ECONOMIC AND MARKET COMMENTARY

3rd Quarter 2022

SMITH SHELLNUT WILSON
AN AFFILIATE OF b1BANK

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I. THIRD-QUARTER 2022 EQUITY MARKET RECAP

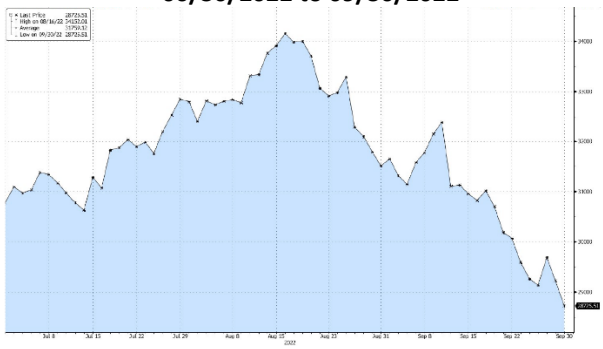
The equity market spent the first half of the quarter bouncing off the prior June lows; however, the rally stalled in mid-August leading to new cycle lows by quarter-end. For the quarter, the S&P 500 closed down 4.90%, the NASDAQ declined 4%, and the Russell 2000 (small cap) fell 2%. Year-to-date, the bear market decline has the S&P 500 off 24% and the tech-heavy NASDAQ down 32%.

On a local currency basis, international markets vs. U.S. markets were mixed. During the quarter, the UK's FTSE 100 index was down 2.8%, the French CAC 400 index fell 2.5%, the German DAX was off 5.2%, the Japan Nikkei-225 was down 1%, and the Chinese Shanghai Composite declined 9.7%. On a dollar-denominated basis, most international markets were down more than the S&P 500.

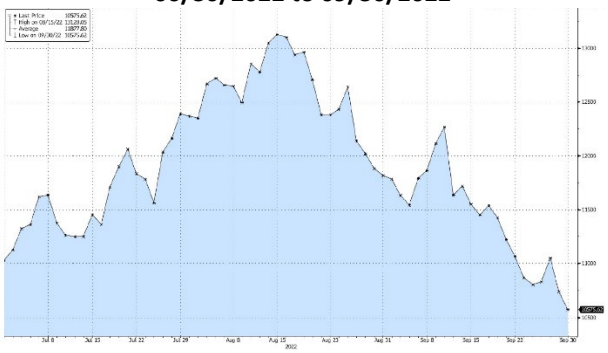
So far, 2022 has brought two quarters of negative GDP quarter-over-quarter and substantial deceleration year-over-year. Expectations for further deceleration in GDP and CPI along with further interest rate increases from the Fed have created a macro environment that historically results in poor equity market results. It's not just the U.S. facing a growing slowdown, most countries around the globe are forecasting continued slowing throughout the remainder of 2022 and 2023. Europe in particular is experiencing collapses in consumer confidence amid looming energy shortages and soaring inflation.

U.S. Equity markets adjusted sharply in September as companies began to guide down revenue and earnings forecast for the coming quarter. Profit cycle deceleration is in motion and will intensify as the domestic economic cycle continues its slowing process. Markets and economies are cyclical in nature. While we are currently in the slowdown phase of the cycle, historically the long-term trend is positive.

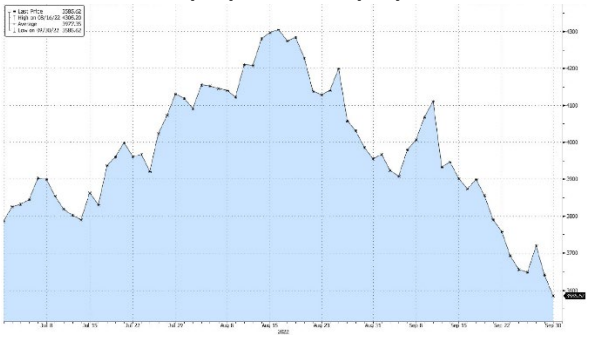
Dow Jones Industrial Index
06/30/2022 to 09/30/2022



NASDAQ Composite Index
06/30/2022 to 09/30/2022



S&P 500 Index
06/30/2022 to 09/30/2022



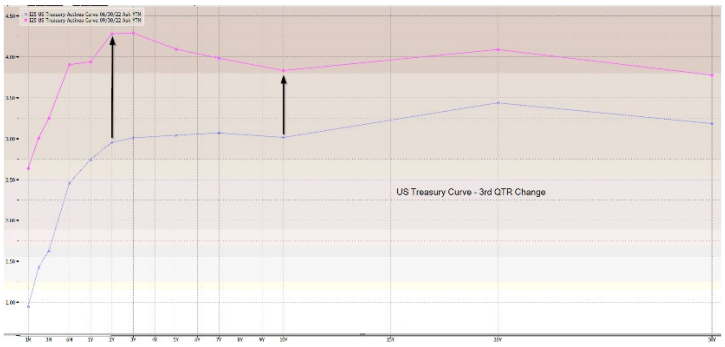
**Registration of an Investment Adviser does not imply any certain level of skill or training.*

II. THIRD-QUARTER 2022 BOND MARKET RECAP

High inflation, the Fed's aggressively hawkish stance, concerns about consumer spending, and concerns about corporate debt/earnings led to warp-speed moves in yields, volatility, and spreads during the quarter. Bond losses have been brutal this year, but with recessionary forecasts growing buying opportunities appear more attractive.

To tame mounting inflation, the FOMC implemented 150 basis points of Fed Fund's rate hikes during the third quarter. While this pushed all Treasury yields higher, the Fed's hikes to the overnight rate with expectations of more through year end put heavy pressure on the front end of the curve. In fact, 2- to 10-year Treasury spreads started the quarter at +5 basis points and ended the quarter inverted at -45 basis points (Chart 1). The curve is now signaling a recession and Bloomberg's Economist Consensus forecast predicts a 50% chance of a recession in the next twelve months.

Chart 1: US Treasury Curve
06/30/2022 to 09/30/2022



Treasury yields rose to their highest levels, across every duration point, in a decade (Chart 2). Not only are nominal Treasury yields nearing 10–15-year highs, but implied volatility (Chart 3) has also approached levels last reached during the 2008 financial crisis and for a brief period at the start of the pandemic. This has led to extreme spread widening on bonds with embedded options (call, prepay) and credit exposure. As evidence, Agency MBS spreads have increased from +68 basis points to +164 basis points and investment grade corporate bond spreads have increased from +94 basis points to +168 basis points since the beginning of the year.

The Fed is expected to continue hiking rates through the end of the year. However, the market is beginning to cool on future inflation. The 10-year average breakeven inflation rate has declined from 3.04% earlier in the year to 2.23% and TIPS has seen an exceptionally large sell-off over recent months. If recessionary pressure continues to mount, then the Fed will most likely have to pivot from its aggressive monetary policy forecast.

Rising recession risk should limit further increases in long-term Treasury yields. Importantly, the sell-off in fixed income has also reduced valuations to much more attractive yield levels. With much higher spread/yields, high-quality fixed income can now provide more of a buffer for portfolios in the case of a market correction or an economic downturn.

Chart 2: US Treasury Curve 10-Year Range
10yr High/Low Range = Grey Shaded Area
Blue line = 9/30/22, Grey line = 12/31/21

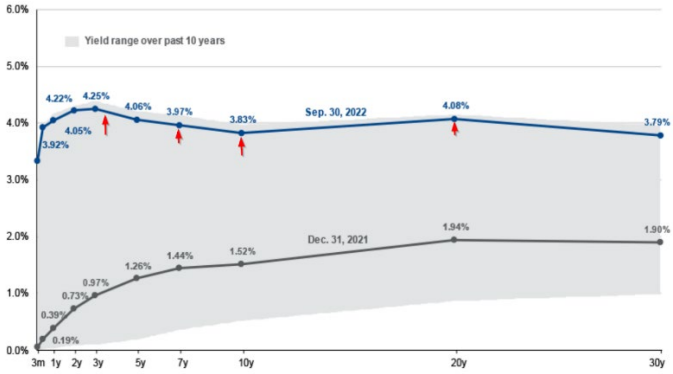
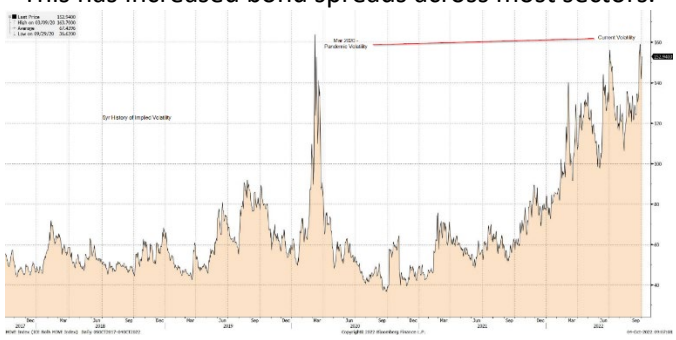
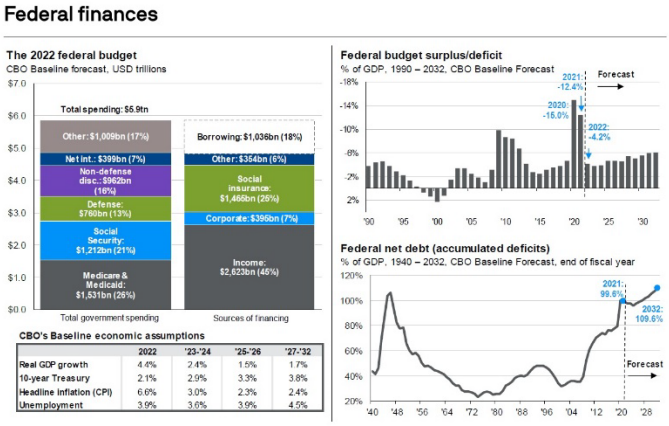


Chart 3: MOVE Index
5 Year History of Implied Volatility
This has increased bond spreads across most sectors.



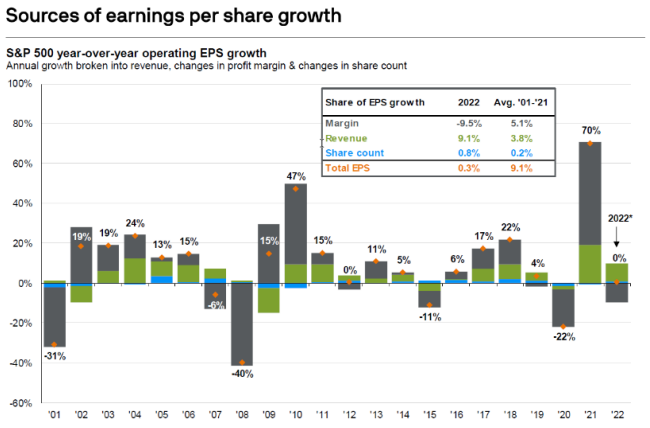
III. ECONOMIC BACKDROP: PAYING THE PIPER

The Federal government's $5 trillion fiscal stimulus response to the COVID pandemic unleashed a stampede into risk assets. However, now the economic pendulum is swinging back, creating a monetary "beast" that the Fed hopes to tame. The Federal budget deficit was $3.2 trillion in 2020, $2.8 trillion in 2021, and has fallen to less than $1 trillion in 2022. This deficit decline, reducing the flow of money to low-income and moderate-income families, has led to slower economic growth.



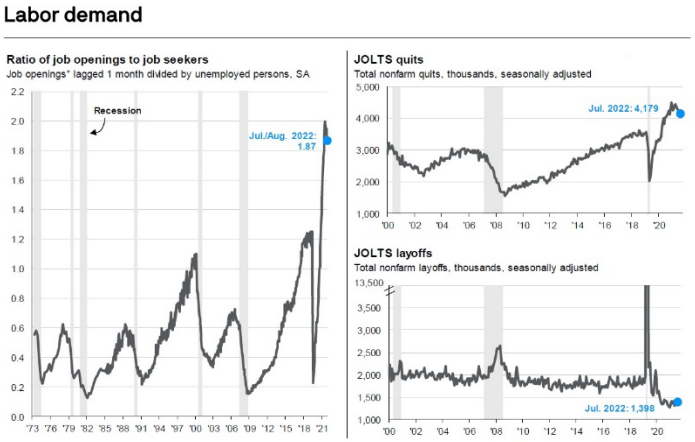
The second economic drag facing the U.S. economy is the housing sector. Fueled by historically low-interest rates, the U.S. housing market increased in value to unprecedented levels during the pandemic. Now that mortgage rates have more than doubled, declines in home sales, home building, and spending on new home set-up are now a drag on the economy.

U.S. corporations have begun to feel the pain of higher labor costs, higher interest rates, and slowing nominal sales. In addition, the increase in the value of the dollar will further erode overseas sales. As a result, within the first six months of 2022, the operating EPS of S&P 500 companies fell by 3.2% year-over-year, and analysts expect a paltry 1% gain for the entire year of 2022.



The global economy is showing signs of weakness as both inflation and tighter financial conditions are a worldwide phenomenon. Europe and the United Kingdom have had the additional challenge of high energy costs and commodity shortages due to the war in Ukraine. China has also suffered as the regulatory crackdown, weak housing market, and zero-Covid policy have taken their toll. Due to these factors, economists are forecasting a slowing global economy over the next year.

A bright spot for the economy is excess labor demand. There are nearly two job openings for every unemployed worker. The current unemployment rate is 3.7% nearing its 50-year low. Low unemployment has led to wage increases during this expansion, and this could persist.



Inflation remains the primary concern for the economy and the Federal Reserve. Inflation peaked in June at 9.1% and has maintained an elevated level. However, due to expected wage growth moderation and supply chain improvement, inflation expectations of consumers, Treasury market investors, and forecasters are only slightly elevated over historical averages currently (2.5% to 5.0% over the next five years).

The Fed has now increased the Federal funds rate from a range of 0.00% to 0.25% to 3.00% to 3.25%. The speed of the rate increase is the fastest increase in interest rates since Paul Volker was the Fed chair in the 1980s. Jerome Powell appears to be just as single-mindedly focused on inflation as Volker was in the 1980s. The Fed consistently stated that inflation is the primary focus and has not blinked with surging market volatility. Can the Fed manufacture a "soft-landing"? Few economists seem to think that is possible, but we will all be watching.

IV. IS HIGH INFLATION THE ULTIMATE PANDEMIC DISTORTION?

Article by Capital Group. Written By: Julian Abdey, Equity Portfolio Manager; Pramod Atluri, Fixed Income Portfolio Manager; and Nick Grace, Equity Portfolio Manager | Date: September 29, 2022

The last time U.S. inflation spiked above 9%, Ronald Reagan was the newly elected president of the United States. IBM was selling its first personal computer using Microsoft software. And stainless steel DeLorean sports cars were rolling off the production line.

Perhaps that's why 2022, in some ways, feels like taking a trip back in time. High inflation, rising interest rates, a bruising bear market and a proxy war with Russia seem all too familiar to anyone who lived through the early 1980s.

Today's market environment, however, has been shaped by an entirely different event. The COVID-19 pandemic and, crucially, the response to the pandemic have created large distortions in the economy and markets — from sky-high inflation to chronic labor shortages to broken supply chains. Which of these COVID distortions will fade over time and which will remain long term? That is a key question for investors.

"There are some aspects of the pandemic that are fleeting and some that will persist," says Alan Wilson, an equity portfolio manager. "That's the issue we are grappling with today. We need to get the answer right because it will likely determine which companies thrive in a post-COVID world and which fall behind."

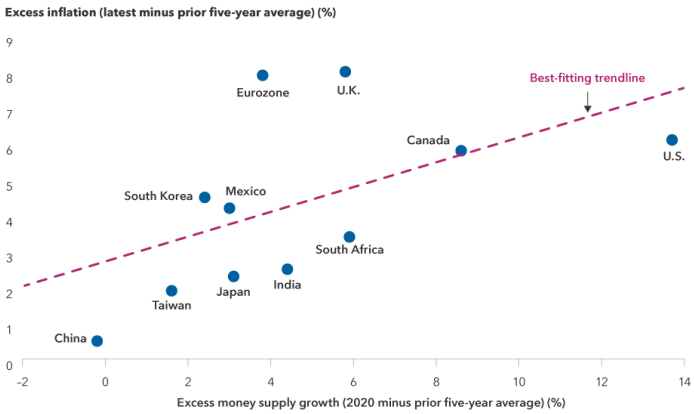
Why is inflation so high?

With elevated inflation representing the most impactful distortion, a team of Capital Group portfolio managers, analysts and economists decided to study consumer price levels in 22 countries in relation to the growth of the money supply, or M2 (this is a broad measure of money that includes currency, coins, checking and savings deposits, as well as shares in money market funds.)

The team looked at many other COVID-related distortions, some of which are covered in more detail below. But since inflation touches virtually all parts of the economy, it makes sense to start there.

As it turns out, the basic laws of economics proved correct.

A rapidly growing money supply — boosted by pandemic-era government stimulus measures, aggressive bank lending and ultra-low interest rates — coincided with drastically higher inflation. In other words, the countries that stimulated the most during the pandemic generally wound up with the highest rates of inflation.



In fact, one could argue that today's high inflation is not the biggest distortion, but rather it was the unprecedented monetary and fiscal stimulus undertaken by the United States and Europe, among others, says Julian Abdey, an equity portfolio manager.

"I am reminded of the famous Milton Friedman quote: 'Inflation is always and everywhere a monetary phenomenon,'" Abdey notes. "In other words, inflation is caused by too much money chasing after too few goods, and that is exactly what we are seeing today."

Has inflation peaked?

In June, U.S. headline inflation hit 9.1% on an annual basis — the highest level since 1981. That may be near the peak, Abdey explains, and while there could be lags, what's important is that the U.S. Federal Reserve (Fed) and many other central banks are now moving fast to tighten monetary policy. That should eventually bring inflation down. In addition, most governments are no longer sending pandemic support payments to businesses and individuals.

Does this mean inflation could return to the 2% level that has long been the Fed's target?

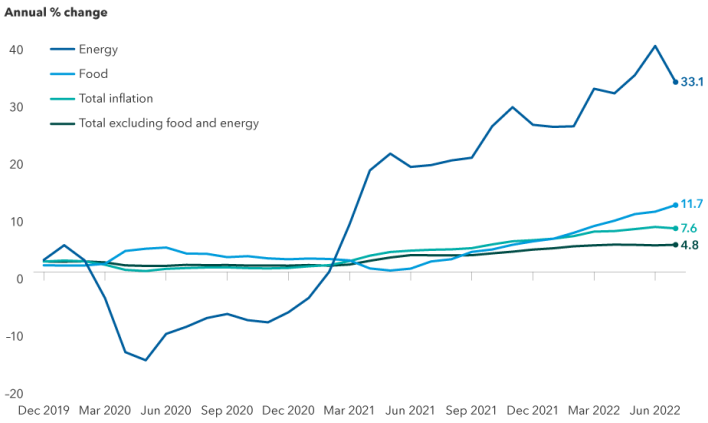
"That is highly dependent on the Fed's response going forward," Abdey adds. "I can see different scenarios, including a more inflationary one, as well as the possibility of a return to deflation. If the Fed remains hawkish and tightens too much, that could result in a nasty recession. On the other hand, if it reverses course, then high inflationary expectations could become embedded into the real economy."

So far, the hawkish stance is prevailing. On Wednesday, 21 September, the Fed announced it would raise interest rates by another 75 basis points, bringing the federal funds rate to a

target range of 3.00% to 3.25%, the highest level since June 2005.

There are signs that inflation is starting to retreat. In the U.S., the August inflation reading declined to 8.3% — still a high number historically speaking, but significantly below the 9.1% reading in June.

Volatile energy prices, a main contributor to inflation, appear to have peaked over the summer and are now moving lower. U.S. gasoline prices, for example, have declined by roughly 25% over the past three months. Food prices, however, continue to rise sharply, along with prices for new cars, housing, electricity and medical care.



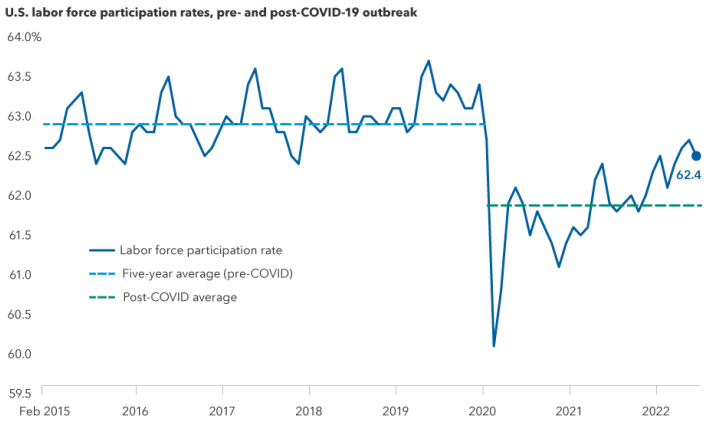
The great resignation

Another COVID distortion that remains entrenched is the severe labor shortage. In 2021, a popular media narrative developed around the idea of "the great resignation," inspired by U.S. government data showing that roughly 47 million people voluntarily quit their jobs that year and seemed to disappear from the workforce.

Further data and myriad surveys helped shed light on the reasons. Many quit to ultimately take better-paying jobs. Some older workers opted for early retirement. And roughly 600,000 Americans decided to start their own small businesses, a trend which is hard to track through monthly employment data.

So why is the labor market still extremely tight, with the unemployment rate near a record low of 3.7%? That's because the U.S. economy — and many other developed economies around the world — have not kept up with pre-pandemic growth trends, says Capital Group economist Jared Franz.

"Given the average annual growth in the labor force pre-COVID, we should have four to five million more workers than we have today," Franz estimates.



This imbalance in the labor force hit some industries harder than others, particularly those most affected by the pandemic-era lockdowns. Those include travel, hospitality, manufacturing and education. The labor imbalance also has significant implications for the Fed's rate-hiking path, given the central bank's desire to cool down the red-hot job market, which adds to inflation through wage increases.

"If these shifts in the labor force persist," Franz notes, "it would require more rate hikes than the market has priced in today — and for a longer period of time — to realign labor supply and demand."

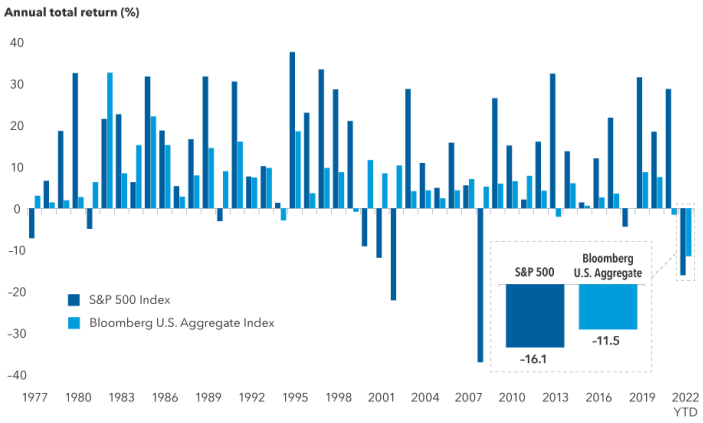
Over the long term, Franz believes the labor crunch will ease, especially if the U.S. economy falls into recession over the next year or two. But that's a painful way to solve the problem, he concedes.

"Unfortunately, it does sometimes take a significant downturn to resolve imbalances in the economy," Franz says.

Stocks and bonds falling

Among all the major distortions in the economy and markets today, this one strikes at the heart of portfolio diversification. Simply put, when stocks zig, bonds are supposed to zag. Yet that has yet to happen in 2022. Both major asset classes are coming under pressure as high inflation and rising interest rates hurt growth-oriented stocks as well as many types of corporate and government bonds.

As of August 31, the S&P 500 Index has lost about 16% on a year-to-date basis, while the Bloomberg U.S. Aggregate Index, which represents the U.S. investment-grade (rated BBB/Baa and above) bond market, has declined more than 11%. On a total return basis, that hasn't happened in more than 45 years — a period that includes the 1994 bond market meltdown, the early 2000s dot-com implosion and the 2007–09 global financial crisis.



The entire relationship hinges on inflation.

If the Fed can get consumer prices under control, the historically negative correlation between stocks and bonds should return, explains fixed income portfolio manager Pramod Atluri.

“That is the trillion-dollar question,” Atluri says. “Are we in a new higher inflation regime or not? I don’t think we are. In my view, we are likely to see inflation come down as the Fed and other central banks continue to raise interest rates and reduce their balance sheets.”

This painful experience, however, could have a long-term impact on the markets by affecting the willingness of governments and central banks to intervene during future times of crisis, Atluri adds.

“In my view, there will be less monetary and fiscal support over the next decade as policymakers assess what went wrong,” he adds. “That would be a big shift from what we’ve experienced over the past decade, which was largely defined by government intervention. Less intervention will likely result in more volatile markets than investors have been accustomed to.”

Silver-lining distortions

Not all COVID distortions necessarily carry a negative connotation. In the equity markets, post-pandemic opportunities are emerging in a number of areas, says Nick Grace, an equity portfolio manager.

Those areas include what Grace likes to call “structural changes,” including the transition from traditional energy sources to more sustainable sources, years of underinvestment in commodities, which could lead to a new commodities super cycle, and big industrial shifts, such as the increasing adoption of automation, resulting in greater demand for semiconductors.

He is also watching certain badly bruised tech and consumer-tech companies, including some of the darlings of the COVID lockdowns that have since sharply sold off. The remarkable pull-forward in demand that we saw during the lockdowns has proven to be a fleeting moment in time, rather than a new paradigm, and share prices are starting to reflect that reality.

“A lot of the price distortions we saw in 2020 and 2021 are being unwound,” Grace says, “which doesn’t mean they can’t fall further. But there’s already been a great deal of price destruction, and I think a lot of the excesses have been wrung out of the market.”

Over the next few years, Grace stresses, this is where traditional stock-picking skills will make all the difference.

“Many of these companies won’t survive,” he explains, “but a handful will come out of this downturn stronger and more profitable. It’s our job to identify them through fundamental bottom-up research, and I feel confident about our ability to do it.”

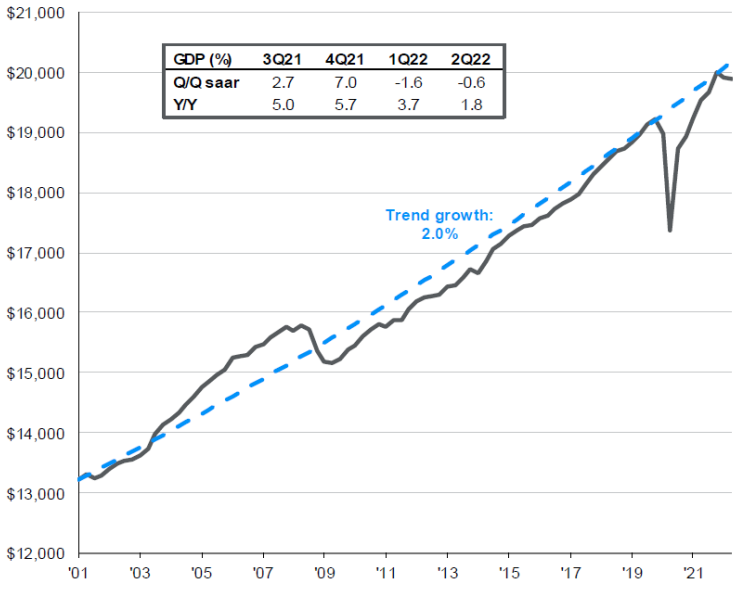
The sources of the information found in this commentary are the SSW Research Department, Bloomberg, and “Is High Inflation the Ultimate Pandemic Distortion” article by Capital Group .

Economy

Economic growth and the composition of GDP

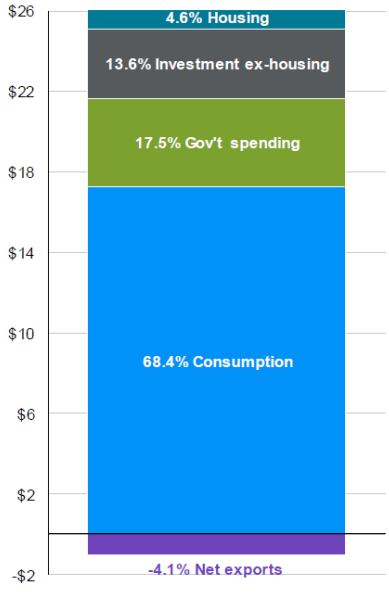
Real GDP

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



Components of GDP

2Q22 nominal GDP, USD trillions



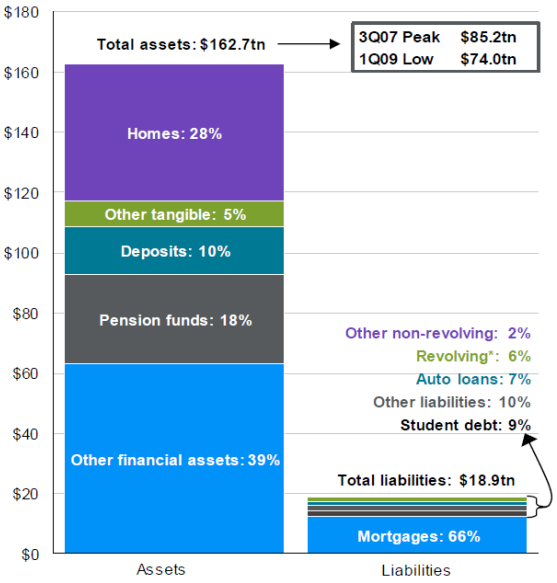
Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19.
Guide to the Markets – U.S. Data are as of September 30, 2022.

Economy

Consumer finances

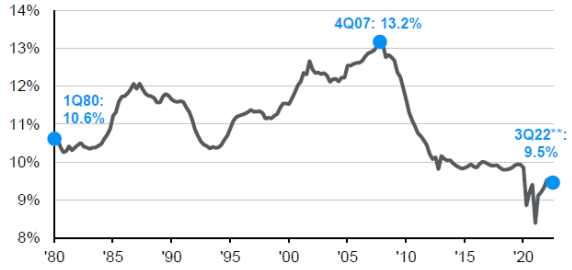
Consumer balance sheet

2Q22, trillions of dollars outstanding, not seasonally adjusted



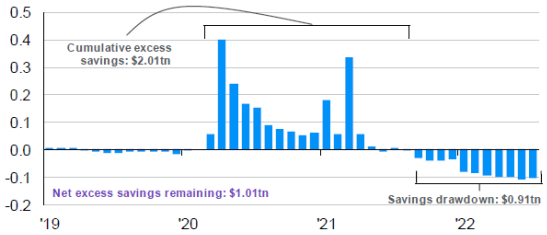
Household debt service ratio

Debt payments as % of disposable personal income, SA



Excess personal savings relative to pre-pandemic trend

Disposable personal income less consumer outlays, minus pre-pandemic trend growth***, $ trillions, monthly



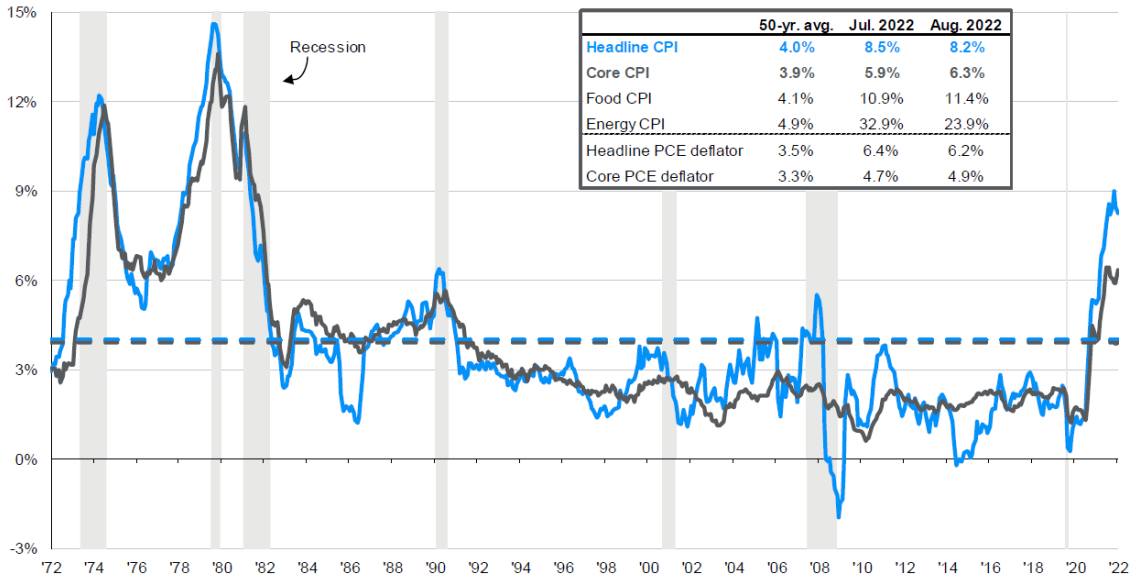
Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA.
Data include households and nonprofit organizations. SA – seasonally adjusted. *Revolving includes credit cards. Values may not sum to 100% due to rounding. **3Q22 figures for debt service ratio are J.P. Morgan Asset Management estimates. ***Figures reflect the difference in monthly realized savings vs. pre-pandemic trend savings. From March 2020 to August 2021, consumers amassed $2.0 trillion in excess savings. Since August 2021, consumers have begun to draw down on those excess savings, with the remaining reflected in the chart annotation.
Guide to the Markets – U.S. Data are as of September 30, 2022.

Economy

Inflation

CPI and core CPI

% change vs. prior year, seasonally adjusted



	50-yr. avg.	Jul. 2022	Aug. 2022
Headline CPI	4.0%	8.5%	8.2%
Core CPI	3.9%	5.9%	6.3%
Food CPI	4.1%	10.9%	11.4%
Energy CPI	4.9%	32.9%	23.9%
Headline PCE deflator	3.5%	6.4%	6.2%
Core PCE deflator	3.3%	4.7%	4.9%

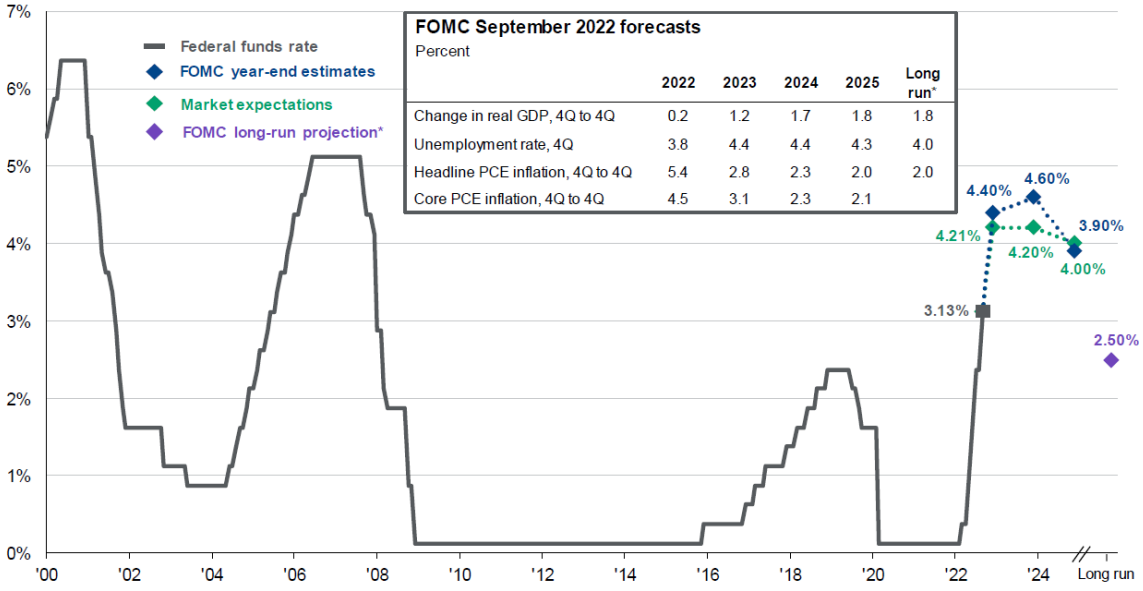
Source: BLS, FactSet, J.P. Morgan Asset Management.
CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations.
Guide to the Markets – U.S. Data are as of September 30, 2022.

Fixed Income

The Fed and interest rates

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



FOMC September 2022 forecasts

Percent

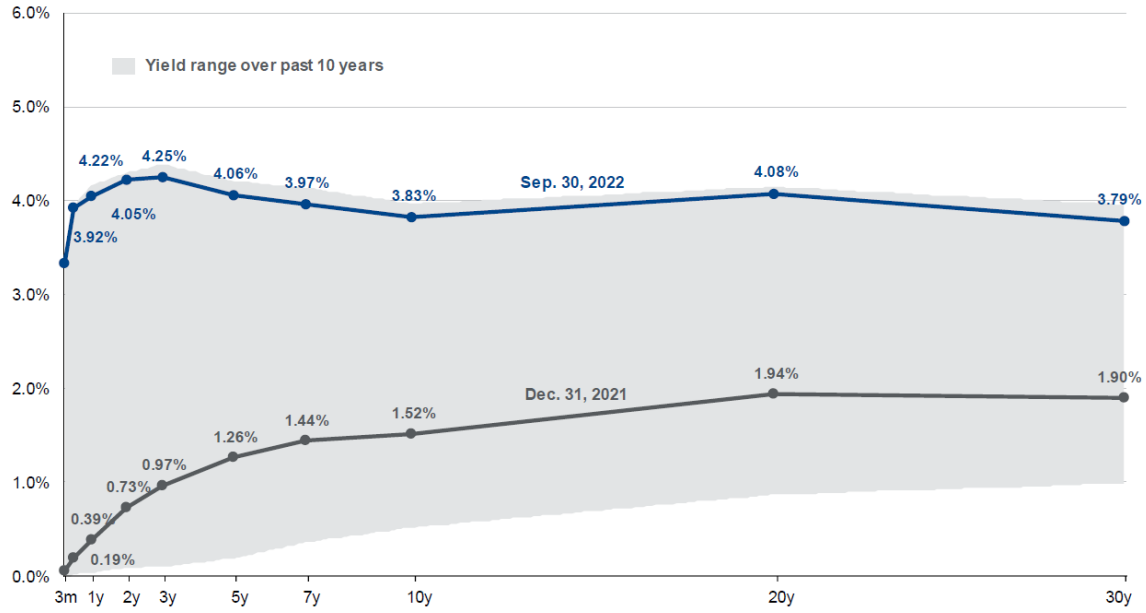
	2022	2023	2024	2025	Long run*
Change in real GDP, 4Q to 4Q	0.2	1.2	1.7	1.8	1.8
Unemployment rate, 4Q	3.8	4.4	4.4	4.3	4.0
Headline PCE inflation, 4Q to 4Q	5.4	2.8	2.3	2.0	2.0
Core PCE inflation, 4Q to 4Q	4.5	3.1	2.3	2.1	

Source: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management.
Market expectations are based off of the respective Federal Funds Futures contracts for December expiry. *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.
Guide to the Markets – U.S. Data are as of September 30, 2022.

Yield curve

Fixed Income

U.S. Treasury yield curve

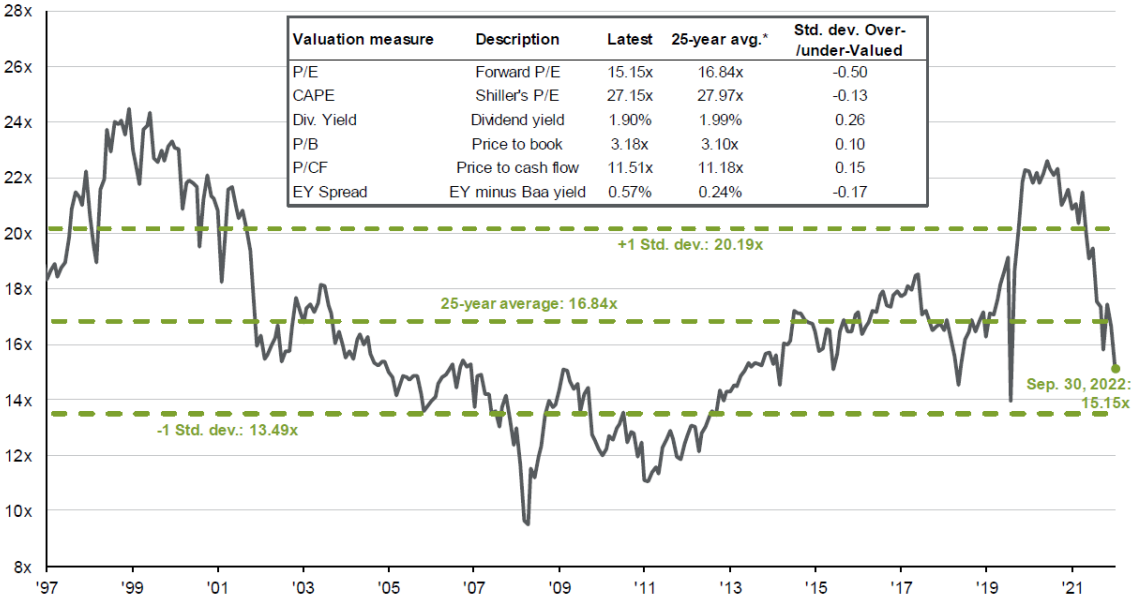


Source: FactSet, Federal Reserve, J.P. Morgan Asset Management.
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S&P 500 valuation measures

Equities

S&P 500 Index: Forward P/E ratio



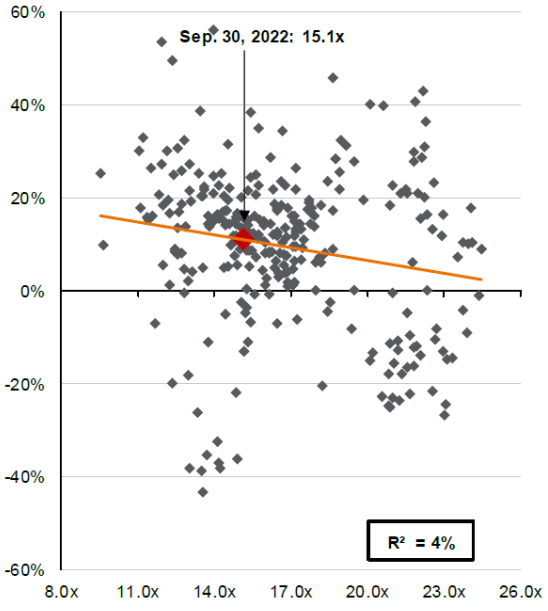
Valuation measure	Description	Latest	25-year avg.*	Std. dev. Over-/under-Valued
P/E	Forward P/E	15.15x	16.84x	-0.50
CAPE	Shiller's P/E	27.15x	27.97x	-0.13
Div. Yield	Dividend yield	1.90%	1.99%	0.26
P/B	Price to book	3.18x	3.10x	0.10
P/CF	Price to cash flow	11.51x	11.18x	0.15
EY Spread	EY minus Baa yield	0.57%	0.24%	-0.17

Source: FactSet, FRB, Refinitiv Datastream, 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 1997 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are $241. Average P/E and standard deviations are calculated using 25 years of 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.
Guide to the Markets – U.S. Data are as of September 30, 2022.

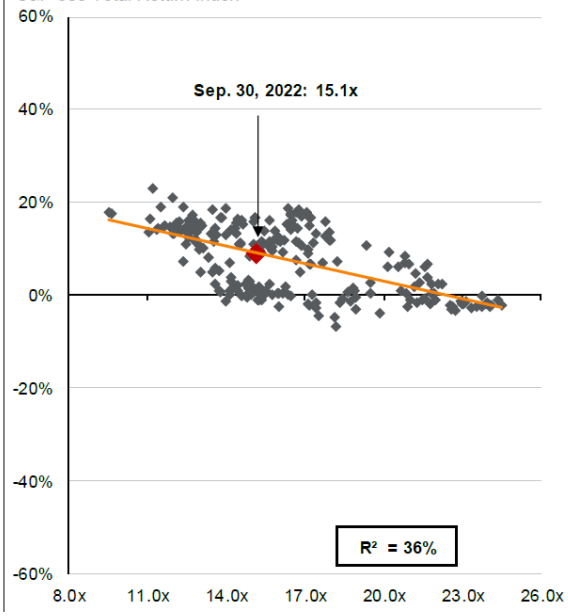
Equities

P/E ratios and equity returns

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

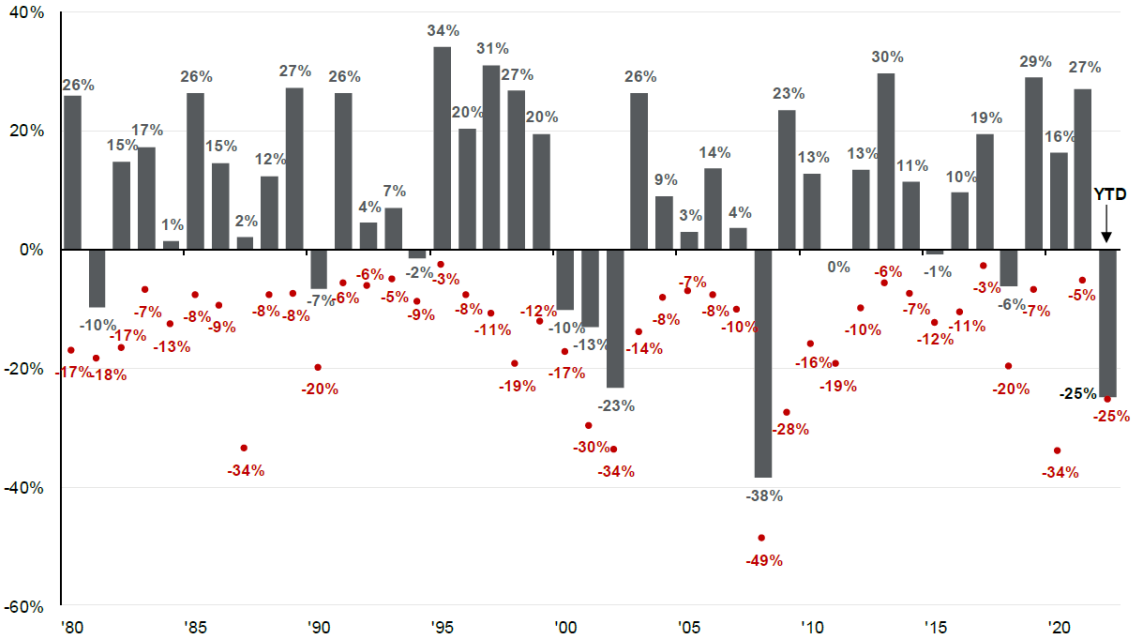


Source: FactSet, Refinitiv Datastream, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
Returns are 12-month and 60-month annualized total returns, measured monthly, beginning 8/31/97. R^2 represents the percent of total variation in total returns that can be explained by forward price-to-earnings ratios. Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since January 1997 and by FactSet since January 2022.
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Equities

Annual returns and intra-year declines

S&P intra-year declines vs. calendar year returns
Despite average intra-year drops of 14.0%, annual returns were positive in 32 of 42 years

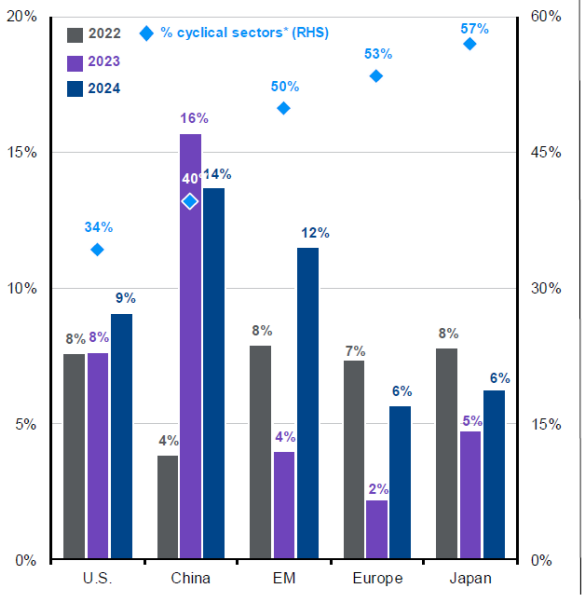


Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2021, over which time period the average annual return was 9.4%.
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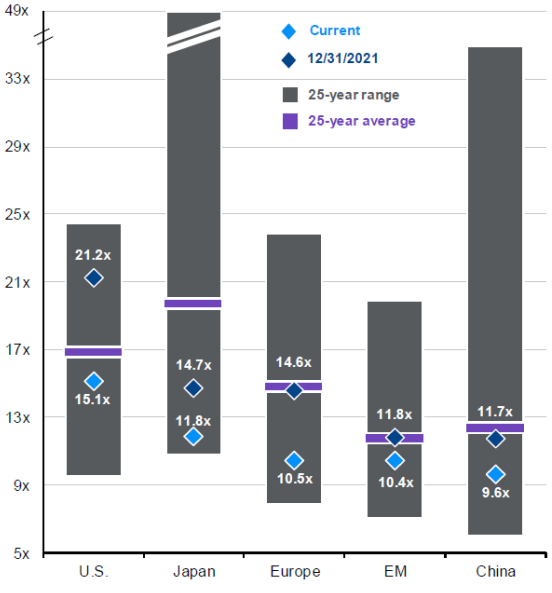
International

International equity earnings and valuations

Global earnings growth
Calendar year consensus estimates



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



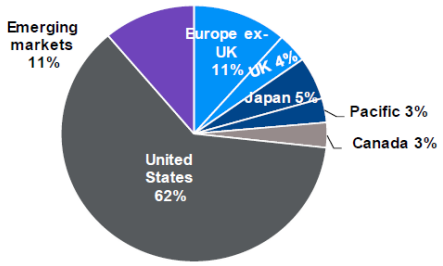
Source: FactSet, MSCI, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
*Cyclical sectors include consumer discretionary, financials, industrials, energy and materials. The Internet and direct marketing subsector has been removed from the cyclicals calculation. In our judgement, companies 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.
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International

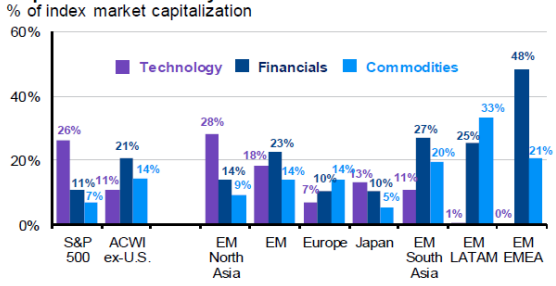
Global equity markets

Returns	2022 YTD		2021		15-years	
	Local	USD	Local	USD	Ann.	Beta
Regions						
U.S. (S&P 500)	-	-23.9	-	28.7	10.7	0.90
AC World ex-U.S.	-15.8	-26.2	13.5	8.3	4.2	1.07
EAFE	-14.1	-26.8	19.2	11.8	4.1	1.04
Europe ex-UK	-21.0	-31.2	24.4	16.5	4.8	1.18
Emerging markets	-20.5	-26.9	0.1	-2.2	4.8	1.18
Selected Countries						
United Kingdom	-1.3	-18.6	19.6	18.5	2.3	1.02
France	-17.1	-28.6	29.7	20.6	4.7	1.22
Germany	-27.0	-37.1	13.9	5.9	4.7	1.31
Japan	-7.1	-26.1	13.8	2.0	3.4	0.72
China	-29.4	-31.1	-21.6	-21.6	5.8	1.10
India	-0.8	-9.4	28.9	26.7	6.7	1.26
Brazil	8.6	11.8	-11.2	-17.2	0.9	1.50
Korea	-27.8	-40.0	0.8	-7.9	5.9	1.49

Weights in MSCI All Country World Index
% global market capitalization, float adjusted



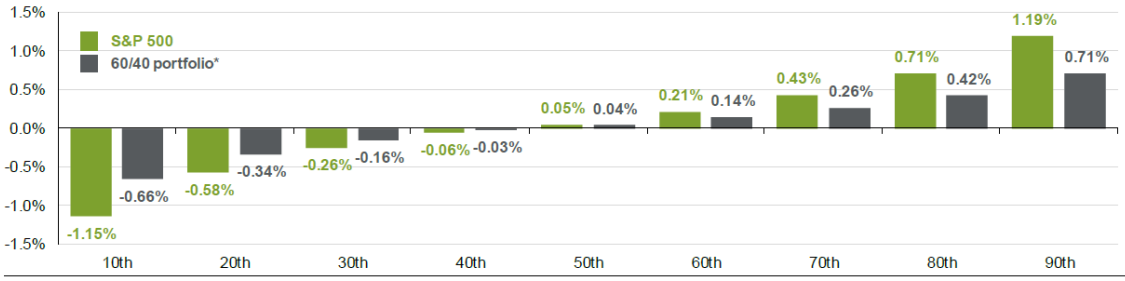
Representation of key sectors in international markets
% of index market capitalization



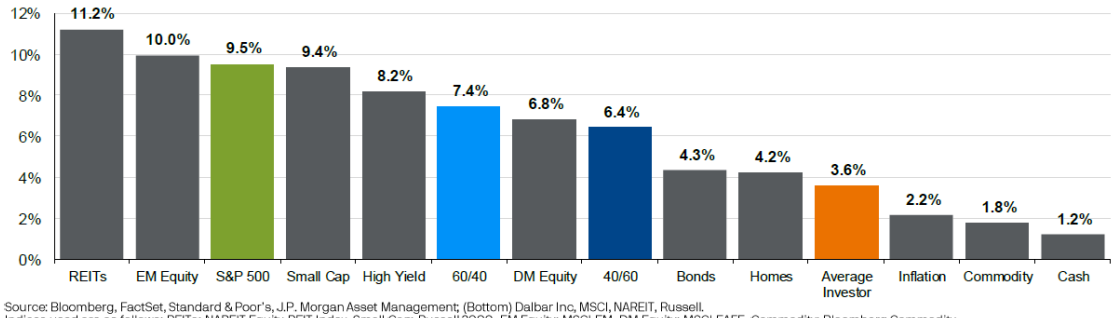
Source: FactSet, Federal Reserve, MSCI, Standard & Poor's, J.P. Morgan Asset Management. All return values are MSCI Gross Index data. 15-year history based on USD returns. 15-year return and beta figures are calculated for the time period 12/31/2006 to 12/31/2021. Beta is for monthly returns relative 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. EM North Asia includes China, Taiwan and South Korea. EM South Asia includes India, Indonesia, Malaysia, Pakistan, Philippines, Taiwan and Thailand.
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Diversification and the average investor

Equities vs. 60/40 portfolio: Last 20 years' daily market performance by decile



20-year annualized returns by asset class (2002 – 2021)



Source: 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 Global HY Index, Bonds: Bloomberg U.S. Aggregate Index, Homes: median sale price of existing single-family homes, Cash: Bloomberg 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 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.
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