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Specializing in

Retirement Plans ◆ Wealth Management

MARKET INSIGHTS

10 Themes for 4Q21: A Guide to the Markets

Dr. David Kelly, Chief Global Strategist
J.P. Morgan Asset Management
October 2021

10 themes for 4Q21: A Guide to the Markets

1. **The stock market has led to surging wealth.**
2. **The economic drag from Covid-19 is fading.**
3. **Fiscal policy will be less investor-friendly.**
4. **Growth should rebound after a weak Q3.**
5. **Strong job gains will power hot wage growth.**
6. **Post-pandemic inflation will likely run above 2%.**
7. **Profits will grow more slowly from very high levels.**
8. **The world economy will rebound despite China issues.**
9. **The Fed is on track to taper and tighten.**
10. **Valuations will be key in a post-pandemic world.**

J.P.Morgan Asset Management

1. The stock market has led to surging wealth.

Portfolios are seeing a third successive year of strong gains….

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	2006 - 2020 Ann.	2006 - 2020 Vol.
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%	Small Cap 20.0%	Comdty. 34.2%	Large Cap 9.9%	EM Equity 23.3%
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%	EM Equity 18.7%	REITs 27.1%	Small Cap 8.9%	REITs 23.1%
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%	Large Cap 18.4%	Large Cap 20.4%	High Yield 7.5%	Small Cap 22.6%
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. 10.6%	Small Cap 15.6%	REITs 7.1%	DM Equity 19.1%
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%	DM Equity 8.3%	Asset Alloc. 11.1%	EM Equity 6.9%	Comdty. 18.8%
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%	Fixed Income 7.5%	DM Equity 10.9%	Asset Alloc. 6.7%	Large Cap 16.7%
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%	High Yield 7.0%	EM Equity 1.5%	DM Equity 5.0%	High Yield 12.2%
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%	Cash 0.5%	High Yield 1.3%	Fixed Income 4.5%	Asset Alloc. 11.8%
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. -3.1%	Cash 0.0%	Cash 1.2%	Fixed Income 3.2%
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 -5.1%	Fixed Income -1.7%	Comdty. -4.0%	Cash 0.8%

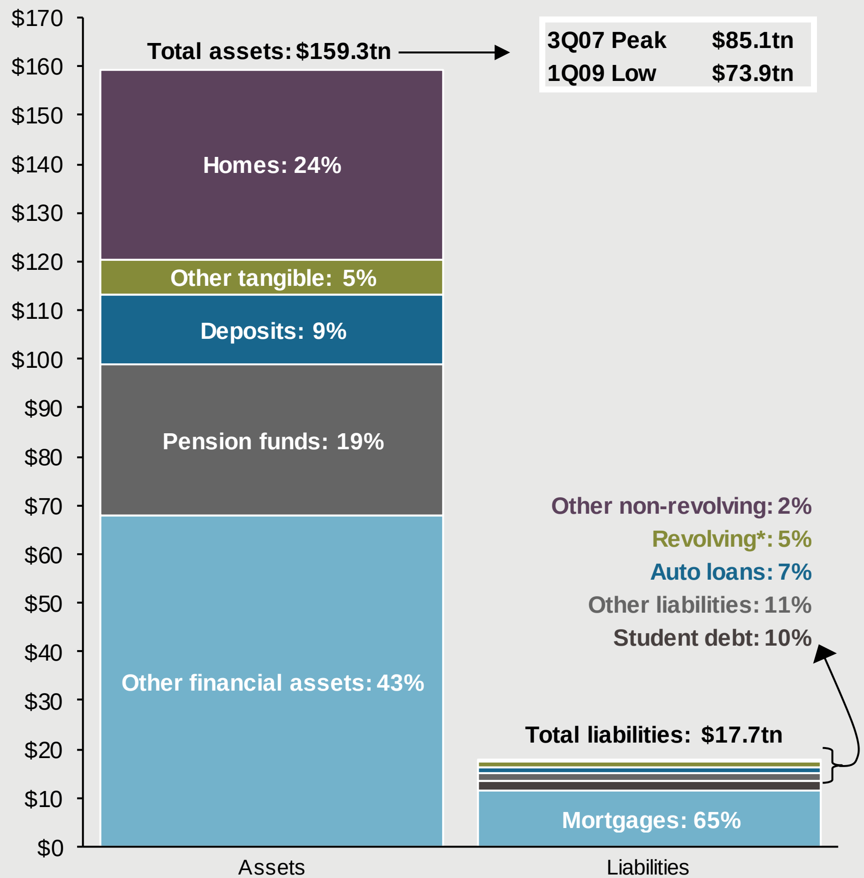
Source: Barclays, Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management.
Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Barclays Global HY Index, Fixed Income: Bloomberg 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 from 12/31/2005 to 12/31/2020. 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 October 14, 2021.

1. The stock market has led to surging wealth.

Economy

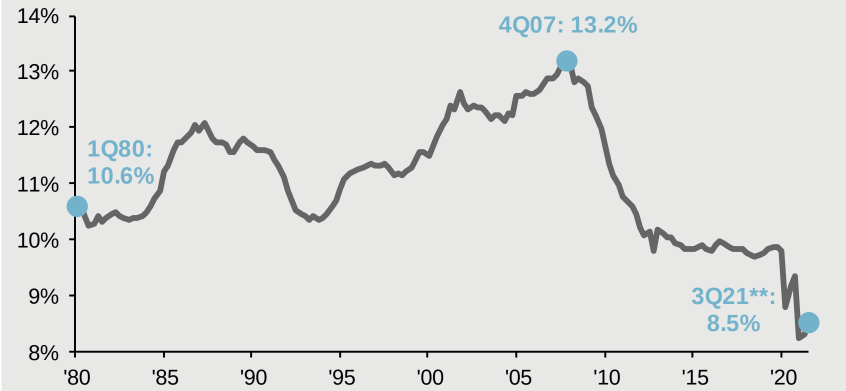
Consumer balance sheet

2Q21, trillions of dollars outstanding, not seasonally adjusted



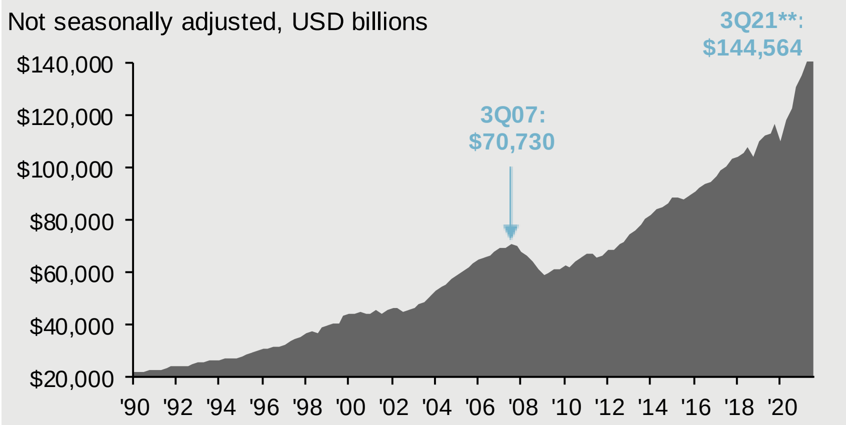
Household debt service ratio

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. **3Q21 figures for debt service ratio and household net worth are J.P. Morgan Asset Management estimates.
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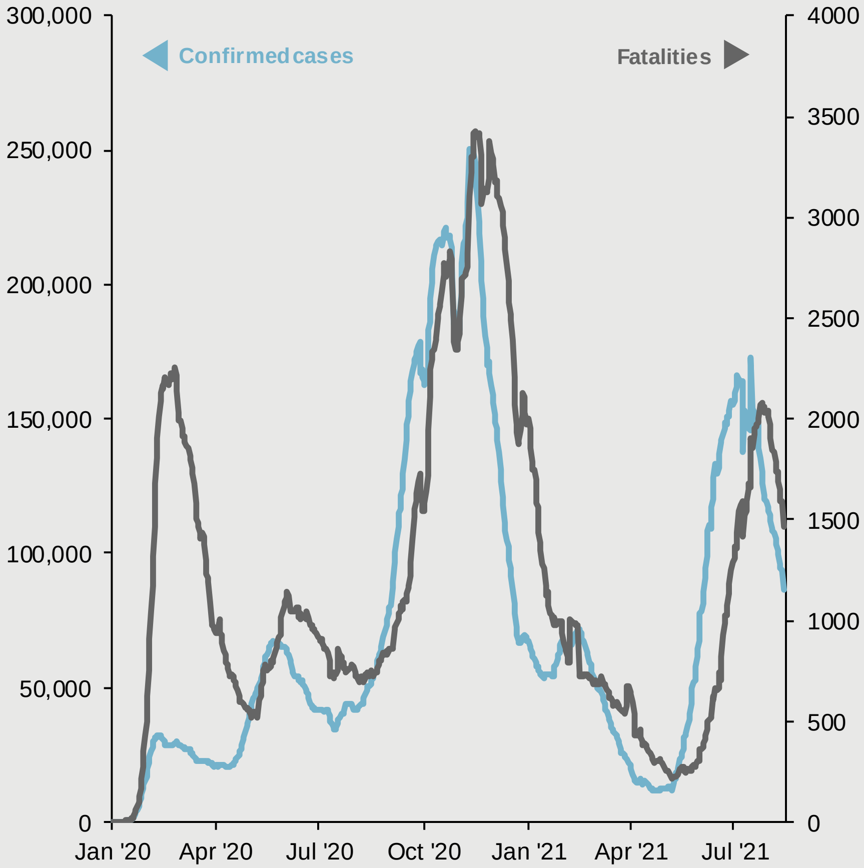
2. The economic drag from Covid-19 is fading.

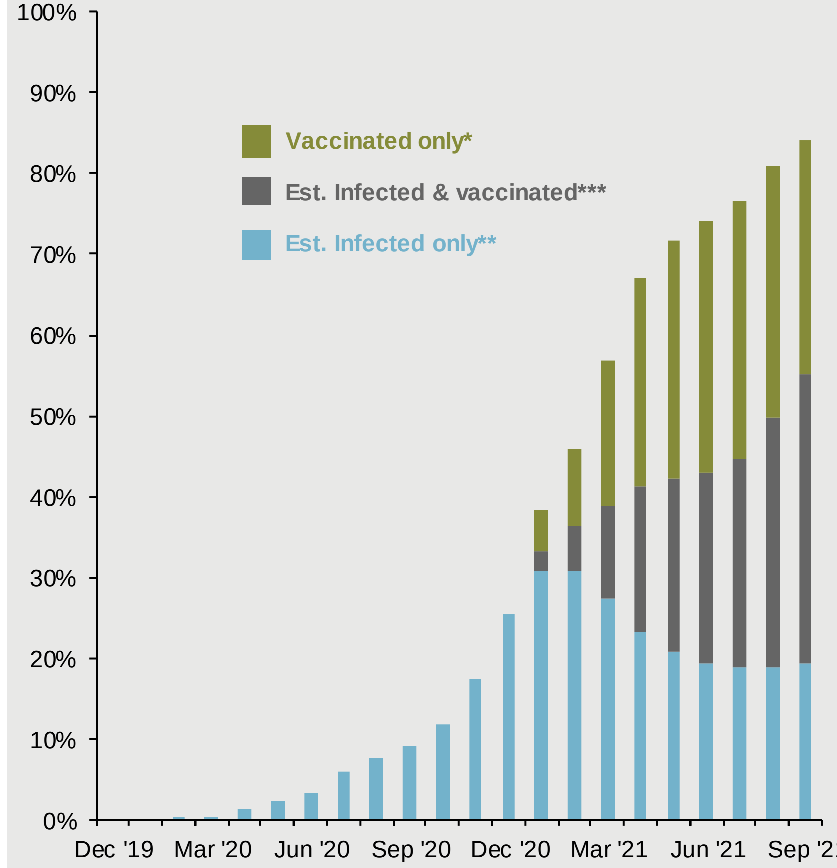
Change in confirmed cases and fatalities in the U.S.

7-day moving average



Progress toward immunity

Percentage of population, end of month



Source: Centers for Disease Control and Prevention, Johns Hopkins CSSE, Our World in Data, J.P. Morgan Asset Management.
*Share of the total population that has received at least one vaccine dose. **Est. Infected represents the number of people who may have been infected by COVID-19 by using the CDC's estimate that 1 in 4.2 COVID-19 infections were reported. ***Est. Infected & vaccinated assumes those infected equally likely to be vaccinated as those not infected.
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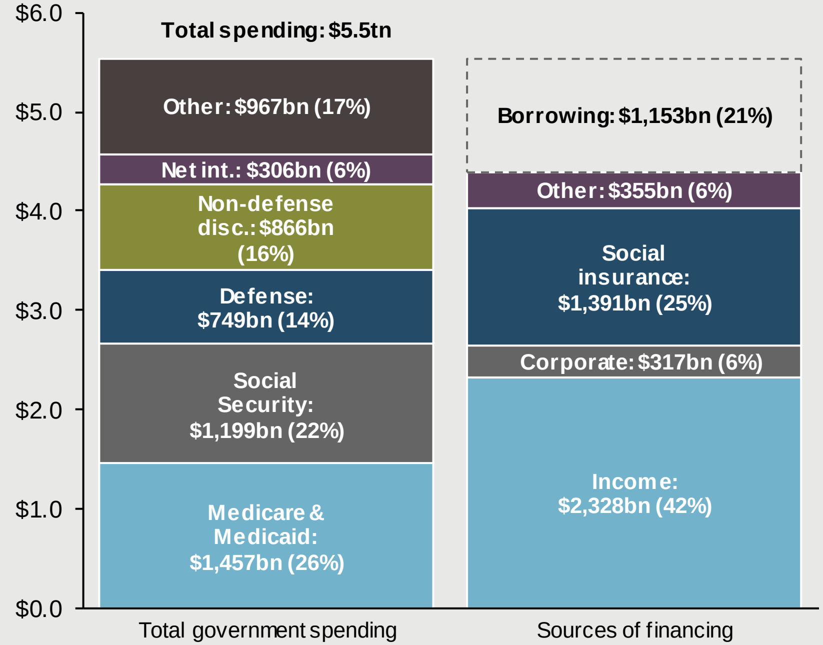
3. Fiscal policy will be less investor-friendly.

While the short run could bring clarity or chaos, 2022 should see less stimulus, higher taxes on corporations and richer households and a stabilization of the debt/GDP ratio.

Economy

The 2022 federal budget

CBO Baseline forecast, USD trillions

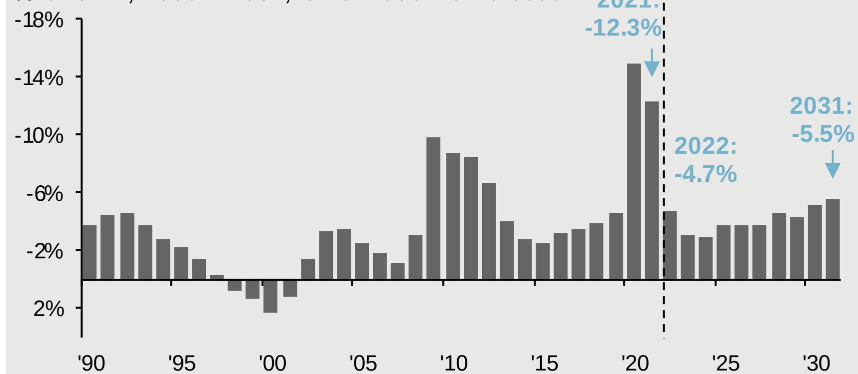


CBO's Baseline economic assumptions

	2022	'23-'24	'25-'26	'27-'31
Real GDP growth	6.1%	1.6%	1.3%	1.6%
10-year Treasury	1.9%	2.1%	2.6%	3.2%
Headline inflation (CPI)	2.7%	2.3%	2.4%	2.4%
Unemployment	4.1%	3.8%	4.2%	4.4%

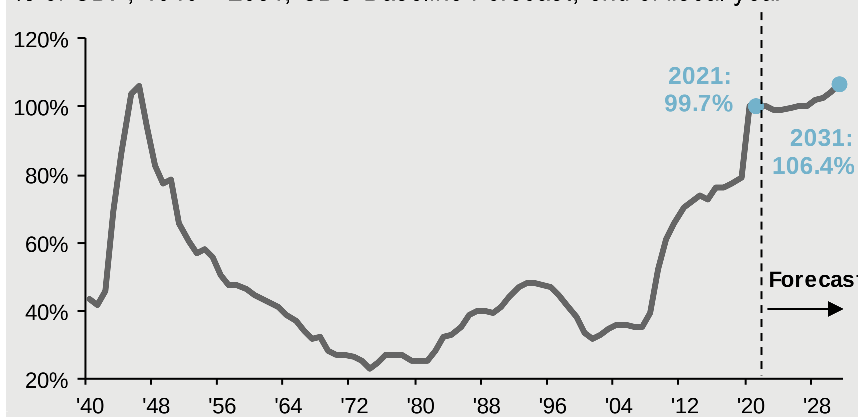
Federal budget surplus/deficit

% of GDP, 1990 – 2031, CBO Baseline Forecast



Federal net debt (accumulated deficits)

% of GDP, 1940 – 2031, CBO Baseline Forecast, end of fiscal year



Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department.
Estimates are based on the Congressional Budget Office (CBO) July 2021 Update to the Budget and Economic Outlook, except for 2021 estimates of the federal deficit and net debt levels. These estimates and the details on the breakdown of spending, excluding net interest, are J.P. Morgan Asset Management estimates. 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. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.
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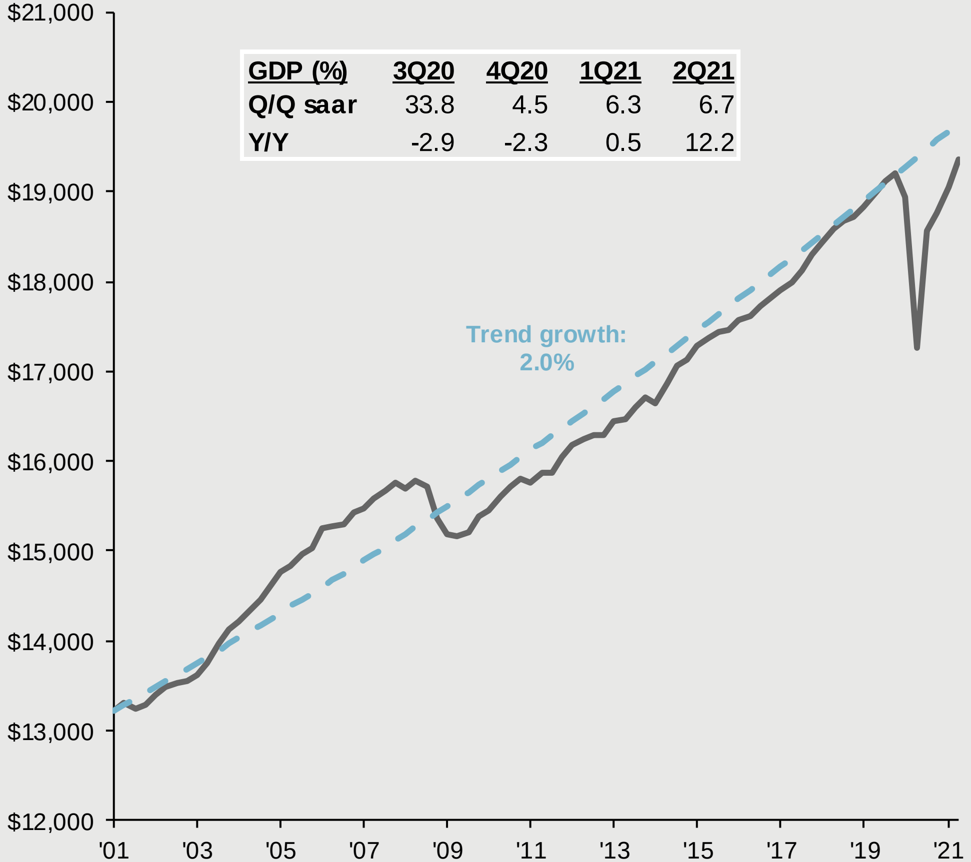
4. Growth should rebound after a weak Q3.

Growth could slow to roughly 2% in Q3 before growing by 6%+ in Q4 and Q1, reflecting inventory rebuilding, strong capital spending and a consumer rebound.

Real GDP

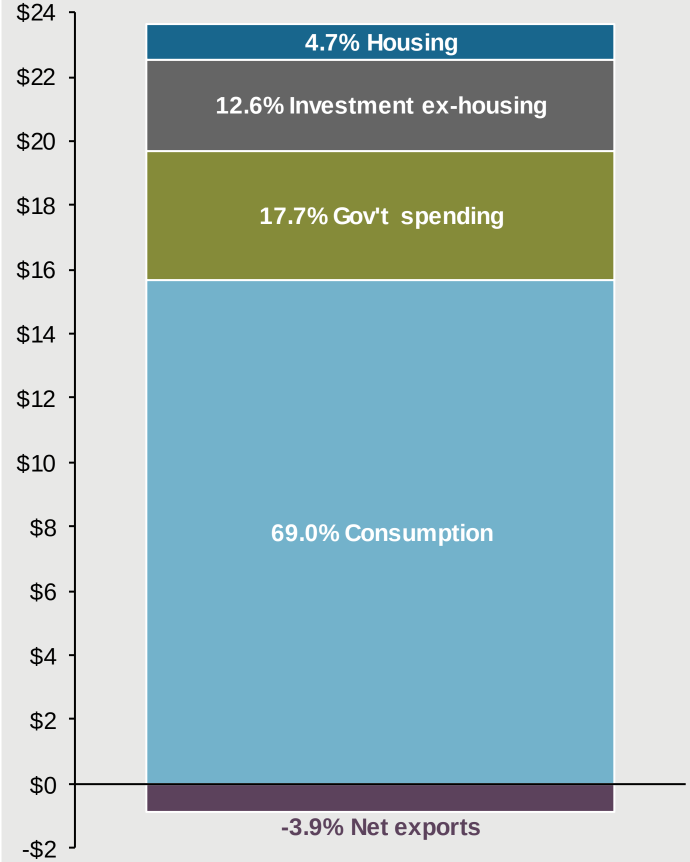
Billions of chained (2012) dollars, seasonally adjusted at annual rates

GDP (%)	3Q20	4Q20	1Q21	2Q21
Q/Q saar	33.8	4.5	6.3	6.7
Y/Y	-2.9	-2.3	0.5	12.2



Components of GDP

2Q21 nominal GDP, USD trillions



Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19.
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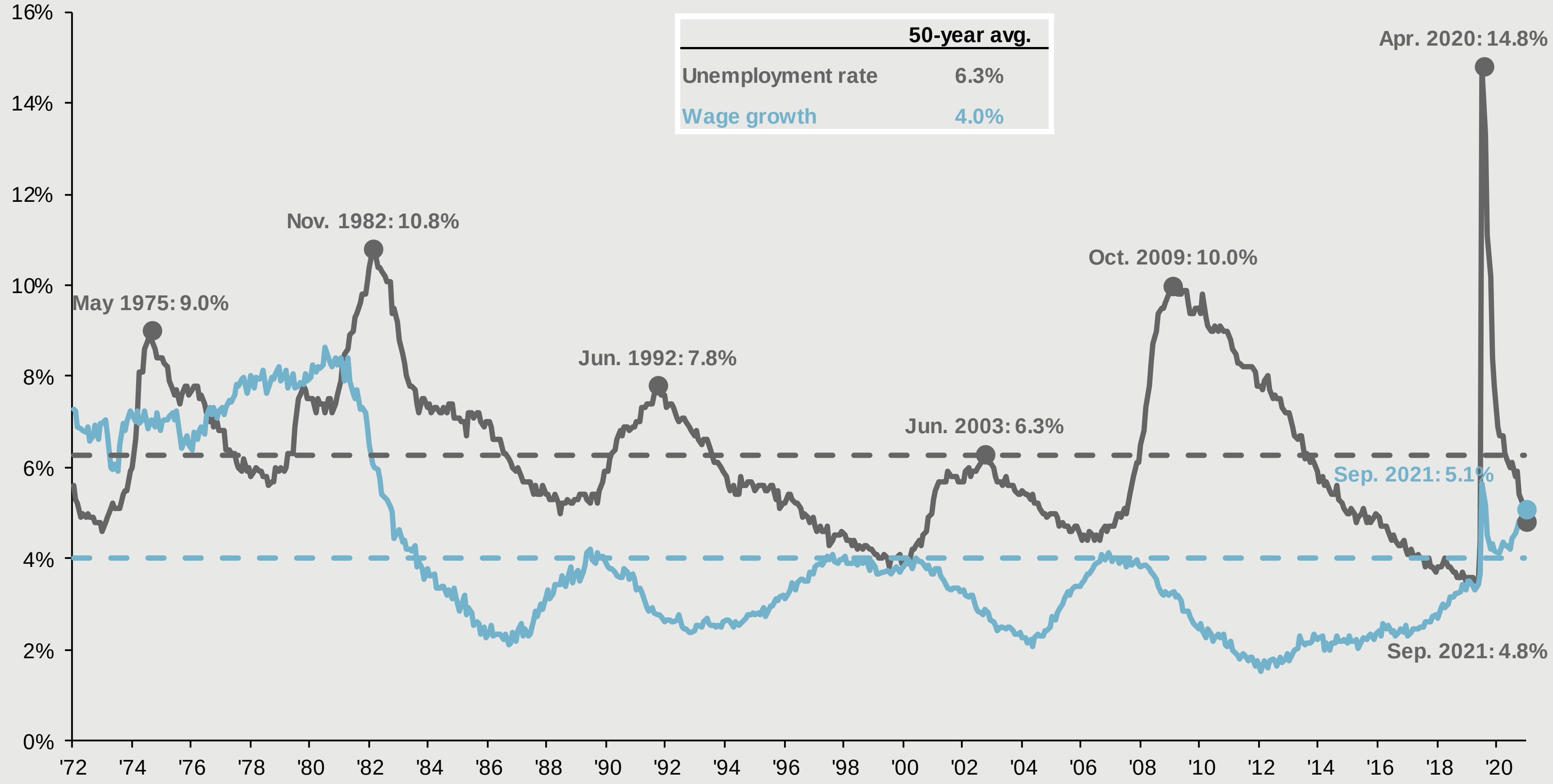
5. Strong job gains will power hot wage growth.

Unemployment has come down, but remains above the pre-pandemic 3.5% level. Meanwhile, wages are rising at rates not seen since the 1980s….

Economy

Civilian unemployment rate and annualized y/2y wage growth for private production and non-supervisory workers

Seasonally adjusted, percent



Source: BLS, FactSet, J.P. Morgan Asset Management.

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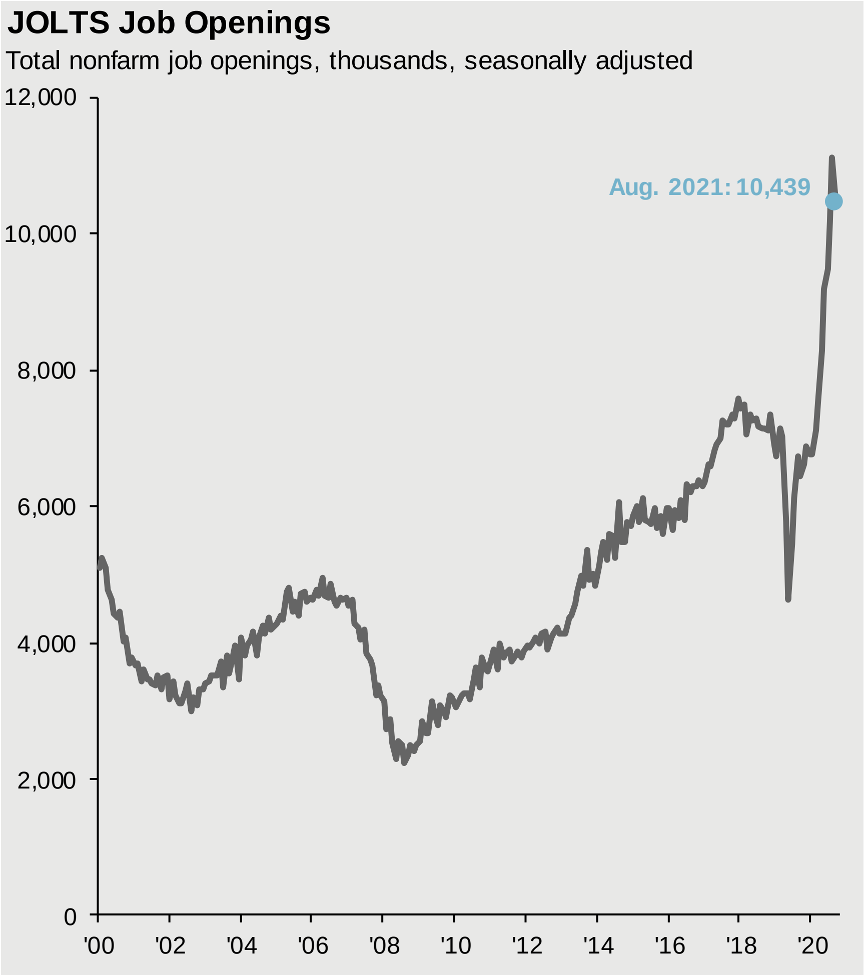
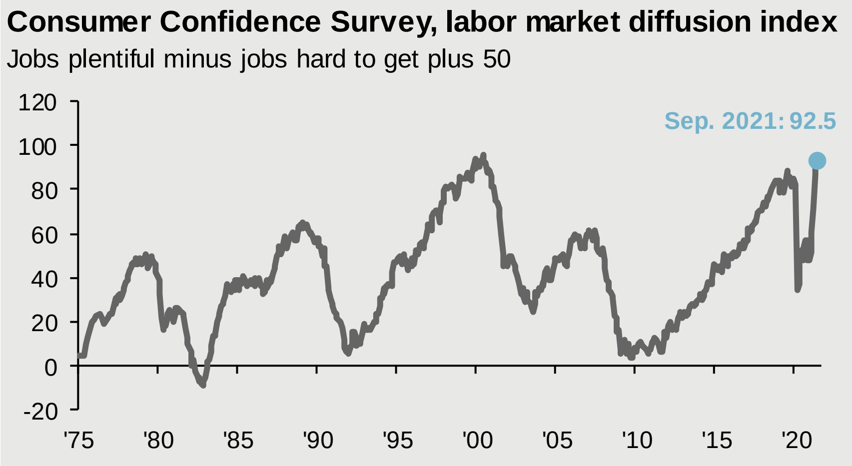
5. Strong job gains will power hot wage growth.





Source: Conference Board, National Federation of Independent Business, U.S. Department of Labor, J.P. Morgan Asset Management. The diffusion index is calculated as the percentage of consumers reporting jobs plentiful minus those reporting jobs hard to get plus 50.
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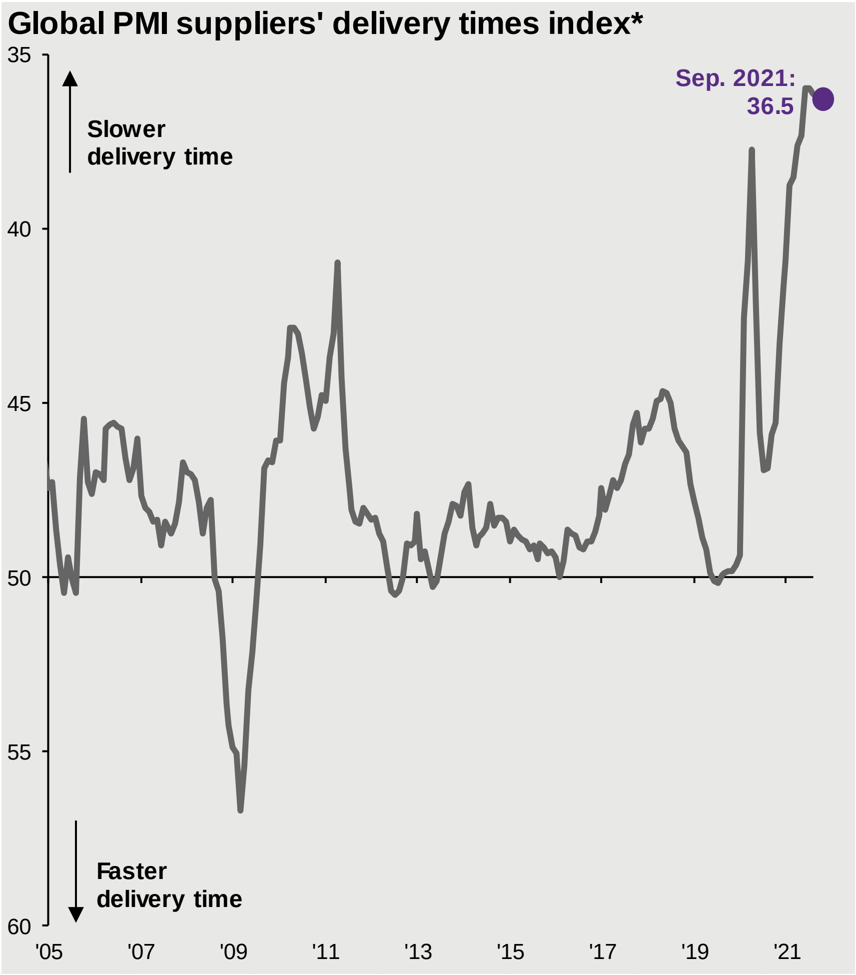
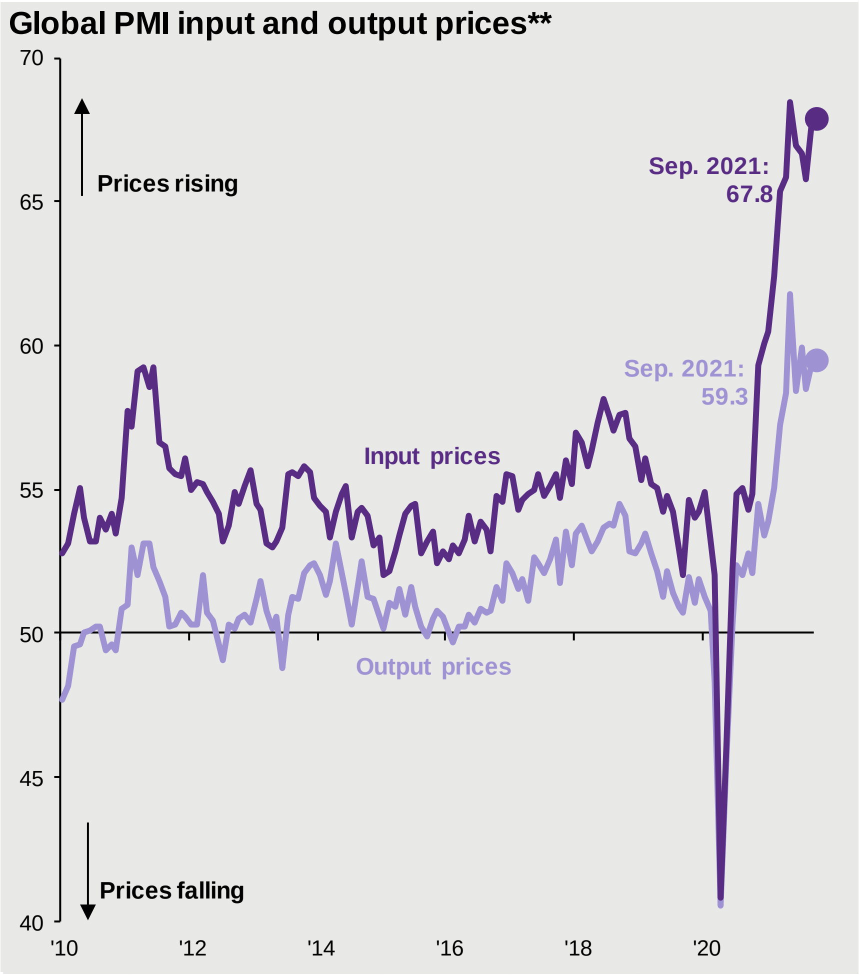
6. Post-pandemic inflation will likely run above 2%.

International





Source: IHS Markit, J.P. Morgan Asset Management.
*Participants in IHS Markit's PMI business surveys, conducted in 44 countries, are asked: "Are your suppliers' delivery times slower, faster or unchanged on average than one month ago?". Index includes the manufacturing and construction sectors. A reading of 50 = no change, >50 = faster delivery time, <50 = slower delivery time.**Participants are asked: "Are input/output prices the same, higher or lower?". Values shown reflect the composite index which includes both manufacturing and services. A reading of 50 = no change, >50 = price increase, <50= price decrease.
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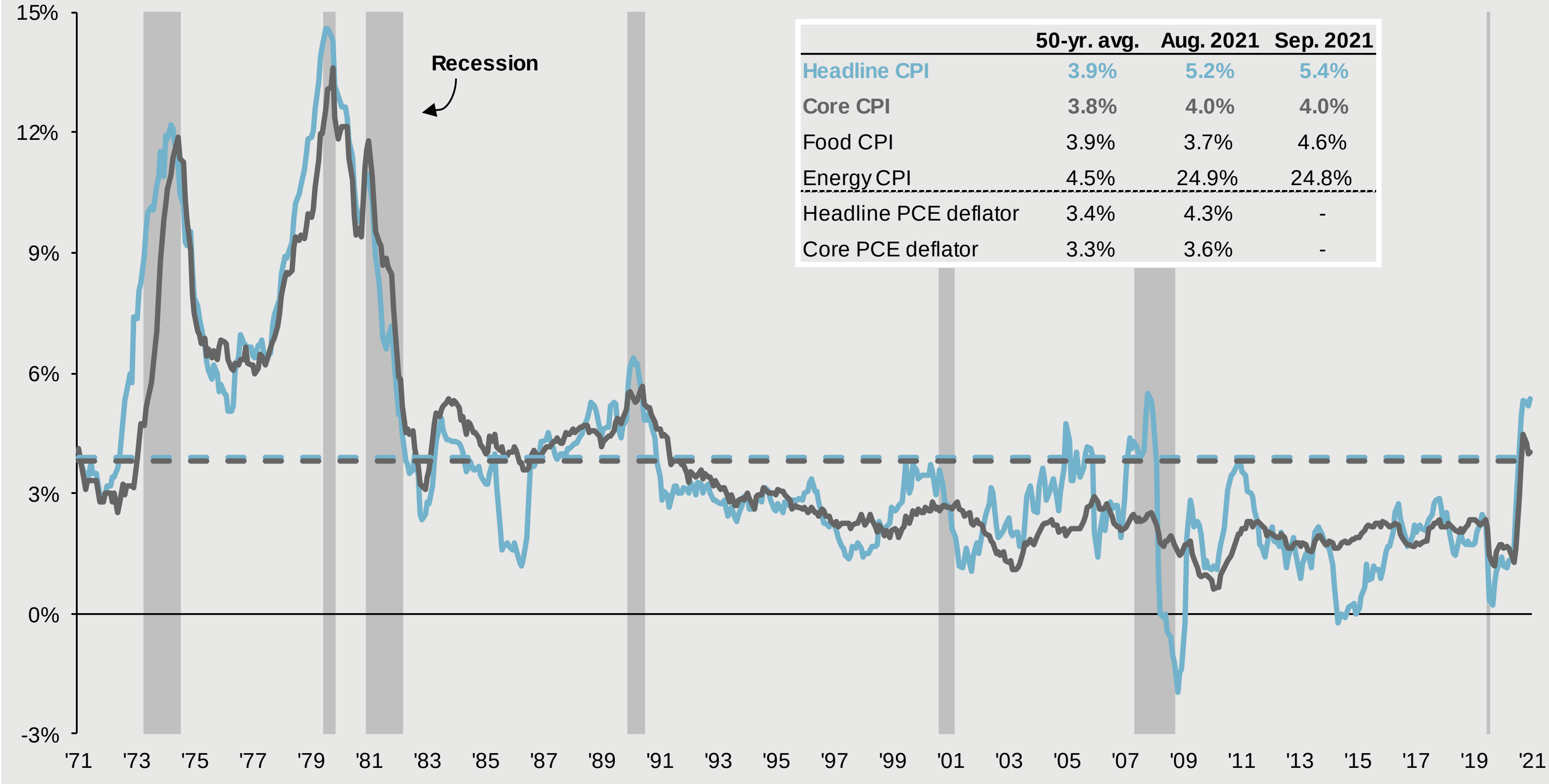
6. Post-pandemic inflation will likely run above 2%.

….strong wage growth, elevated inflation expectations and rising rents should keep consumption deflator inflation above 2% in 2022 and 2023.

CPI and core CPI

% change vs. prior year, seasonally adjusted



	50-yr. avg.	Aug. 2021	Sep. 2021
Headline CPI	3.9%	5.2%	5.4%
Core CPI	3.8%	4.0%	4.0%
Food CPI	3.9%	3.7%	4.6%
Energy CPI	4.5%	24.9%	24.8%
Headline PCE deflator	3.4%	4.3%	-
Core PCE deflator	3.3%	3.6%	-

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.
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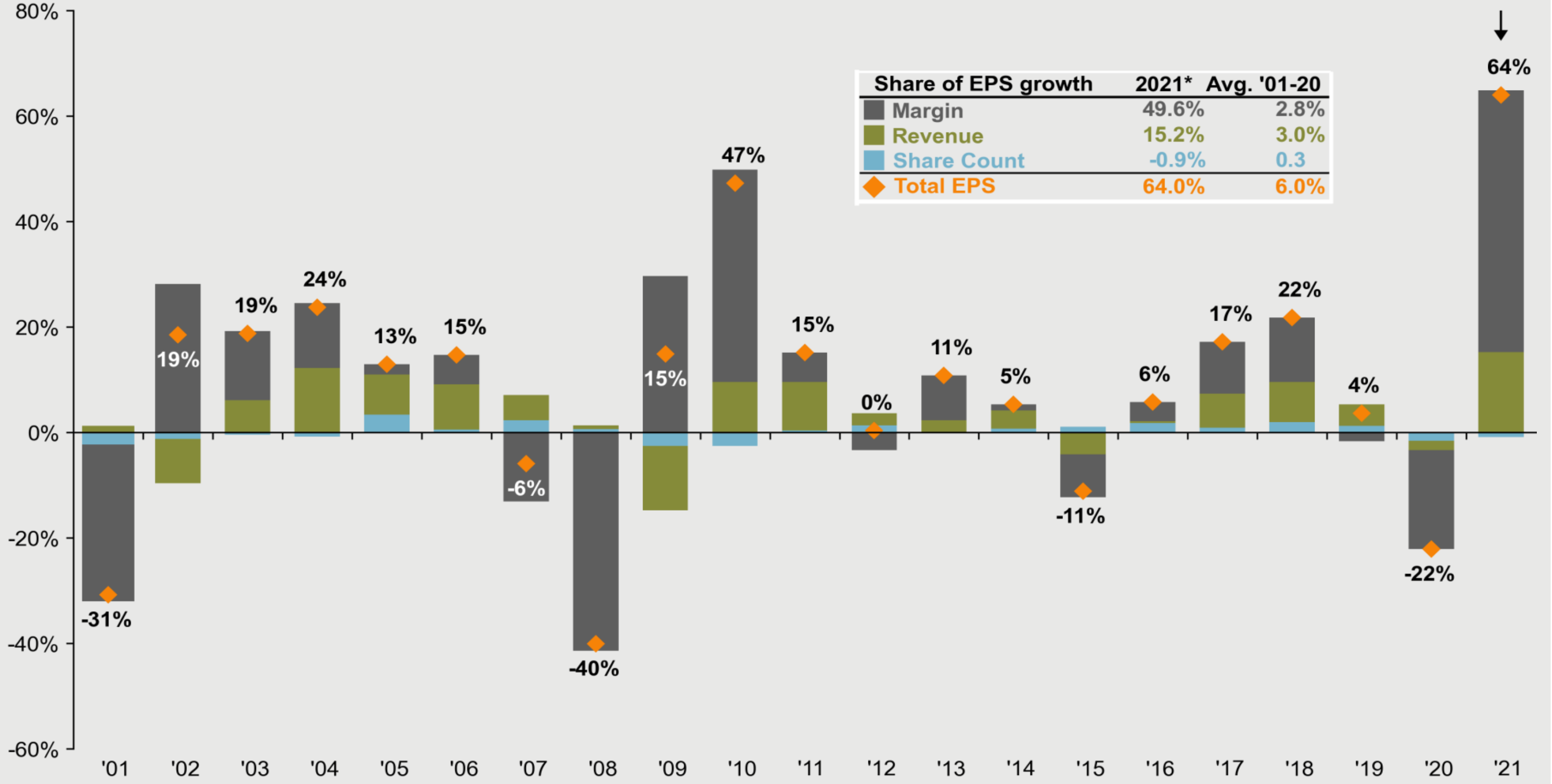
7. Profits will grow more slowly from very high levels.

After a spectacular 2021, earnings gains in 2022 will be challenged by higher rates, accelerating wages, higher corporate taxes and fading economic growth.

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

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



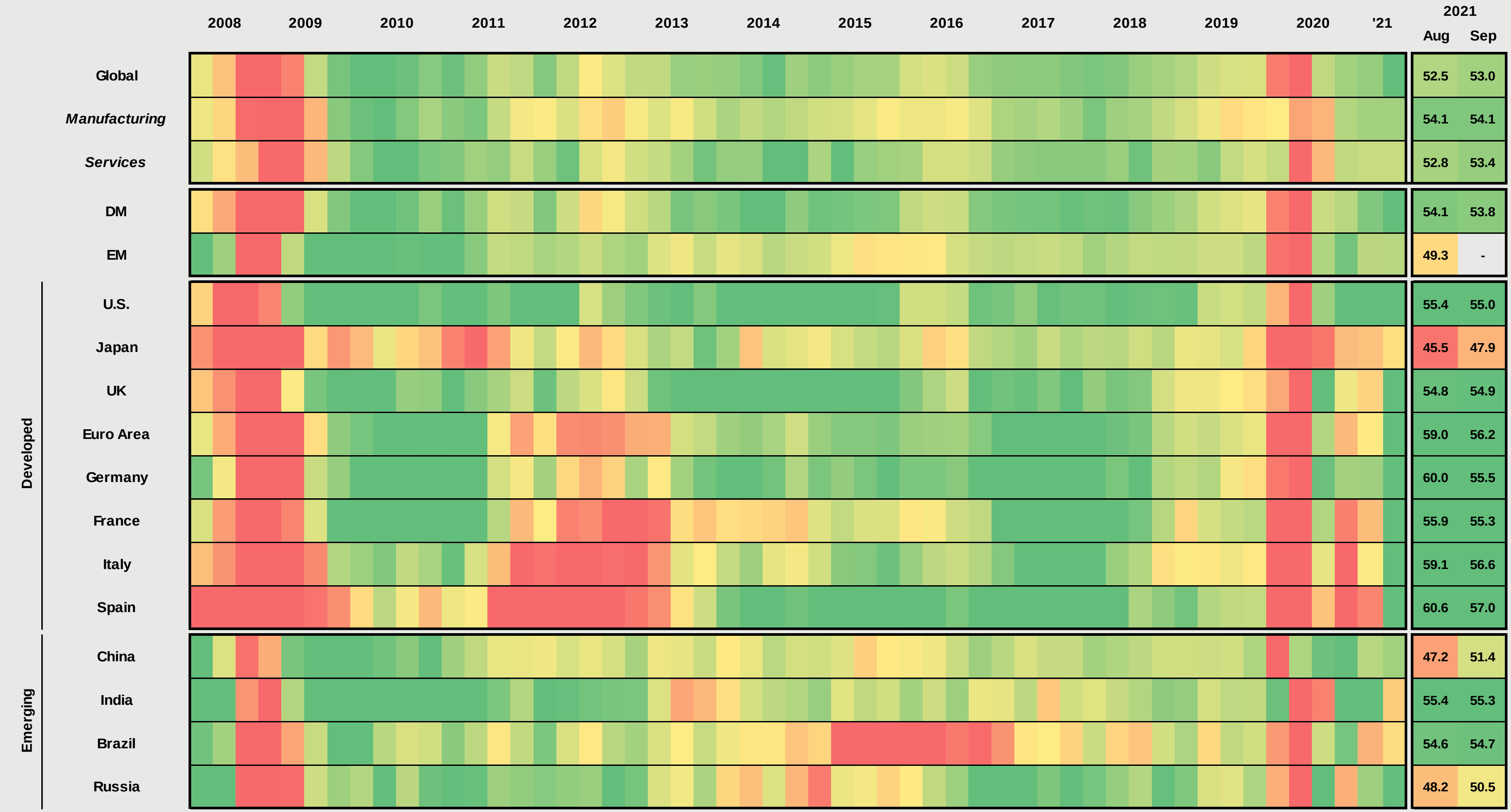
Share of EPS growth	2021*	Avg. '01-20
Margin	49.6%	2.8%
Revenue	15.2%	3.0%
Share Count	-0.9%	0.3
Total EPS	64.0%	6.0%

Source: FactSet, Compustat, 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. *2021 earnings estimates are based on forecasts from FactSet Market Aggregates.
Guide to the Markets – U.S. Data are as of October 14, 2021.

8. The world economy will rebound despite China issues.

International

Global Composite (manufacturing & services combined) Purchasing Managers' Index, quarterly



Source: Markit, J.P. Morgan Asset Management.
The Composite PMI includes both manufacturing and services sub-indices. 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 2009 due to lack of existing PMI figures. DM and EM represent developed markets and emerging markets, respectively. *September Global, Manufacturing, and Services PMIs are based on estimates from J.P. Morgan Asset Management.
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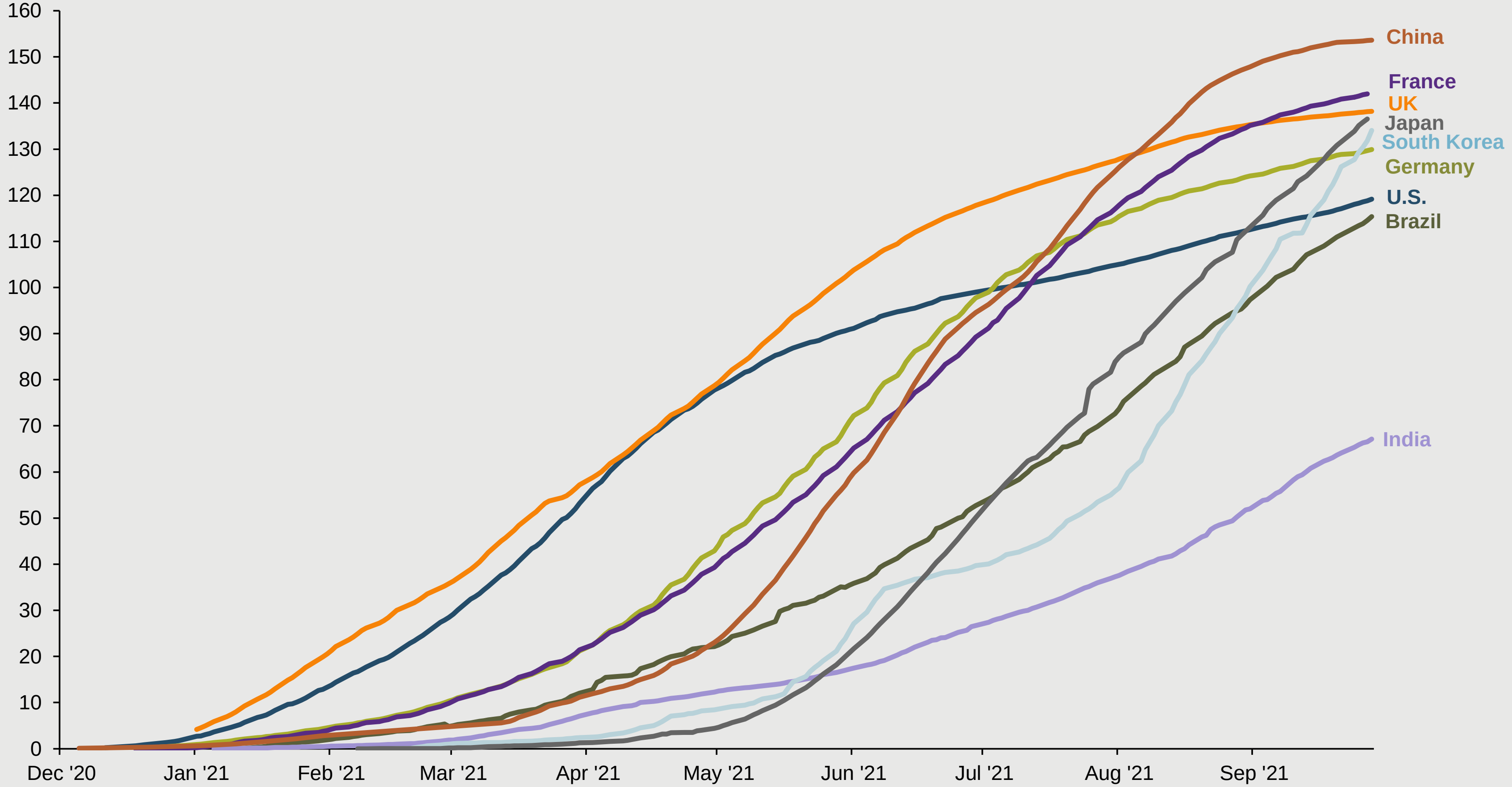
Asset Management

8. The world economy will rebound despite China issues.

International

COVID-19 vaccine rollout

Total vaccine doses administered per hundred people



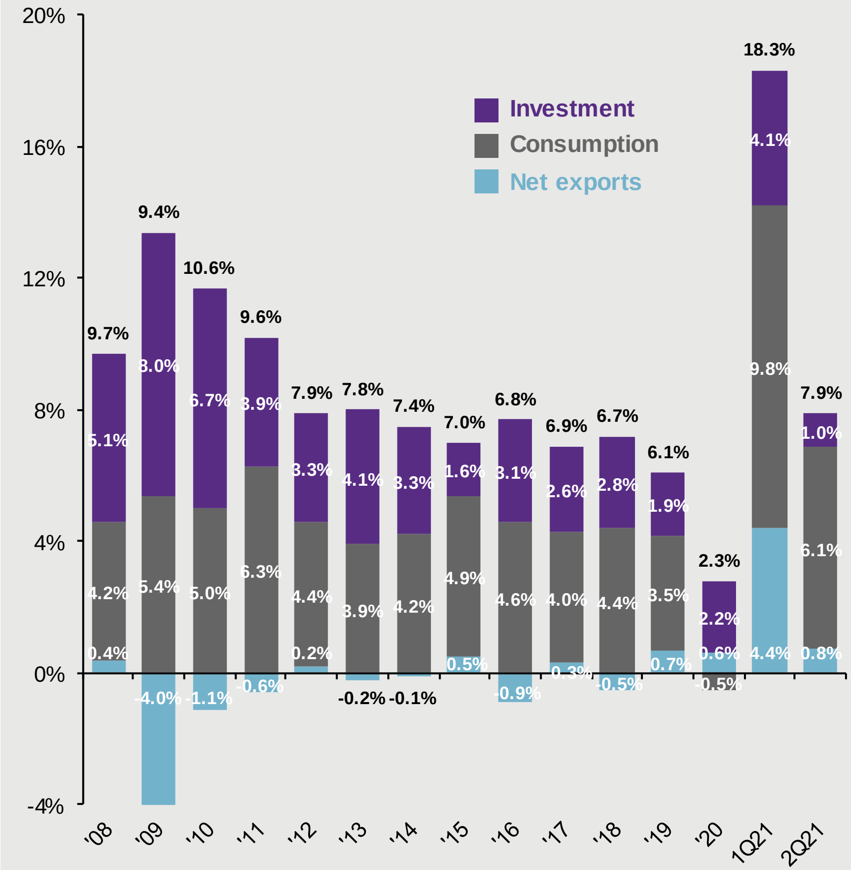
Source: Our World in Data, J.P. Morgan Asset Management.
Total vaccine doses administered per hundred people. Includes both first and second doses in the case of a two-dose vaccine regimen.
Guide to the Markets – U.S. Data are as of October 14, 2021.

8. The world economy will rebound despite China issues.

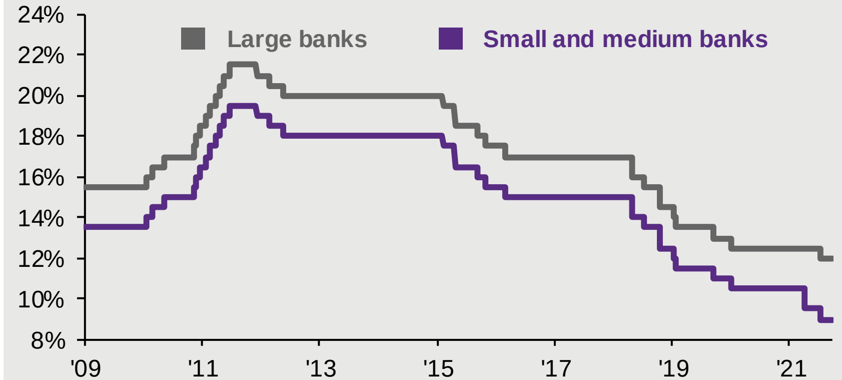
Meanwhile, Chinese growth will remain challenged by attempts to control property speculation, increase private sector regulation and maintain a zero covid policy.

China real GDP contribution

Year-over-year % change

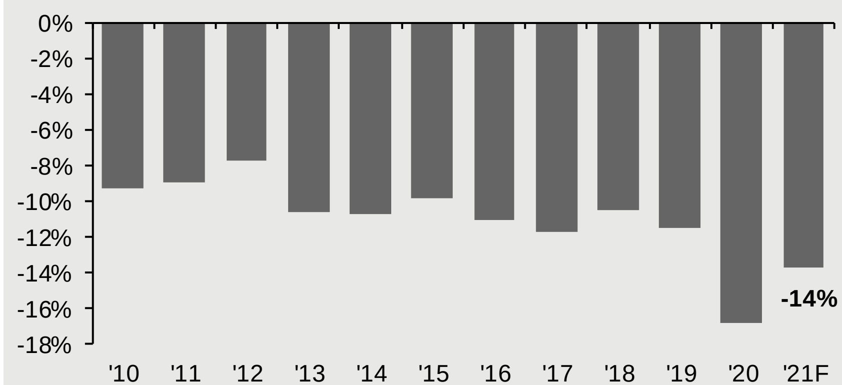


Monetary stimulus: Reserve requirement ratio



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 Global Economic Research 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 and various government-guided funds, whose activities are considered quasi-fiscal. Large banks are six major banks in China, including Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank, Bank of Communications, Postal Savings Bank of China. The other banks are categorized as small and medium-sized banks. PBoC sets favorable required reserve ratio (RRR) for banks that have met specific criteria, such as loans to small and medium-sized enterprises and agricultural sectors. These measures have significantly brought down the actual RRR for banks. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward statements, actual events, results or performance may differ materially from those reflected or contemplated.

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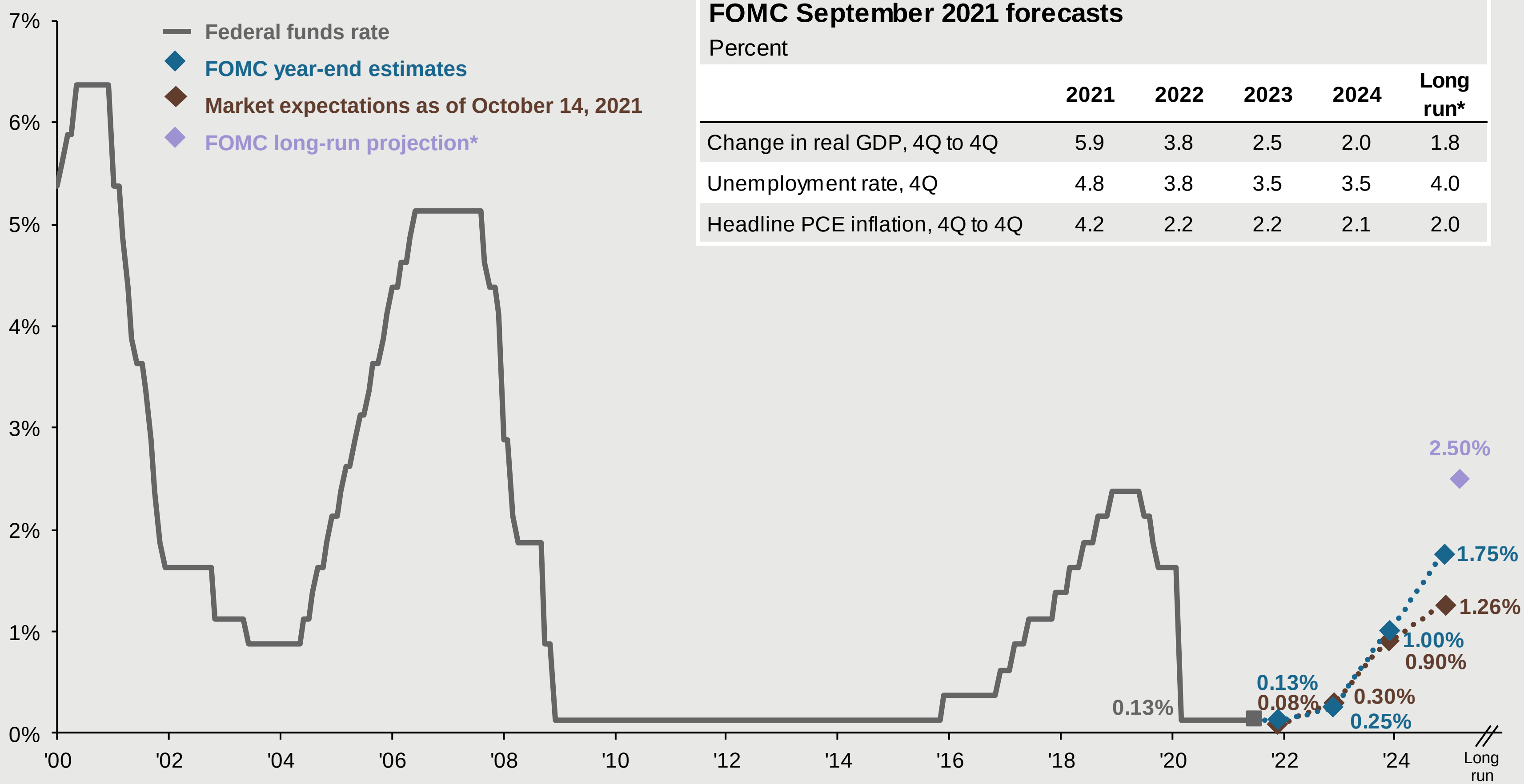
9. The Fed is on track to taper and tighten.

Despite lower growth and labor market forecasts, the Fed is worried about inflation. They will likely announce tapering in November and could raise rates in late 2022.

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



FOMC September 2021 forecasts

Percent

	2021	2022	2023	2024	Long run*
Change in real GDP, 4Q to 4Q	5.9	3.8	2.5	2.0	1.8
Unemployment rate, 4Q	4.8	3.8	3.5	3.5	4.0
Headline PCE inflation, 4Q to 4Q	4.2	2.2	2.2	2.1	2.0

Source: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management.
Market expectations are based off of the USD Overnight Index Forward Swap rates. *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. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.
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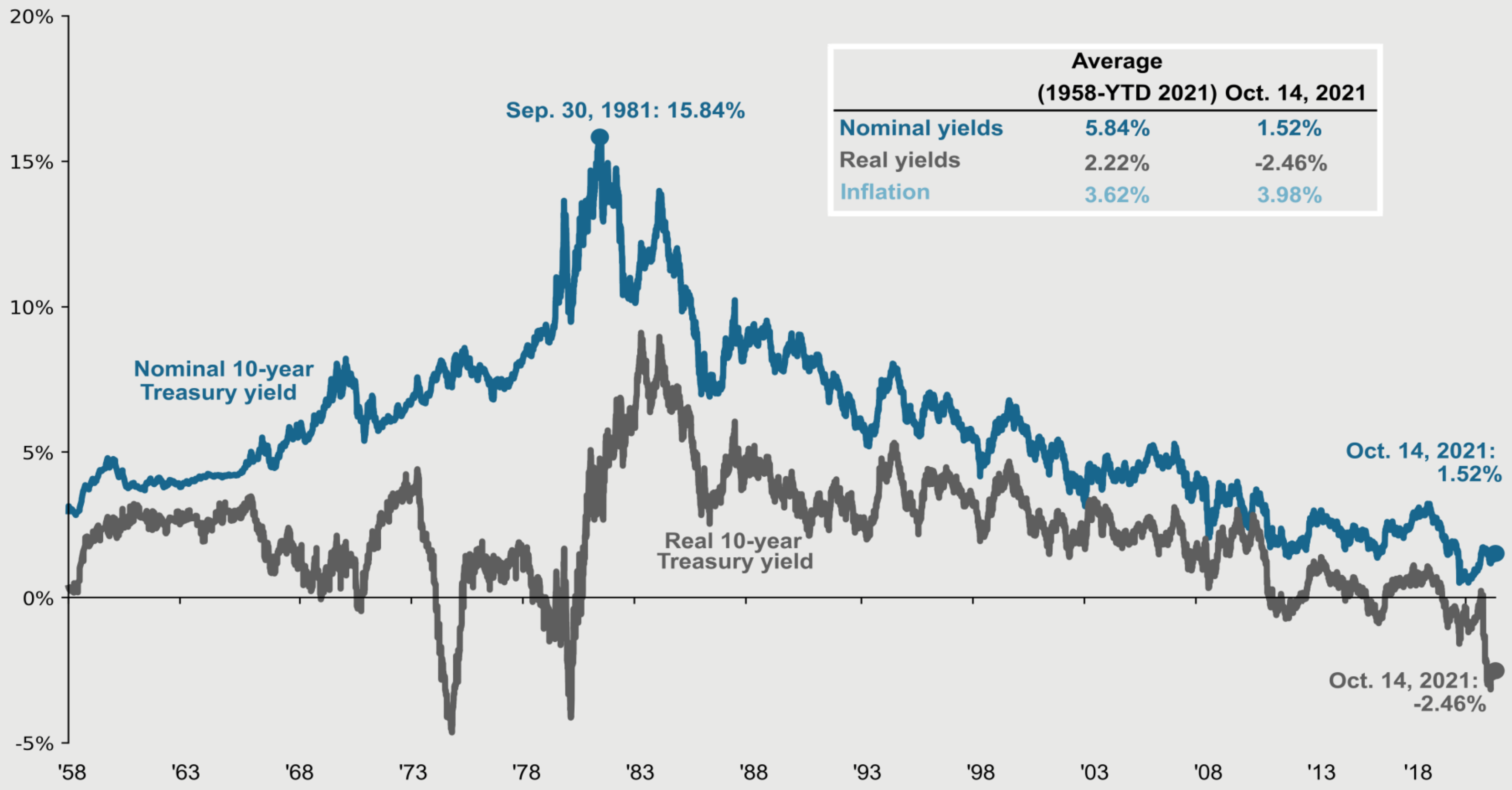
10. Valuations will be key in a post-pandemic world.

Fixed income

Nominal and real 10-year Treasury yields



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 October and September 2021 where real yields are calculated by subtracting out October 2021 year-over-year core inflation.
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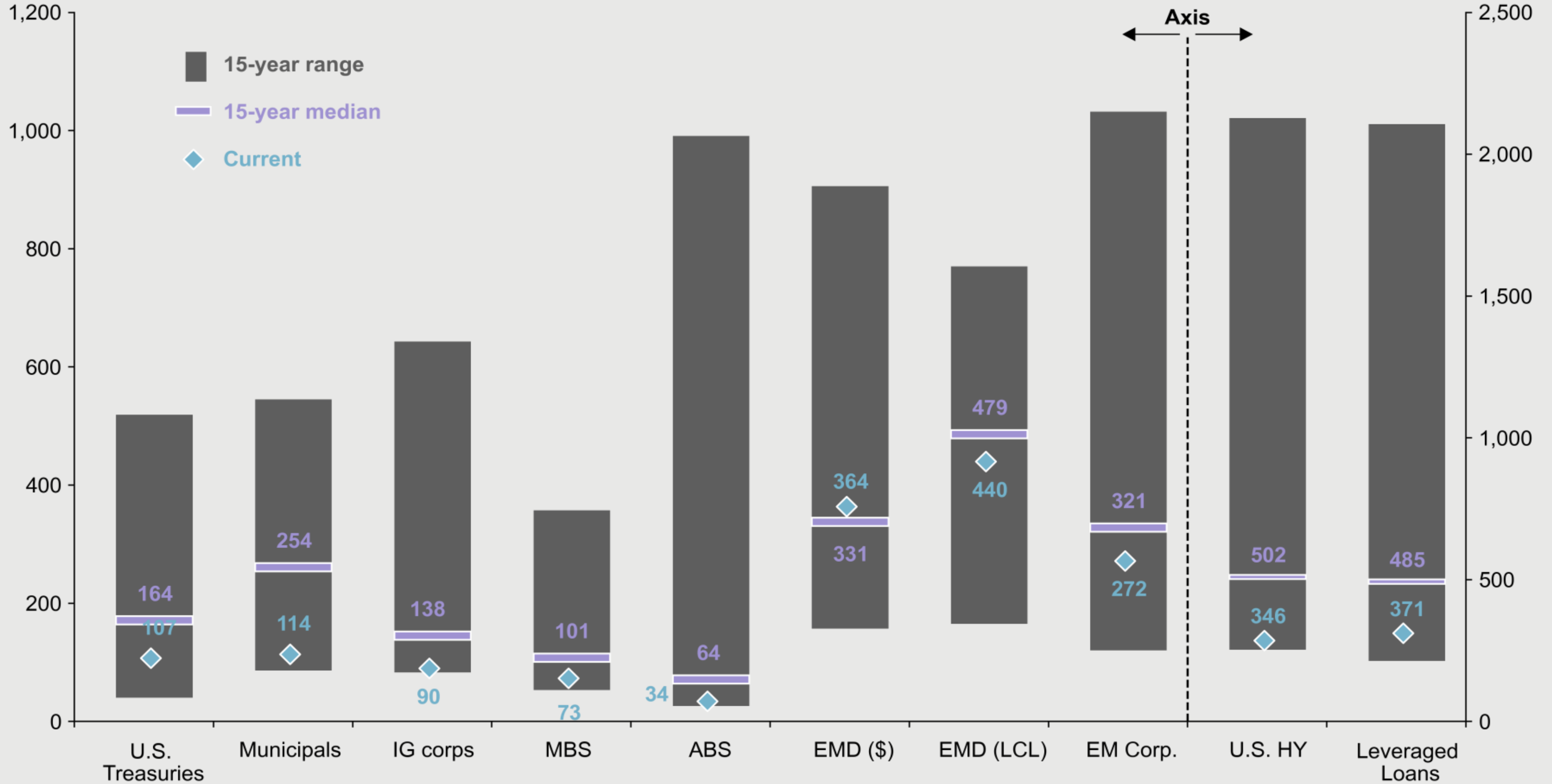
10. Valuations will be key in a post-pandemic world.

Fixed income

Spread-to-worst across fixed income sectors

Basis points, past 15 years



Source: Barclays, Bloomberg, FactSet, J.P. Morgan Credit Research, J.P. Morgan Asset Management. Indices used are Barclays except for emerging market debt and leveraged loans: EMD ($): J.P. Morgan EMIGLOBAL Diversified Index; EMD (LCL): J.P. Morgan GBI-EM Global Diversified Index; EM Corp.: J.P. Morgan CEMBI Broad Diversified; Leveraged loans: JPM Leveraged Loan Index. 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. All sectors shown are spread-to-worst except for Treasuries and Municipals, which are based on yield-to-worst, and Leveraged loans, which are based on spread to 3Y takeout. EM (LCL) spread-to-worst is calculated using the index yield less the YTM on the 5-year U.S. Treasury bellwether index.
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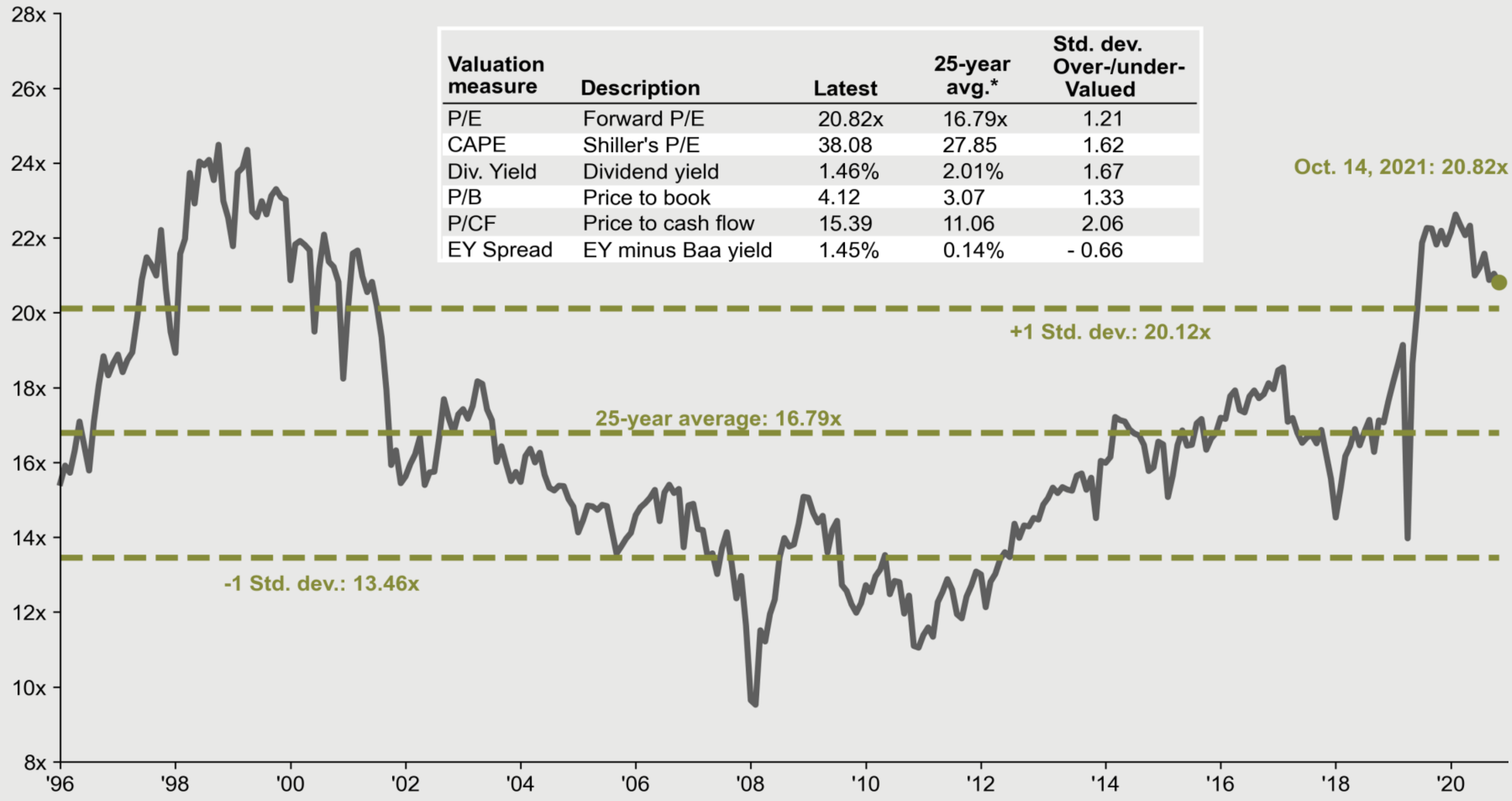
10. Valuations will be key in a post-pandemic world.

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	20.82x	16.79x	1.21
CAPE	Shiller's P/E	38.08	27.85	1.62
Div. Yield	Dividend yield	1.46%	2.01%	1.67
P/B	Price to book	4.12	3.07	1.33
P/CF	Price to cash flow	15.39	11.06	2.06
EY Spread	EY minus Baa yield	1.45%	0.14%	- 0.66

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 August 1996, and J.P. Morgan Asset Management for October 14, 2021. Current next 12-months consensus earnings estimates are $200. 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. *P/CF is a 20-year average due to cash flow availability.
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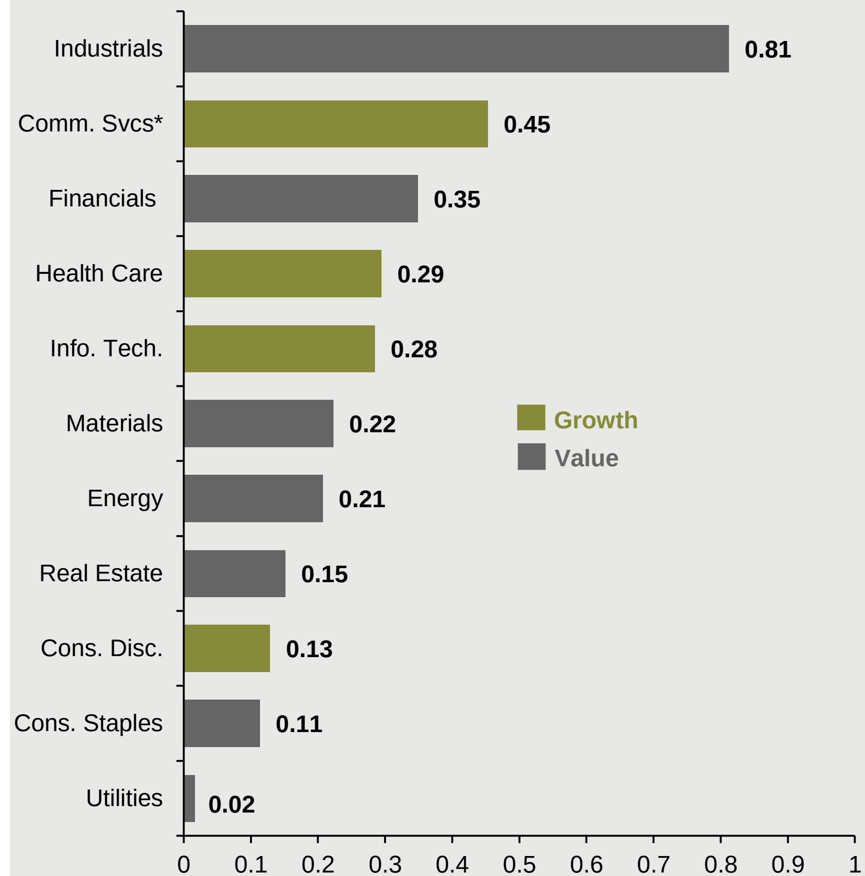
10. Valuations will be key in a post-pandemic world.

Value vs. Growth relative valuations

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

S&P 500 sector earnings correlation to real GDP

1Q 2009 - 2Q 2021



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. *Communication services correlation is since 3Q13 and based on backtested data by JPMAM.
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10. Valuations will be key in a post-pandemic world.

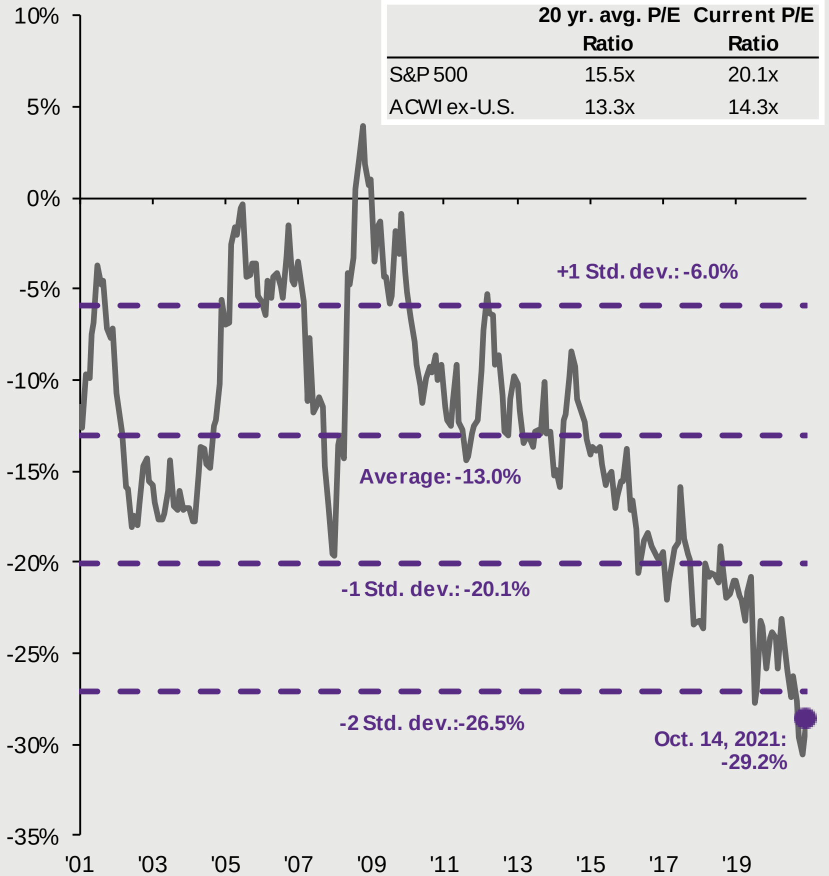
International equities are almost 30% cheaper than their U.S. counterparts and have double the dividend yield.

International

International: Price-to-earnings discount vs. U.S.

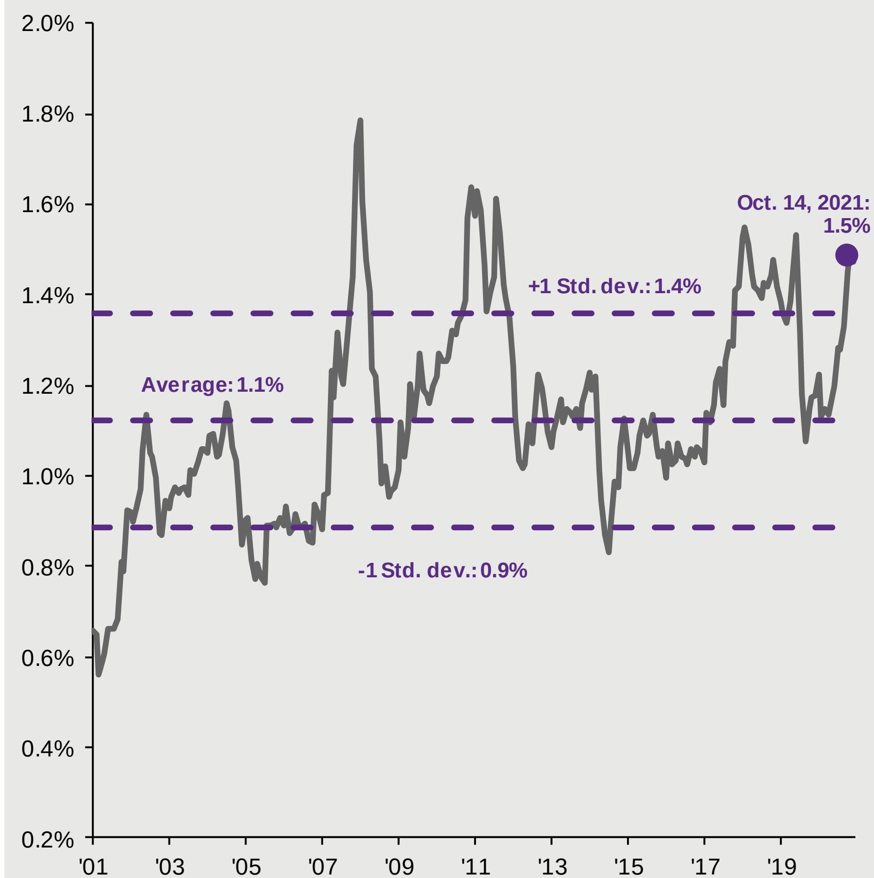
MSCI AC World ex-U.S. vs. S&P 500 Indices, next 12 months

	20 yr. avg. P/E Ratio	Current P/E Ratio
S&P 500	15.5x	20.1x
ACWI ex-U.S.	13.3x	14.3x



International: Difference in dividend yields vs. U.S.

MSCI AC World ex-U.S. minus S&P 500 Indices, next 12 months



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
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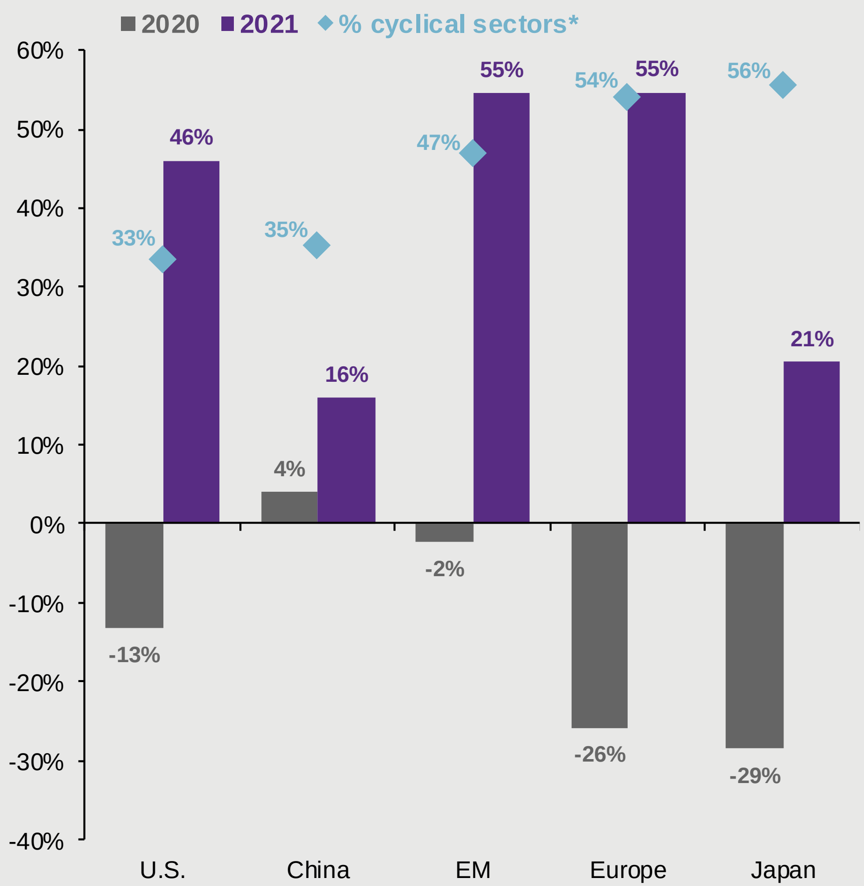
10. Valuations will be key in a post-pandemic world.

In the short-run, a more cyclical recovery could favor European and Japanese equities.

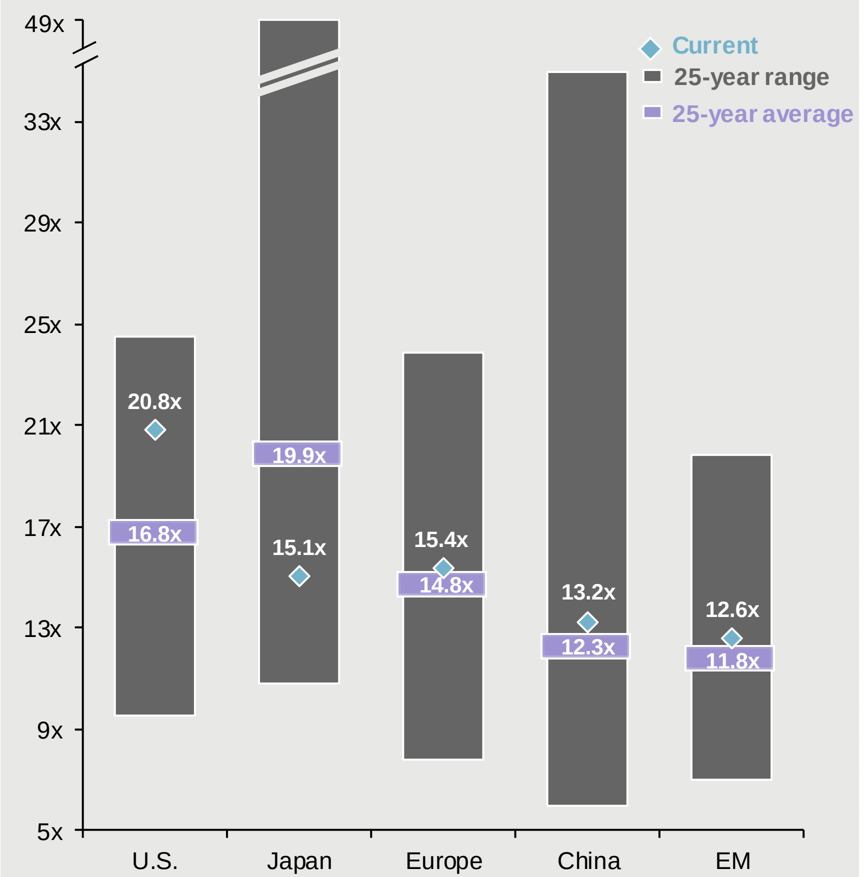
Global earnings growth

Calendar year consensus estimates



Global valuations

Current and 25-year next 12 months price-to-earnings ratio



Source: FactSet, MSCI, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
*Cyclical sectors include consumer discretionary, financials, industrials, energy and materials. The Internet and direct marketing subsector has been removed from the cyclicals calculation. In our judgement, companies in this space do not yet fit into the cyclical category, as they are still in a transitional growth phase and are not being directly impacted by the business cycle. 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 October 14, 2021.

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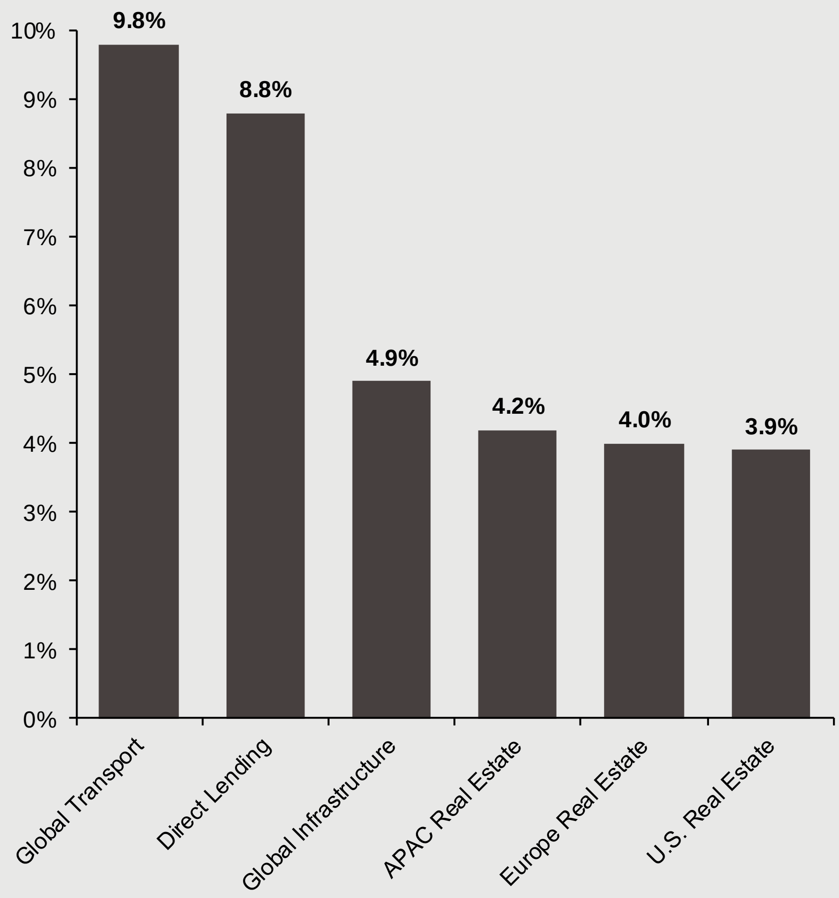
10. Valuations will be key in a post-pandemic world.

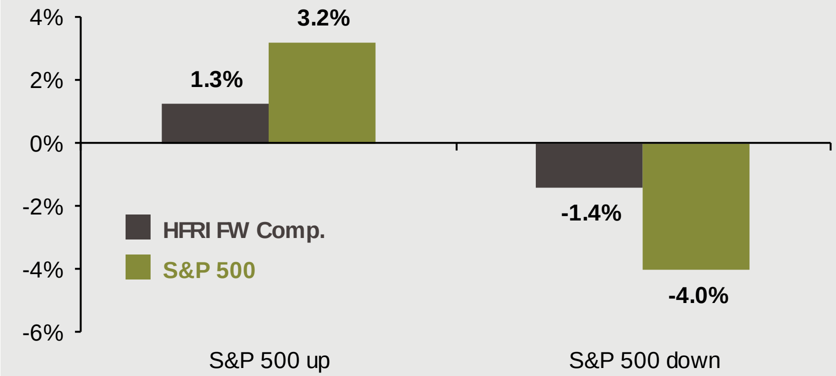
Alternatives offer both income and diversification.

Alternative asset class yields



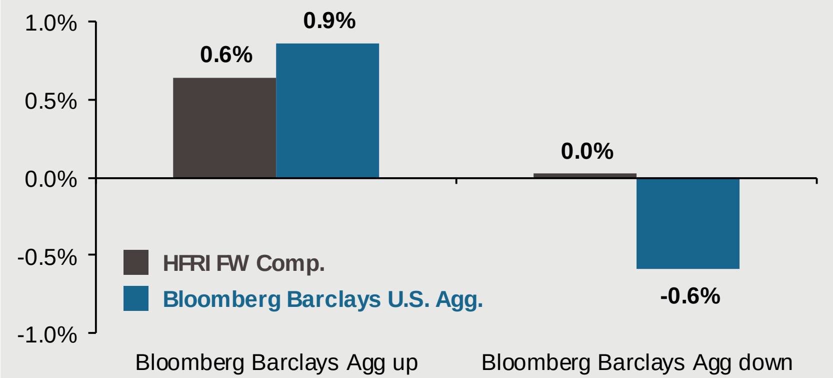
Hedge fund returns in different market environments

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, BEA, Bloomberg, Clarkson, Cliffwater, Drewry Maritime Consultants, FactSet, HFRI, J.P. Morgan Asset Management. Global Transport and Direct Lending yields are as of 6/30/2021.Global Infrastructure and U.S, Europe and APAC Real Estate yields are as of 3/31/2021. Global Transport: Levered yields for transport assets calculated as the difference between charter rates (rental income), operating expenses, debt amortization and interest expenses, as a percentage of equity value. Yields for each of the sub-vessel types are calculated and respective weightings are applied to arrive at the current levered yields for Global Transportation; Direct Lending: Cliffwater Direct Lending Index; Global Infrastructure: MSCI Global Infrastructure Asset Index-Low Risk; U.S. Real Estate: NCREIF-ODCE Index; Europe core real estate: IPD Global Property Fund Index – Continental Europe. Asia Pacific (APAC) core real estate: IPD Global Property Fund Index – Asia-Pacific. Positive yield does not imply positive return.
This slide comes from our Guide to Alternatives.
Guide to the Markets – U.S. Data are as of October 14, 2021.

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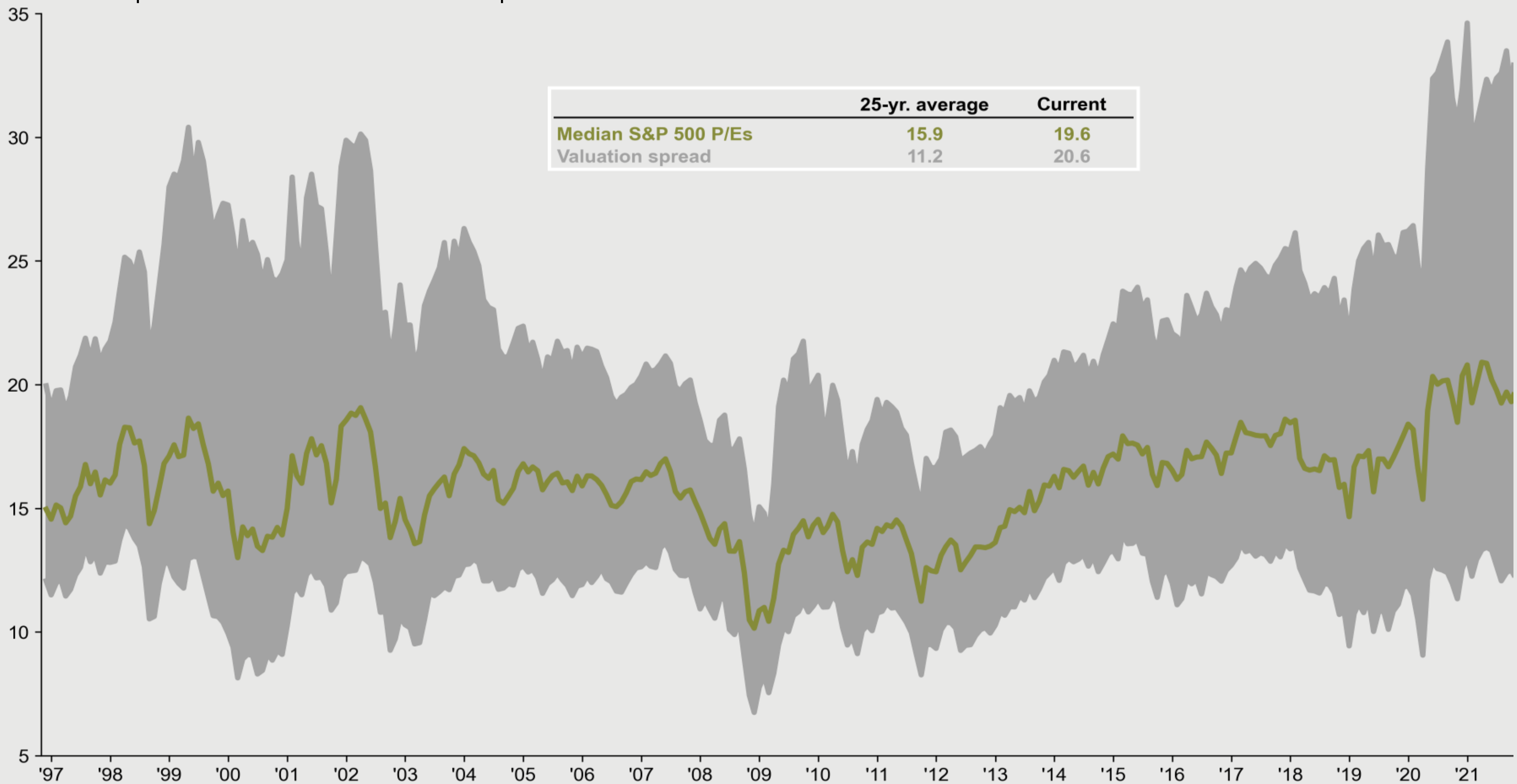
10. Valuations will be key in a post-pandemic world.

The wide dispersion in valuations points to an opportunity for active management.

Equities

S&P 500 valuation dispersion

Valuation dispersion between the 20th and 80th percentile of S&P 500 stocks



Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management.
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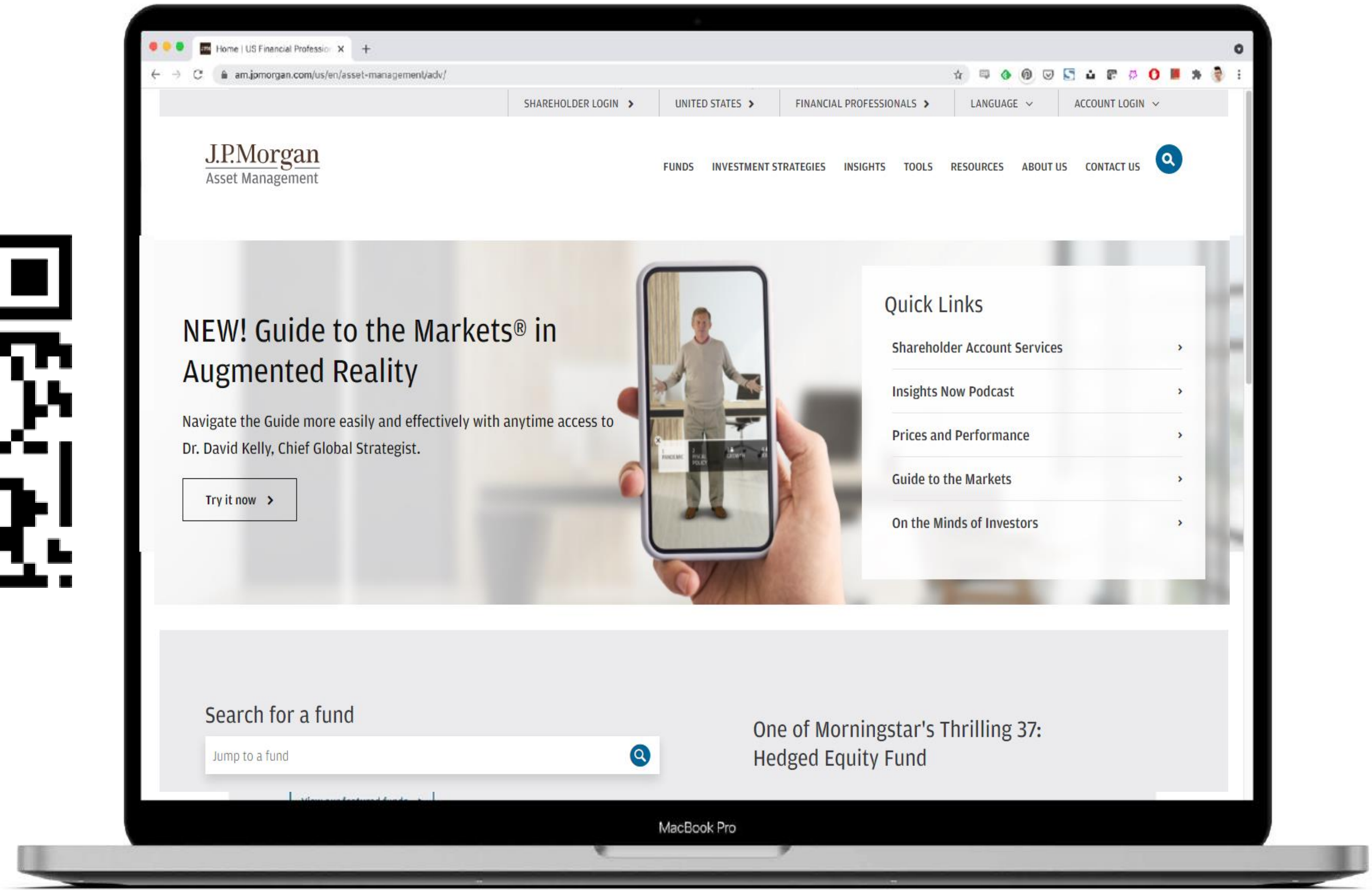
Explore the new *Guide* in a new way



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Asset Management

Three ways to engage with Market Insights

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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.

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.

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Prepared by: Stephanie Aliaga, Jordan K. Jackson, David M. Lebovitz, John C. Manley, Meera Pandit, Gabriela D. Santos, Olivia C. Schubert, Nimish Vyas and David P. Kelly.

Unless otherwise stated, all data are as of October 14, 2021 or most recently available.

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