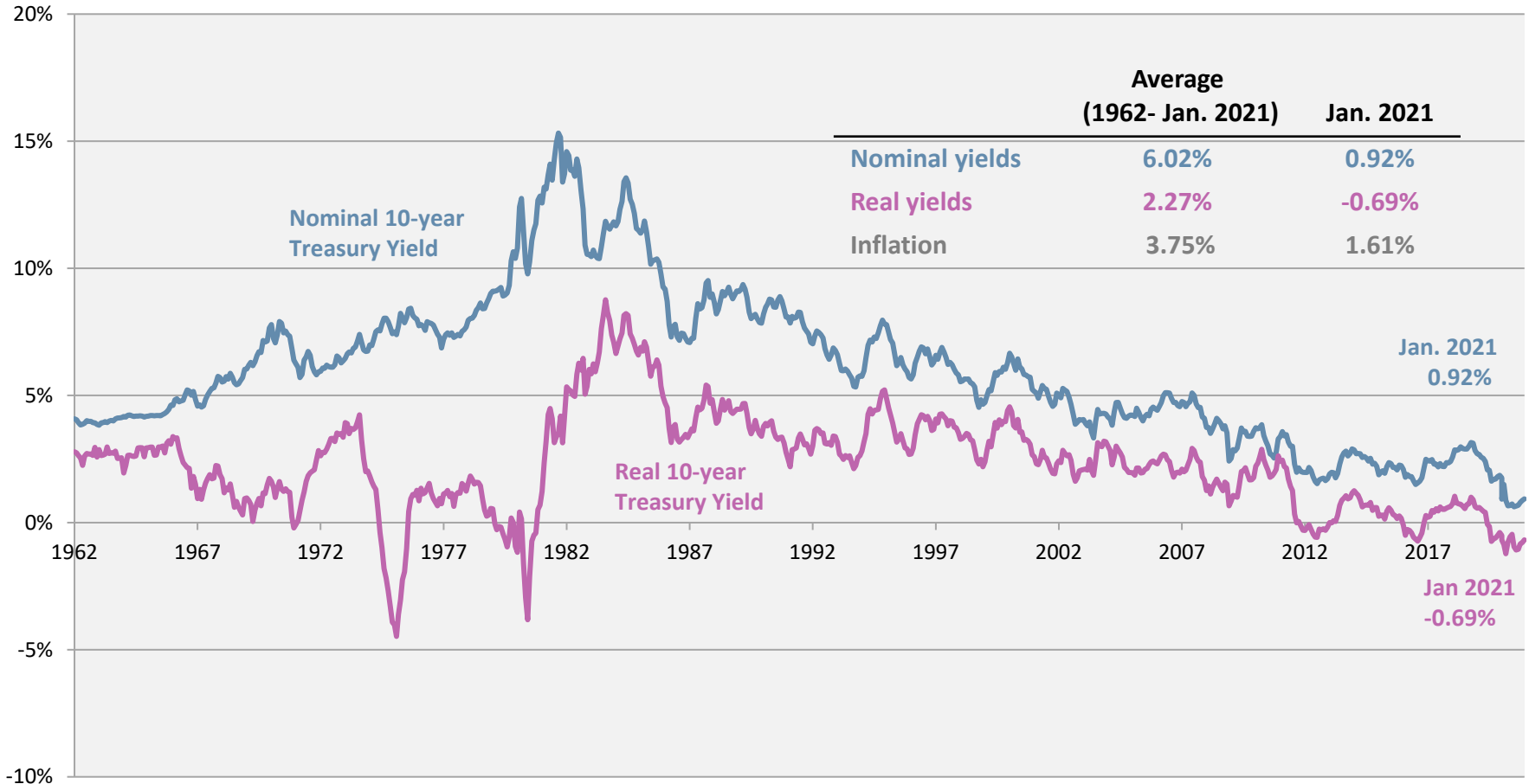


Source: Federal Reserve, Bloomberg



Fed and market do not anticipate any short-term interest rate increases in coming years.

Interest Rates and Inflation



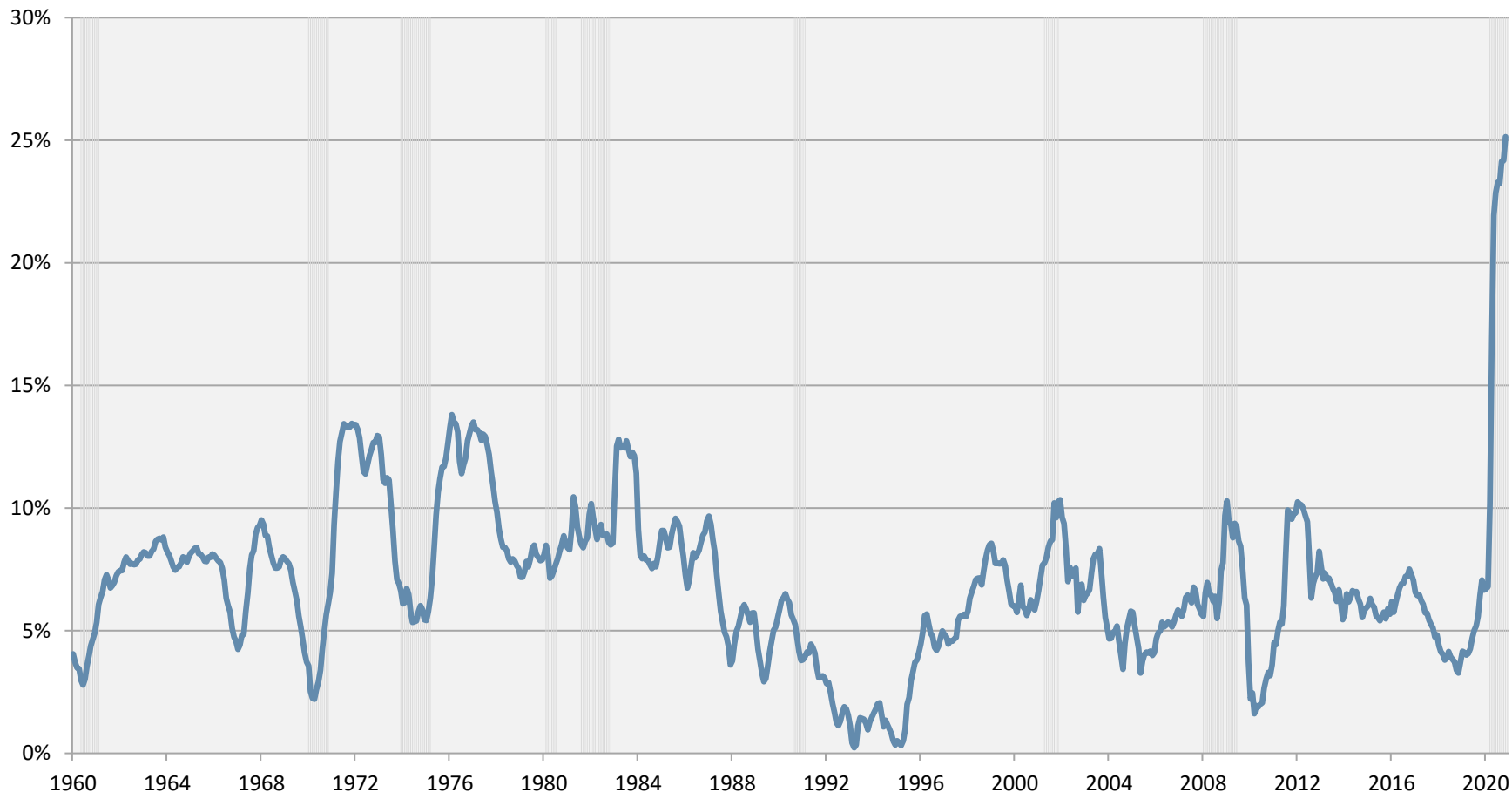
Source: Federal Reserve of St. Louis



Negative real treasury yields offer no compensation for inflation (core CPI) anymore.

Fixed Income

M2 Money Supply, yoy % change

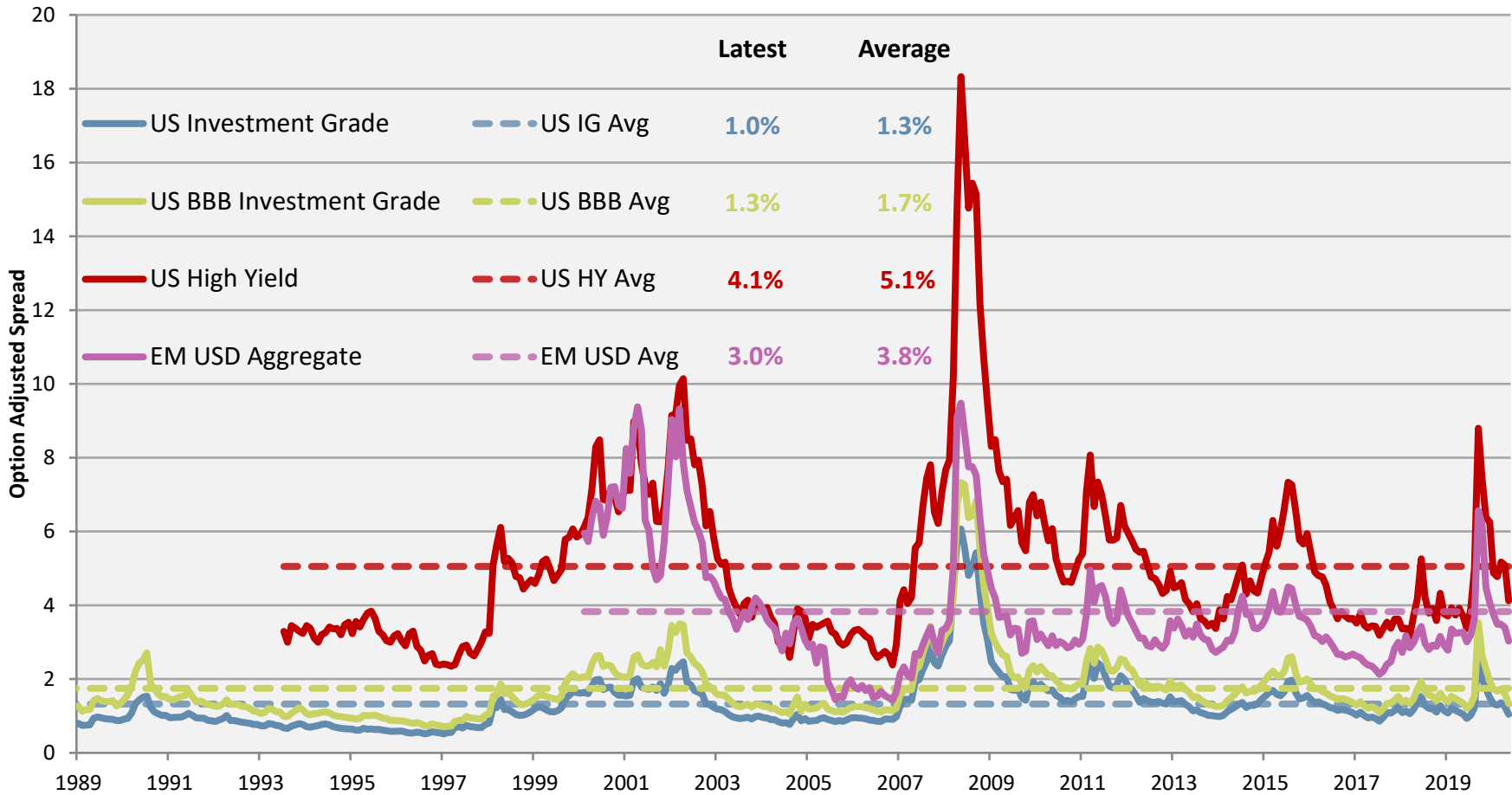


Source: Federal Reserve Bank of St. Louis



The developed world has come to take low inflation for granted. However, money supply has increased sharply due to continued bank lending in contrast to the period after the financial crisis.

Spreads over Treasuries



Source: Bloomberg Barclays Indices



Spreads (the safety margin for credit risk) are low; 20% to 25% below long-term averages.
BBB debt ~50% of total IG

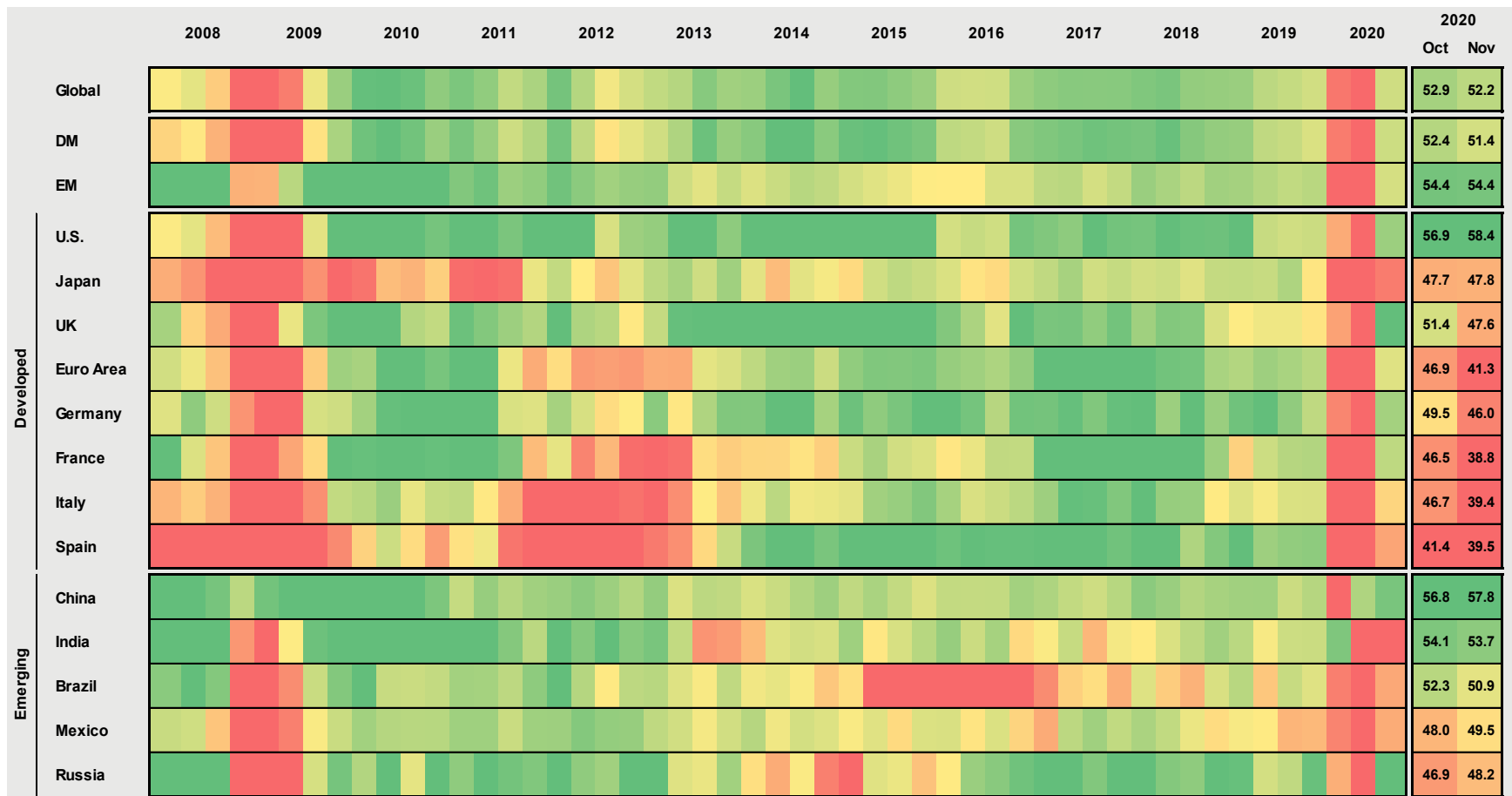
INTERNATIONAL

CAPITAL MARKET SUMMARY



Global Service Purchasing Manager Index (PMI)

International



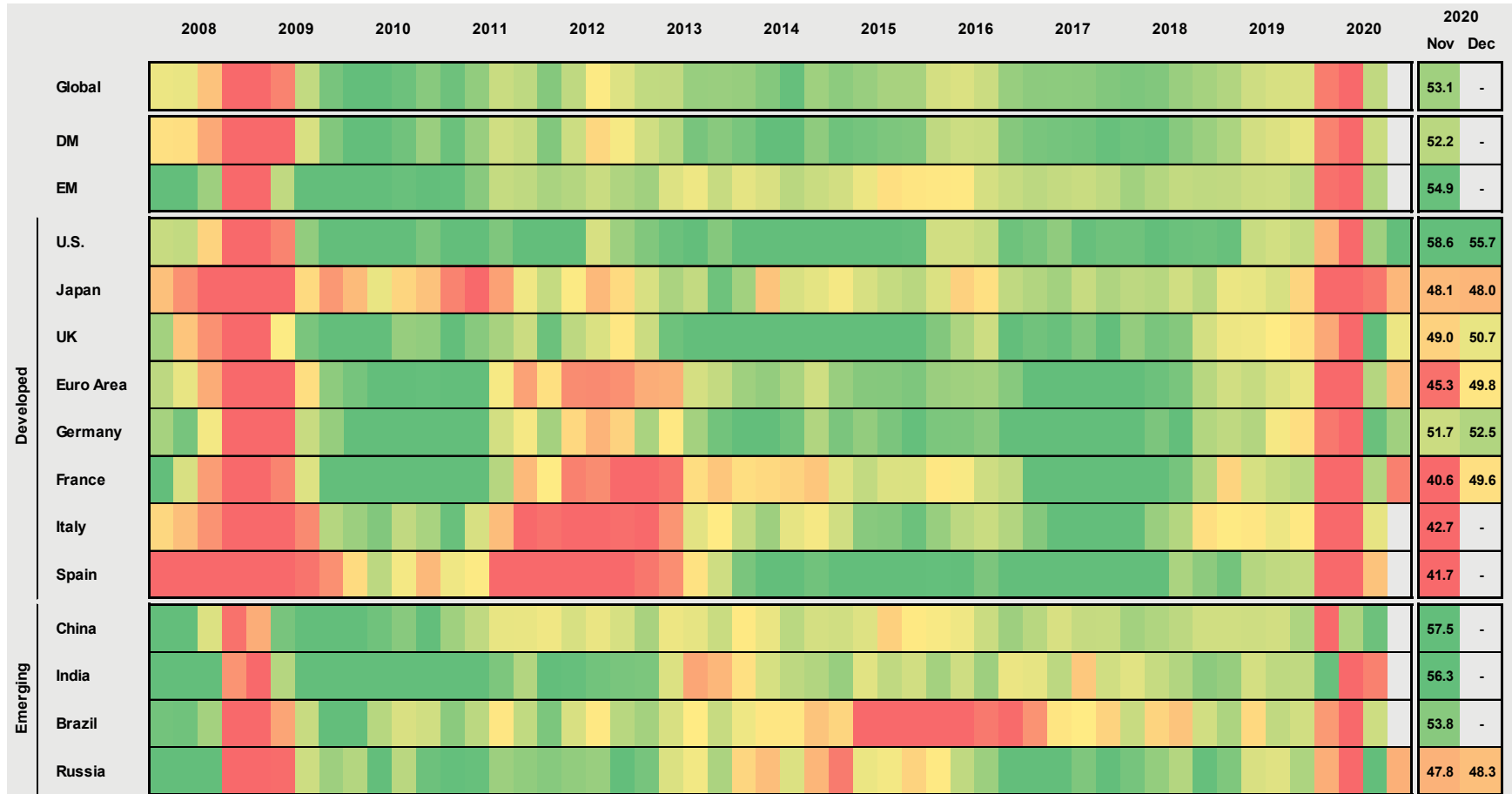
Source: J.P. Morgan Asset Management



Economic activity indicator shows globally and for the US, China “green” light at the end of the tunnel, however European countries impacted by renewed lockdowns. Service sectors were more impacted by the pandemic and the resulting lockdowns.

Global Composite PMI

International



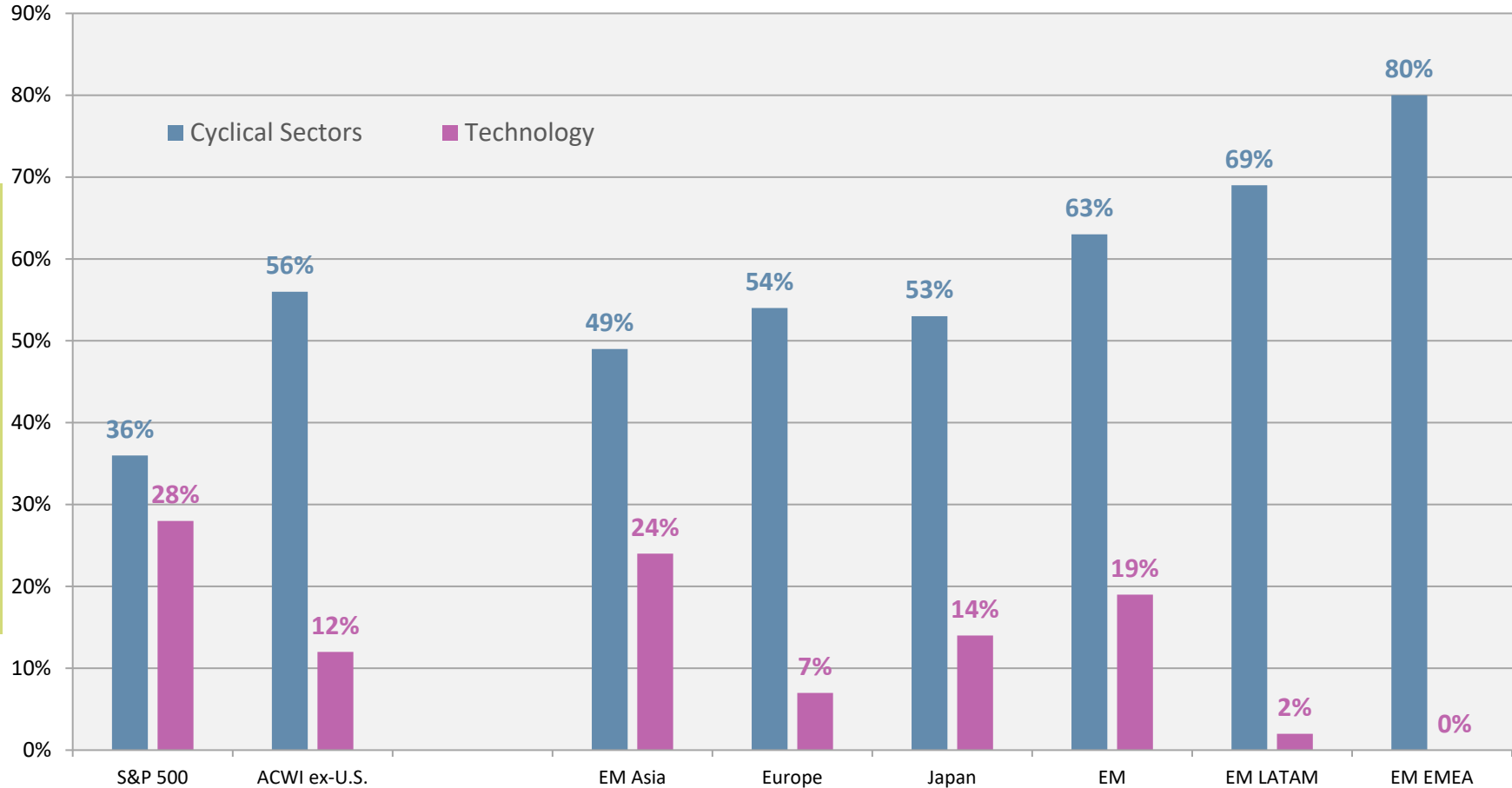
Source: J.P. Morgan Asset Management



Similar economic activity trends on a composite level (service and manufacturing sectors combined)

Representation of Cyclical and Technology Sectors

International



Source: J.P. Morgan Asset Management

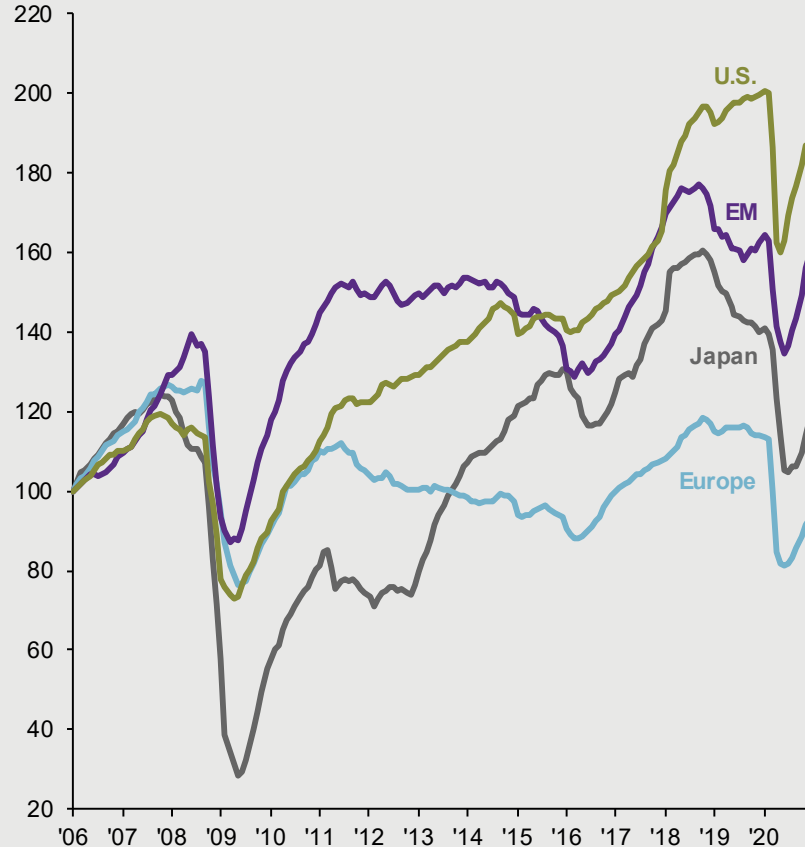


When investing internationally and using market indices, sector composition is an important differentiator. Higher exposure to cyclical sectors could be beneficial in a global recovery.

International Equity Earnings and Valuations

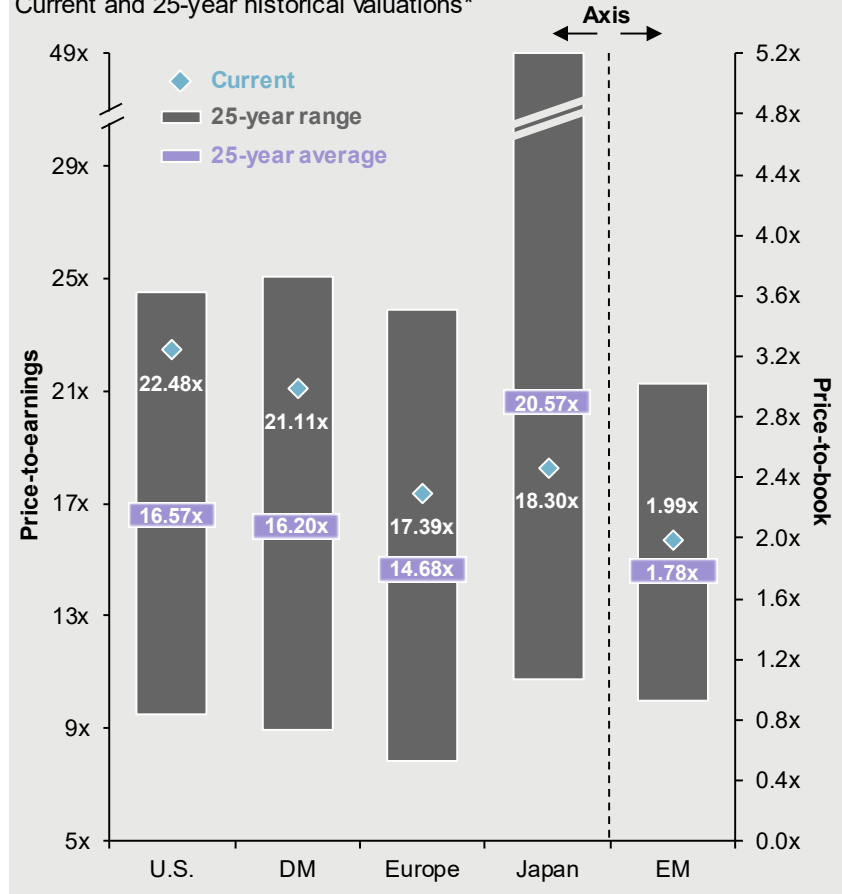
Global earnings

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



Global valuations

Current and 25-year historical valuations*



Source: J.P. Morgan Asset Management



Earnings are recovering globally, however there are still further away from previous peaks compared to the U.S.

We might find value outside the US.

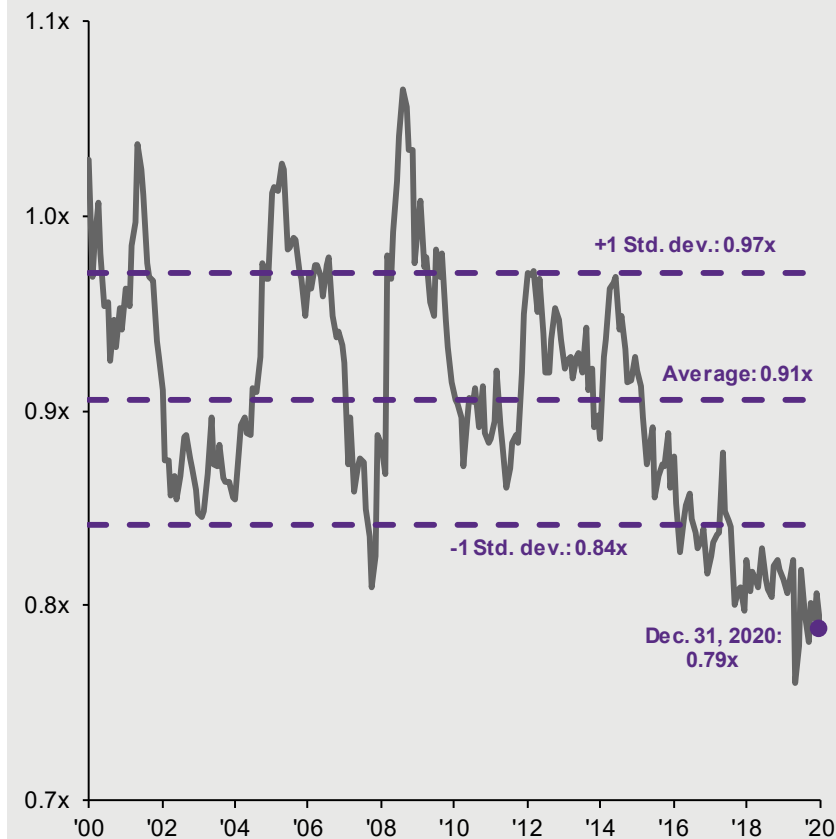
Emerging markets: Relative price-to-book ratio

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: J.P. Morgan Asset Management



Valuation discounts of Emerging and other Developed markets to the U.S. market is close to / at historic levels.

2021 Recommendations

- US Equity: We remain buyers but are cautious of elevated valuation. Relative to FI, it remains attractive. Earnings growth needs to support valuation levels.
- Continue to invest along several secular trends, such as
 - 1) EM growing middle class (domestic consumption)
 - 2) 5G network development and its applications in communication, entertainment, and transportation
 - 3) Green sustainable technology
 - 4) New therapies in cancer treatment and autoimmune diseases
 - 5) Robotic / automation technology used in manufacturing, agriculture, and medical fields
 - 6) Payment technology
- US Fixed Income: Combination of short/ intermediate-term bonds and variable/ floating coupon bonds and preferreds to minimize duration risk. Rising long-term rates might start to offer some relief.
- Opportunities outside the U.S. and areas overlooked by the market

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