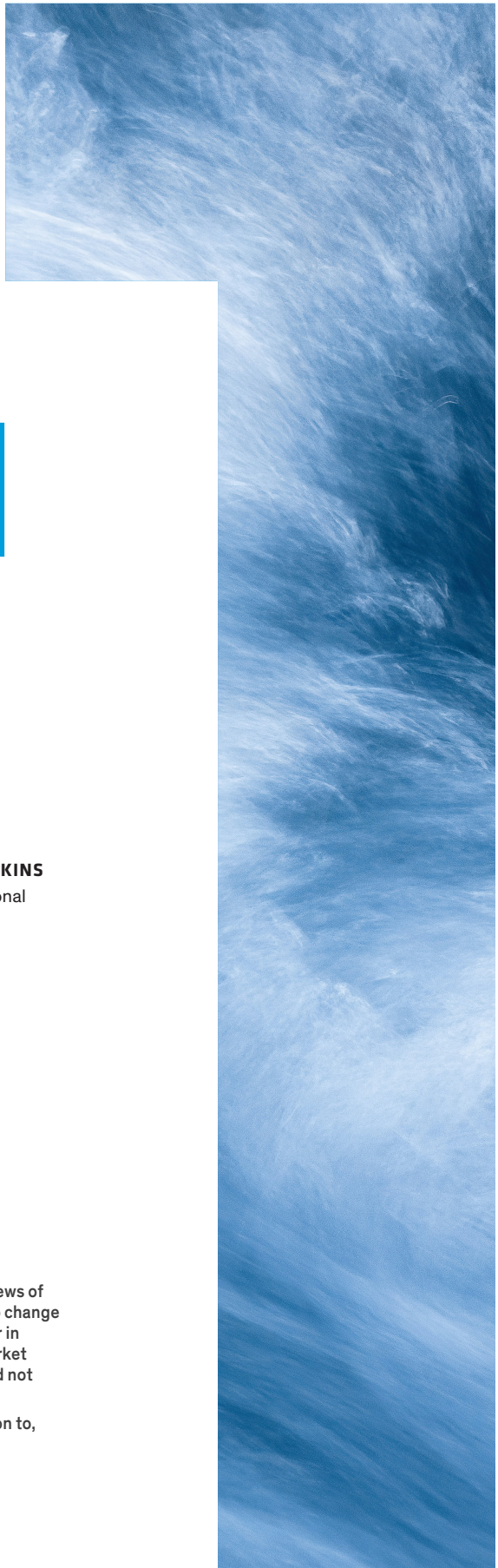
AllianceBernstein®

October | 2021



4Q:2021

Institutional Solutions Quarterly

Navigating Post-Pandemic Returns

We've segmented this first quarterly note from AB's new Institutional Solutions team into three chapters. The first sketches out our overall view of the investment landscape, the second outlines our key assumptions for capital markets, and the final chapter analyzes how asset owners can deploy factors interchangeably with asset classes. Collectively, the sections reflect the team's scope: the nexus of investment environment, capital-market outlook and investment-industry changes.

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Co-Head of Institutional Solutions

ADDITIONAL CONTRIBUTORS:
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Executive Summary

This *Institutional Solutions Quarterly* sets out a strategic view that encompasses the investment environment, capital-market outlook and a changing investment industry. The challenge of a decades-long decline in yields across asset classes underpins our outlook, implying lower potential returns ahead. Layered on top of this issue is the possibility of a very different post-pandemic policy environment.

Inflation is the preeminent macro topic of the day. While the focus of this note is primarily strategic, it is impossible to avoid the tactical aspects of inflation that cloud the policy outlook, given the long lags in the transmission of monetary policy to the real economy. We detail the evidence on whether excessively high levels of inflation are turning or accelerating—we think inflation will end up higher than the pre-pandemic level, but only moderately so.

The central challenge for investors is that low yields imply lower returns across most major asset classes, and, at the same time, diversification seems harder to come by today. This unfriendly environment also affects the outlook for private equity, which is viewed by some as an escape from the problem.

The strategic outlook for risk assets is tied to growth, and we discuss the marginal upward and downward forces on its trajectory. A significant upward boost seems likely to come from the energy transition, but there will also be a negative pull from a shrinking labor force across developed markets and China.

We detail our strategic outlook for the major asset classes: real returns will likely be lower on average, but the outlook is not necessarily bearish, with many assets still capable of delivering positive real returns.

For equities, the challenges are high valuations and the likelihood that margins decline, as the pendulum swings away from capital and toward labor—a function of sociopolitical choices we might call a macro corollary of ESG. The US households' allocation to equities is at the top end of its 70-year range. That might sound alarming, but the prospect of moderately higher inflation and the possibility of real yields remaining low actually imply that the allocation should be higher.

The last part of this quarterly considers what this "state of the markets" means for the *way* institutions invest. The return/risk outlook of traditional asset classes raises a pointed question: Should investors allocate elsewhere? The industry is already seeing a response to this question in the reallocation from traditional investments to alternatives.

Another aspect of this issue is the role of factors.

We make the case that asset classes and factors are complementary ways of investing. Asset-class valuations are high, but dispersions are wide *within* asset classes, potentially supporting the case for allocating more risk to factors—which a possible strategic shift in the inflation outlook further supports. We discuss what the asset-class/factor debate means for institutional portfolios.

Chapter One: The Investment Landscape

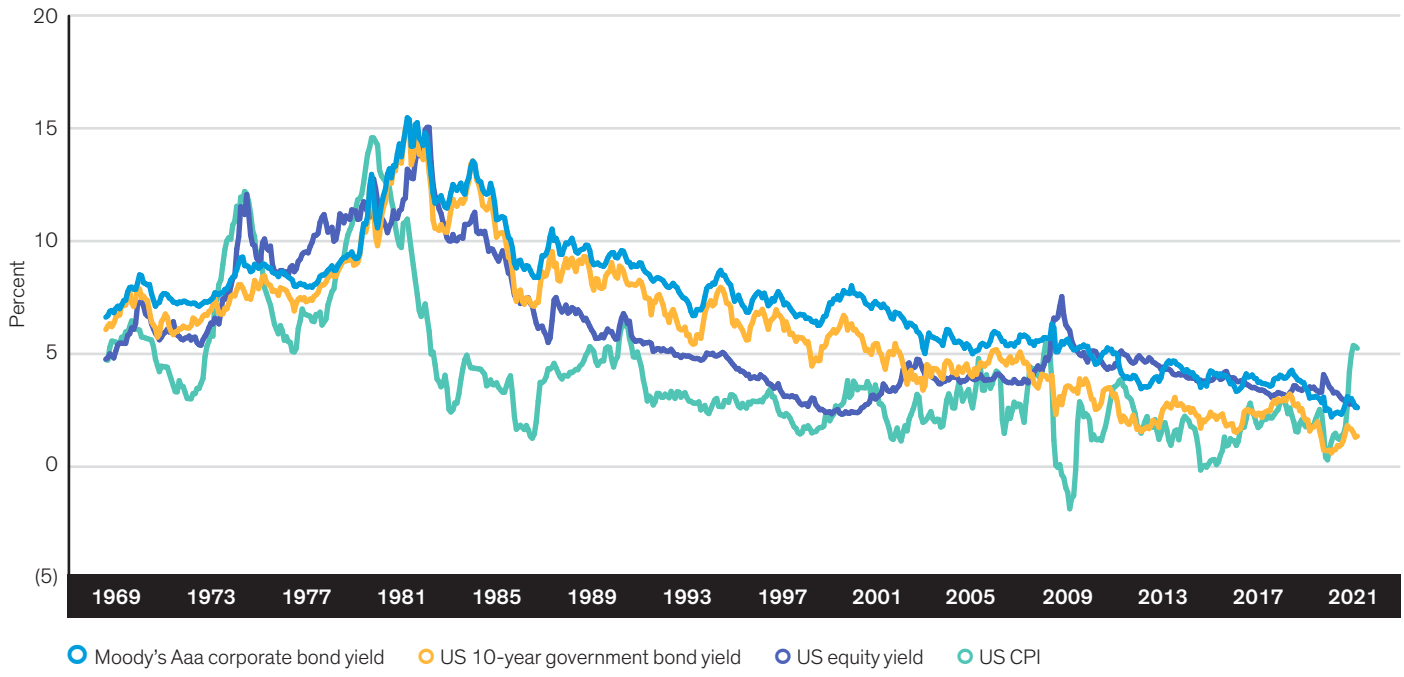
The post-COVID-19 pandemic investment environment is being defined not only by a potentially sizable shift in the policy environment but also by the legacy of 40 years of declining yields across asset classes (*Display 1*). The run-up in asset prices has spanned all financial assets, causing a record disconnect between prices in the financial and real economies (we'll return to this point in the final chapter).

Many investors have unsuccessfully tried to call a turning point in this trend. The legacy of rising asset prices says nothing about the timing of a possible shift, but viewed from a strategic investment horizon (the focus of this note), something extraordinary would likely need to happen for it to continue.

Aside from the tactical challenge of navigating the reopening trade, the outlook for growth and the path of policy are the key determinants of how the "initial conditions" set by low yields translate into a capital-market view. The key ingredient for that policy outlook right now is the inflation path. In this section, we also consider marginal strategic influences on the growth outlook.

DISPLAY 1: FORTY YEARS OF DECLINING YIELDS

US Nominal Bond Yield, Credit Yield, Equity Yield and Consumer Price Inflation



Historical analysis and current forecasts do not guarantee future results.

US equity yield is defined as 1/Shiller P/E for the US equity market.

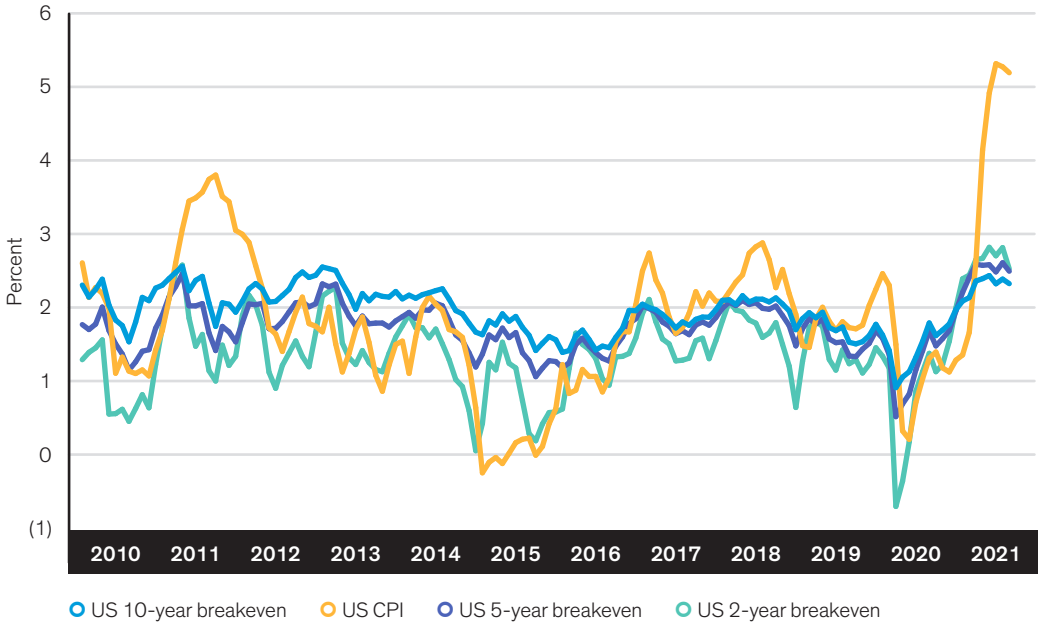
Through August 31, 2021 | **Source**: Datastream, FRED, Moody's, Robert Shiller's database and AB

Inflation: Reopening Impacts Mask the Longer-Term Picture

The inflation outlook is probably the key question for both the tactical and strategic outlook. We'll assess the longer-term outlook here, but the inflation question is also a key short-term issue, and the two can't really be separated. We see two challenges: One, inflation from the reopening trade masks the longer-term picture. And two, policymakers face a time lag for monetary transmission of policy to the real economy that usually lasts longer than one year.

Display 2 shows that current "printed" inflation is well above forecast breakevens, and the five-year breakeven is above the 10-year. We won't detail the long-run case for inflation, which we covered in more detail previously in *Assessing the Inflation Trajectory—and Portfolio Responses*. The recent evolution of the data doesn't change our view that the current very high inflation is transitory, a natural result of a demand surge and supply constraint. However, we think the pandemic does change the longer-run inflation path, so we end up with moderately higher inflation in a non-transient way. We detail the case for and against this outcome in *Display 3*.

DISPLAY 2: NEAR-TERM INFLATION MEASURES ARE HIGHER THAN LONGER-TERM MEASURES



Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Bloomberg, Datastream and AB

DISPLAY 3: THE CASE FOR AND AGAINST MEDIUM-TERM INFLATION

Deflationary Forces	Inflationary Forces
Persistent slack in the labor market, implying that wages won't lead inflation higher	With debt/GDP at its highest level since WWII, governments will prefer inflation in order to keep debt under control
The influence of technology and automation, which have been deflationary for years and remain that way	Politicians can use fiscal policy proactively with spending plans but may also send more cash to individuals to counter future downturns or address starkly wider societal inequality
Customers' possible realization, once pent-up spending ebbs, that nominal savings returns are down and inflation is up, implying the need to save more, which lowers money's long-term velocity	A growing ESG emphasis may be inflationary: consumers paying up for "ESG-friendly" products, less investment in upstream extraction or pushback against the gig economy, which could boost wages
The risk of zombie companies in the wake of the pandemic—not least because it may be politically hard to let companies go bankrupt in large numbers	The global labor supply is shrinking, hinting at wage inflation possibly taking root "naturally," but we think the policy backlash against the gig economy could happen more quickly

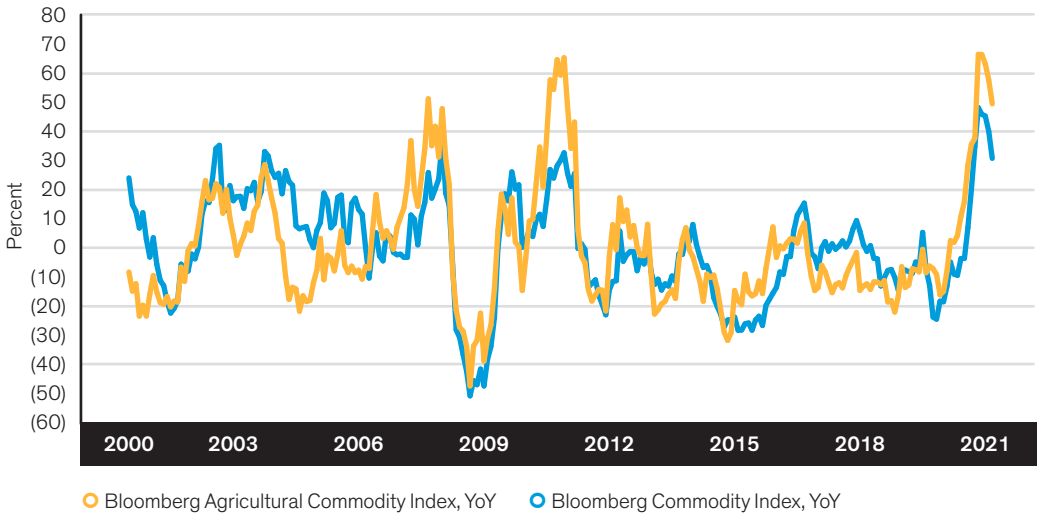
Current analysis does not guarantee future results.

As of September 30, 2021 | **Source**: AB

Our inflation discussion focuses on the strategic aspect, but inflation dominates the short-term conversation, too, especially as it affects the prognosis for monetary policy. Based on some of our favorite high-frequency inflation indicators, there are tentative signs that prices are starting to roll over in parts of the economy. Commodity price growth has been slowing down in the past few months (*Display 4)*, and used-car prices are also normalizing rapidly (*Display 5*).

DISPLAY 4: SLOWING COMMODITY PRICE GROWTH

Agricultural Commodity Index

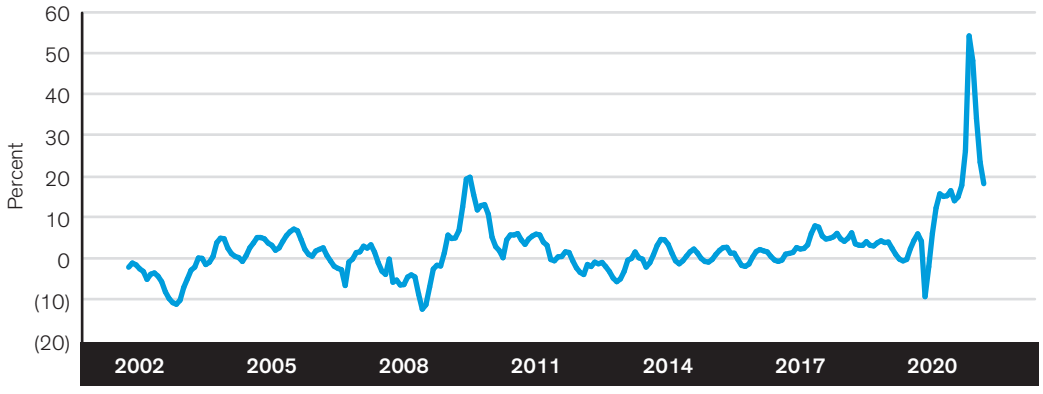


Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Bloomberg

DISPLAY 5: US USED-VEHICLE PRICES

US Used-Vehicle Prices, Year over Year



Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Bloomberg and Datastream

On the other hand, transport costs remain elevated (*Display 6*). We've seen an incredible jump in the cost of global shipping since the middle of 2020, and it remains stubbornly high. There's little sign of moderation in road transport costs (*Display 7*), which we also expect to remain high: labor shortages remain and US gasoline prices, which have risen sharply in recent months, are currently 40% below their historical average since 1995 (*Display 8*).

DISPLAY 6: TRANSPORTATION COSTS ARE STILL HIGH

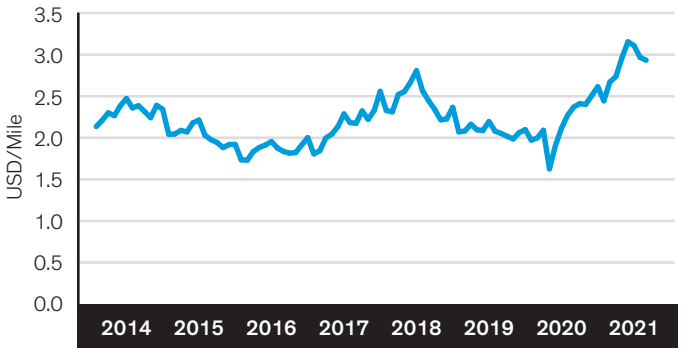
Drewry Hong Kong: LA Container Rate

Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Bloomberg and Datastream

DISPLAY 7: LITTLE SIGN OF TRANSPORTATION COST MODERATION

US Road Transportation



Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Bloomberg

DISPLAY 8: GAS PRICES ARE UP SHARPLY

US Gasoline Price

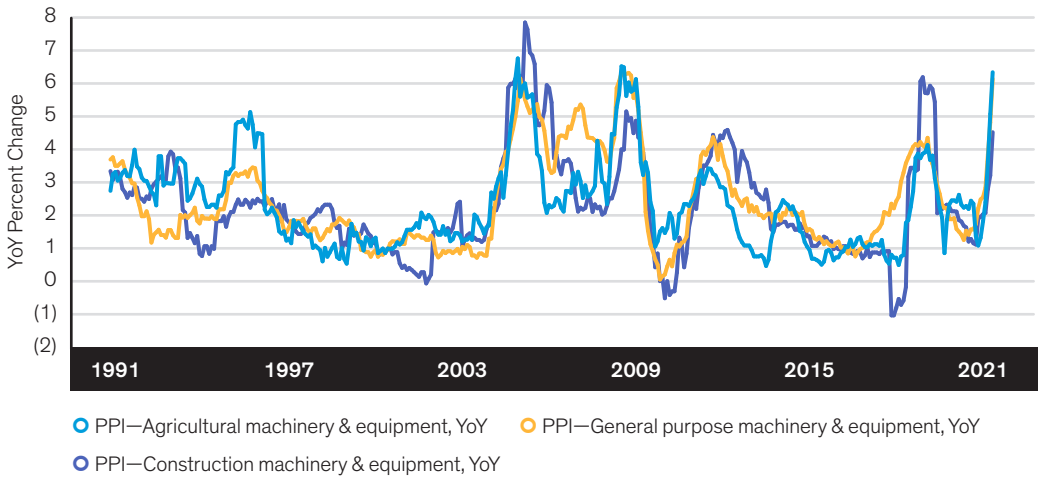
Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Bloomberg

Input costs have risen sharply, as well (*Display 9*), and manufacturers expect further increases in the near term—in *Display 10*, according to the US Empire State of Manufacturing Survey, expectations of prices paid for inputs are near their highest since 2008. Where companies have pricing power, we expect most of this increase to be passed on to consumers.

DISPLAY 9: INPUT COSTS ARE UP SHARPLY...

Producer Price Index

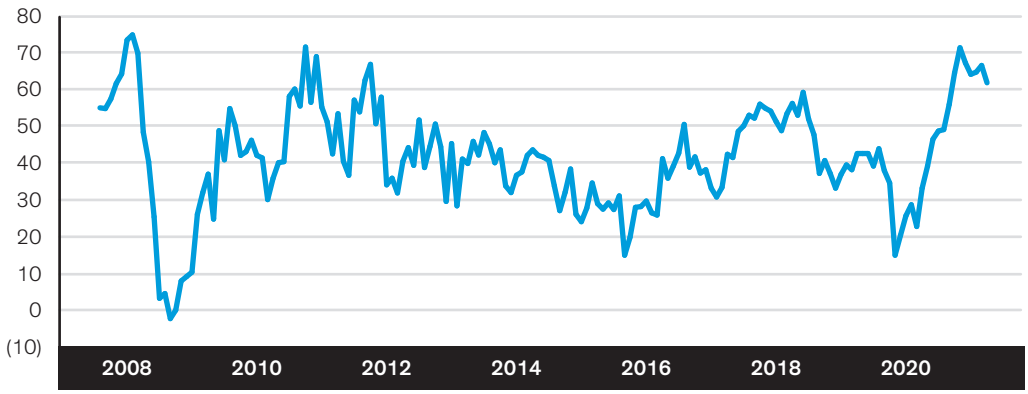


Historical analysis and current forecasts do not guarantee future results.

Through July 15, 2021 | **Source**: Datastream

DISPLAY 10: ...AS ARE EXPECTATIONS

US Empire State of Manufacturing Survey



Historical analysis and current forecasts do not guarantee future results.

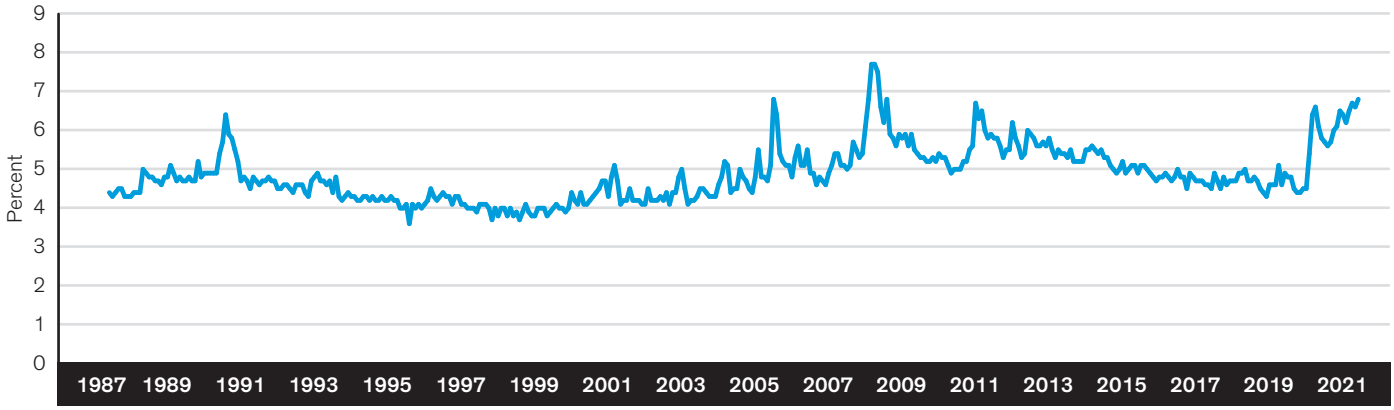
Through September 15, 2021 | **Source**: Datastream

Consumer near-term expectations for inflation remain elevated, as well, and are at their highest level since mid-2008 (*Display 11*).

We see early signs that rising prices are starting to affect consumer sentiment, given the big drop in the University of Michigan's consumer confidence indicator in August (*Display 12*) and marked slowdown in retail sales growth in recent months (*Display 13*). If consumer confidence continues to sour, that could have strong negative implications for demand and put downward pressure on future price increases.

DISPLAY 11: NEAR-TERM INFLATION EXPECTATIONS ARE AT THEIR HIGHEST IN MORE THAN A DECADE

US Conference Board: Consumer Inflation Expectations

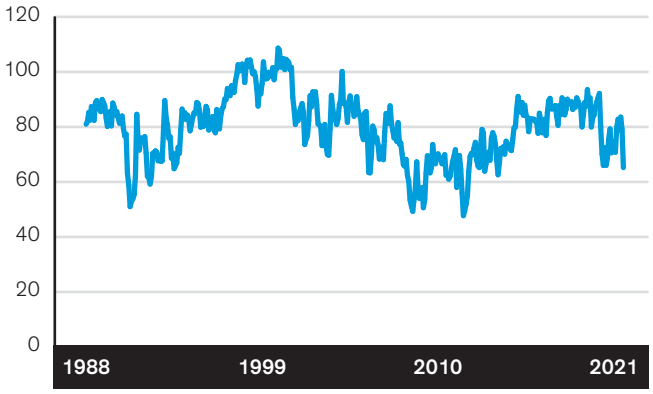


Historical analysis and current forecasts do not guarantee future results.

Through August 15, 2021 | **Source**: Datastream

DISPLAY 12: SIZABLE DROP IN CONSUMER CONFIDENCE

Consumer Confidence Indicator

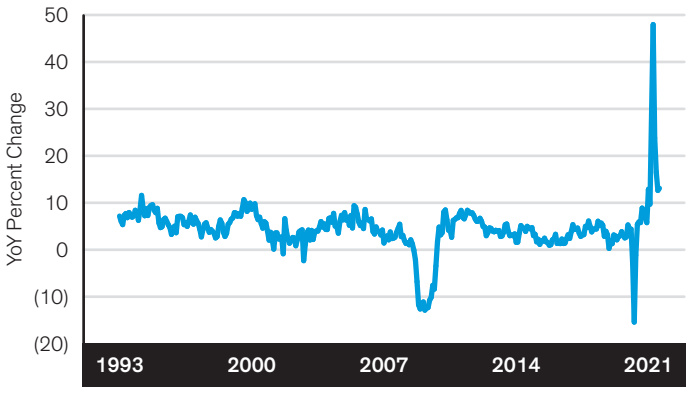


Historical analysis and current forecasts do not guarantee future results.

Through August 15, 2021 | **Source**: Datastream and University of Michigan

DISPLAY 13: RETAIL SALES GROWTH SLOWDOWN

US Retail Sales



Historical analysis and current forecasts do not guarantee future results.

Through August 15, 2021 | **Source**: Datastream

The Case for—and Against—Higher Growth

The amplitude of the bounce back from the COVID-19-induced recession complicates the growth outlook and clouds the tactical horizon. In recent months, this situation could have been described as the reopening narrative versus the delta narrative; now, it may be progressing to a narrative linked to near-term policy responses. That tactical outlook is not our primary focus. The question we're examining: What is the five–10-year strategic outlook?

We see two key drivers for marginal changes to growth rates:

A case for higher global growth lies in the spending boost from the energy transition. The transition will require a significant capital injection over the next decade, with estimates suggesting that the multiplier effect of that spending could be above the average boost from capital investment (International Monetary Fund, *Building Back Better: How Big Are Green Spending Multipliers?*). In this sense, the energy transition could be viewed as akin to the buildout of railways or electrification.

We would add to the higher-growth case the possibility that the COVID-19 experience could enable looser fiscal rules for a *time*. This point is open to debate. For example, the promise of an ongoing post-COVID-19 fiscal boost in the UK is now under attack from a renewed drive to make public spending appear "sustainable." These themes are linked: a post-COVID-19 rethink of the role of government spending and a possible greater political willingness to make investment decisions if they're labeled "green" could be a powerful combination that changes public-investment patterns.

There's a case to be made for lower growth rates, too. On a strategic horizon, it stems from demographics and, specifically, shrinking working-age populations in many countries, which we discuss in the next section. The shrinkage affects most advanced economies and China. The process is clearly well advanced for Japan, and Europe has started down a similar track (albeit with VERY different starting valuations than Japan, distinguishing its return outlook). The trend exists in the US, as well, but in a less pronounced way, which has been used as an argument for continued US exceptionalism.[1]

Of course, productivity might also increase, a shift that would play a major role in altering growth expectations. However, attempts to forecast productivity have been very ineffective, so to be conservative we suggest that investors should assume that productivity remains flat—at least as a starting point for analysis.

Demographics as a Growth Headwind

In our view, demographics will be a significant headwind for global growth in the coming decade. The United Nations projects the pace of working-age population growth to be well below its historical average in coming decades. Meanwhile, the European and US working-age population has been declining for years already and is expected to continue shrinking (*Display 14*).

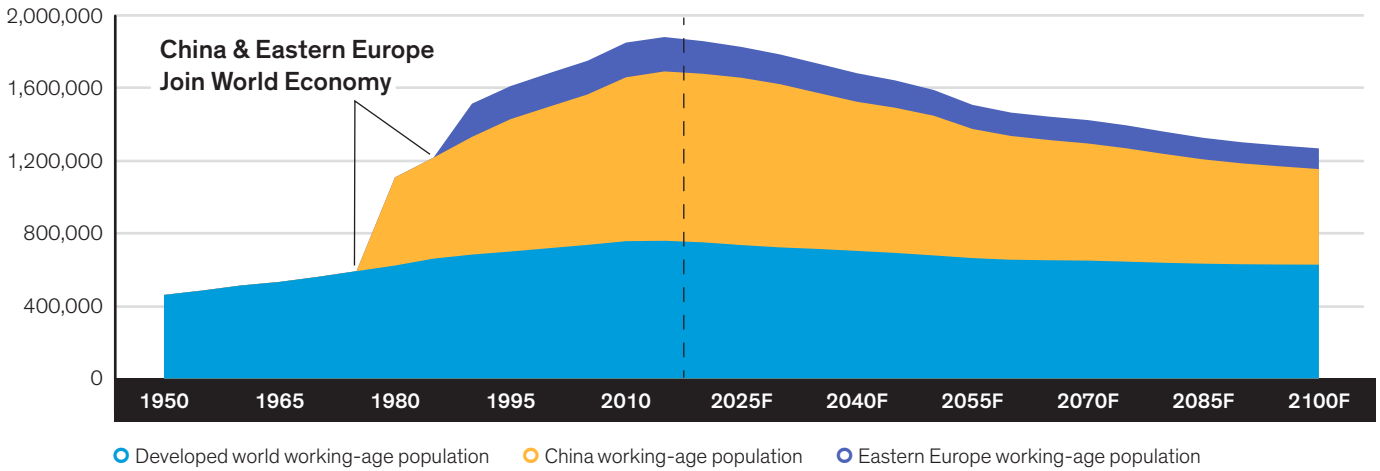
The projected decline in the working-age population should be put in the context of changes in recent decades. The global labor force has ballooned since 1980, with China and then former Soviet countries joining the world economy in conjunction with a dominant political narrative in many developed countries that allowed companies to offshore labor. The projected decline in the labor force in China and former Soviet countries is reversing a considerable part of that earlier expansion. Meanwhile, the political tide in developed economies has turned against a compression of DM and EM wages, and this could well have an even more immediate impact.

This story is relevant to both the inflation and growth debates as a potential argument for inflation through wage bargaining power (though there will be an ongoing lively debate about whether it will be entirely offset by automation). We could also see a downward force on growth (assuming no change in productivity, of course). The extent to which this demographic factor has lifted real growth and depressed inflation in recent decades will be a key part of the policy reaction.

1 P. Zeihan, *The Accidental Superpower* (2014), p.12.

DISPLAY 14: A COMING REVERSAL OF WORKING-AGE POPULATION GROWTH

Working-Age Population (in Thousands)



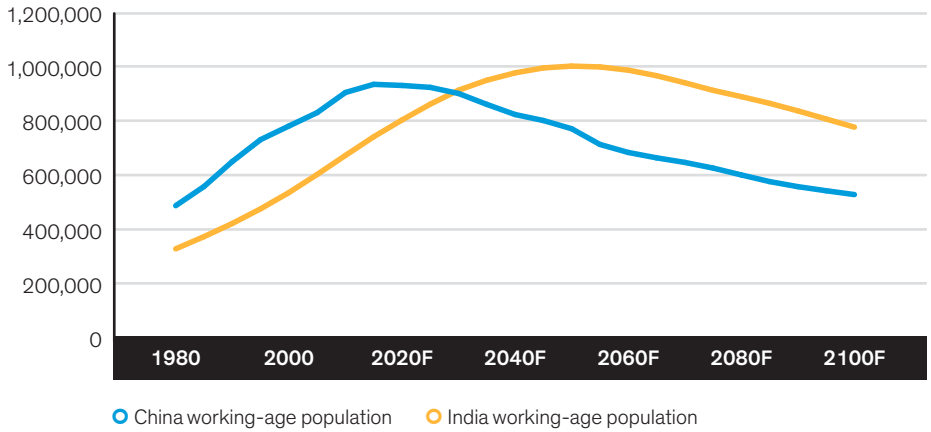
Historical analysis and current forecasts do not guarantee future results.

Note: Size of regional population between ages 20 and 65

As of March 12, 2021 | **Source**: UN Population Division and AB

DISPLAY 15: THE EMERGING-MARKET WORKING-AGE DRIVER IS REVERSING, TOO

China and India Working-Age Population (in Thousands)



Historical analysis and current forecasts do not guarantee future results.

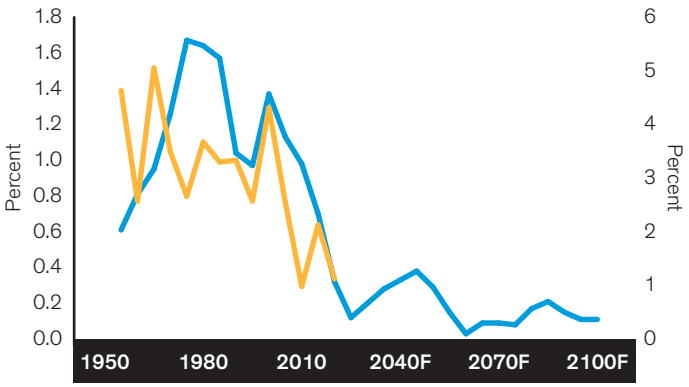
Note: Size of regional population between ages 20 and 65

As of March 12, 2021 | **Source**: UN Population Division and AB

We note that while, emerging markets (EM) had been a significant driver of the global working-age population increase, that trend is reversing (*Display 15*). The working-age population in China is already declining, while growth in India is slowing significantly and expected to peak in the coming decades.

As we show in *Displays 16*, *17* and *18*, there is a significant link, across regions, between working-age population increases and gross domestic product (GDP) growth.

DISPLAY 16: US WORKING-AGE POPULATION

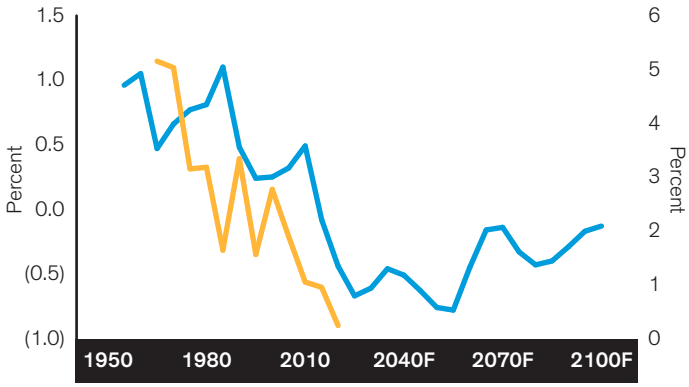


- US: Working-age population (20–60, 5-year change, annualized, left scale)
- US: Real GDP growth 5-year (annualized)

Historical analysis and current forecasts do not guarantee future results.

As of September 30, 2021 | **Source**: Datastream, Global Financial Data, UN Population Division and AB

DISPLAY 17: EUROPE WORKING-AGE POPULATION

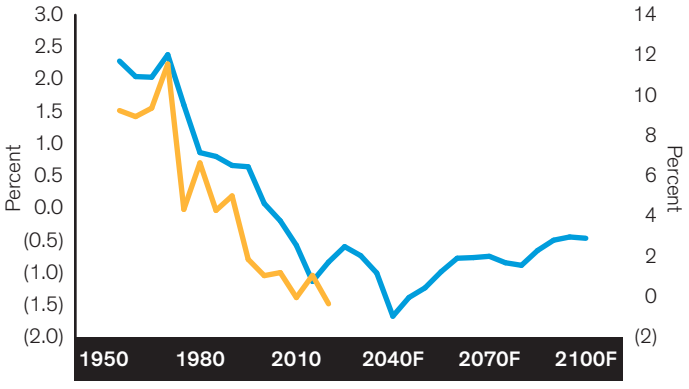


- Europe: Working-age population (20–60, 5-year change, annualized, left scale)
- Europe: Real GDP growth 5-year (annualized)

Historical analysis and current forecasts do not guarantee future results.

As of September 30, 2021 | **Source**: Datastream, Global Financial Data, UN Population Division and AB

DISPLAY 18: JAPAN WORKING-AGE POPULATION



- Japan: Working-age population (20–60, 5-year change, annualized, left scale)
- Japan: Real GDP growth 5-year (annualized)

Historical analysis and current forecasts do not guarantee future results.

As of September 30, 2021 | **Source**: Datastream, Global Financial Data, UN Population Division and AB

Chapter Two: Capital Markets Outlook

Aside from the macro outlook described in the first chapter, the key building blocks in our view are valuation, growth (including the outlook for margins), sentiment and volatility.

The central issue for asset owners is the presence of seemingly strong reasons to indicate that achieving return for a given level of risk will be harder over the next 10 years than the past decade. This is a bearish statement—we expect positive real return on equities, for example—but highlights that the outlook is harder. This challenge will have a decisive impact on asset-allocation decisions and, we think, in time will change the methodology of asset allocation.

The message on valuation is that most asset classes are what we would describe as "fully valued," while within asset classes there are large valuation spreads. The growth picture is complicated by the near-term news flow on reopening, which is not our focus in this note—we look at the key positive and negative forces influencing the strategic growth outlook.

The directional message on margins seems clearer. There's a case that macro growth can continue, but the ability of the corporate sector to retain its share of this is moot. Another force acting on the market is sentiment. Here, the message from a range of indicators is complicated: At face value, they imply that sentiment toward risk assets is overly positive, which could be bearish. But when one actually overlays the macro environment, there is scope for further expansion of equity positions.

In *Display 19*, we summarize the valuation levels of key asset classes compared with their average historical levels, and the general picture is that most asset classes are expensive versus history. The exceptions include exposure to commodities assets (cue the question on ESG) and the unusually "cheap" value factor (see the following chapter).

DISPLAY 19: MOST ASSET CLASSES ARE EXPENSIVE

Asset Valuation Z Scores

Start date	Asset	Valuation (z score)
Sep 71	US 10-Year TIPS	2.53
Jan 70	Municipal Bonds	1.83
Jan 06	US Private Equity Buyouts	1.67
Jan 73	US REITs Sector Yield	1.58
Jan 70	US 10-Year Government Bonds	1.54
Jan 70	US Equities	1.15
Jan 85	EM Equities	1.12
Jan 97	US Investment-Grade Credit Index	1.07
Jan 97	US High-Yield Credit Index	0.93
Jan 95	US Mining & Energy Sectors (relative)	(2.58)

Historical analysis and current forecasts do not guarantee future results.

The data history used is from 1970 or longest available history indicated in the Start date column. For equities, valuation metric used is the cyclically adjusted earnings yield (1/Cyclically Adjusted PE (CAPE) ratio). For bonds, the valuation is measured by the bond yield. The sector relative valuation is measured as the relative Yes, 12-month forward earnings yield (1/PE) relative to the broader US market. Credit index valuation is measured by the option-adjusted spread. Real estate investment trusts (REITs) sector valuation is measured by the dividend yield. Private Equity valuations are based on the US average EBITDA purchase price multiple for leveraged buyout transactions using annual data. Higher z-score value indicates a higher premium to historical valuation.

As of September 13, 2021 | **Source**: Datastream, Fama-French database, Federal Housing Finance Agency, FRED, Freddie Mac, Global Financial Data, MSCI and AB

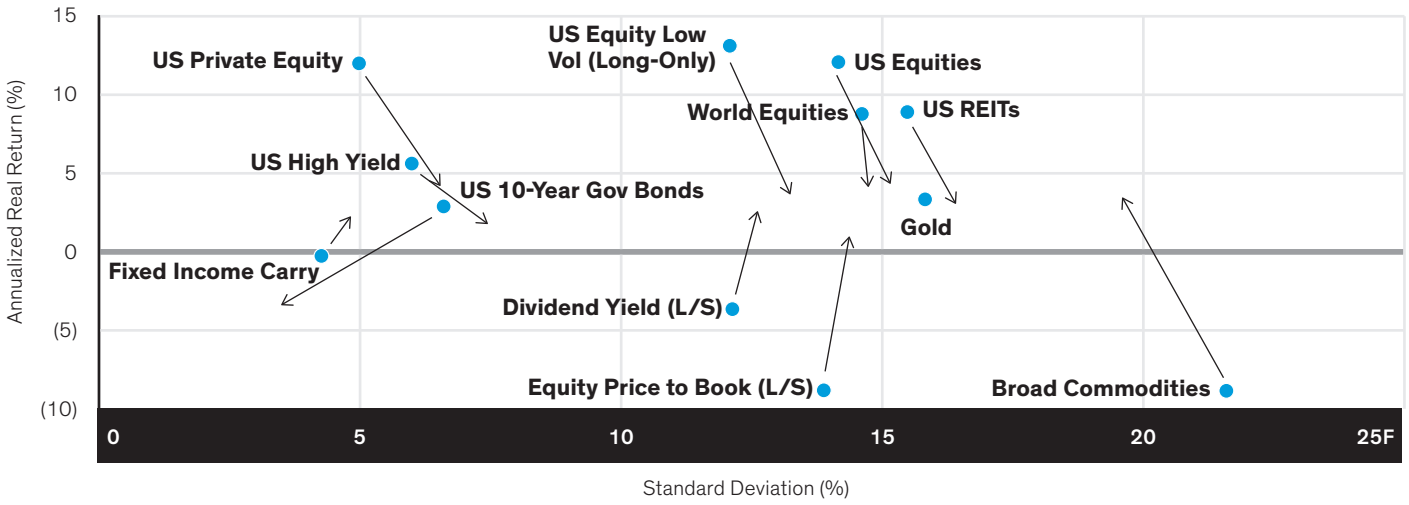
Higher valuations for many asset classes translate into generally lower returns than investors have experienced in recent decades.

In *Display 20*, we show 10-year historical returns from key asset classes, with arrows indicating how we expect them to evolve in the next 10 years. The chart essentially summarizes the conclusions of this chapter: The bottom line is that investors do not appear to have any "easy options." Achieving a given level of real return entails taking on higher risk by rebalancing portfolios into higher-risk assets or using leverage.

What this chart does not show is that the challenge is compounded by the probability that higher inflation would make it harder for bonds to diversify equity risk—and that high-grade fixed-income duration is at the top end of its historical range. This need to increase risk may be familiar for fixed-income investors who have migrated to lower levels of credit quality or into EM assets, but we think it applies in a multi-asset context.

DISPLAY 20: A COMPRESSION OF RISK-ADJUSTED RETURNS?

Investors Must Add Risk; Pension Plans May Need to Add Factors



Historical analysis and current forecasts do not guarantee future results.

The dots represent the real returns and volatility during the period of January 2010 through December 2020 for the major return streams that investors can buy. The arrows represent the AB Institutional Solutions team's forecasts for the next five–10 years. As of June 2021 | Note: The US Private Equity data are compiled from 1,562 funds, including fully liquidated partnerships, formed between 1986 and 2019. All returns are net of fees, expenses and carried interest. Data are provided at no cost to managers. Private Equity data provided as of March 31, 2020.

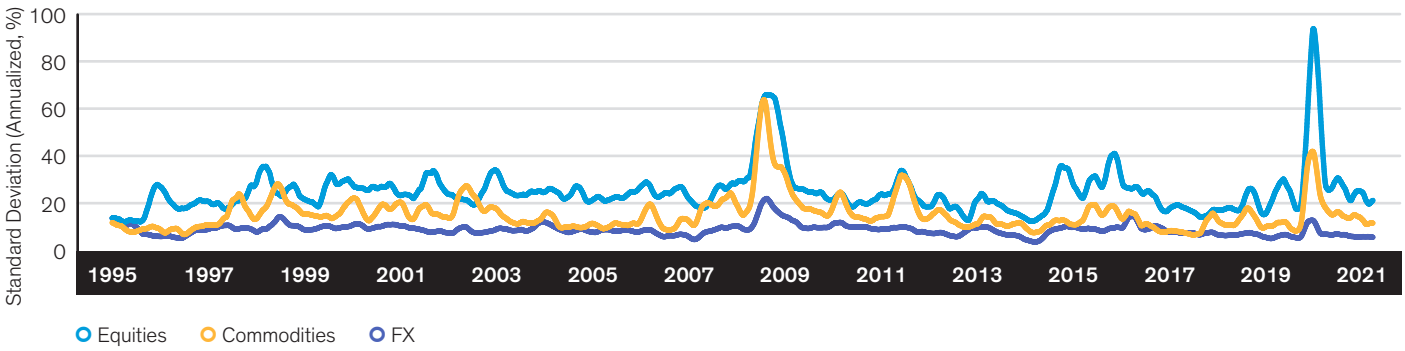
Source: Cambridge Associates, Datastream, FactSet, FRED, Ken French Data Library and AB

Having said that, investors do not need to give up all hope. One could interpret high asset valuations and the outlook for policy as being outright bearish for risk assets, but we think real returns are likely to remain positive for many assets. For an unconstrained portfolio, equities, high-yield REITs and commodities are forecast to deliver positive returns. However, low returns increase the need to add factors alongside asset classes (the subject of the final chapter in this note) and will also continue to drive flows into alternative investments (the subject of a future note).

Volatility and Correlations

After a sharp spike in the second quarter of 2020, volatility across asset classes has swiftly normalized; except for commodities, volatility is once again significantly below historical average (*Display 21*). We don't believe that such low volatility levels will be sustained in the coming years. Valuation is one of the strongest arguments in favor of higher volatility: US equity valuation multiples are firmly in the highest decile compared with history, and, as we show in *Display 22*, historically high valuations are associated with high future volatility.

DISPLAY 21: VOLATILITY IS LOW ACROSS ASSET CLASSES



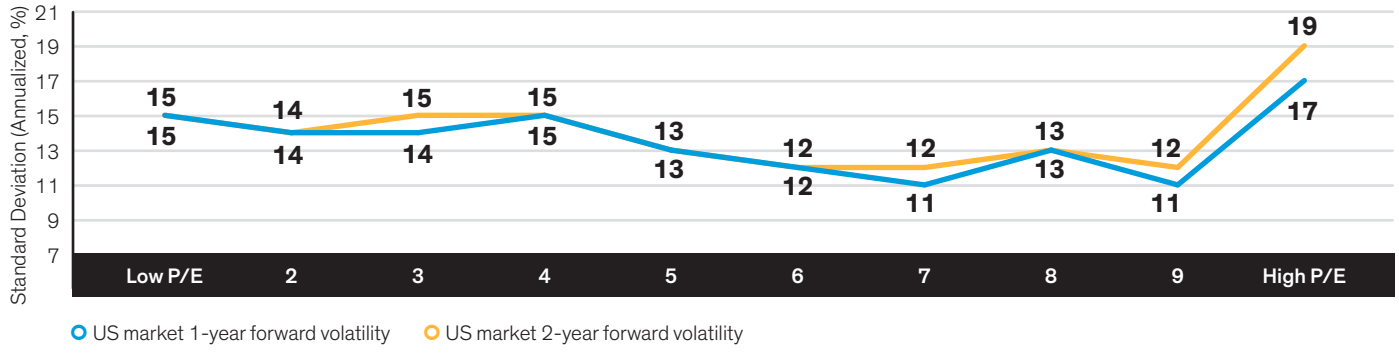
Historical analysis and current forecasts do not guarantee future results.

The chart shows the three-month moving average of annualized 30-day rolling standard deviation. Equities aggregate is an average of S&P 500, MSCI EAFE and MSCI EM; commodities is an average of oil and gold, while FX index is an average of EUR, GBP and YEN.

Through September 7, 2021 | **Source**: Bloomberg, CBOE, Datastream, MSCI, S&P and AB

DISPLAY 22: HISTORICALLY HIGH VALUATIONS ARE ASSOCIATED WITH HIGH FUTURE VOLATILITY

Forward Volatility by Shiller Price/Earnings Decile



Historical analysis and current forecasts do not guarantee future results.

As of July 31, 2021 | **Source**: Datastream, Global Financial Data, Robert Shiller's database and AB

Also, the probability of negative returns and significant drawdowns increases markedly as equity valuations move to more expensive deciles (*Display 23* and *24*). And, as we showed in *Display 19*, valuations for other assets, such as credit and high-grade bonds, are looking even more stretched. Historically, peaks in profitability have been associated with a rise in equity future volatility (*Display 25*), as demonstrated by comparing US corporate profit's share of GDP and forward equity volatility. Given that the profit share is near its highest level since 1950, we don't see much scope for further expansion.

Against this backdrop, the current policy environment is a very significant driver of lower volatility. The swift, decisive fiscal and monetary policy response to the COVID-19 crisis has undoubtedly stabilized markets and suppressed volatility. Both policy channels remain extremely supportive, and should keep volatility in check in the coming months. But beyond that lies a high degree of uncertainty for the global growth outlook and policy environment, which is at odds with today's quiescent volatility levels.

DISPLAY 23: PROBABILITY OF FORWARD RETURN OUTCOMES FOR SHILLER P/E QUINTILES (5% RANGES)

		One-Year Forward Return			Three-Year Forward Return			Five-Year Forward Return		
Shiller P/E Quintile		< (5)%	(5)% to +5%	> +5%	< (5)%	(5)% to +5%	> +5%	< (5)%	(5)% to +5%	> +5%
Cheap	1	12%	9%	78%	0%	1%	99%	0%	0%	100%
	2	16%	20%	64%	3%	8%	89%	3%	5%	92%
	3	23%	24%	52%	16%	11%	73%	4%	8%	88%
	4	26%	20%	55%	16%	10%	74%	13%	7%	80%
Expensive	5	25%	15%	61%	29%	8%	63%	23%	14%	63%

Historical analysis and current forecasts do not guarantee future results.

Sample period 1881–2017 | **Source**: Datastream, Robert Shiller's database and AB

DISPLAY 24: PROBABILITY OF FORWARD RETURN OUTCOMES FOR SHILLER P/E QUINTILES (10% RANGES)

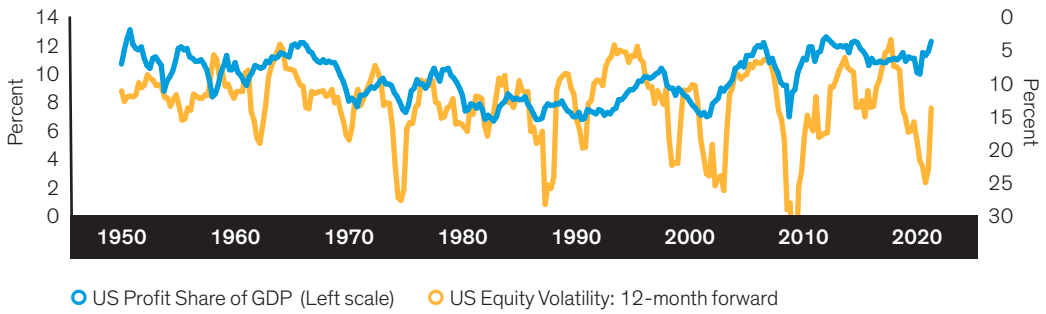
		One-Year Forward Return			Three-Year Forward Return			Five-Year Forward Return		
Shiller P/E Quintile		< (10)%	(10)% to +10%	> +10%	< (10)%	(10)% to +10%	> +10%	< (10)%	(10)% to +10%	> +10%
Cheap	1	17%	81%	2%	19%	79%	2%	19%	79%	2%
	2	22%	77%	1%	36%	63%	1%	41%	59%	1%
	3	30%	69%	1%	42%	57%	1%	49%	50%	1%
	4	25%	75%	0%	44%	56%	0%	48%	52%	0%
Expensive	5	29%	70%	1%	54%	46%	0%	70%	30%	0%

Historical analysis and current forecasts do not guarantee future results.

Sample period 1881–2017 | **Source**: Datastream, Robert Shiller's database and AB

DISPLAY 25: PROFITABILITY PEAKS: HARBINGER OF HIGHER FUTURE EQUITY VOLATILITY?

US Profit Share and Forward Volatility

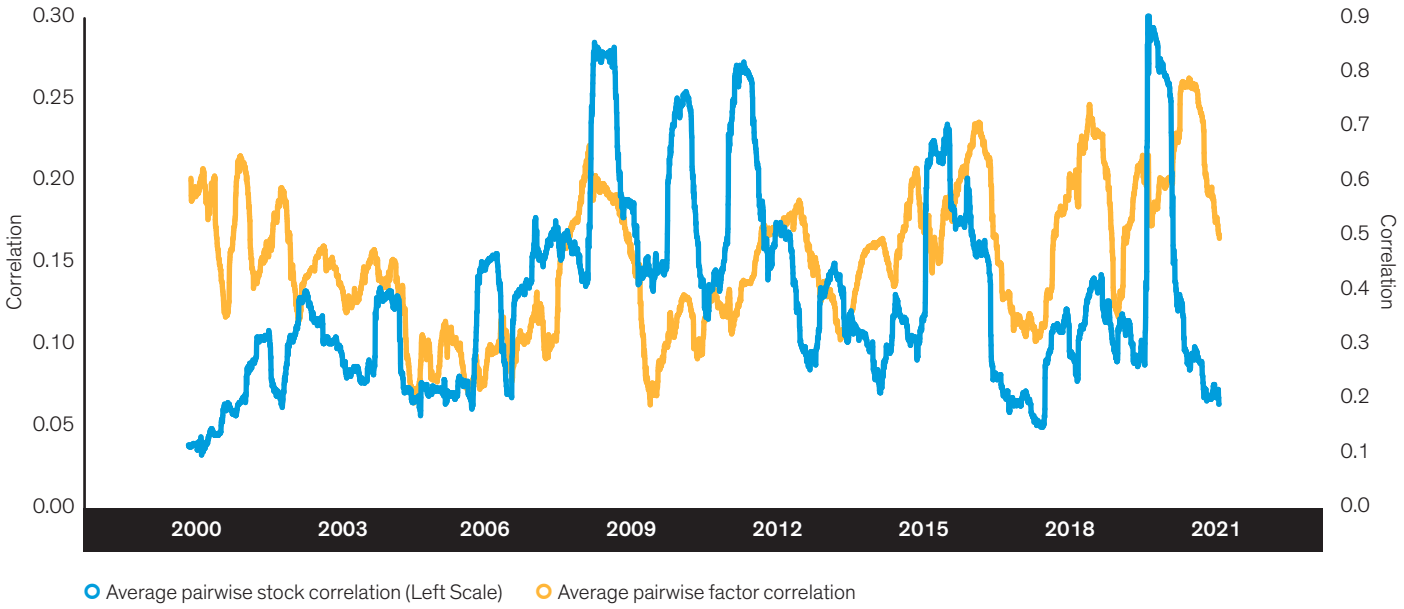


Historical analysis and current forecasts do not guarantee future results.

Through June 30, 2021 | **Source**: Datastream, Global Financial Data and AB

One area where we think the news is getting better is on correlations within asset classes. As *Display 26* shows, the pandemic had a huge impact on correlations—with much greater co-movement between stocks and a reduction in the "factor richness" of the equity market. Such an environment is undesirable because, all else equal, it's harder to achieve a given level of alpha. In a world where returns from asset-class "betas" are expected to be lower, those alphas become a larger share of the end investor's return. Recent data suggest that, as the shock of the pandemic has receded, correlations have also fallen, increasing the opportunity for active return streams.

DISPLAY 26: STOCK AND FACTOR CORRELATIONS ARE NOW DECLINING



Historical analysis and current forecasts do not guarantee future results.

The factor correlations are based on the average absolute pairwise correlations of daily signed long-short factor returns for global composite value, global composite quality, global long-term growth and global price momentum. The correlations are calculated over a rolling six-month window. The stock correlations are the average pairwise correlations of daily stock returns for the constituents of the MSCI AC World Index over a rolling six-month window.

Through August 31, 2021 | **Source**: FactSet, I/B/E/S, MSCI and AB

Sentiment

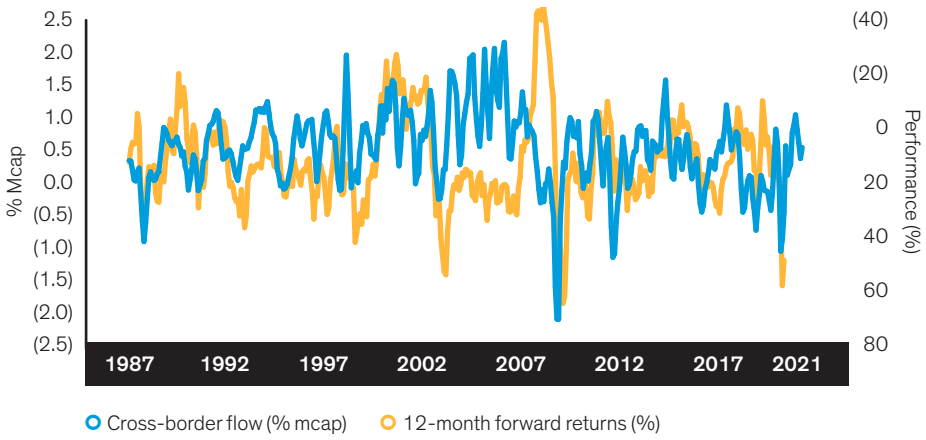
It might seem odd to have a section on sentiment in a note devoted to the strategic outlook. One usually thinks of sentiment having a role in tactical allocations but not for longer horizons. This is generally true, but tactical dynamics can be important in timing the entry into more strategic positions. Also, some sentiment measures, in the domain of asset allocation, can have strategic consequences.

Recent quarters have seen an extended (and belated) inflow into equities and a pickup in cross-border flow (*Display 27*). However, the inflow hasn't reached levels that imply a significant "tactical" danger to the equity outlook (taking a 12-month forward view).

What seems more worrying at face value is the overall level of equity allocations, accounting for both inflows and rising asset prices. The total share of public equities in US household allocations is just shy of 50% (*Display 28*) and is at the top end of its 70-year range. In a different macro context, the combination of an equity allocation at historical maximum levels and high valuations does not sound particularly inviting for the return outlook.

However, we suggest that an environment in which inflation will likely be moderately higher, and where the interest-rate response to inflation is unlikely to be as significant, changes the data interpretation. In these circumstances, equities can play a key role in many portfolios (for example, defined contribution plan pensions). So we would suggest that, conditional on the macro context, it's surprising that the equity allocation remains within its historical range; it should be higher.

DISPLAY 27: GLOBAL CROSS-BORDER EQUITY-FLOW INDICATOR

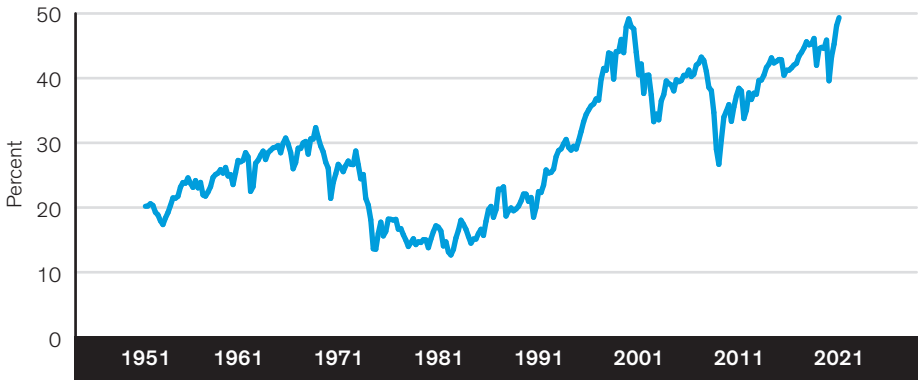


Historical analysis and current forecasts do not guarantee future results.

Chart shows the combined net purchases of overseas equities for US, UK, euro area post-1997, Germany (1987–1997), France (1993–1997) and Japan post-1997. Data derived from external sector portfolio investment data published in the financial accounts of central banks. The series is monthly flows smoothed over three months, annualized and normalized by the market cap of the Datastream World index.

Through April 15, 2021 | **Source**: Banque de France, Datastream, Deutsche Bundesbank, European Central Bank, Japan Ministry of Finance, UK Office for National Statistics, US Fed and AB

DISPLAY 28: TOTAL EQUITY SHARE OF TOTAL FINANCIAL ASSETS (%) – INCLUDING PENSION ASSETS



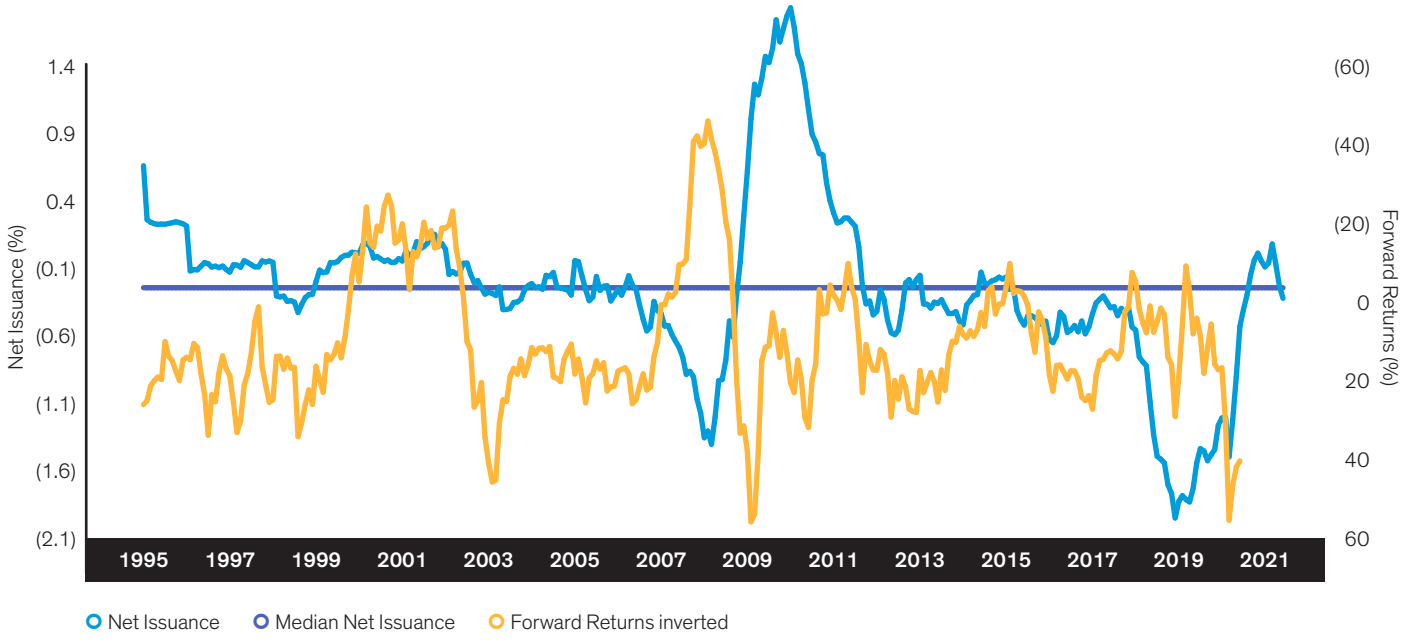
Historical analysis and current forecasts do not guarantee future results.

US household and nonprofit sector total financial assets allocated to equities. Equities is defined here as directly held corporate equities + mutual fund shares (includes exchange-traded funds) + the equity portion of public and private pension fund assets. The data are quarterly.

Through March 31, 2021 | **Source**: US Fed and AB

Corporations, which have collectively been net buyers of stock for the best part of a decade, have picked up their net issuance strongly in recent years (*Display 29*), even excluding the recent boom in special-purpose acquisition companies (SPACs), which would make net issuance even more positive. This activity is another potentially limiting factor for equity returns: for a decade, corporations have been the biggest equity buyers, and we have yet to see whether a moderately inflationary environment can convert asset owners, such as pension plans, into buyers on a similar scale.

DISPLAY 29: GLOBAL NET ISSUANCE INDICATOR



Historical analysis and current forecasts do not guarantee future results.

Net issuance is defined as the value of equity issuance: the value of stock buyback announcements over the most recent 12 months expressed as a yield (percentage of market cap). A high net issuance value can be thought of as net supply of equity and a drag on future performance, while a negative value can be thought of as net demand for equity and predictive of better than average future performance.

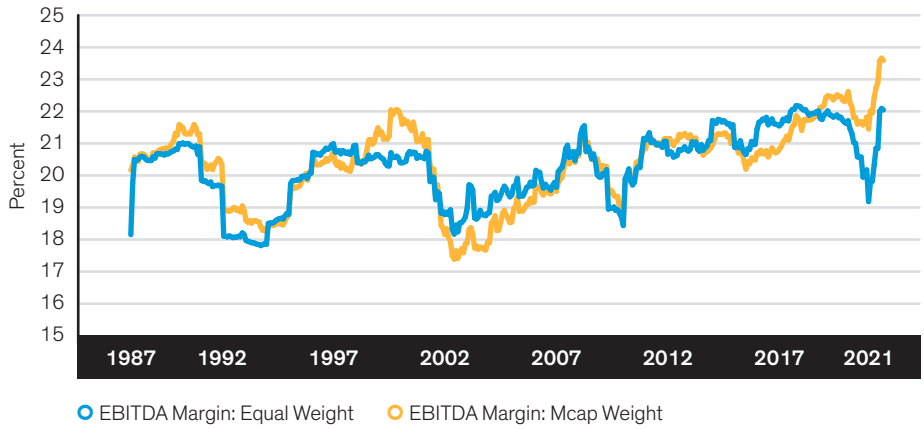
Through June 30, 2021 | **Source**: Bloomberg, Datastream and AB

Margins

In *Displays 30* and *31*, we show pre- and post-tax margins for the broad US market. After a drop in 2020, both have rebounded significantly, and the market-cap-weighted average margins now stand at the highest level in more than 30 years. In our view, such high levels of profitability cannot be sustained in the future.

A key macroeconomic theme we've been researching is the power shift from capital to labor, as demographics transform into a headwind and a shrinking global labor supply—a trend that will put downward pressure on pretax margins. Meanwhile, the extreme levels of government debt accrued in response to the COVID-19 pandemic will necessitate higher corporate taxes. Tax hikes, together with the closing of tax loopholes such as the recent G7 minimum tax agreement, will reduce post-tax profitability, too.

DISPLAY 30: EBITDA MARGINS HAVE REBOUNDED

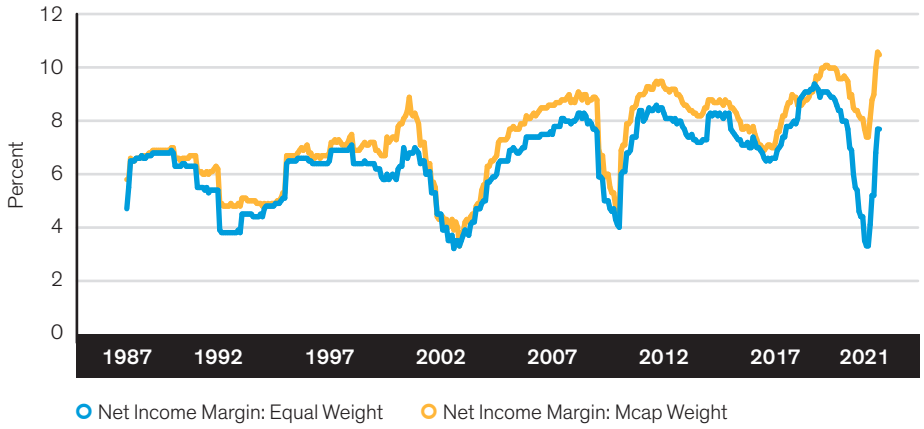


Historical analysis and current forecasts do not guarantee future results.

Note: Time series are constructed from equal-weighted and market-cap-weighted sector margins.

Through September 1, 2021 | **Source**: Datastream

DISPLAY 31: NET INCOME MARGINS RISING AGAIN



Historical analysis and current forecasts do not guarantee future results.

Note: Time series are constructed from equal-weighted and market-cap-weighted sector margins.

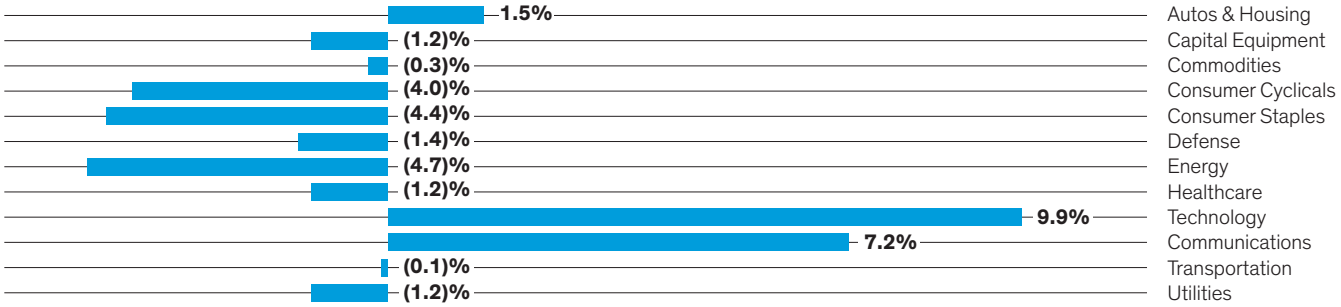
Through September 1, 2021 | **Source**: Datastream

Looking over the past five years, market-cap-weighted margins have been much stronger and more resilient, suggesting a large impact from a shifting mix. At the sector level (*Display 32*), the weight of the technology and communications sectors has surged, as they not only improved their profitability but possess much higher margins than the overall market (*Displays 33* and *34*).

Meanwhile, the weights of sectors with below-average profitability, such as energy and capital equipment, have declined. Because economic growth increasingly depends on intangible assets, we believe tech and communications margins should remain resilient. Thus, the mix shift we have seen over the past five years suggests that, while overall margins should decline, they do not need to fall to historical averages.

We have seen a similar effect within sectors, where the very largest US companies have benefited from economies of scale and the network benefits of intangible assets. Barring any direct government policy intervention, we would expect market-cap-weighted margins to remain higher than equal-weighted ones for the foreseeable future. However, if initiatives to close international tax loopholes are successful, it might challenge the biggest and most international companies to sustain their high post-tax margins.

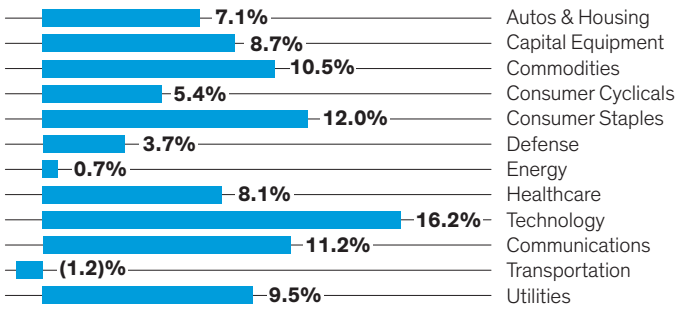
DISPLAY 32: CHANGING SECTOR MARKET CAPS: CURRENT VERSUS JANUARY 2016



Historical analysis and current forecasts do not guarantee future results.

As of September 10, 2021 | **Source**: FactSet and AB

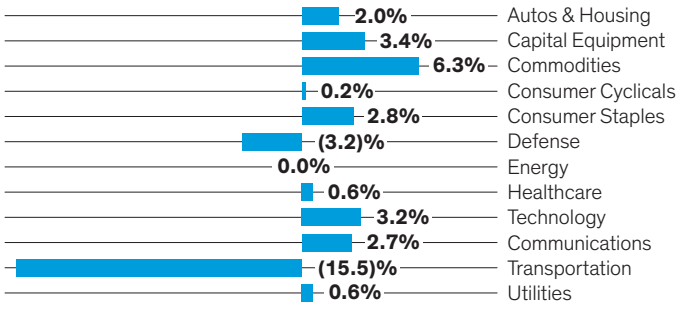
DISPLAY 33: CURRENT NET INCOME MARGIN



Historical analysis and current forecasts do not guarantee future results.

As of September 10, 2021 | **Source**: FactSet and AB

DISPLAY 34: NET INCOME MARGIN: CURRENT VS. JANUARY 2016



Historical analysis and current forecasts do not guarantee future results.

As of September 10, 2021 | **Source**: FactSet and AB

Our view on US margins is at odds with the current consensus, which expects that EBITDA margins will continue to rise in 2022 and 2023 (*Display 35*).

Equity Outlook

The key ingredients in forming a strategic equity outlook are valuation, growth (both economic and margins), inflation, real interest rates and potential flows (sentiment).

The negative case against equities is easy enough to articulate—mainly, that high cyclically adjusted price/earnings (P/E) ratios imply low returns ahead. In fact, if taken at face value, the long-run relationship between a Shiller P/E and 10-year forward returns implies no real return on US equities over the next 10 years (*Display 36*), and that number includes dividends. Many investors have taken this historical relationship as the basis for a bearish view.

Moreover, as we discussed earlier, we see the potential for margins to decline structurally, not so much because of mean reversion but because of active policy choices that swing the pendulum from capital to labor (we could call it the macro consequence of ESG). For this analysis, we use the cyclically adjusted, or Shiller, P/E: over short horizons of one to two years, this metric is not helpful, but we can show that on a five–10-year forward horizon, it is one of the best metrics that investors have available.

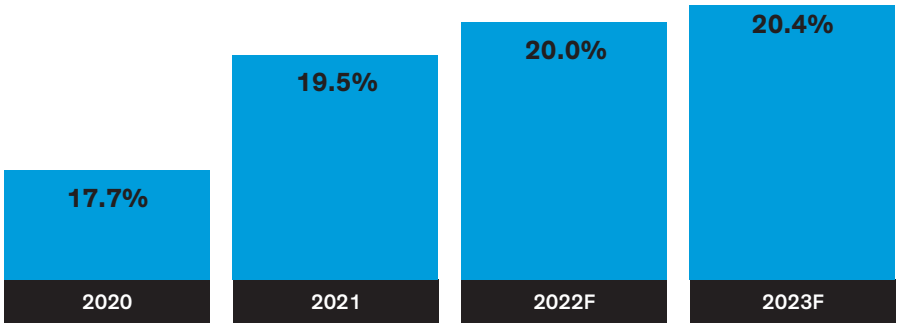
Having said that, calling for a flat or down equity market based on valuation is a call that investors could have made many times over the past five years and would have been disastrously wrong. We laid this out in terms of a debate in a recent white paper, *Portfolio Strategy: Oops—I Hit My 10-Year Price Target with 8½ Years to Go … What Do I Do Now?*.

We don't wish to sound cavalier about this point: valuation does matter, but the broader context of rates and flows has to be considered.

Growth may be subpar and corporate profit share expected to fall, but earnings growth

DISPLAY 35: THE CONSENSUS IS CALLING FOR RISING MARGINS

MSCI US Consensus EBITDA Margin

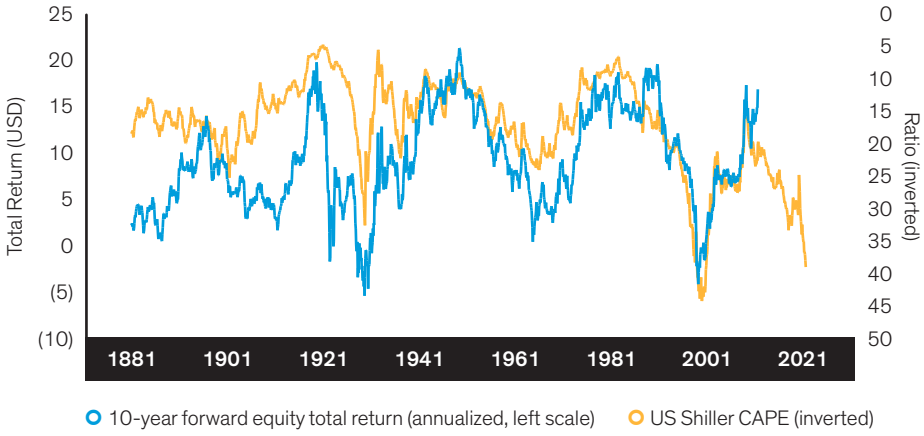


Historical analysis and current forecasts do not guarantee future results.

As of August 31, 2021 | **Source**: Datastream and MSCI

DISPLAY 36: HIGH CYCLICALLY ADJUSTED P/E RATIOS HAVE IMPLIED LOW FUTURE EQUITY RETURNS

Long-Run Shiller P/E Ratio for US Equities and 10-Year Forward Returns



Historical analysis and current forecasts do not guarantee future results.

Shiller P/E is defined as price divided by 10-year average inflation-adjusted earnings. Data from January 1, 1881, through June 30, 2021

Through June 30, 2021 | **Source**: Global Financial Data, Robert Shiller's database and AB

is still positive in real terms. In our recent work on inflation, *Assessing the Inflation Trajectory—and Portfolio Responses*, we show that inflation moderately above 2% over the medium term is still consistent with high equity multiples, but much higher and sustained inflation is required to materially increase the equity risk premium. And if real yields must be held low or rise only slowly, then unlike fixed-income duration, long-duration real assets (which equities can claim to be) can maintain high multiples.

This brings us to the question of equity flows. The macro situation we've described presents many possible portfolio solutions. The specific solution will depend on risk tolerance, time horizon and investors' exact liabilities, but equities seem likely to be a core part of it for investors who seek a positive real return over the business cycle. So allocations likely need to rise. We realize that this is a TINA ("there is no alternative") argument, and more an expression of investor hope than a normative reason for why the market needs to rise; nevertheless, it is supportive.

If we want to attempt an absolute-return forecast, one way is to decompose the various sources of return or shareholders by writing:

Real equity return = dividend yield + buyback yield + real growth per capita + population growth + change in profit share of GDP + multiple expansion/contraction

In this formulation, we're subsuming margin expansion/contraction as part of the broader measure of profit share of GDP.

The UN population growth projection for the US is 0.5% per year. The achieved real GDP per capita average growth over the past 30 years has been 1.5% annualized (with long-run consensus forecasts tending to be in a similar range). The US dividend yield is 1.3%, and the 10-year average net buyback yield (buybacks less issuance as a percentage of market capitalization) has been 1.5%. With no change in multiple or profit share, the decomposition of returns simplifies to:

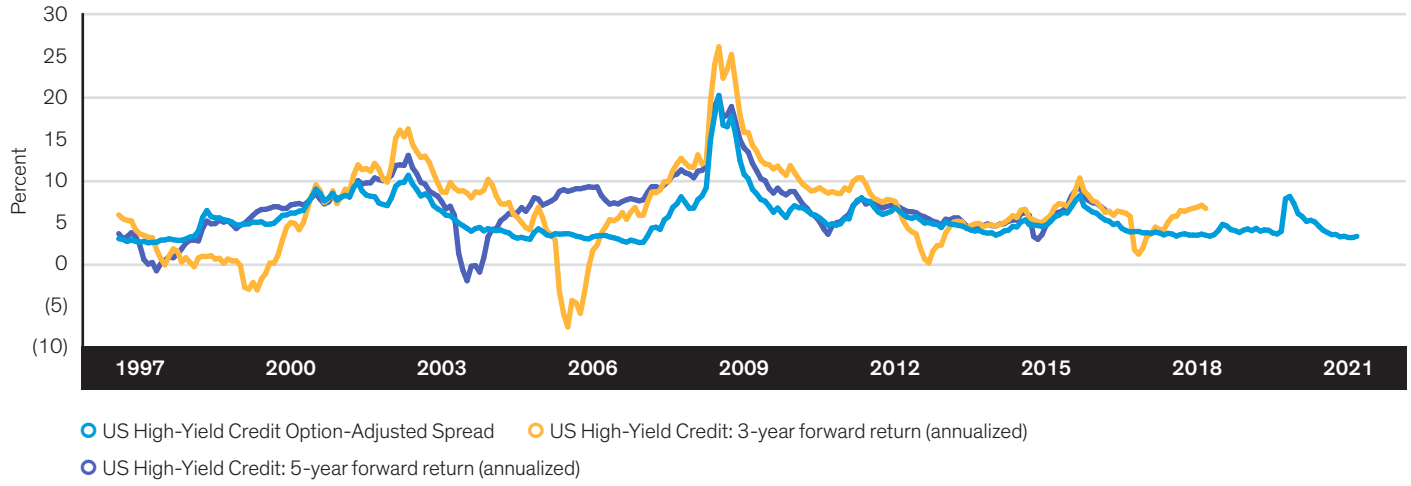
Real equity return = dividend yield + buyback yield + real growth per capita + population growth

So what does this imply in terms of real return? Plugging in numbers to the above equation, we get: real return = **1.3%** + 1.5% + 1.5%+ **0.5%** = 4.8%. If we assume inflation at **3%** annualized over the forecasting horizon, we're left with an annualized nominal equity return of **7.8%**.

Credit Valuation and Future Returns

The credit valuation, which can be proxied by the yield spread of credit over US Treasuries, has been a key driver of long-term high-yield bond returns (*Display 37*). The high-yield credit spread is currently hovering around historical lows, so we don't believe they can decline much further. This strongly suggests that high-yield credit returns should be much lower going forward, versus recent history. The link between credit spread and future return for investment-grade credit is weaker (*Display 38*) but also suggests that future returns should be much lower.

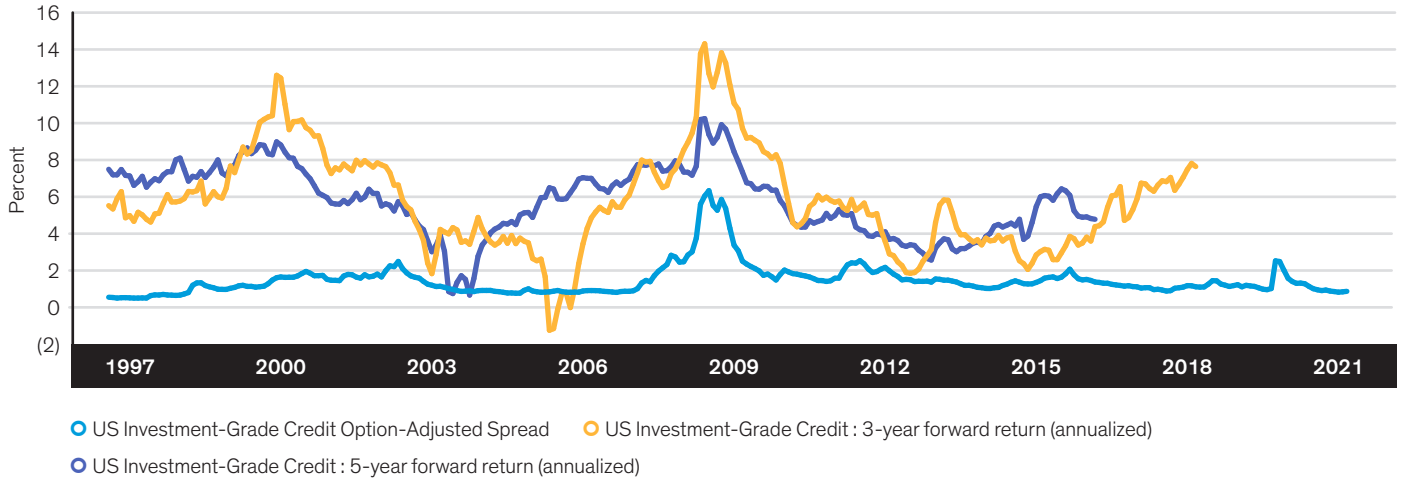
DISPLAY 37: US HIGH-YIELD CREDIT SPREADS AND FORWARD RETURNS



Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Datastream and FRED

DISPLAY 38: US INVESTMENT-GRADE CREDIT SPREADS AND FORWARD RETURNS



Historical analysis and current forecasts do not guarantee future results.

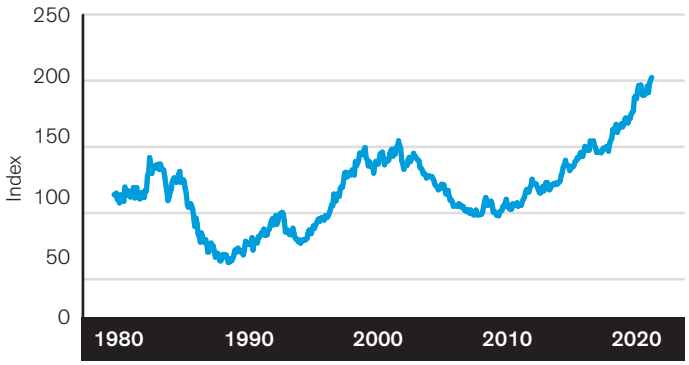
Through August 31, 2021 | **Source**: Datastream and FRED

Regional Allocations

When it comes to allocations within equities, we're often asked why one should bother investing in anything other than US markets. *Display 39* shows the nearly uninterrupted outperformance of US stocks versus other regions over the past decade. The US now accounts for 60% of the MSCI ACWI universe (*Display 40*) and has seen the lion's share of inflows during the great rotation into equities over the past 12 months. How much higher can this share go?

DISPLAY 39: WHY INVEST IN ANYTHING OTHER THAN US EQUITIES?

MSCI USA vs. MSCI EAFE Total Return (USD)

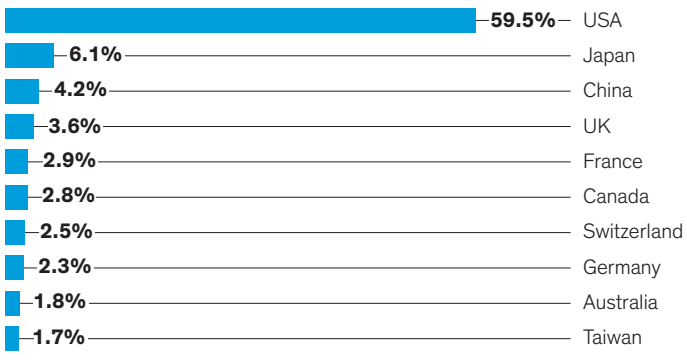


Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source**: Datastream and MSCI

DISPLAY 40: US EQUITIES DOMINATE GLOBAL INDICES

Top 10 Countries in MSCI ACWI Index



Historical analysis and current forecasts do not guarantee future results.

As of September 8, 2021 | **Source**: MSCI

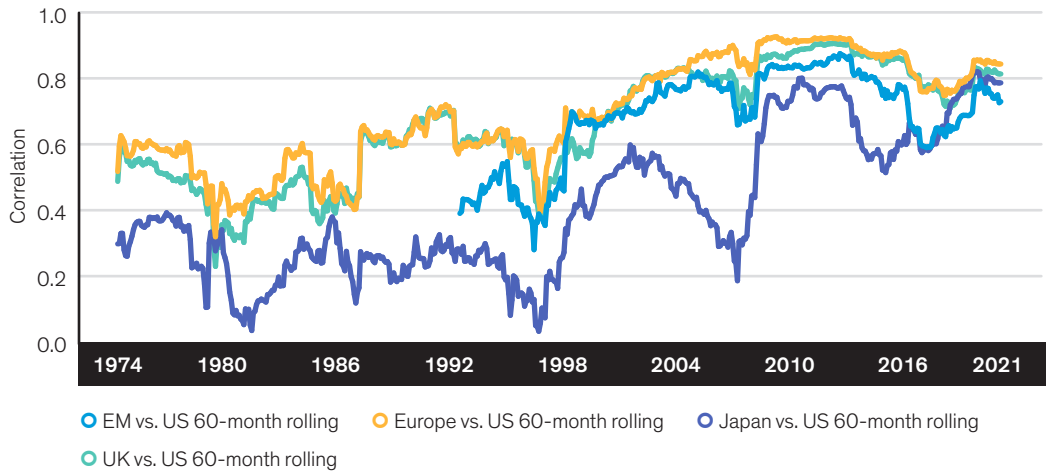
The pairwise correlation of equity regions has been rising (in USD total-return terms), which can be viewed as a result of the globalization of corporate revenues and the investor base. The 60-month rolling correlation of Europe or EM with the US equity market is now 0.73, versus its average of about 0.5 in the 1980s and 1990s (*Display 41*).

The recent huge mismatch in regional flows could arguably make a tactical case for a reversal. Europe has been the most disliked region, with an inflow of US$1.2 billion over the past 12 months; in contrast, the rebound in US flows has brought inflows of US$352 billion. However, such forces tend to be only transient and are of interest to investors wishing to make very short-term switches. The argument we often hear against the US is that it is "expensive" compared with other regions.

At face value, this is true, given the high relative Shiller P/E. However, we can show that sector composition accounts for at least some of that gap. For example, one of the largest regional valuation spreads is between the US and Europe (*Display 42*). But if we adjust for the different sector compositions (Europe's relative absence of a tech sector), Europe's valuation discount drops to only 4%, in line with its 30-year average.

DISPLAY 41: REGIONAL EQUITY CORRELATIONS ARE UP SUBSTANTIALLY

60-Month Rolling Equity Correlation (in USD Total Return)

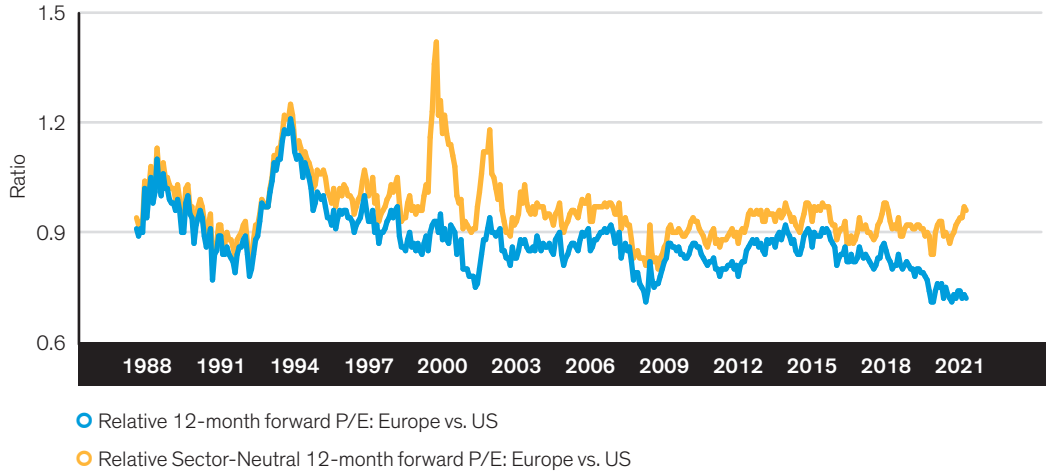


Historical analysis and current forecasts do not guarantee future results.

Through August 31, 2021 | **Source:** Datastream and MSCI

DISPLAY 42: EUROPE'S EQUITY DISCOUNT IS AVERAGE AFTER ADJUSTING FOR SECTOR DIFFERENCES

Europe Versus US 12-Month Forward P/E Multiples



Historical analysis and current forecasts do not guarantee future results.

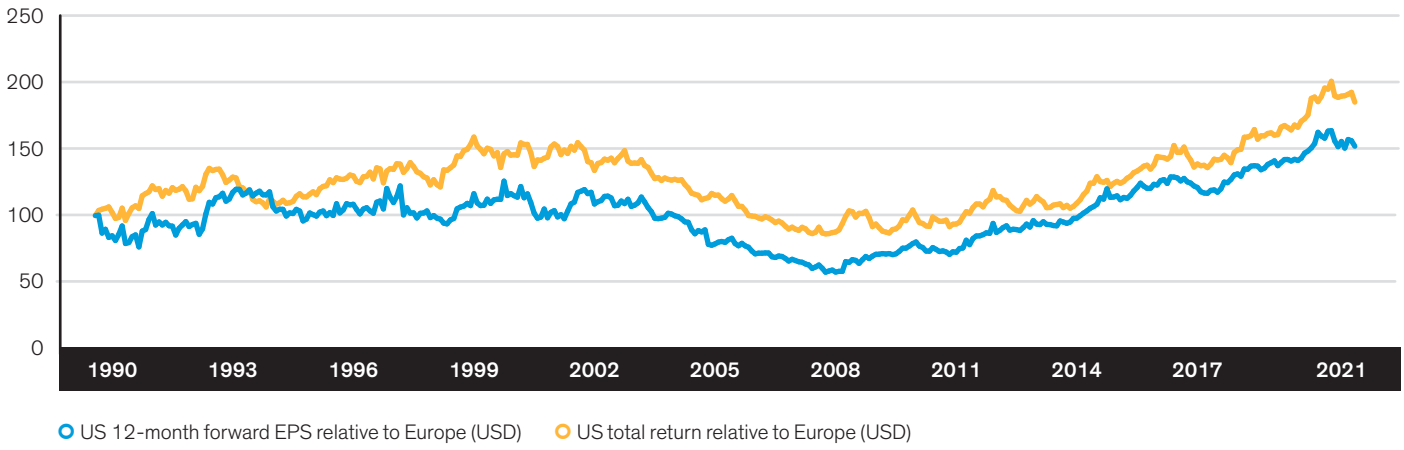
The sector-neutral valuation of the European market is calculated by applying US sector weights to European sectors' 12-month forward P/E multiples.

Through September 1, 2021 | **Source:** FactSet, MSCI and AB

How successful has valuation actually been at making relative regional calls? In *Display 43*, we show that the relative performance of Europe and the US has been closely linked to relative earnings growth, so the importance of valuation in making this call would appear to be secondary. We would find ourselves unable to make a call that suggested European companies would outgrow their US peers. Thus, the US remains attractive as a strategic overweight.

DISPLAY 43: THE US AND EUROPE: A CLOSE LINK BETWEEN EARNINGS GROWTH AND RETURNS

US and European Relative Returns and Relative EPS Growth



Historical analysis and current forecasts do not guarantee future results.

Through May 31, 2021 | **Source:** Datastream and AB

Chapter 3: What's the Difference Between Asset Classes and Factors?

In this final chapter, we move away from the direct question of the market outlook to consider a broader question about the changing way portfolios are constructed.

We think investors are too hung up about categories when delineating investment decisions. For large asset owners, investing is ultimately about crafting a combination of return streams. Ideally, these streams offer diverse return distributions: a range of volatilities, covariances, skews, time horizons and linkages to the macro environment. But in practice, asset allocation tends to focus on asset-class distinctions rather than a more generalized concept of return streams.

Instead, asset owners should include factors alongside asset classes in strategic asset allocation. We think they have little choice—from both real-return and diversification perspectives. Both angles are equally important. This chapter provides a brief outline of the case for using factors in asset allocation; we'll detail this case further in coming months.

Why make this argument now, one might ask?

From our perspective, asset owners are growing increasingly desperate to achieve a given level of return for a given level of risk, which will be a major catalyst in the post-pandemic world. A secondary motivation will be the desire to allocate active fees more efficiently: paying them only where they really must. Our market outlook earlier in this note comes into play here: the notion of using factors in conjunction with asset classes is a result of both the macro environment and changes within the investment industry.

The last 40 years have seen valuations rise for most financial assets while inflation has fallen. In effect, the significant outperformance of the financial economy versus the real economy has made achieving high levels of real return appear easier than it usually is. The general decline in yields and the run-up in valuations have made most asset classes more expensive.

As a result, the valuation spread between asset classes is not exceptional, and making the case for relative value on that basis is hard. However, *within* asset classes (the basis for many factor strategies), valuation spreads are unprecedented (*Display 44*). This landscape leaves open the possibility of greater valuation support for investing based on factors—though valuation alone is not enough to make such a switch.

Wider valuation spreads may well reflect structural changes such as technology, but at least some portion of the lack of mean reversion in recent years results from macro forces, such as declining inflation, that seem more cyclical. In a post-pandemic policy environment that seems likely to see inflation rise moderately, this could tip the balance in favor of including factors in asset allocation.

Persistence of Asset-Class Versus Factor Returns

Is there a capacity level beyond which factors fail to operate? If so, how would one assess where that limit lies? The theoretical debate, in part, rests on the question of whether so-called factors are artifacts of investors' behavioral biases or whether they're compensation for some kind of risk. This debate has raged for decades but is particularly germane now.

As investors collectively entrust more capital to be run by "machines," behavioral effects are likely to melt away because, to some extent, such quantitative strategies exist to explicitly trade against behavioral biases. However, if factor returns are a compensation for risk, they may be more robust than the growth of trading strategies designed to take the other side of behavioral biases.

Empirically, factor returns have been definitively subpar in recent years, some of which may reflect structural changes. However, we suggest that the relative effectiveness of factors has been highly cyclical—not a slow, persistent decline.

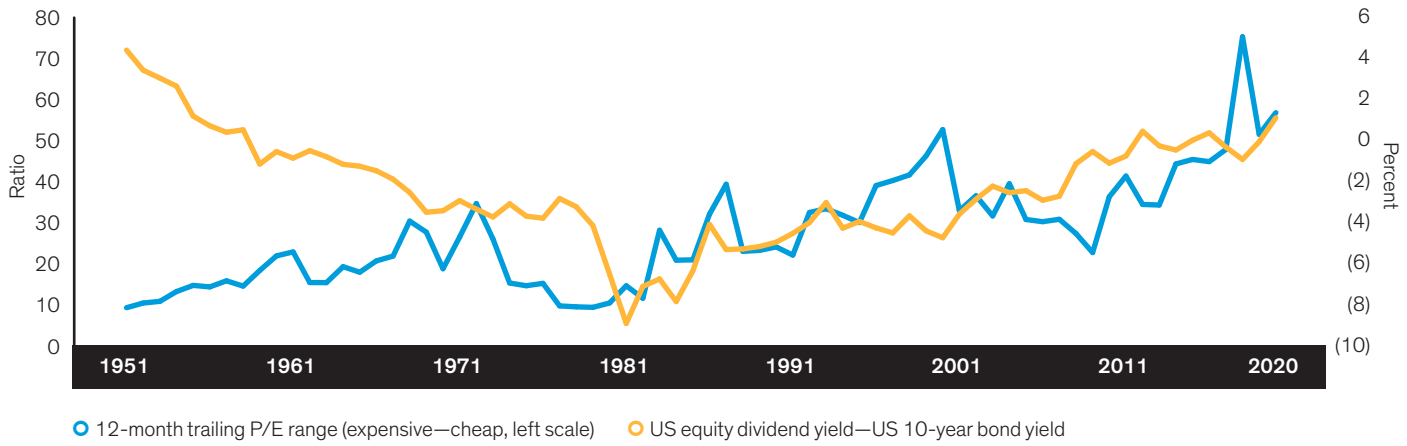
What Does This Mean for Portfolios?

How do factors fit into the achievable range of return versus risk for asset owners?

We think the post-pandemic return outlook is very different from the pre-pandemic experience. In *Display 45*, the dots show the return/risk trade-off for major asset classes and factors over the past decade; the arrows show how we expect these to evolve over the next 10 years. We anticipate a general decline in the risk/return expectation for major assets. By contrast, we think factor returns can surpass the levels achieved over the past decade. We'll explore what this means in more practical terms in a forthcoming note.

DISPLAY 44: VALUATION SPREADS WITHIN ASSET CLASSES HIGHLIGHT SUPPORT FOR FACTORS

Valuation Spreads: Between and Within Asset Classes

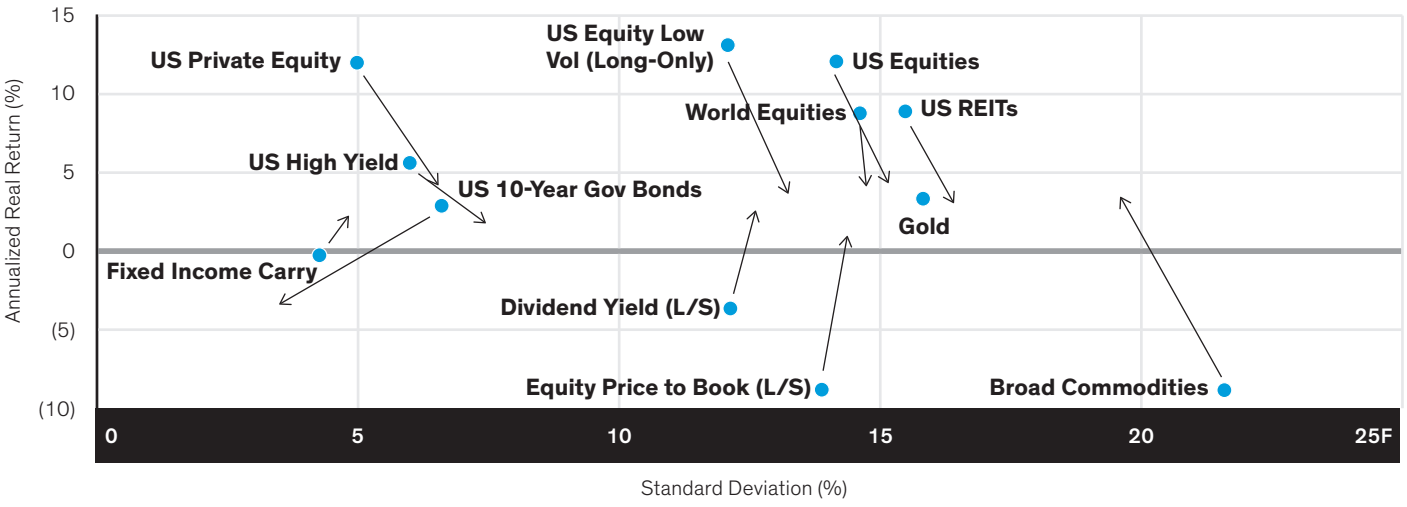


Historical analysis and current forecasts do not guarantee future results.

The 12-month trailing P/E range shows the difference between the average P/E ratio of the most expensive and the cheapest quintile of US stocks.

Through December 31, 2021 | **Source:** Datastream, Global Financial Data and Ken French database

DISPLAY 45: FORECAST RETURNS FOR SELECT ASSET CLASSES AND FACTORS



Historical analysis and current forecasts do not guarantee future results.

The dots represent real returns and volatility from January 2010 through December 2020 for the major return streams investors can buy. The arrows represent the AB Institutional Solutions team's forecasts for the next five–10 years as of June 2021. US Private Equity data are compiled from 1,562 funds, including fully liquidated partnerships, formed between 1986 and 2019. All returns are net of fees, expenses and carried interest. Data are provided at no cost to managers. Private Equity data provided as of March 31, 2020.

Source: Cambridge Associates, Datastream, FactSet, FRED, Ken French Data Library and AB

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