WELLS FARGO
Investment Institute

Asset Allocation Strategy

June 15, 2020

2021 year-end forecasts:
Pages 4, 6, 9, 13, and 16.

2020 year-end forecast changes:
4, 9, and 16.

Recapping our Midyear Outlook: Recession, Recovery, and Resilience

During the first half of 2020, the S&P 500 Index dropped by an unprecedented 32% from peak to trough in 23 trading days, shattering records as the swiftest market decline. After March 23, the S&P 500 recorded an equally impressive rebound of 36% through May (and 44.5% through June 8).[1] This rally has primarily been driven by the Federal Reserve's (Fed) ability to provide liquidity to markets impacted by COVID-19, along with signs of optimism over hopes of a faster-than-expected economic recovery. Yet, risks of a new surge in coronavirus infections, coupled with a failure to regenerate consumer and business spending, could extend unemployment and bankruptcies.

We believe that developed economies, aside from the U.S., likely will face a deeper recession and a weaker recovery because of greater exposure to slumping world trade, more limited policy support, and demographic and structural restraints on growth. Emerging market economies, collectively, should suffer less than developed markets this year—and we expect them to post stronger 2021 gains in a pattern shaped largely by China's early reopening start and sustained recovery. Most other emerging market countries are likely to be hurt this year by trade exposure to sluggish demand from developed economies and, in 2021, by continued pandemic-related disruptions at home.

We encourage investors to align their portfolio allocations with their long-term goals—as that alignment may have been disrupted with recent volatility.

Below, we present some highlights from our Midyear Outlook report:

Economy: We believe that a moderate recovery in the U.S. economy is most likely, beginning in the second half of 2020. We expect a similar reversal from an economic downturn to positive growth around the world, with the dollar slipping further against the euro as a return in risk appetite and low U.S. interest rates remove some support. In addition, emerging market currency depreciation should end, but those currencies likely will struggle to recover amid weakened global trade and structural problems that predate the pandemic.

Equities: We continue to expect that earnings may take until 2022 to recover their pre-pandemic levels, but the economic recovery and low interest rates should support modestly higher earnings and valuations through 2021. We favor updating equity allocations to avoid overexposure to the most volatile equity asset classes, such as U.S. small-cap equities, developed market equities, and emerging market equities—and in the Energy, Materials, Real Estate, and Industrials sectors.

Fixed income: A low-yield environment is likely to persist, despite an avalanche of new supply in several fixed-income classes. We believe that credit-focused fixed-income classes (such as corporate bonds) should produce solid returns as the economy improves.

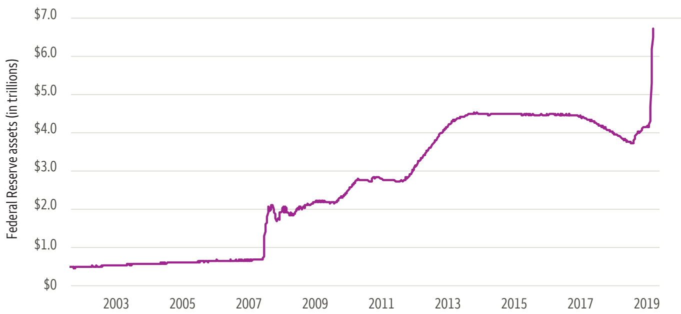
(Continued on the next page.)

[1] S&P 500 return is from March 23, 2020 through May 31, 2020.

Recapping our Midyear Outlook: Recession, Recovery, and Resilience (continued)

Federal Reserve balance sheet

Chart 5: Federal Reserve assets on balance sheet



Sources: Bloomberg and Wells Fargo Investment Institute. Weekly data, December 18, 2002 – May 22, 2020.

We expect the Fed to continue to absorb new debt issuance through expansion in its balance sheet, adding liquidity to the markets as it seeks to accelerate economic recovery.

Real assets: We suspect that commodities are primed to rebound over the coming year. However, most commercial real estate sectors appear caught in the crosshairs of the global lockdown, with few clear answers on their future.

Alternative investments*: The coronavirus crisis has accelerated the default cycle. We foresee opportunities in strategies that provide lending and liquidity, followed by those that focus on dislocation and distress. The economic downturn has created challenges for income-seeking investors but also opportunities in alternative investments—such as those that specialize in distressed debt.

Looking ahead, we could see certain trends emerge in a post COVID-19 world:

- Consumption patterns are likely to change—as businesses are expected to reassess how to add flexibility while maintaining efficiency.
- The pandemic is likely to intensify existing stresses globally, which likely will increase government influence on the economy.
- Health Care will play an increasingly prominent role for investment focus in the future.

*Alternative investments are not suitable for all investors and are only open to "accredited investors" or "qualified investors" within the meaning of the U.S. securities laws. They are speculative, highly illiquid, and designed for long-term investment and not as trading vehicles.

Our authors

Darrell Cronk, CFA,
President, Wells Fargo Investment Institute and CIO, Wealth and Investment Management

Global Asset Allocation Team

Tracie McMillion, CFA,
Head of Global Asset Allocation

Chris Haverland, CFA,
Global Asset Allocation Strategist

Michael Taylor, CFA,
Investment Strategy Analyst

Veronica Willis,
Investment Strategy Analyst

Michelle Wan, CFA,
Investment Strategy Analyst

Krishna Gandikota,
Investment Strategy Analyst

Global Market Strategy

Paul Christopher, CFA,
Head of Global Market Strategy

Scott Wren,
Senior Global Market Strategist

Gary Schlossberg,
Global Strategist

Global Fixed Income

Brian Rehling, CFA,
Head of Global Fixed Income Strategy

Peter Wilson,
Global Fixed Income Strategist

Luis Alvarado,
Investment Strategy Analyst

Global Equities

Mark Litzerman, CFA,
Head of Global Portfolio Management

Sameer Samana, CFA,
Senior Global Market Strategist

Chao Ma, PhD, CFA, FRM,
Global Portfolio and Quantitative Strategist

Ken Johnson, CFA,
Investment Strategy Analyst

Global Real Assets

John LaForge,
Head of Real Asset Strategy

Austin Pickle, CFA,
Investment Strategy Analyst

Global Alternative Investments

Jim Sweetman,
Global Alternative Investments Strategist

Justin Lenarcic,
Global Alternative Investments Strategist

Ryan McWalter,
Global Alternative Investments Strategist

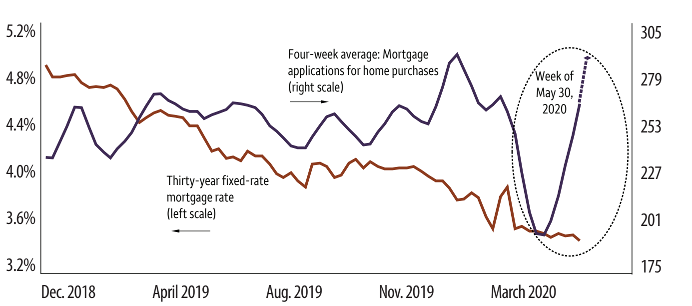
Global Economic Summary

United States

Spreading "green shoots" are shifting the conversation from the timing of a return to economic growth to its strength and staying power. Weekly and daily economic data either with increases or decelerating declines from early-April lows pointed toward improvement in monthly data in late May. At the very least, we believe that data are signaling that the worst of the U.S. economy's declines are behind us. At best, investor hopes are building for an early recovery from what could be a record decline in second-quarter economic activity, increasing the odds of an initial burst of activity before an expected shift to more moderate growth.

The shock from the economy's lockdown to small businesses—key to job growth—and to dominant household spending, was muted by early and aggressive fiscal support from the federal government, along with Fed programs. Signs of life in the small-business sector are coming from scattered improvement in May operating income and hiring. April's record savings rate, a by-product of the spending slump and direct government assistance, has added "dry powder" for consumer-led growth. Housing's direct contribution to growth is coming from increased home demand and spending on "big-ticket" appliances and home furnishings. Indirect support is coming from steadying home prices, which are enhancing household wealth, borrowing capacity, and spending power. Home values are being steadied by a pullback in listings and by the rebound in housing demand captured by a recent surge in weekly mortgage applications for home purchases from an early-April low.

A stunning rebound in housing (residential mortgage) demand from a deep-pandemic-related slump



Source: Mortgage Bankers' Association, June 2, 2020. Chart is indexed to 100 as of March 16, 2020.

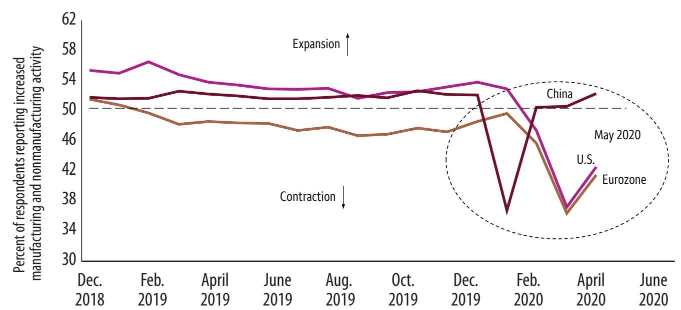
Europe

Europe's recovery from its deep dive earlier in the spring has been even weaker than the U.S. economic rebound. Improvement has been most noticeable in Germany—after it avoided the worst of the lockdown's economic impact—and in hard-hit Italy. Regional monetary and fiscal stimulus is lagging U.S. policy support, but it is ramping up as pandemic fallout and its longer-term threat to European integration becomes clearer. Significantly, a proposed $826 billion-equivalent rescue package of European Union (EU) grants and loans to hard-pressed countries would be backed collectively by stronger EU countries, signaling greater cohesion within the often-fragmented currency bloc. Despite encouraging signs in the eurozone economy, its projected full-year economic decline, in the upper single digits, would be among the worst in the advanced-country area. Italy and other southern European economies are being hit hardest, widening the income divide within the eurozone and underscoring the need for pandemic financial relief set for debate in coming months.

Asia

Asia's two-track recovery from the pandemic's economic fallout continued through May, paced by still-unbalanced growth in China from an early reopening in February. Increased momentum in construction and manufacturing is outpacing Chinese consumer spending that has been restrained by household caution and by a labor market still under pressure. That has left full-year activity in a holding pattern. Japan's more recent recovery has been mild and fragile, despite a decline in the country's coronavirus infection rate and an economic reopening in key metro areas. Employment, financial, and pandemic concerns continue to weigh on an economy headed for a sizable 4%–5% decline this year. Elsewhere in Asia, pandemic and trade concerns, associated with the U.S.-China trade dispute, should keep economic growth modest, at best, this year.

China leads the way toward a modest global growth recovery



Sources: Markit, Bloomberg, June 3, 2020. Chart shows Markit purchasing managers' index data for China, the U.S., and the eurozone.

Key economic statistics

Global real growth rates (%)	First-quarter 2020	Fourth-quarter 2019	Third-quarter 2019
U.S. economic growth (GDP)[1]	-5.0	2.1	2.1
Eurozone economic growth[2]	-3.1	1.0	1.3
Japanese economic growth[1]	-2.2	-7.2	0.0
Chinese economic growth[2]	-6.8	6.0	6.0
Key U.S. economic data	**05/20**	**04/20**	**05/19**
Unemployment rate (%)	13.3	14.7	3.6
Leading Economic Index (LEI) (%)	2.4[1]	-4.4	0.0
Durable goods orders (%)	12.5[1]	-17.7	-1.5
ISM manufacturing	43.1	41.5	52.3
ISM service	45.4	41.8	56.3
Retail sales (%)	7.8[1]	-16.4	0.4
Consumer confidence	86.6	85.7	131.3
New home sales (thousands)	630[1]	623	600
Existing home sales (millions)	4.13[1]	4.33	5.33
U.S. Dollar Index	98.34	99.02	97.75
U.S. inflation (%)	**05/20**	**04/20**	**YoY**
Consumer Price Index (CPI)	-0.1	-0.8	0.1
Core CPI	-0.1	-0.4	1.2
Producer Price Index (PPI)	0.1[1]	-1.3	-1.2[1]
Core PPI	-0.1[1]	-0.3	0.4[1]
Personal consumption expenditures (PCE)	–	-0.5	–
Core PCE	–	-0.4	–

Sources: Bloomberg, May 31, 2020 [1] Annualized quarter-over-quarter % change; [2] Year-over-year % change; [a] Bloomberg survey estimate; See end of report for important definitions and disclosures. GDP = gross domestic product. ISM = Institute for Supply Management.

Global Economic Summary

Economic forecasts

GDP growth: The economic reopening in the U.S. and overseas has set the stage for a second-half recovery in advanced economies. We believe that moderate U.S. growth, following an initial burst of activity in this year's second half, is likely to lead the pace in other developed economies. However, recovery in so-called developed economies should run below China-led growth in emerging markets. The strength of the next growth cycle is less certain than its timing. We believe that this cycle is keyed more to the willingness, rather than the ability to pay, making possible a strong recovery like the one from a deep, shock-induced recession in 1980. Financial adjustment from excessive debt and slumping asset values won't be the headwind that it was during recovery from the deep, 2008–2009 recession. Added help will come from the early, aggressive support from monetary and fiscal policy in the U.S. and abroad and from a jobs recovery that potentially is supercharged by growth led by labor-intensive services.

Nonetheless, the economy likely will settle into another moderate growth cycle following a deep recession, much like the last one 11 years ago. Potential restraints on activity include a staggered reopening of the economy, cautious household spending without a vaccine safety net, and the pandemic's aftershocks on business bankruptcies and layoffs. Moreover, an unusually short recession, though deep, provides little time for the kind of pent-up demand and balance-sheet rebuilding that normally is associated with enduring economic strength.

Inflation: Prices across most advanced economies were driven lower earlier this spring by slumping oil prices and by the deep recession. Broad-based price declines in the U.S. have been led by the travel, hospitality, and entertainment industries most affected by the pandemic. Modest inflation is set to return in coming months, now that fuel costs are increasing and a return to economic growth is likely to shore up demand. However, the inflation rate through next spring likely will remain well below the Fed's 2% target, strengthening the case for continuing monetary stimulus.

Price "spikes" of goods experiencing supply-chain disruptions are an immediate concern for inflation-wary investors. However, a weak pricing environment for businesses should prevent the kind of ripple effect on other prices and costs that was experienced during the high-inflation 1970s and 1980s. Another longer-term worry is the effect of "too much money chasing too few goods" if the Fed's financing of massive government deficits continues. For now, at least, price pressures likely will be contained by the same forces that are contributing to inflation's secular decline in recent decades, including lingering globalization, and online shopping, along with the looser link between money growth, economic activity, and inflation.

Labor market conditions: May's surprising decline in the unemployment rate may be signaling an unexpectedly early bottom to the labor market's free fall earlier this spring. However, even the historically high 13.3% rate for May understates the damage already done. Recent business closures have left a sizable number of workers that were tallied as furloughed actually unemployed. Others simply have given up looking for work, for now, and are not counted in the labor force and in the unemployment rate. Moderate economic growth likely will leave the year-end 2021 unemployment rate at nearly double that of its pre-pandemic reading, despite leadership of the recovery by labor-intensive services industries. Social distancing and delayed hiring by hard-pressed state and local governments are among the headwinds to stronger job growth, even as the economy slowly gets back on its feet.

Global economy

	Latest (%)	2020 YE targets (%)	2021 YE targets (%)
U.S. GDP growth[1]	2.3	▲-4.5	3.0
U.S. inflation	1.8	▼ 0.7	1.7
U.S. unemployment rate[2]	3.5	▲ 9.5	6.5
Global GDP growth	3.0	-3.3	3.0
Developed market GDP growth	1.9	-5.7	1.3
Developed market inflation	1.6	0.6	1.5
Emerging market GDP growth	3.8	-1.7	4.2
Emerging market inflation	4.8	4.0	4.0
Eurozone GDP growth[1]	1.2	▼-8.0	0.4
Eurozone inflation	1.2	-0.1	1.2

Sources: Bureau of Labor Statistics, Wells Fargo Investment Institute, Wells Fargo Securities' Economic Group, as of May 31, 2020. The targets are Wells Fargo Investment Institute forecasts, as of June 15, 2020. YE = year-end.

[1] "Latest" is year-over-year % change (2019 versus 2018).

[2] "Year-end 2020 target" is the average for the year; "latest" is the average for 2019.

Forecasts are not guaranteed and based on certain assumptions and on views of market and economic conditions which are subject to change. ▲/▼: recent change.

Fixed Income

Market summary

Most fixed-income classes delivered solid May returns, led by credit-sensitive U.S. sectors, such as high-yield (HY) and investment-grade (IG) corporate bonds. Emerging market (EM) debt also posted strong gains, but year-to-date (YTD) returns remained negative as EMs have been heavily impacted by the pandemic's economic effects. In the Treasury sector, intermediate-term maturities outperformed short- and long-term maturities last month. Yet, long-term and intermediate taxable issues, along with Treasury securities, led YTD performance as a risk-off environment benefited them.

Liquidity continues to flow into the U.S. bond market as the Fed further expanded its balance sheet and began buying corporate bond exchange-traded funds last month. The Fed retains significant additional lending capacity to deploy in the future if needed. The old adage "don't fight the Fed," is more pertinent than ever. Central banks overseas also are acting to support markets.

Market observations

U.S. fixed income: Treasury-yield volatility decreased further after a few rough months earlier this year; the 10-year Treasury yield fell from 1.91% on January 2 to 0.65% on May 31; it was relatively unchanged in May. This decline helped to fuel the 8.6% YTD Treasury gain. Residential mortgage-backed securities (RMBS) and agency securities returned 3.6% and 4.9%, respectively, YTD, after their nominal May gains. We are favorable on RMBS given current yields and Fed mortgage-security purchases, but we believe that selectivity and a quality focus are essential, given economic headwinds.

Credit-focused sectors saw some of the largest May taxable-bond gains after the March coronavirus-fueled market turmoil. Investors continued their move back into risk assets, helping to fuel strong IG and HY corporate returns in May (+1.6% and 4.4%, respectively). In fact, IG corporates returned 10.0% for the 12-month period. We are favorable on IG corporates and neutral on HY corporates, given current yield levels and our near-term expectations. We believe that selectivity, careful credit research, and a quality focus are important.

After a weak April due to fiscal concerns, municipals rebounded strongly in May (+3.2%) as income-focused investors actively returned to bond markets. Municipal securities have registered gains for the 12-month period and YTD, despite the March and April sell-offs. While we remain favorable, near-term headwinds remain—so selectivity, a quality focus, and careful credit research are essential.

Developed markets: Small index-level changes for developed market (DM) bonds in May (unhedged, +0.2%; hedged, -0.1%) masked diverging country-level performance. Eurozone sovereigns performed best, led by Portugal and Italy, and helped by the stronger euro, which responded positively to hopes of a more coordinated fiscal response to the COVID-19 crisis. On the other hand, U.K. gilts and Japanese government bonds declined, as these currencies weakened versus the dollar.

Emerging markets: EM bonds recovered strongly in May, aided by dollar weakness; more positive risk sentiment amid greater economic optimism; and an oil-price bounce. Many EM currencies had strong gains, led by oil exporters such as Mexico and Russia, leaving local-currency-denominated bonds +5.0% last month in dollar terms (still -8.5% YTD). Dollar-denominated sovereigns performed even better, +5.7% in May (-4.6% YTD), with similar outperformance by commodities exporters.

[1] Duration is a measure of interest-rate sensitivity.

Please see the end of the report for the definitions of the representative indices.

Fixed income index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
U.S. Taxable Inv Grade Fixed Income	0.5	2.3	5.5	9.4	5.1	3.9
U.S. Short Term Taxable	0.2	0.7	2.5	4.4	2.8	2.0
U.S. Intermediate Term Taxable	1.1	3.0	5.7	9.0	4.8	3.7
U.S. Long Term Taxable	0.1	4.6	11.1	20.3	10.1	7.8
U.S. Treasury Bills	0.0	0.0	0.5	1.7	1.7	1.1
U.S. Municipal Bonds	3.2	1.9	1.2	4.0	3.8	3.7
High Yield Taxable Fixed Income	4.4	9.1	-4.7	1.3	3.0	4.3
DM Ex.-U.S. Fixed Income (Unhedged)	0.2	1.6	0.4	3.3	2.6	3.3
DM Ex.-U.S. Fixed Income (Hedged)	-0.1	0.8	2.3	5.7	5.0	4.5
EM Fixed Income (U.S. dollar)	5.7	8.1	-4.6	1.7	2.2	4.2
EM Fixed Income (Local currency)[1]	5.0	8.8	-8.5	0.7	0.9	2.0

Sources: Bloomberg Barclays, J.P. Morgan, May 31, 2020. MTD = month to date. QTD = quarter to date. YTD = year to date. Inv Grade indicates Investment Grade; DM indicates Developed Market; EM indicates Emerging Market. Returns over one year are annualized. [1] Returns are converted to dollars for U.S. investors. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** See end of report for important definitions and disclosures.

Wells Fargo Investment Institute perspective

We expect rates to move modestly higher over the next 12 months, but we believe that they will remain relatively low over time. Rates potentially could move to new record lows should new negative economic developments occur; thus, we remain neutral on duration.[1] We continue to add credit exposure, but selectivity remains key as we expect an increase in bankruptcies in the near term. We continue to favor IG corporates, municipals, and preferred securities, as we view these sectors as well-positioned to offer investors sustainable yield potential, which we view as a key driver of future fixed-income performance.

Even while the yield differential with the U.S. has rapidly contracted as U.S. rates have fallen sharply, DM sovereign-debt yields remain lower than U.S. Treasury yields, and they are negative in much of the eurozone and Japan. We see little prospect of strong DM-debt returns this year. We believe that the dollar may have peaked, and it may slip a little further in 2021, but elevated risks in both directions support our unfavorable DM-debt view, since foreign-exchange risk is insufficiently compensated by income or capital-gain prospects (the strategic index is unhedged in terms of currency exposure).

EM debt yields rose to near 7.50% on March 19, matching the highest levels seen since the global financial crisis. Although yields have fallen sharply since that peak, EM debt remains supported by investors' search for yield, with many government-bond yields stuck near zero. However, given uncertainties about the long-term impacts of the coronavirus and the global shutdown on EM economies, we remain neutral for now.

Asset class guidance	Guidance: Most unfavorable		Neutral		Most favorable
Cash Alternatives	□	□	■	□	□
U.S. Taxable Investment Grade Fixed Income	□	□	□	■	□
U.S. Short Term Taxable	□	□	■	□	□
U.S. Intermediate Term Taxable	□	□	□	■	□
U.S. Long Term Taxable	□	□	■	□	□
High Yield Taxable Fixed Income	□	□	■	□	□
DM Ex.-U.S. Fixed Income	□	■	□	□	□
EM Fixed Income	□	□	■	□	□

Source: Wells Fargo Investment Institute, June 15, 2020.

Fixed Income

Wells Fargo Investment Institute forecasts

Interest rates: Interest rates remain at low levels. The economic damage due to the coronavirus pandemic, coupled with Fed liquidity, may keep rates lower for longer. The Fed reduced the federal funds rate to 0.00%–0.25% in March. This change, along with the Fed's numerous lending programs this spring, was made in an effort to help assure adequate funds for orderly financial-market conditions and to support an economy facing significant coronavirus challenges. We believe that the Federal Open Market Committee (FOMC) will continue to utilize its tools to inject liquidity into the financial system, ease credit conditions, and stimulate the economy as needed. Our interest-rate targets for year-end 2020 remain unchanged, with the federal funds rate target range at 0.00%–0.25%, and our target ranges for 10-year and 30-year U.S. Treasury securities at 0.75%–1.25% and 1.50%–2.00%, respectively. Our 2021 year-end targets reflect modest upside for longer-term rates, with the 10-year Treasury yield target range at 1.00%–1.50% and the 30-year Treasury yield target range at 1.75%–2.25%; the federal funds rate 2021 year-end target range remains unchanged (0.00%–0.25%).

Global fixed income (%)

	Latest	2020 YE target	2021 YE target
10-year U.S. Treasury yield	0.65	0.75–1.25	1.00–1.50
30-year U.S. Treasury yield	1.41	1.50–2.00	1.75–2.25
Fed funds rate	0.25	0.00–0.25	0.00–0.25

Sources: Bloomberg, Wells Fargo Investment Institute, as of May 31, 2020.
The targets are Wells Fargo Investment Institute forecasts, as of June 15, 2020. Forecasts are not guaranteed and based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures.

Rolling 12-month forecasts

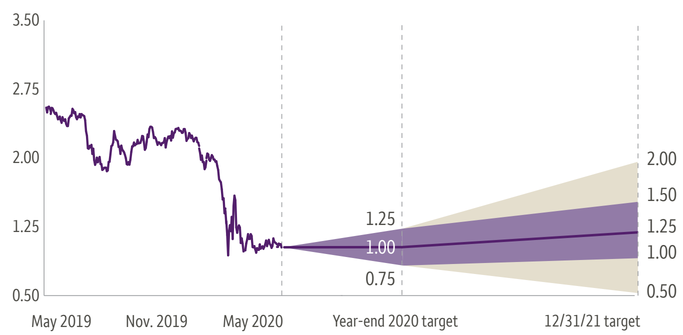
Conviction path definitions

Lower conviction range (upper): The upper range of the lower conviction path may occur if coronavirus issues subside quickly and the economy proves resilient. For example, stronger-than-expected U.S. growth may result if added monetary or fiscal stimulus supports markets and coronavirus headwinds subside with more limited economic damage.

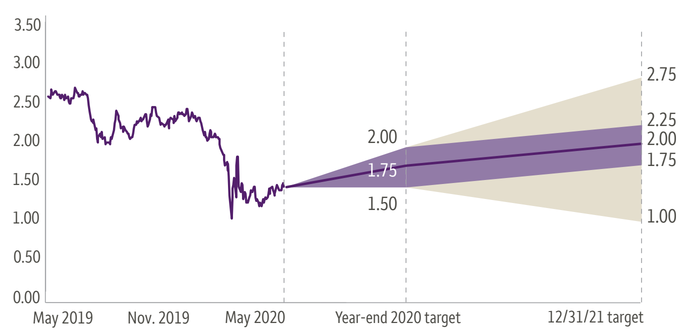
High conviction range: The high conviction middle path factors in Wells Fargo Securities' base case economic forecasts. The high conviction middle path may occur if economies in the U.S. and abroad improve late in 2020 from coronavirus disruptions and inflation begins to firm as the world economy recovers.

Lower conviction range (lower): The lower range of the lower conviction path may occur if the coronavirus' economic impact is more serious. Such a development likely would impair U.S. economic growth and sustain investors' recent preference for perceived "safe haven" assets.

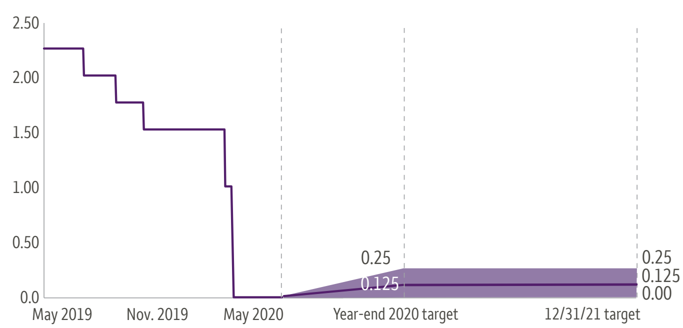
10-year Treasury yield (%)



30-year Treasury yield (%)



Fed funds rate (%)



Forecasts are not guaranteed and based on certain assumptions and on our views of market and economic conditions, which are subject to change. Yields represent past performance and fluctuate with market conditions. Current yields may be higher or lower than those quoted above. **Past performance is no guarantee of future results.**

Fixed Income

Sector strategy: U.S. investment-grade securities

Sector guidance

	Guidance				
Sector	Most unfavorable		Neutral		Most favorable
Duration	□	□	■	□	□
U.S. Government	□	■	□	□	□
Treasury Securities	□	■	□	□	□
Agencies	□	□	■	□	□
Inflation-Linked Fixed Income	□	□	■	□	□
Credit	□	□	□	■	□
Corporate Securities	□	□	□	■	□
Preferred Securities	□	□	□	■	□
Securitized	□	□	□	■	□
Residential MBS	□	□	□	■	□
Commercial MBS	□	□	■	□	□
Asset Backed Securities	□	□	■	□	□
U.S. Municipal Bonds	□	□	□	■	□
Taxable Municipal	□	□	■	□	□
State and Local General Obligation	□	□	■	□	□
Essential Service Revenue	□	□	□	■	□
Pre-Refunded	□	□	■	□	□

Source: Wells Fargo Investment Institute, June 15, 2020.
See end of report for important definitions and disclosures.

Total sector returns (%)

Sector	1 month	Year to date	12 months
U.S. Government	-0.2	8.5	11.2
Credit	1.6	2.9	9.5
Securitized	0.1	3.6	6.5
U.S. Municipal Bonds	3.2	1.2	4.0

Source: FactSet, May 31, 2020.
An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** See end of report for important definitions and disclosures.

Duration (Neutral): Our duration guidance is neutral for both taxable and tax-exempt (municipal) bond sectors. During the first quarter, many U.S. interest rates declined to all-time historic lows, following the coronavirus' outbreak and the resulting economic headwinds. Given the continued low-yield environment and the pandemic's likely economic effect, we do not believe that the risk/reward profile merits positioning duration above benchmark levels.

U.S. Government (Unfavorable): We recently downgraded this sector to unfavorable from neutral. Interest rates have fallen to new, generational lows, and we see limited return potential going forward. Further, the supply and demand picture in the Treasury market is set to worsen as the Treasury Department funds federal stimulus spending. We also expect the Fed to step away from significant new Treasury market intervention over the medium term as market functioning returns to normal levels.

Investment-Grade (IG) Credit (Favorable): We have a favorable view of IG credit (and IG corporate bonds). High-quality IG credit can allow portfolios to generate excess yield through spread premium (also known as "carry") that is meant to compensate investors for perceived issuer credit risk. While credit markets have seen some stress from the pandemic, the Fed's recent actions should help to support the IG credit market. We reiterate our bias toward higher quality and selectivity.

Investment-Grade Securitized (Favorable): We believe that yield is an important component of an investor's sector selection, and the securitized sector can offer investors potential income opportunities that cannot be found in many other highly rated, fixed-income securities. This sector can add diversification benefits to a fixed-income portfolio and generally has lower correlation to other sectors.

U.S. Municipal Bonds (Favorable): Following a substantial May rally, the municipal yield curve steepened, while municipal-to-Treasury yield ratios declined significantly. As of late May, municipal-to-Treasury yield ratios ranged from 82% for the 2-year maturity to 118% and 119% for the 10- and 30-year maturities, respectively.[1] When this is compared to their 10-year averages of 113%, 96%, and 104%, respectively, we believe that municipal securities are richly valued for shorter-maturity issues but offer value in 10-year and longer maturities. We currently favor the 10-to-13 year maturity range, where the municipal yield curve was steepest in late May. Many municipal securities have compelling yields versus Treasury securities and even corporate bonds, particularly considering their tax benefits. We expect overall municipal supply to remain negative this year as taxable municipal issuance continues to rise while tax-exempt issuance generally remains below demand. Reinvestment demand this summer is likely to provide technical support (along with Fed lending and liquidity programs). We currently favor 3%–4% coupons in the municipal bond space.

While economic headwinds remain, we see opportunities for long-term investors in the municipal bond space today. The coronavirus crisis is impacting states, cities, and other municipal issuers. Nevertheless, the Fed has extended its asset purchase program into short-term municipal securities, and Municipal Liquidity Facility support from the Treasury Department and the Fed will offer up to $500 billion in liquidity to states and larger municipalities. We do acknowledge that many municipal bonds in the health care and transportation sectors carry higher-than-average risk today, along with those secured by economically sensitive revenue sources (such as sales taxes, hotel taxes, convention centers, and sports facility revenues). These bonds likely would have greater inherent risk than many essential service and general obligation bonds in the event of a prolonged economic downturn. In our view, an emphasis on quality and selectivity remains essential in the current landscape. We believe that investors should undertake careful credit research or access professional management in this space today.

[1] As of May 29, 2020.

For more information, please request our most recent *Investment Strategy* report or our *Quarterly Fixed Income Guidance* report.

Equities

Market summary

Global equity markets rallied in May on optimism for a swifter economic recovery than originally had been anticipated. All major equity classes were positive last month. Market breadth improved as investors rotated into previously neglected value equities and highly cyclical stocks. All major U.S. equity classes outperformed major international equities in May.

All major equity classes had negative year-to-date (YTD) returns. U.S. large caps and mid caps have outperformed other U.S. and international equity classes YTD and for the one-year period; they were the only major equity classes to gain over the 12 months ended on May 31.

Market observations

U.S. equities: U.S. large caps returned 4.8% last month, underperforming both mid caps' and small caps' monthly returns (+7.0% and +6.5%, respectively). All large-cap sectors were positive in May. Information Technology's 7.1% return was the largest monthly gain, followed by Communication Services' 6.0% increase. These sectors have benefited from the transition to the virtual business and entertainment environment during the pandemic lockdown. Consumer Staples (+1.5%) was the weakest large-cap sector last month as the economic reopening dampened likely future demand for basic consumer goods.

Mid- and small-cap equities had strong monthly gains, driven by "risk-on" sentiment. Consumer Discretionary led sector returns for both equity classes, with an 11% gain for mid caps and 17.1% for small caps. The weakest sector performer for mid caps was Real Estate, ending the month unchanged. Energy (-3.3%) had the weakest small-cap sector performance.

International equities: As noted, developed market (DM) and emerging market (EM) equities underperformed U.S. stocks in May—for the third consecutive month. U.S.-dollar-denominated DM equities returned 4.4% last month, while U.S.-dollar-denominated EM equities gained 0.8%. Dollar-denominated equities continued to outperform their local-currency counterparts as the U.S. dollar depreciated against DM and EM currencies.

DM and EM equity markets posted mixed May returns. The strongest DM-equity performer was the MSCI Israel Index (+9.0% in U.S.-dollar terms), due to better-than-expected earnings results for major financial firms. The MSCI Hong Kong Index (-8.4% in U.S.-dollar terms) trailed other DM markets as China announced plans to impose a national security law on Hong Kong.

The MSCI Russia Index (+8.7% in U.S.-dollar terms) was the best EM equity performer last month as the country lifted its lockdown and global risk sentiment improved. The MSCI Chile Index (-5.4% in U.S.-dollar terms) had the sharpest decline after the largest Latin American airline carrier filed for bankruptcy.

Wells Fargo Investment Institute perspective

Investors' risk appetite has improved as countries across the globe are reopening their economies. By the end of May, the S&P 500 Index was trading above 3000 for the first time since U.S. equity markets corrected in February and March. Investors now anticipate a stronger U.S. earnings rebound over the next 12 to 18 months. While liquidity from the Fed can support higher valuations, the true swiftness of an earnings recovery will depend upon consumers' willingness to spend and the pace of medical breakthroughs for the treatment and cure of the coronavirus.

We recently reduced our 2020 full-year earnings targets for the Russell Midcap, Russell 2000 (small cap), and MSCI Emerging Markets indices. The reductions for the Russell indices reflect continued profitability challenges that are likely to persist through year-end. We believe that consensus analyst earnings estimates for emerging markets are too high and reflect unrealistic expectations. We increased all of our 2020 year-end equity targets as investors reprice a significant earnings rebound in 2021.

We believe that worldwide reopenings, improving economic data, and bullish investor sentiment should support further 2020 gains. Broadening market participation, a steepening yield curve, and a softening U.S. dollar also should add support. Even so, the ongoing uncertainty surrounding the pandemic and the November elections may lead global equity markets to trade, at times, in ranges around our targets. We reiterate our favorable ratings on U.S. large- and mid-cap equities and our unfavorable ratings on the other major equity classes. We remain most unfavorable on U.S. small-cap equities.

Equity index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
U.S. Large Cap Equities	4.8	18.2	-5.0	12.8	10.2	9.9
U.S. Large Cap (Growth)	6.7	22.5	5.2	26.3	17.2	14.5
U.S. Large Cap (Value)	3.4	15.1	-15.7	-1.6	2.6	4.4
U.S. Mid Cap Equities	7.0	22.4	-10.7	2.6	5.5	5.9
U.S. Mid Cap (Growth)	10.0	27.3	1.8	17.0	14.0	10.7
U.S. Mid Cap (Value)	4.6	18.6	-19.0	-6.9	-0.4	2.6
U.S. Small Cap Equities	6.5	21.1	-15.9	-3.4	2.0	3.7
U.S. Small Cap (Growth)	9.4	25.8	-6.6	7.3	7.7	6.3
U.S. Small Cap (Value)	2.9	15.6	-25.6	-14.7	-4.2	0.7
DM Equities Ex-U.S. (USD)	4.4	11.2	-14.0	-2.4	0.1	1.3
DM Equities Ex-U.S. (Local)[1]	4.1	9.9	-12.6	-2.3	0.6	1.7
DM Small Cap Equity (USD)	7.2	18.4	-14.1	-0.4	0.4	3.6
DM Small Cap Equity (Local)[1]	6.9	16.6	-12.4	0.0	1.0	3.9
EM Equities (USD)	0.8	10.0	-15.9	-4.0	0.2	1.3
EM Equities (Local)[1]	0.7	9.5	-11.3	-0.2	3.2	3.7
FM Equities (USD)	5.8	12.9	-17.1	-10.5	-1.9	-0.2
FM Equities (Local)[1]	5.3	11.6	-15.4	-9.1	-0.6	1.8

Sources: Standard & Poor's, Russell Indices, MSCI Inc., May 31, 2020. DM indicates Developed Market; EM indicates Emerging Market; FM indicates Frontier Market; USD indicates U.S. dollar. Returns over one year are annualized.[1] Returns are in local currencies as experienced by local investors. U.S. investors would experience gains or losses on currency conversion. An index is unmanaged and not available for direct investment.

Past performance is no guarantee of future results.
See end of report for important definitions and disclosures.

Asset class guidance	Guidance: Most unfavorable		Neutral		Most favorable
U.S. Large Cap Equities	□	□	□	■	□
U.S. Mid Cap Equities	□	□	□	■	□
U.S. Small Cap Equities	■	□	□	□	□
DM Equities Ex-U.S.	□	■	□	□	□
EM Equities	□	■	□	□	□

Source: Wells Fargo Investment Institute, June 15, 2020.

Equities

Wells Fargo Investment Institute forecasts

We have increased our 2020 year-end equity price targets for all the major equity classes. Our equity target adjustments reflect markets' expected repricing of a significant earnings rebound in 2021.

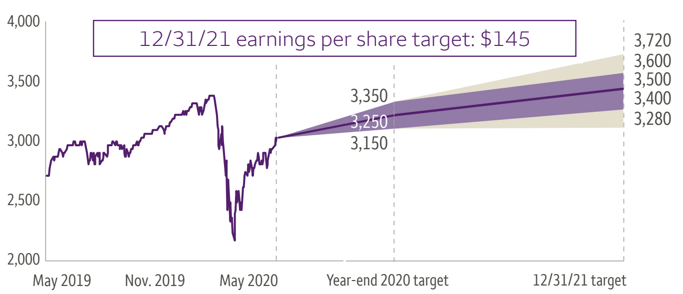
U.S. equities: Our 2020 earnings per share (EPS) forecast for the S&P 500 Index remains unchanged at $115, which implies a 30% year-over-year earnings decline. Our preliminary 2021 EPS target for the S&P 500 Index is $145, with a 2021 year-end price target range midpoint of 3500. Our new 2020 year-end price target range for this index is 3150–3350. We have reduced our 2020 full-year earnings targets for the Russell Midcap and Russell 2000 (small cap) indices to $70 and $20, respectively. These reductions reflect continued profitability challenges that are likely to persist through year-end. Our year-end price target ranges for the Russell Midcap Index are 2230–2430 for this year and 2400–2600 for next year. Our Russell 2000 Index price targets are 1450–1650 and 1550–1750, for 2020 and 2021, respectively.

Foreign equities: We recently reduced our 2020 earnings target for emerging market equities. We believe that the consensus analyst earnings estimates for emerging markets are too high and reflect unrealistic expectations. Our 2020 earnings target for the MSCI Emerging Markets Index is now $45 and our 2020 year-end price target range is 930–1130. Our 2021 earnings target for the same index is $55 with a year–end price target range of 950–1150.

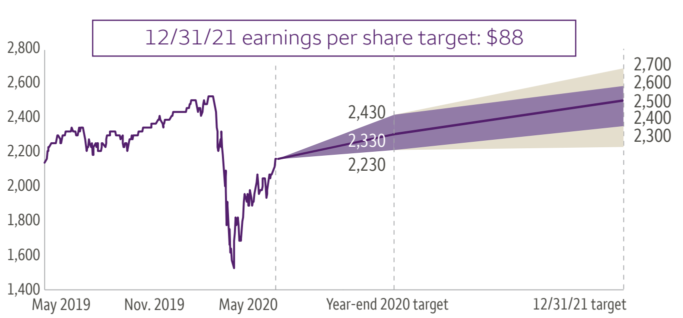
Our 2020 year–end price target range for the MSCI EAFE Index is now 1800–2000, and our earnings target remains at $85. Our 2021 earnings target is $100 and our 2021 year-end price target range is 1850–2050.

Rolling 12-month forecasts

S&P 500 Index



Russell Midcap Index



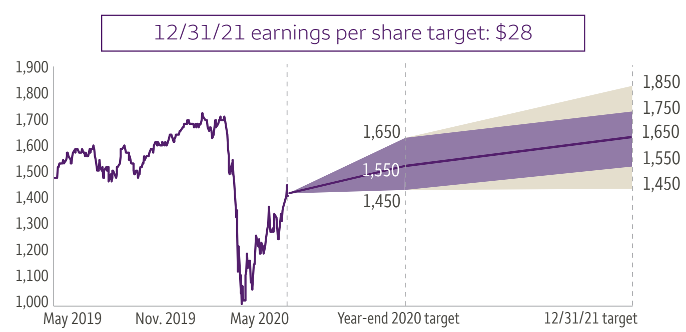
Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.**

Global equities

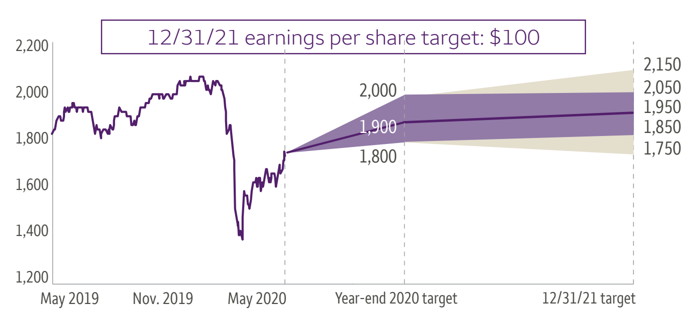
	Latest	2020 YE target	2021 YE target
S&P 500 Index	3044	▲ 3150–3350	3400–3600
S&P 500 earnings per share ($)	163	115	145
Russell Midcap® Index	2111	▲ 2230–2430	2400–2600
Russell Midcap earnings per share ($)	105	▼ 70	88
Russell 2000 Index	1394	▲ 1450–1650	1550–1750
Russell 2000 earnings per share ($)	44	▼ 20	28
MSCI EAFE Index	1725	▲ 1800–2000	1850–2050
MSCI EAFE earnings per share ($)	130	85	100
MSCI Emerging Markets (EM) Index	930	▲ 930–1130	950–1150
MSCI EM earnings per share ($)	71	▼ 45	55

Sources: FactSet, Bloomberg, Wells Fargo Investment Institute, as of May 31, 2020. The targets are Wells Fargo Investment Institute forecasts, as of June 15, 2020. The current earnings per share is as of December 31, 2019. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures. ▲/▼: recent change.

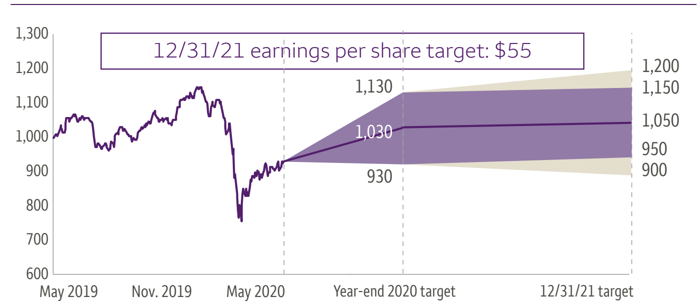
Russell 2000 Index



MSCI EAFE Index



MSCI Emerging Markets Index



Conviction range definitions are on page 6.

Equities

U.S. equity sector strategy

Sector guidance

Sector	S&P 500 Index weight (%)*	WFII guidance ranges (%)**	Guidance: Most unfavorable		Neutral		Most favorable
Communication Services	11.0	+2 and +4	□	□	□	■	□
Consumer Discretionary	10.5	+2 and +4	□	□	□	■	□
Consumer Staples	7.1	+2 and -2	□	□	■	□	□
Energy	2.9	0.0	■	□	□	□	□
Financials	10.4	+2 and +4	□	□	□	■	□
Health Care	15.2	+2 and +4	□	□	□	■	□
Industrials	8.0	-2 and -4	□	■	□	□	□
Information Technology	26.2	+4 and +6	□	□	□	□	■
Materials	2.5	0.0	■	□	□	□	□
Real Estate	2.8	-2 and -3	□	■	□	□	□
Utilities	3.2	+2 and -2	□	□	■	□	□
Total	100.0						

Sources: FactSet, Wells Fargo Investment Institute (WFII). Weightings are as of May 31, 2020. WFII guidance is as of June 15, 2020.
*Sector weightings may not add to 100% due to rounding.

**We now provide ranges of recommended weights, instead of specific percentages. The ranges allow flexibility in sizing transactions, and may require less rebalancing as markets fluctuate.

Total returns (%): S&P 500 Index sectors

Sector	1 month	Year to date	12 months
S&P 500 Index	4.8	-5.0	12.8
Communication Services	6.0	0.2	16.4
Consumer Discretionary	5.0	2.1	15.6
Consumer Staples	1.5	-5.3	9.4
Energy	1.9	-34.5	-29.2
Financials	2.7	-23.4	-7.8
Health Care	3.3	1.6	21.1
Industrials	5.5	-16.3	-3.8
Information Technology	7.1	7.3	38.4
Materials	7.0	-8.9	8.1
Real Estate	1.9	-9.9	-1.7
Utilities	4.4	-6.8	6.1

Source: FactSet, May 31, 2020.
An index is unmanaged and not available for direct investment.
Past performance is no guarantee of future results.

Communication Services (Favorable): Internet and media industry groups represent 80% of the Communication Services sector—and these groups' revenues should be more resilient to the coronavirus' impact—as much of the content can be consumed at home. Profitability, earnings growth, and leverage health metrics are all above average, which provides a good source of quality for investors.

Consumer Discretionary (Favorable): Certain parts of this sector, such as travel-related companies and luxury goods purveyors, have been hard-hit by the pandemic. Yet, that impact should be more than offset by areas with larger weightings in this sector, such as internet commerce and housing-related retailers.

Consumer Staples (Neutral): We expect volatility to persist as COVID-19 and geopolitical concerns continue. The Consumer Staples sector offers an attractive dividend yield; we believe that its defensive characteristics should help to counter some cyclical volatility this year.

Energy (Most unfavorable): Forward price/earnings (P/E) valuations remain unattractive. More compelling valuations will require meaningfully higher energy prices, which we do not foresee at this time.

Financials (Favorable): Financial-sector valuations, reflected in price-to-book-value ratios, remain at significant discounts to these firms' balance sheets. Business loan demand remains strong as firms seek credit to address liquidity needs in response to the coronavirus' economic impact. Yet, banks have become more cautious in extending credit, given the recent economic headwinds. Yet, Fed actions and fiscal programs should continue to support lending to companies, individuals, and financial institutions.

Health Care (Favorable): Fiscal spending should improve revenue and earnings growth for Health Care stocks, leaving the sector attractive from a forward P/E ratio perspective. Additionally, the sector has generated increased research and development focus in the wake of the coronavirus pandemic. Further, we believe that many of the political headwinds that this sector has faced in the recent past have abated.

Industrials (Unfavorable): Industrial production in the U.S. and overseas weakened as countries shuttered factories. Recently, investors have rotated into the sector on news of economic reopening. Yet, fundamentals are not yet pointing to sustained opportunities in this sector.

Information Technology (Most favorable): Strong balance sheets and digital-economy growth stemming from "shelter at home" directives should be supportive of 2020 returns and revenue. However, we acknowledge that there have been some additional near-term supply chain disruptions from the coronavirus pandemic. We are monitoring these developments closely.

Materials (Most unfavorable): We anticipate that Materials companies' margins will remain compressed without a broader commodity price rebound and a recovery in global industrial production.

Real Estate (Unfavorable): We believe that the coronavirus pandemic could have a lasting negative impact on rent payments and occupancy rates in segments of the Real Estate sector.

Utilities (Neutral): Utilities are considered a defensive sector that offers an attractive dividend yield. Economic uncertainty and lower interest rates could attract further capital to this sector.

Growth versus Value (Neutral): The Information Technology and Consumer Discretionary sectors contain a heavy allotment of growth companies and have led the market higher over the past two years. For now, we remain neutral with a slight lean toward growth, based on our sector guidance.

For more information, please request our most recent Investment Strategy report.

Equities

International equity market strategy

Developed Market Ex.-U.S. Equities

Europe region (Unfavorable): Europe's recovery from its deep dive earlier in the spring has been even weaker than the rebound in the United States. Europe's economy likely will lag the U.S. economic recovery that is expected to begin in the third quarter.

Economic: European economic growth is facing headwinds from slumping world trade, Brexit uncertainties, and structural weaknesses. The coordinated eurozone fiscal and monetary stimulus measures are a positive development, but export sensitivity leaves the region vulnerable to deteriorating U.S.-China trade relations.

Equity fundamentals: Forward P/E valuations remain in the bottom percentile. Consensus bottom-up earnings estimates for 2020 continue to decline and now show a nearly 30% drop. Investors are looking ahead to a sharp 2021 rebound, but we anticipate a more modest earnings rebound.

Pacific region (Unfavorable): Japan has joined Europe in a modest economic recovery. Yet, it nonetheless is disappointing, considering the recent decline in the country's coronavirus infection rate. Recessions in New Zealand and Australia (ending a growth cycle in Australia that began in the early 1990s) have wound down, although trade sensitivity also is keeping early recoveries modest there.

Economic: Mounting U.S.-China trade tensions are aggravating region-wide exposure to a challenging trade environment, countering signs of improved pandemic containment and of stability in commodity prices that support trade-sensitive economies in Australia and New Zealand.

Equity fundamentals: Forward P/E valuations have fallen to the 30th percentile, based on consensus bottom-up earnings estimates for 2020.

Emerging Market Equities

Asia (Unfavorable): Trade sensitivity is expected to slow emerging Asia's growth recovery, despite support from a moderately weaker U.S. dollar and from a return to growth in China and other key trading partners.

Economic: U.S.-China trade tensions and a moderate recovery in world trade and economic growth are expected to dampen emerging Asia's transition from recession to recovery, supported by China's early economic rebound, along with recent stability in the U.S. dollar and commodity prices.

Equity fundamentals: Forward P/E valuations have declined to the 9th percentile, despite consensus bottom-up earnings estimates for 2020 increasing by 5.2%. We believe that this earnings increase is too optimistic, and we anticipate that earnings estimates will fall significantly as analysts adjust their forecasts to incorporate economic conditions.

Europe, Middle East and Africa (EMEA) region (Unfavorable): We do not expect a convalescing global trade and economic environment to be enough to support any more than historically low growth in the region, which would be insufficient to bolster country finances.

Economic: A dollar peak, firmer oil and other commodity prices, and the return to modest world trade and economic growth have set the stage for a return to modest second-half expansion that nevertheless is likely to be too weak to support improvement in living standards, to enable adequate capital-market returns, and to bolster country finances that were debilitated by the recent, deep recession.

Equity fundamentals: Forward P/E valuations remain unattractive after their decline to the bottom percentile. Bottom-up 2020 earnings estimates continue to decrease. Analysts now expect earnings to decrease by 25% this year.

Latin America region (Unfavorable): Sub-par economic growth for many of the same reasons that have been weighing on other emerging economies are likely to be compounded by a worsening pandemic in Latin America.

Economic: Support from a moderately weaker U.S. dollar and commodity prices, along with a return to growth in export markets, should be offset by disruptions from a rising coronavirus infection rate in the region and by worsening U.S.-China trade tensions that threaten to keep Latin American economic growth at a sub-par level.

Equity fundamentals: Forward P/E valuations have fallen to the 36th percentile as bottom-up 2020 earnings estimates continue to decrease. Analysts now expect earnings to fall by 22%.

International equity guidance by region

		Regional guidance				
Region	Benchmark weight (%)*	Most unfavorable		Neutral		Most favorable
Developed Market Ex.-U.S. Equities		☐	■	☐	☐	☐
Europe	62	☐	■	☐	☐	☐
Pacific	38	☐	■	☐	☐	☐
Emerging Market Equities		☐	■	☐	☐	☐
Asia	79	☐	■	☐	☐	☐
Europe, Middle East, and Africa	13	☐	■	☐	☐	☐
Latin America	8	☐	■	☐	☐	☐

Source: Wells Fargo Investment Institute, May 31, 2020.
* Benchmarks are MSCI EAFE for DM and MSCI Emerging Markets for EM.

We provide additional context for the regional guidance in our International Strategy reports.

↺ Table of Contents

Real Assets

Market summary

April's "risk-on" market mood continued into May. It seemed that confidence grew as states started to reopen from lockdowns. May saw master limited partnerships (MLPs) outperform again with a 9% return, while commodities posted a 4.3% monthly return.

Master limited partnerships

Market observations

While it was not as impressive as April's astonishing 49% return, MLPs' 9% May return still put it near the top of the monthly stack rank versus other assets that we track. While MLPs rode the "risk-on" rally, they essentially were nudged ahead by oil's surge. West Texas Intermediate (WTI) oil prices rose by nearly 90% in May. From the March 18 low to May 31, the Alerian MLP Index delivered a total return of more than 110%. We suspect that institutional selling eased as the price of WTI oil approached multi-decade—and then historic—lows, while individual investors waded into the beaten-down MLP space. Despite their recently impressive returns, MLPs remain one of the worst-performing assets YTD. Investors seemed to approve of management announcements of fiscally-responsible measures, such as capital expenditure reductions and distribution cuts. We expect that the measures taken by this group over the past few years to improve balance sheets and reduce leverage will help it weather the low-oil-price storm better than some of its energy company peers. We expect oil-market participants to remain nervous in the short run as supplies and storage are adjusted for stagnant demand, which should remain an MLP headwind. For investors looking to wade into the group, we urge a preference for the large, high-quality names that are well-capitalized.

Wells Fargo Investment Institute perspective

We prefer midstream companies (MLPs and c-corporations) over those closer to the wellhead, including exploration and production firms, along with equipment, services, and drilling firms. Regardless of tax structure (MLP or c-corporation), we urge investors to emphasize quality midstream companies that are large, broadly diversified, and well-capitalized.

Commodities

Market observations

Commodities recouped some of their YTD losses in May, led by oil's impressive price recovery from its April lows. Concerns remain surrounding weaker commodity demand, especially from China, and they may increase until the global economy begins to recover.

Energy: WTI oil's rise of nearly 90% last month led the way for energy commodities as prices bounced from the historically-low negative price on April 20. Strong performance from Brent crude, diesel, and gasoline followed as they all rose by more than 30%. Concerns over falling oil demand eased as some countries and U.S. states began to reopen following the lockdowns. This helped to boost oil prices, along with the production cuts from OPEC+ (Organization of the Petroleum Exporting Countries and others such as Russia). Natural-gas prices fell by 5% as seasonal demand waned and storage filled. We expect oil markets to remain volatile in the near term as investors continue to price in any demand headwinds and tailwinds from potential production cuts. We anticipate that supply and demand will balance better toward the end of this year.

Metals: Precious and base metals gained in May, led by silver, platinum, iron ore, and copper. Gold prices rose 2.5%, while silver prices increased by 24.2%. In recent months, gold has benefited from perceived "safe-haven" demand as concern grew over weakening economic growth and the coronavirus. Yet demand waned in May as the "risk-on" market mood took hold. We believe that gold prices should continue to benefit from volatility, low rates, and accommodative global monetary policies. Base metals continued their recovery in May, led by a surge in iron prices, as optimism grew over a demand rebound from economic reopening.

Agriculture: Agriculture commodities underperformed as crop reports suggested a potential record output in 2020. Sugar was the best performer, while coffee and wheat underperformed. In general, the elevated supply for most agriculture commodities and demand uncertainties should limit upside potential in this space.

Real assets index total returns

	MTD	QTD	YTD	1 year	3 year	5 year
Public Real Estate	0.3	7.4	-23.0	-16.3	-1.3	0.9
U.S. REITs	1.7	10.7	-15.3	-7.3	3.4	5.2
International REITs	0.8	6.6	-22.8	-15.0	-1.2	0.2
Master Limited Partnerships	9.0	63.0	-30.2	-34.7	-14.7	-12.9
Global Infrastructure	5.4	15.3	-18.3	-9.0	-0.5	1.9
Commodities (BCOM)	4.3	2.7	-21.2	-17.1	-6.9	-7.8
Agriculture	-0.9	-6.5	-15.7	-14.9	-10.1	-7.7
Energy	11.4	7.5	-47.4	-44.8	-16.1	-19.4
Industrial Metals	2.8	5.1	-14.3	-10.6	-2.4	-2.3
Precious Metals	6.3	12.6	11.3	30.5	7.9	5.6

Sources: Bloomberg, May 31, 2020. REITs = real estate investment trusts. Returns over one year are annualized. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** See end of report for important definitions and disclosures.

Wells Fargo Investment Institute perspective

Coronavirus containment efforts have dented commodity demand and prices YTD. Demand concerns should persist in the near term, but we expect supply and demand to be better balanced toward year-end. We view current commodity price levels as attractive, and we recently upgraded commodities from neutral to favorable.

Private Real Estate: We are unfavorable on Private Real Estate (specifically, core strategies). Early indications are that the Private Real Estate sector appears to be in reasonably good shape overall and should not have the same volatility that often can be associated with public real estate investment trusts (REITs). However, open-end funds that invest in core or core-plus strategies that offer quarterly liquidity may face redemption pressure. It is likely that core Private Real Estate offerings will reflect markdowns in existing asset values over the next two quarters. We expect that Private Real Estate funds focusing on value-add and opportunistic strategies could enjoy an expanded opportunity set during this period of dislocation, particularly following the nearly-inevitable markdown of real estate valuations due to the coronavirus pandemic.

Asset class guidance	Guidance: Most unfavorable		Neutral	Most favorable	
Private Real Estate	☐	■	☐	☐	☐
Commodities	☐	☐	☐	■	☐

Source: Wells Fargo Investment Institute, June 15, 2020.

Real Assets

Wells Fargo Investment Institute forecasts

Commodities: Commodity prices were driven lower in 2020 from the demand destruction associated with the coronavirus outbreak and the early March oil-price collapse. We viewed the resulting level of our commodity benchmark, the Bloomberg Commodity Index (total return), as attractive. We took the opportunity to upgrade commodities from neutral to favorable. We expect oil-market participants to remain nervous in the short run as supplies and storage are adjusted for stagnant demand. By year-end, we expect higher prices on a sharp supply reduction and modest demand rebound. Our year-end target ranges are $35–$45 for WTI crude oil and $40–$50 for Brent oil. Looking further ahead, we see additional upside for oil, with 2021 year-end targets of $40–$50 for WTI and $45–$55 for Brent. Gold has a host of economic and market factors working in its favor, and we are increasingly confident that gold could test its all-time high of $1,900 per troy ounce. Our 2020 year-end target gold price range is between $1,800 and $1,900 per troy ounce, and our 2021 year-end target range is $2,200–$2,300.

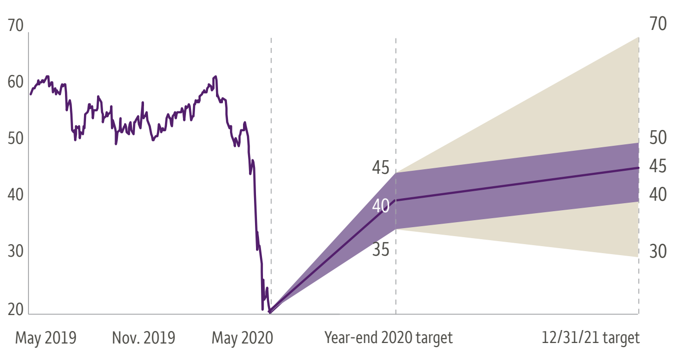
Global real assets

	Latest	2020 YE target	2021 YE target
WTI crude oil price ($ per barrel)	$35	$35–$45	$40–$50
Brent crude oil price ($ per barrel)	$35	$40–$50	$45–$55
Gold price ($ per troy ounce)	$1,737	$1800–$1900	$2200–$2300
Commodities	136	145–155	150–160

Sources: Bloomberg, Wells Fargo Investment Institute, as of May 31, 2020.
The targets are Wells Fargo Investment Institute forecasts, as of June 15, 2020. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures. WTI is a grade of crude oil used as a benchmark in oil pricing.

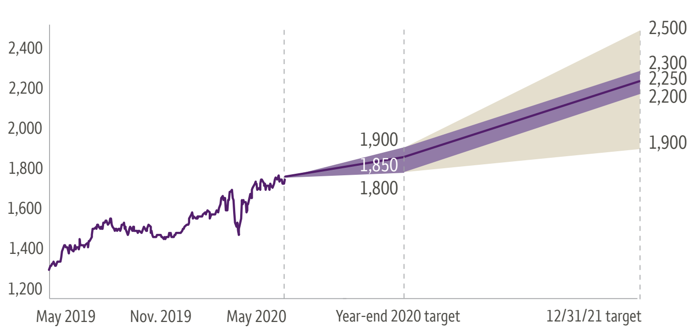
Rolling 12-month forecasts

West Texas Intermediate crude oil ($)

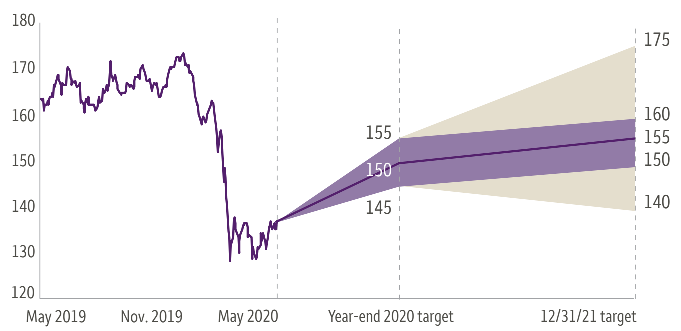


Brent crude oil ($)

Gold ($)



Bloomberg Commodity Index (total return)



Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. An index is unmanaged and not available for direct investment.
Past performance is no guarantee of future results.

Conviction range definitions are on page 6.

For more information, please request our most recent Investment Strategy report.

Alternative Investments*

Market summary

Early estimates from Hedge Fund Research, Inc. (HFR) indicate a May gain of 2.5%. Directional strategies outperformed, specifically Equity Hedge, Activist, and Distressed, as broader equity and credit markets continued their rebound from the March lows. Structured Credit strategies also had a strong month as upward repricing continued across much of the securitized credit market. Returns were very mixed for Macro strategies, with Discretionary managers generally outperforming, driven by long equity exposure.

Relative Value: Structured Credit managers continued to recover from March's extreme market dislocations. In particular, non-agency residential mortgage-backed security (RMBS) and collateralized loan obligation (CLO) exposure drove returns.

Macro: Trend Following strategies were subdued in May as returns were hindered by muted fixed-income and currency market trends, along with a strong trend reversal in the Energy sector. Discretionary strategy managers were able to add value through long single-name equity exposure.

Event Driven: Activist and Distressed strategies benefited from the sustained equity- and credit-market rebound, while Merger Arbitrage strategies' May returns were restrained as merger spreads were range-bound, following the extreme April spread tightening.

Equity Hedge: Long-biased portfolios continued to outperform in May, particularly those with high Information Technology and growth exposure.

Alternative investments index/strategy total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
Global Hedge Funds	2.5	7.3	-4.8	0.3	1.7	1.8
Relative Value	2.5	4.9	-5.2	-2.5	1.3	2.1
Arbitrage	4.3	5.7	-7.2	-3.4	1.5	2.5
Long/Short Credit	3.0	6.5	-5.4	-2.6	2.0	3.0
Struct. Credit/Asset-Backed	2.6	3.9	-8.1	-5.1	1.6	2.7
Macro	-0.3	0.7	-0.7	3.2	1.2	0.3
Systematic	-1.0	-1.4	-1.8	2.6	0.3	-1.1
Discretionary	1.4	3.5	1.1	4.7	1.7	0.7
Event Driven	2.9	7.4	-8.7	-5.6	0.0	1.2
Activist	4.8	14.2	-17.0	-8.6	-3.7	-0.6
Distressed Credit	2.8	5.2	-7.6	-8.5	-1.2	0.6
Merger Arbitrage	-1.5	3.5	-7.8	-4.1	1.2	1.8
Equity Hedge	3.9	11.1	-5.0	1.9	2.7	2.5
Directional Equity	5.8	14.9	-1.7	5.4	2.6	2.3
Equity Market Neutral	0.3	1.4	-2.1	-0.6	1.1	1.7

Source: Hedge Fund Research, Inc., May 31, 2020. Returns over one year are annualized. An index is unmanaged and not available for direct investment.

Past performance is no guarantee of future results.

See end of report for important definitions and disclosures.

Market observations

Overall, May's trading activity was indicative of a risk-on posture among hedge fund managers. For example, Financial-sector sentiment became more constructive, with broad-based net buying across regions and subsectors.[1] More specifically, the sector experienced more net buying month over month (from April to May) than during any other four-week period since October 2018.[2] This was driven by long purchases outpacing short sales by 3 to 1.[3] Conversely, positioning in the airline industry remains bearish as hedge funds became net short on U.S. airline carriers at the end of April, and shorts more than doubled between April and May.[4]

Wells Fargo Investment Institute perspective

Relative Value: We are neutral on Relative Value and anticipate that an allocation to Structured Credit strategies, combined with exposure to Long/Short Credit strategies, could enhance diversification and income potential for appropriately qualified investors. We are cognizant of the pandemic's effect on consumers and its potential impact on the securitized credit market; we continue to monitor these developments closely.

Macro: We remain neutral overall, but we are more constructive on Discretionary Macro strategies' more nimble, tactical approach in a volatile environment. While we are neutral on Systematic Macro, we have become more constructive on the strategy, given the sustained volatility and trends across asset classes.

Event Driven: We are neutral on Event Driven, but we have a favorable outlook for the Distressed strategy. The number of stressed and distressed bonds has risen significantly, enhancing the strategy's opportunity set. While merger and acquisition activity has decreased with coronavirus impacts, and merger spreads significantly narrowed following March's historic widening, spreads remain above the historical average. Given its directional nature, we believe that the Activist strategy could face headwinds from sustained volatility, but it could be well-positioned in an eventual recovery.

Equity Hedge: We remain favorable on Equity Hedge and prefer low-net global exposure. While stock correlations have risen dramatically, we believe that the strategy offers diversification benefits to long-only equity allocations, particularly for managers overseeing lower-net, defensive portfolios.

Private Equity: While we are neutral on Private Equity, we have high conviction in certain strategies and geographies where valuations are more attractive and capital-market funding is tighter. We believe that opportunities do exist—especially in secondary and infrastructure investing—but not indiscriminately. Early indications are that the overall Private Equity universe remains resilient, with no significant indications of liquidity or other major issues. Private Equity funds likely will require another quarter or two before they complete meaningful numbers of transactions at "bargain valuations." Also, historically, private-market company valuations can remain high for months after public-market valuations decline. We don't expect the coronavirus pandemic to be reflected in valuations for at least the next one-to-two quarters.

Private Debt: We remain favorable on Private Debt funds as we anticipate growing opportunities for Distressed Debt investing. Pieces could be falling into place for the next expanded distressed cycle, especially in cyclical sectors. We generally expect Private Debt funds employing trading strategies to act more quickly than those funds that originate opportunistic credit to stressed and distressed companies.

[1] Goldman Sachs Prime Brokerage, May 31, 2020.

[2] Ibid.

[3] Ibid.

[4] Ibid.

Alternative Investments*

Private placements and liquid alternatives

Alternative investment strategies outlook*

Private placements	Guidance: Most unfavorable		Neutral	Most favorable	
Relative Value	□	□	■	□	□
Arbitrage	□	□	■	□	□
Long/Short Credit	□	□	□	■	□
Structured Credit/Asset-Backed	□	□	■	□	□
Macro	□	□	■	□	□
Systematic	□	□	■	□	□
Discretionary	□	□	□	■	□
Event Driven	□	□	■	□	□
Activist	□	□	■	□	□
Distressed Credit	□	□	□	■	□
Merger Arbitrage	□	□	■	□	□
Equity Hedge	□	□	□	■	□
Directional	□	□	□	■	□
Equity Market Neutral	□	□	■	□	□
Private Equity	□	□	■	□	□

Liquid alternatives	Guidance: Most unfavorable		Neutral	Most favorable	
Relative Value	□	□	■	□	□
Macro	□	□	■	□	□
Event Driven	□	□	■	□	□
Equity Hedge	□	□	■	□	□

Sources: Wells Fargo Investment Institute, Wilshire Liquid Alternative Index family, June 15, 2020.

Notes on alternative investment structures

The core differences between our guidance for private placements versus liquid alternative mutual funds centers on the expected illiquidity premium and the expected complexity premium often associated with private placements. The illiquidity premium refers to the potential for incremental return or yield generated by owning securities that cannot be sold quickly without affecting the price. Certain securities may be illiquid for one month, quarter, several years or longer. This illiquidity may provide investment managers enhanced flexibility which may result in higher long-term returns. Illiquidity may be experienced in public and private credit securities that can include loans, securitized credit, and stressed and distressed corporate credit. However, equity strategies may also be illiquid for periods of time, especially after a corporate restructuring when debt is converted to equity or within strategies that require significant equity ownership such as Activism. A complexity premium may also be associated with illiquid securities as they often require specialized origination, underwriting and investing strategies. Because private placements do not offer daily liquidity to their investors, they potentially provide greater flexibility to invest in securities that may offer an illiquidity premium. Furthermore, private placements can have a larger concentration in illiquid securities.

The complexity premium potentially offered with private placements results from several structural limitations associated with mutual funds, including provisions of the Investment Company Act of 1940, as amended (1940 Act), that apply at the fund level and not the individual strategy level. The 1940 Act requires, among others, the following:

- Regular liquidity—Redemptions must be paid within seven calendar days
- Regular transparency
- Limits on leverage—300% asset coverage limits leverage to 33%; making loans; or investing in real estate or commodities
- Limits on concentration—75% of the value of its total assets cannot be invested more than 5% in any one issuer, 25% in one industry or 10% of the outstanding voting securities of the issuer
- Limits on illiquidity—No more than 15% can be invested in illiquid assets

In addition, under the Investment Advisers Act of 1940, performance-based fees must be symmetric.

As a result of the illiquidity and complexity premiums, performance returns and characteristics are expected to vary between liquid alternative mutual funds and private placements. In our view, when implementing liquid alternatives in a diversified portfolio, they should not be considered a one-to-one substitute for traditional hedge funds. Our new guidance will reflect these differences in product types.

It is important to remember that only "accredited investors" or "qualified purchasers" within the meaning of U.S. securities laws can invest in private placements. This means investors must have a minimum level of income, assets, or net worth to be eligible. They may also need to meet other qualification requirements. Like all mutual funds, liquid alternative funds are regulated under the 1940 Act, and are open to all investors. As such, they are regulated in their use of leverage and have required levels of liquidity and diversification. Mutual funds must value their portfolios and price their securities daily using fair value guidelines. Hedge funds, on the other hand, face less regulation and are not required to provide investors with periodic pricing or valuation. This allows them a great deal of flexibility but may increase the risks for investors. It is also important to note that liquid alternative mutual funds typically have higher fees than traditional mutual funds but their fees are lower than those of private placement hedge funds.

Liquid alternatives are designed to provide retail investors access to strategies utilized by hedge funds and provide investors an "alternative" way to add returns less correlated to traditional assets such as stock, bonds and cash and improve diversification. Relative to broad, long-only traditional asset class mutual funds, liquid alternatives may employ more complex strategies including hedging and leveraging through short selling and derivatives and might invest in assets such as global real estate, commodities, leveraged loans, start-up companies and unlisted securities. Although liquid alternatives may seek to mimic hedge fund strategies, these funds cannot fully duplicate the broad hedge fund industry. Moreover, the regulatory structure under which liquid alternatives are governed may affect their return potential. As noted above, among other things, their use of leverage, investments in illiquid securities and concentration limits are curtailed and thus they are not able to employ hedge fund strategies as fully as private placement vehicles.

Investors should fully understand the strategies and risks of any liquid alternative mutual fund they are considering and keep in mind that many of them have limited performance histories so it is not known how they might perform in a down market. Please see the end of this report for other risks associated with these funds and for a description of the hedge fund and liquid alternative hedge fund replication strategies.

Because of the illiquid and complex nature of private placement hedge funds, Wells Fargo Investment Institute will no longer provide tactical percentage guidance for these asset classes. We will instead provide guidance that may be incorporated into portfolios over a longer period of time.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

For more information, please request our most recent Global Alternatives Outlook or our Investment Strategy report.

Currency Guidance

The U.S. dollar versus developed market currencies

Market observations and outlook

The U.S. Dollar Index (DXY) turned weaker in May and ended 0.7% lower, at 98.34. Euro strength was the driver, with the euro gaining 1.3% as support from German Chancellor Angela Merkel raised hopes for a more effective joint fiscal response from the European Union. On the other hand, the Japanese yen and the British pound were both weaker, limiting the DXY's drop. We have revised our 2020 year-end forecasts slightly in the direction of further dollar weakness, and now expect a euro range of 1.10–1.18 and a yen range of 101–111 versus the U.S. dollar. For year-end 2021, we expect a euro range of 1.13–1.21 and a yen range of 100–110. These ranges suggest that—while the dollar could see more bouts of volatility—early 2020 DXY strength is unlikely to be sustained, and the DXY should continue to drift moderately lower (weaker) over the period.

2020 and 2021 year-end currency targets

	May 31, 2020	2020 YE forecasts	2021 YE forecasts
Dollars per euro	$1.11	▲ $1.10–$1.18	$1.13–$1.21
Yen per dollar	¥108	▼ ¥101–¥111	¥100–¥110

Source: Bloomberg, as of May 31, 2020. The targets are Wells Fargo Investment Institute forecasts, as of June 15, 2020. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures. ▲/▼: recent change.

The U.S. dollar versus emerging market currencies

Market observations and outlook

Many EM currencies rebounded strongly in May, driven by improving risk appetite, a firmer oil price, and the dollar's slide versus DM currencies. Oil and commodity exporters, such as Mexico, Russia, and South Africa, topped the performance table. The JP Morgan Emerging Markets Currency Index (EMCI) gained 3.4%, but, notably, the Morgan Stanley Capital International (MSCI) Emerging Markets Currency Index (an index of currencies mirroring the weighting of the more manufacturing-based MSCI Emerging Markets Index) fell by 0.2%, lagging partly as a result of its heavier weighting in oil importers. EM currencies may stabilize after significant declines in early 2020, but, outside of Asia, it is hard to foresee sustained EM currency recoveries. Emerging economies face headwinds that predate the coronavirus crisis, including slow growth in global demand, depressed commodity prices, and contracting trade.

Currency hedging

Based on our views on the direction of the dollar, we provide our currency-hedging guidance in the matrix below. We no longer recommend strategic allocations to DM fixed income in local currency, and we do not favor taking tactical positions at this time. For those who wish to hold DM fixed income positions, we do not recommend hedging any portion of these holdings, since our outlook for DM currencies over the coming year is broadly neutral. While we acknowledge that wide currency swings remain possible in the currently uncertain environment, our strategic benchmark is unhedged (that is, taking the exposure to DM currencies), so we would require greater conviction that the U.S. dollar would appreciate strongly before suggesting hedging some of this currency risk. For EM fixed income, the strategic benchmark consists exclusively of dollar-denominated sovereign EM bonds— so our favorable stance on this debt class and our relatively neutral view on the dollar versus EM local currencies suggest that hedging is unnecessary.

Hedging matrix

Asset class	Strategic benchmark	Currency advice
Developed Market Ex-U.S. Fixed Income	N/A*	No hedge
Developed Market Ex-U.S. Equities	Local currency	No hedge
Emerging Market Fixed Income	U.S. dollar	No hedge
Emerging Market Equities	Local currency	No hedge

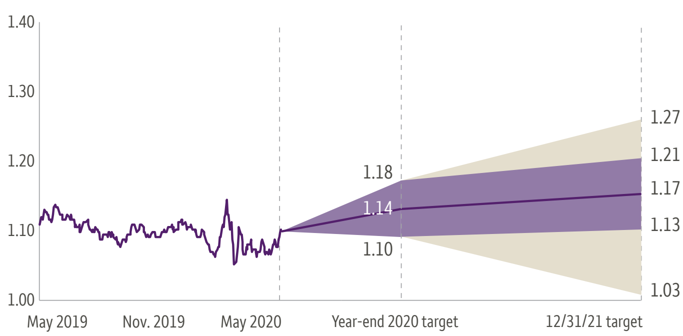
Source: Wells Fargo Investment Institute, June 15, 2020. The table above provides guidance for investors who want and are able to hedge against currency losses, or to take advantage of the dollar's move in either direction. Please note that implementation may vary according to the hedging instruments available to investors.

*We no longer recommend strategic allocations and do not favor tactical allocations at this time to Developed Market Ex-U.S. Fixed Income. Hedging guidance applies to those who wish to hold these assets.

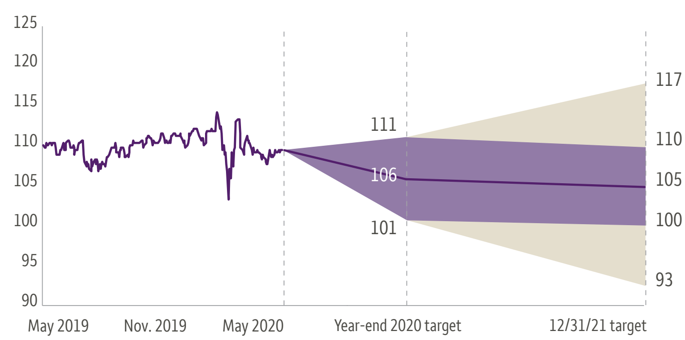
We do not favor hedging currency risk for equities at this time. The hurdle to hedging currency risk is higher for equities than for bonds because, in equity markets, currency movements have had a smaller influence on total return than for fixed income. Further, the cost and complexity of currency hedging for equities may be greater. It is important to consider that many actively managed mutual funds already may incorporate an element of currency hedging. In addition, the cost of hedging against losses from EM currencies is far higher than for those of DMs, and the availability of efficient hedging instruments is limited.

Rolling 12-month forecasts

Dollar/euro exchange rate ($)



Yen/dollar exchange rate (¥)



Past performance is no guarantee of future results. Conviction range definitions are on page 6.

Tactical Guidance

Recommended tactical guidance

No changes this month.

The strategic (neutral) asset allocations are based on long-term strategies. However, capital markets tend to move in cycles, and there may be short-term opportunities to enhance the risk/return relationship within a portfolio by temporarily adjusting the strategic allocations. The tactical asset allocation adjustments are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio. The minimum position of any asset class is zero, meaning that no short selling is permitted. The maximum position of all asset classes together is 100%, meaning that no leverage is permitted. The actual extent of the recommended tactical adjustments is a judgment call. It should be enough to make a difference without crowding out other assets or creating a vacuum. Also, all the tactical recommendations have to be considered together. It would not be mathematically possible to underallocate two asset groups while maintaining over-allocations in the other two. Adjustments must be made to bring all the broad asset classes into a proper relationship. These are guidelines to be used prudently for investors with temperaments that agree with a more aggressive, tactical investment style.

Additional asset class guidance

Consider long/short equity strategies: These strategies can provide diversification in an equity portfolio by utilizing both long and short exposures to the asset class. While they can provide diversification, investors should expect higher tracking error (extent to which the strategy's returns have differed from its benchmark) to traditional benchmarks from these strategies. Prudent use through controlled allocations is recommended.

Most unfavorable	Unfavorable	Neutral	Favorable	Most favorable
		Cash and fixed income		
	Developed Market Ex.-U.S. Fixed Income	High Yield Taxable Fixed Income Cash Alternatives Emerging Market Fixed Income U.S. Long Term Taxable Fixed Income U.S. Short Term Taxable Fixed Income	U.S. Taxable Investment Grade Fixed Income U.S. Intermediate Term Taxable Fixed Income	
		Equities		
U.S. Small Cap Equities	Emerging Market Equities Developed Market Ex.-U.S. Equities		U.S. Mid Cap Equities U.S. Large Cap Equities	
		Real assets		
	Private Real Estate		Commodities	
		Alternative investments*		
		Hedge Funds–Macro Hedge Funds–Event Driven Hedge Funds–Relative Value Private Equity	Hedge Funds–Equity Hedge	

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Tactical Guidance

Tactical guidance summary

	Asset class	Guidance: Most unfavorable		Neutral		Most favorable	Rationale and further detail
FIXED INCOME	U.S. Taxable Investment Grade Fixed Income	□	□	□	■	□	Our economic growth expectations are moderate, and our inflation expectations remain muted. While we believe that total return expectations should be tempered, high-quality fixed income remains an important diversifier and can provide a portfolio shock absorber in times of market stress.
FIXED INCOME	U.S. Short Term Taxable	□	□	■	□	□	Short-term interest rates have fallen significantly as coronavirus fears have driven investors into perceived "safe-haven" assets and the Fed has cut the fed funds rate. Investing in short-term fixed income securities typically offers a lower volatility profile than longer-maturity issues.
FIXED INCOME	U.S. Intermediate Term Taxable	□	□	□	■	□	We remain favorable, despite the recent decline in U.S. fixed-income yields. Modest economic and inflation expectations support our favorable view.
FIXED INCOME	U.S. Long Term Taxable	□	□	■	□	□	Modest economic and inflation expectations also support our neutral view on this fixed-income class. Interest rates have fallen significantly, but longer-dated, high-quality fixed income can be a portfolio diversifier that historically has tended to perform well during periods of market stress.
FIXED INCOME	High Yield Taxable Fixed Income	□	□	■	□	□	This spring, credit spreads and yields on high-yield corporate debt rose to levels not seen since the financial crisis, and we upgraded this bond class to neutral. The Fed's broad fixed-income market support should help to provide important liquidity to markets. We continue to believe that selectivity and careful credit research in this space are important.
FIXED INCOME	Developed Market Ex-U.S. Fixed Income	□	■	□	□	□	Sovereign yields (outside the U.S.) should remain low relative to Treasury yields. We no longer recommend strategic allocations to this bond class. In this context, a rating of unfavorable means that we do not favor tactically allocating to this fixed-income class at this time.
FIXED INCOME	Emerging Market Fixed Income	□	□	■	□	□	Dollar-denominated debt is a small portion of sovereign borrowing and is insulated from EM currency volatility. We believe that this structural advantage makes it more defensive than other EM asset classes.
EQUITIES	U.S. Large Cap Equities	□	□	□	■	□	Our favorable guidance is based, in part, on improving market breath, strong balance-sheet fundamentals, and a compelling "risk premium" versus fixed-income (Treasury) yields.
EQUITIES	U.S. Mid Cap Equities	□	□	□	■	□	We believe that relatively resilient earnings and less revenue exposure to non-U.S. consumers should benefit mid-cap equities as the global economy begins its recovery from the coronavirus pandemic.
EQUITIES	U.S. Small Cap Equities	■	□	□	□	□	Liquidity and solvency risk remains a problem for many small-cap companies as the percent of small-cap firms that are unprofitable climbs. We expect earnings headwinds to continue for small-cap firms this year, leading to underperformance.
EQUITIES	Developed Market (DM) Ex.-U.S. Equities	□	■	□	□	□	Weak world trade, political uncertainties, and structural weaknesses create a challenging environment for European and Japanese firms' profitability.
EQUITIES	Emerging Market Equities	□	■	□	□	□	Low commodity prices are placing additional strain on EM firms' margins, while trade headwinds continue.
REAL ASSETS	Commodities	□	□	□	■	□	We believe that the commodity price collapse associated with the oil-price drop provided an attractive tactical opportunity. We upgraded commodities from neutral to favorable as a result.
REAL ASSETS	Private Real Estate*	□	■	□	□	□	At this point in the cycle, we are more constructive on value-add and opportunistic strategies.
ALTERNATIVE INVESTMENTS*	Hedge Funds–Relative Value*	□	□	■	□	□	We support the less-directional nature of Relative Value, particularly Long/Short Credit strategies, to potentially enhance diversification.
ALTERNATIVE INVESTMENTS*	Hedge Funds–Macro*	□	□	■	□	□	We maintain a neutral view on Macro strategies. Over a full market cycle, we believe that investors can benefit from the strategy's low correlation to traditional long-only stock and bond investments. We remain more constructive on the Discretionary strategy, given its more tactical, nimble approach.
ALTERNATIVE INVESTMENTS*	Hedge Funds–Event Driven*	□	□	■	□	□	We are neutral on Event Driven, but we believe that the recent market dislocations have provided attractive entry points across a number of sectors for Distressed and Merger Arbitrage managers.
ALTERNATIVE INVESTMENTS*	Hedge Funds–Equity Hedge*	□	□	□	■	□	We remain cognizant of global equity risks, and we believe that higher volatility levels will continue to exemplify the importance of lower-net Equity Hedge strategies in reducing downside participation in equity markets.
ALTERNATIVE INVESTMENTS*	Private Equity*	□	□	■	□	□	We maintain a neutral view on Private Equity; however, we see opportunities within niche strategies focused on secondary investments.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Capital Market Assumptions

Fixed income, equities, real assets and alternative investments

Annual update; as of July 2019

Capital market and asset class assumptions are estimates of how asset classes may respond during various market environments. For example, **downside risk** is based on our assumptions about average returns and the variability of returns. It represents the minimum return that would be statistically likely in 95% of annual returns. In other words, in 19 out of 20 years, performance would likely be better than this figure and in the twentieth year it would likely be worse. There is no guarantee that any particular 20-year period would follow this pattern. **Hypothetical returns** represent our estimate of likely average returns over the next several market cycles. They do not represent the returns that an investor should expect in any particular year. **Geometric return** is the compounded annual growth rate of an investment (asset class or portfolio) over a specified period of time longer than one year. **Standard deviation** is a measure of volatility. It reflects the degree of variability surrounding the outcome of an investment decision; the higher the standard deviation, the greater the risk. **Yield** on a bond assumes constant maturity. **Dividend yield** on an equity or real-asset investment represents the projected dividend as a percentage of the purchase price. The assumptions are not designed to predict actual performance, and there are no assurances that any estimates used will be achieved. The information given has been provided as a guide to help with investment planning and does not represent the maximum loss a portfolio could experience.

Capital market assumptions (%)

	Asset class	Hypothetical arithmetic return	Hypothetical geometric return	Hypothetical standard deviation or risk	Yield or dividend yield	Downside risk
	Inflation	2.25				
	Cash Alternatives	2.25	2.2	1.0	2.2	0.6
FIXED INCOME	U.S. Short Term Taxable Fixed Income	2.7	2.7	1.5	2.7	0.2
	U.S. Intermediate Term Taxable Fixed Income	3.6	3.5	3.8	3.5	-2.4
	U.S. Long Term Taxable Fixed Income	4.3	3.8	9.5	3.8	-10.6
	High Yield Taxable Fixed Income	6.4	5.8	11.5	5.8	-11.4
	Short Term Tax Exempt Fixed Income	2.3	2.3	1.8	2.3	-0.6
	Intermediate Term Tax Exempt Fixed Income	3.1	3.0	4.3	3.0	-3.8
	Long Term Tax Exempt Fixed Income	3.6	3.5	5.5	3.5	-5.2
	High Yield Tax Exempt Fixed Income	5.5	5.1	8.3	5.1	-7.5
	Developed Market ex.-U.S. Fixed Income	3.2	2.9	8.3	2.9	-9.7
	Emerging Market Fixed Income	6.8	6.2	11.5	6.2	-11.0
	Inflation-Linked Fixed Income	3.2	3.0	6.5	3.0	-7.1
	Preferred Stock	4.6	3.9	12.0	3.9	-13.9
EQUITIES	U.S. Large Cap Equities	8.6	7.4	16.0	2.1	-15.6
	U.S. Mid Cap Equities	9.6	8.3	17.0	1.8	-16.0
	U.S. Small Cap Equities	10.3	8.5	20.0	1.5	-19.3
	Developed Market ex.-U.S. Equities	8.7	7.4	17.0	3.0	-16.9
	Developed Market ex.-U.S. Small Cap Equities	9.7	7.9	20.0	2.5	-19.9
	Emerging Market Equities	11.5	9.2	23.0	2.5	-22.0
	Frontier Market Equities	10.4	8.4	21.0	3.5	-20.5
REAL ASSETS	Public Real Estate	7.9	6.5	17.5	4.0	-18.3
	Private Real Estate*	8.7	7.7	15.0	5.5	-14.1
	Infrastructure	8.3	7.1	16.0	4.3	-15.9
	Master Limited Partnerships	9.2	7.9	17.0	6.3	-16.4
	Timberland	5.3	5.0	7.5	3.0	-6.6
	Commodities	5.5	4.4	15.0	0.0	-17.3
ALTERNATIVE INVESTMENTS*	Hedge Funds–Relative Value	5.3	5.1	5.1	0.0	-2.9
	Hedge Funds–Macro	4.8	4.6	6.0	0.0	-4.8
	Hedge Funds–Event Driven	5.4	5.2	6.5	0.0	-5.0
	Hedge Funds–Equity Hedge	6.1	5.7	8.8	0.0	-7.7
	Global Liquid Alternatives	2.6	2.5	3.5	0.0	-3.1
	Private Equity	11.9	10.1	20.0	0.0	-17.7
	Private Debt	8.9	8.1	14.0	6.8	-12.5

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Strategic Asset Allocation

Client goals	INCOME			GROWTH & INCOME			GROWTH		
Risk Tolerance	Conservative	Moderate	Aggressive	Conservative	Moderate	Aggressive	Conservative	Moderate	Aggressive

Efficient frontier

An efficient frontier represents the theoretical set of diversified portfolios that attempt to maximize return given a specific level of risk.

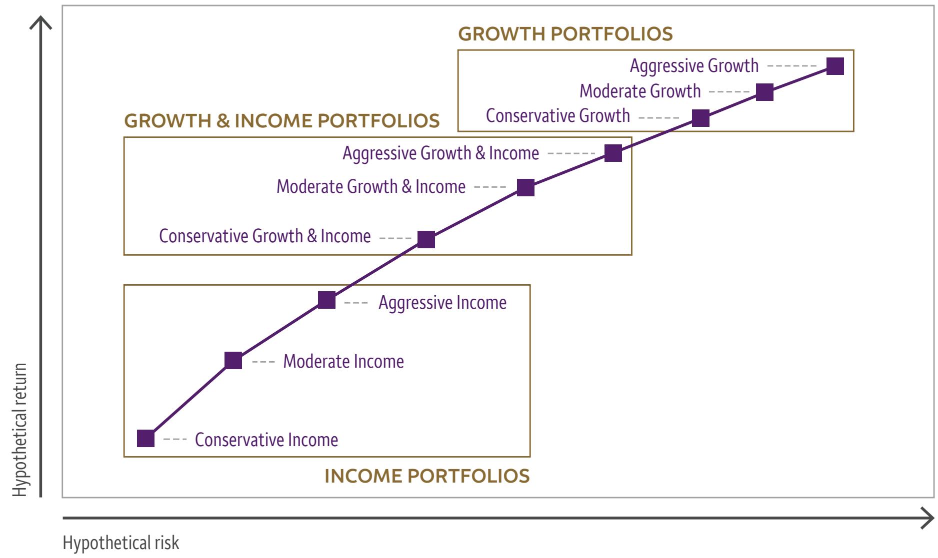


Chart is conceptual and is not meant to reflect any actual returns or represent any specific asset classifications.

Source: Wells Fargo Investment Institute, July 2019

Hedge fund allocations are based on private hedge fund capital market assumptions.

Investment objectives definitions

INCOME

Income portfolios emphasize current income with minimal consideration for capital appreciation and usually have less exposure to more volatile growth assets but can still experience losses.

Conservative Income investors generally assume lower risk, but may still experience losses or have lower expected income returns.

Moderate Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest income returns.

Aggressive Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses.

GROWTH & INCOME

Growth & Income portfolios emphasize a blend of current income and capital appreciation and usually have some exposure to more volatile growth assets.

Conservative Growth & Income investors generally assume a lower amount of risk, but may still experience losses or have lower expected returns.

Moderate Growth & Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest returns.

Aggressive Growth & Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses.

GROWTH

Growth portfolios emphasize capital appreciation with minimal consideration for current income and usually have significant exposure to more volatile growth assets.

Conservative Growth investors generally assume a lower amount of risk, but may still experience increased losses or have lower expected growth returns.

Moderate Growth investors are willing to accept a modest level of risk that may result in significant losses in exchange for the potential to receive higher returns.

Aggressive Growth investors seek a higher level of returns and are willing to accept a higher level of risk that may result in more significant losses.

Strategic and Tactical Asset Allocation

Three asset groups: fixed income, equities, real assets

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	85.0	85.0	0.0	72.0	74.0	2.0	64.0	66.0	2.0
	U.S. Taxable Investment Grade Fixed Income	77.0	79.0	2.0	61.0	65.0	4.0	48.0	52.0	4.0
	U.S. Short Term Taxable	28.0	28.0	0.0	19.0	19.0	0.0	8.0	9.0	1.0
	U.S. Intermediate Term Taxable	44.0	46.0	2.0	35.0	38.0	3.0	30.0	33.0	3.0
	U.S. Long Term Taxable	5.0	5.0	0.0	7.0	8.0	1.0	10.0	10.0	0.0
	High Yield Taxable Fixed Income	5.0	3.0	-2.0	6.0	4.0	-2.0	8.0	6.0	-2.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	3.0	3.0	0.0	5.0	5.0	0.0	8.0	8.0	0.0
	TOTAL EQUITIES	12.0	10.0	-2.0	25.0	21.0	-4.0	33.0	29.0	-4.0
	U.S. Large Cap Equities	6.0	6.0	0.0	12.0	14.0	2.0	15.0	17.0	2.0
	U.S. Mid Cap Equities	4.0	4.0	0.0	5.0	5.0	0.0	7.0	7.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	4.0	0.0	-4.0	6.0	2.0	-4.0
	Developed Market Ex-U.S. Equities	2.0	0.0	-2.0	4.0	2.0	-2.0	5.0	3.0	-2.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL REAL ASSETS	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
	Commodities	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
GROWTH AND INCOME	CASH ALTERNATIVES	3.0	4.0	1.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	53.0	54.0	1.0	43.0	45.0	2.0	35.0	37.0	2.0
	U.S. Taxable Investment Grade Fixed Income	42.0	44.0	2.0	32.0	34.0	2.0	22.0	25.0	3.0
	U.S. Short Term Taxable	7.0	8.0	1.0	4.0	6.0	2.0	2.0	5.0	3.0
	U.S. Intermediate Term Taxable	25.0	28.0	3.0	21.0	23.0	2.0	16.0	18.0	2.0
	U.S. Long Term Taxable	10.0	8.0	-2.0	7.0	5.0	-2.0	4.0	2.0	-2.0
	High Yield Taxable Fixed Income	6.0	5.0	-1.0	6.0	6.0	0.0	7.0	6.0	-1.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	5.0	5.0	0.0	5.0	5.0	0.0	6.0	6.0	0.0
	TOTAL EQUITIES	44.0	39.0	-5.0	54.0	49.0	-5.0	62.0	57.0	-5.0
	U.S. Large Cap Equities	17.0	21.0	4.0	21.0	25.0	4.0	25.0	29.0	4.0
	U.S. Mid Cap Equities	10.0	12.0	2.0	12.0	15.0	3.0	14.0	17.0	3.0
	U.S. Small Cap Equities	8.0	2.0	-6.0	8.0	2.0	-6.0	8.0	2.0	-6.0
	Developed Market Ex-U.S. Equities	5.0	2.0	-3.0	6.0	3.0	-3.0	7.0	4.0	-3.0
	Emerging Market Equities	4.0	2.0	-2.0	7.0	4.0	-3.0	8.0	5.0	-3.0
	TOTAL REAL ASSETS	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0
	Commodities	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0
GROWTH	CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	1.0
	TOTAL FIXED INCOME	25.0	27.0	2.0	17.0	19.0	2.0	7.0	8.0	1.0
	U.S. Taxable Investment Grade Fixed Income	18.0	21.0	3.0	11.0	13.0	2.0	3.0	4.0	1.0
	U.S. Short Term Taxable	4.0	4.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
	U.S. Intermediate Term Taxable	10.0	13.0	3.0	6.0	8.0	2.0	0.0	0.0	0.0
	U.S. Long Term Taxable	4.0	4.0	0.0	3.0	3.0	0.0	3.0	4.0	1.0
	High Yield Taxable Fixed Income	4.0	3.0	-1.0	3.0	3.0	0.0	2.0	2.0	0.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	3.0	3.0	0.0	3.0	3.0	0.0	2.0	2.0	0.0
	TOTAL EQUITIES	73.0	67.0	-6.0	81.0	75.0	-6.0	91.0	85.0	-6.0
	U.S. Large Cap Equities	29.0	34.0	5.0	29.0	34.0	5.0	27.0	32.0	5.0
	U.S. Mid Cap Equities	15.0	18.0	3.0	16.0	19.0	3.0	18.0	20.0	2.0
	U.S. Small Cap Equities	10.0	3.0	-7.0	13.0	6.0	-7.0	16.0	10.0	-6.0
	Developed Market Ex-U.S. Equities	9.0	5.0	-4.0	10.0	6.0	-4.0	14.0	10.0	-4.0
	Emerging Market Equities	10.0	7.0	-3.0	13.0	10.0	-3.0	16.0	13.0	-3.0
	TOTAL REAL ASSETS	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0
	Commodities	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0

Strategic allocations are updated annually; last update was July 17, 2019. Tactical allocations are updated periodically; last update was April 9, 2020.

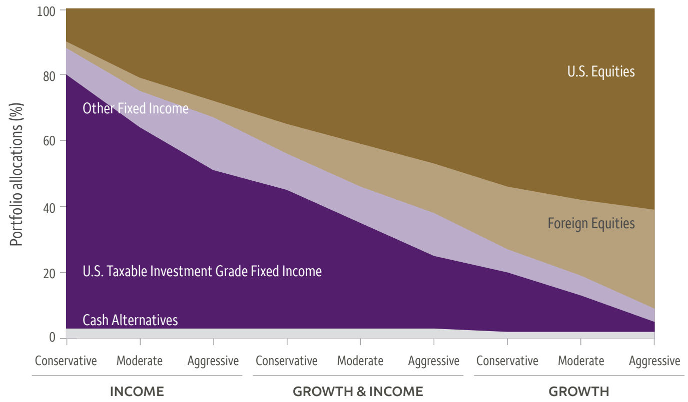
See next page for Portfolio allocations across the efficient frontier, strategic and tactical.

Strategic and Tactical Asset Allocation

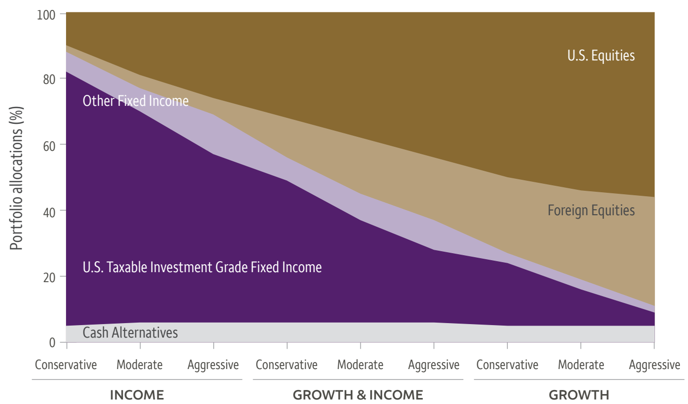
Three asset groups: fixed income, equities, real assets (continued)

These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for each asset class. Depending on their tax bracket and on market conditions, investors may elect taxable or municipal bonds to implement their fixed-income allocation.

Portfolio allocations across the efficient frontier–strategic



Portfolio allocations across the efficient frontier–tactical



Strategic and Tactical Asset Allocation

Four asset groups: fixed income, equities, real assets, alternative investments (without Private Capital)

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	75.0	75.0	0.0	64.0	66.0	2.0	56.0	57.0	1.0
	U.S. Taxable Investment Grade Fixed Income	67.0	69.0	2.0	52.0	56.0	4.0	40.0	43.0	3.0
	U.S. Short Term Taxable	21.0	21.0	0.0	14.0	16.0	2.0	4.0	5.0	1.0
	U.S. Intermediate Term Taxable	41.0	43.0	2.0	31.0	34.0	3.0	26.0	29.0	3.0
	U.S. Long Term Taxable	5.0	5.0	0.0	7.0	6.0	-1.0	10.0	9.0	-1.0
	High Yield Taxable Fixed Income	5.0	3.0	-2.0	7.0	5.0	-2.0	8.0	6.0	-2.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	3.0	3.0	0.0	5.0	5.0	0.0	8.0	8.0	0.0
	TOTAL EQUITIES	13.0	11.0	-2.0	21.0	17.0	-4.0	29.0	26.0	-3.0
	U.S. Large Cap Equities	7.0	7.0	0.0	10.0	10.0	0.0	11.0	15.0	4.0
	U.S. Mid Cap Equities	4.0	4.0	0.0	5.0	5.0	0.0	9.0	9.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	2.0	0.0	-2.0	5.0	0.0	-5.0
	Developed Market Ex-U.S. Equities	2.0	0.0	-2.0	4.0	2.0	-2.0	4.0	2.0	-2.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL REAL ASSETS	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
	Commodities	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
	TOTAL ALTERNATIVE INVESTMENTS*	9.0	9.0	0.0	12.0	12.0	0.0	12.0	12.0	0.0
	Hedge Funds–Relative Value	6.0	6.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
	Hedge Funds–Macro	3.0	3.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
	Hedge Funds–Event Driven	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Equity Hedge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROWTH AND INCOME	CASH ALTERNATIVES	3.0	2.0	-1.0	3.0	4.0	1.0	3.0	4.0	1.0
	TOTAL FIXED INCOME	43.0	45.0	2.0	33.0	34.0	1.0	25.0	26.0	1.0
	U.S. Taxable Investment Grade Fixed Income	34.0	36.0	2.0	22.0	23.0	1.0	13.0	15.0	2.0
	U.S. Short Term Taxable	4.0	5.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0
	U.S. Intermediate Term Taxable	21.0	24.0	3.0	16.0	19.0	3.0	8.0	11.0	3.0
	U.S. Long Term Taxable	9.0	7.0	-2.0	6.0	4.0	-2.0	5.0	3.0	-2.0
	High Yield Taxable Fixed Income	5.0	5.0	0.0	6.0	6.0	0.0	6.0	5.0	-1.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	4.0	4.0	0.0	5.0	5.0	0.0	6.0	6.0	0.0
	TOTAL EQUITIES	40.0	36.0	-4.0	49.0	44.0	-5.0	57.0	52.0	-5.0
	U.S. Large Cap Equities	13.0	17.0	4.0	20.0	24.0	4.0	22.0	26.0	4.0
	U.S. Mid Cap Equities	10.0	12.0	2.0	10.0	13.0	3.0	12.0	15.0	3.0
	U.S. Small Cap Equities	8.0	3.0	-5.0	8.0	2.0	-6.0	10.0	4.0	-6.0
	Developed Market Ex-U.S. Equities	5.0	2.0	-3.0	6.0	3.0	-3.0	7.0	4.0	-3.0
	Emerging Market Equities	4.0	2.0	-2.0	5.0	2.0	-3.0	6.0	3.0	-3.0
	TOTAL REAL ASSETS	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0
	Commodities	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0
	TOTAL ALTERNATIVE INVESTMENTS*	14.0	14.0	0.0	15.0	15.0	0.0	15.0	15.0	0.0
	Hedge Funds–Relative Value	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Macro	6.0	6.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0
	Hedge Funds–Event Driven	3.0	3.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
	Hedge Funds–Equity Hedge	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0

Strategic allocations are updated annually; last update was July 17, 2019. Tactical allocations are updated periodically; last update was April 9, 2020. Hedge fund allocations are based on private hedge fund capital market assumptions.

See next page for Growth data and Portfolio allocations across the efficient frontier, strategic and tactical.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Strategic and Tactical Asset Allocation

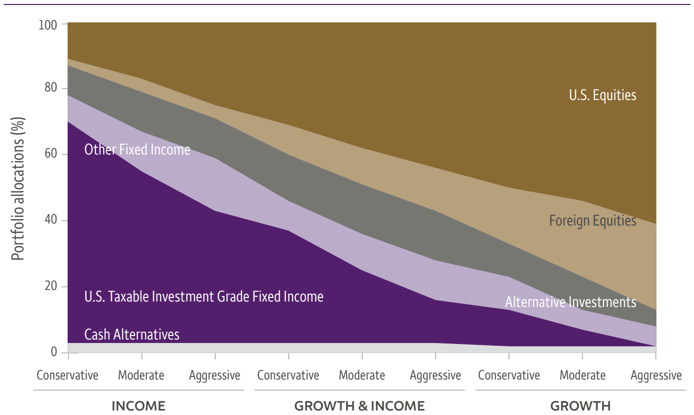
Four asset groups: fixed income, equities, real assets, alternative investments (without Private Capital) (continued)

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
GROWTH	CASH ALTERNATIVES	2.0	2.0	0.0	2.0	3.0	1.0	2.0	2.0	0.0
	TOTAL FIXED INCOME	21.0	23.0	2.0	11.0	13.0	2.0	6.0	9.0	3.0
	U.S. Taxable Investment Grade Fixed Income	11.0	15.0	4.0	5.0	7.0	2.0	0.0	3.0	3.0
	U.S. Short Term Taxable	0.0	3.0	3.0	0.0	2.0	2.0	0.0	0.0	0.0
	U.S. Intermediate Term Taxable	8.0	10.0	2.0	3.0	5.0	2.0	0.0	3.0	3.0
	U.S. Long Term Taxable	3.0	2.0	-1.0	2.0	0.0	-2.0	0.0	0.0	0.0
	High Yield Taxable Fixed Income	5.0	3.0	-2.0	3.0	3.0	0.0	3.0	3.0	0.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	5.0	5.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL EQUITIES	67.0	61.0	-6.0	77.0	70.0	-7.0	87.0	80.0	-7.0
	U.S. Large Cap Equities	24.0	29.0	5.0	25.0	29.0	4.0	25.0	29.0	4.0
	U.S. Mid Cap Equities	14.0	17.0	3.0	15.0	18.0	3.0	19.0	22.0	3.0
	U.S. Small Cap Equities	12.0	5.0	-7.0	14.0	7.0	-7.0	17.0	10.0	-7.0
	Developed Market Ex-U.S. Equities	9.0	5.0	-4.0	11.0	7.0	-4.0	13.0	9.0	-4.0
	Emerging Market Equities	8.0	5.0	-3.0	12.0	9.0	-3.0	13.0	10.0	-3.0
	TOTAL REAL ASSETS	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0
	Commodities	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0
	TOTAL ALTERNATIVE INVESTMENTS*	10.0	10.0	0.0	10.0	10.0	0.0	5.0	5.0	0.0
	Hedge Funds–Relative Value	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
	Hedge Funds–Macro	6.0	6.0	0.0	6.0	6.0	0.0	3.0	3.0	0.0
	Hedge Funds–Event Driven	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Hedge Funds–Equity Hedge	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0

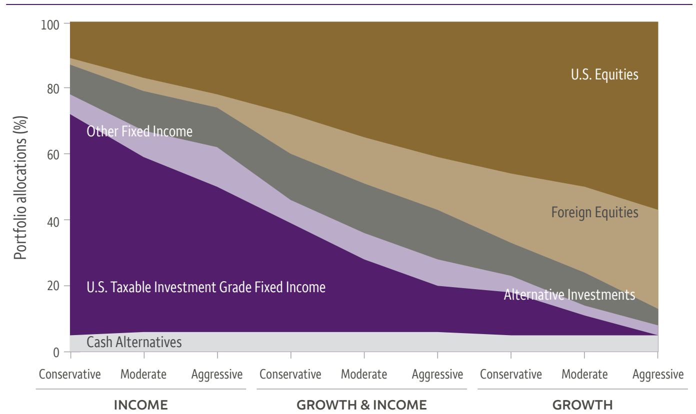
Strategic allocations are updated annually; last update was July 17, 2019. Tactical allocations are updated periodically; last update was April 9, 2020. Hedge fund allocations are based on private hedge fund capital market assumptions.

These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for each asset class. Depending on their tax bracket and on market conditions, investors may elect taxable or municipal bonds to implement their fixed income allocation. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.

Portfolio allocations across the efficient frontier–strategic



Portfolio allocations across the efficient frontier–tactical



*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Strategic and Tactical Asset Allocation

Four asset groups: fixed income, equities, real assets, alternative investments

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	4.0	1.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	71.0	71.0	0.0	60.0	59.0	-1.0	52.0	52.0	0.0
	U.S. Taxable Investment Grade Fixed Income	62.0	64.0	2.0	48.0	49.0	1.0	36.0	38.0	2.0
	U.S. Short Term Taxable	20.0	20.0	0.0	12.0	13.0	1.0	2.0	3.0	1.0
	U.S. Intermediate Term Taxable	37.0	40.0	3.0	29.0	29.0	0.0	25.0	26.0	1.0
	U.S. Long Term Taxable	5.0	4.0	-1.0	7.0	7.0	0.0	9.0	9.0	0.0
	High Yield Taxable Fixed Income	6.0	4.0	-2.0	7.0	5.0	-2.0	8.0	6.0	-2.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	3.0	3.0	0.0	5.0	5.0	0.0	8.0	8.0	0.0
	TOTAL EQUITIES	10.0	8.0	-2.0	20.0	18.0	-2.0	27.0	25.0	-2.0
	U.S. Large Cap Equities	6.0	6.0	0.0	10.0	12.0	2.0	11.0	15.0	4.0
	U.S. Mid Cap Equities	2.0	2.0	0.0	4.0	4.0	0.0	8.0	8.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	2.0	0.0	-2.0	4.0	0.0	-4.0
	Developed Market Ex-U.S. Equities	2.0	0.0	-2.0	4.0	2.0	-2.0	4.0	2.0	-2.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL REAL ASSETS	5.0	7.0	2.0	6.0	8.0	2.0	7.0	9.0	2.0
	Private Real Estate*	5.0	5.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
	Commodities	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
	TOTAL ALTERNATIVE INVESTMENTS*	11.0	11.0	0.0	11.0	11.0	0.0	11.0	11.0	0.0
	Hedge Funds–Relative Value	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
	Hedge Funds–Macro	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Event Driven	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Equity Hedge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Private Equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROWTH AND INCOME	CASH ALTERNATIVES	3.0	4.0	1.0	3.0	3.0	0.0	3.0	4.0	1.0
	TOTAL FIXED INCOME	42.0	41.0	-1.0	33.0	33.0	0.0	26.0	27.0	1.0
	U.S. Taxable Investment Grade Fixed Income	31.0	32.0	1.0	21.0	25.0	4.0	14.0	18.0	4.0
	U.S. Short Term Taxable	4.0	4.0	0.0	0.0	3.0	3.0	0.0	2.0	2.0
	U.S. Intermediate Term Taxable	20.0	21.0	1.0	16.0	19.0	3.0	9.0	11.0	2.0
	U.S. Long Term Taxable	7.0	7.0	0.0	5.0	3.0	-2.0	5.0	5.0	0.0
	High Yield Taxable Fixed Income	6.0	4.0	-2.0	6.0	2.0	-4.0	6.0	3.0	-3.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	5.0	5.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0
	TOTAL EQUITIES	34.0	31.0	-3.0	41.0	38.0	-3.0	48.0	43.0	-5.0
	U.S. Large Cap Equities	14.0	18.0	4.0	18.0	23.0	5.0	22.0	26.0	4.0
	U.S. Mid Cap Equities	8.0	11.0	3.0	8.0	10.0	2.0	8.0	11.0	3.0
	U.S. Small Cap Equities	4.0	0.0	-4.0	5.0	0.0	-5.0	6.0	0.0	-6.0
	Developed Market Ex-U.S. Equities	5.0	2.0	-3.0	6.0	3.0	-3.0	7.0	4.0	-3.0
	Emerging Market Equities	3.0	0.0	-3.0	4.0	2.0	-2.0	5.0	2.0	-3.0
	TOTAL REAL ASSETS	5.0	8.0	3.0	6.0	9.0	3.0	6.0	9.0	3.0
	Private Real Estate*	5.0	5.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0
	Commodities	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0
	TOTAL ALTERNATIVE INVESTMENTS*	16.0	16.0	0.0	17.0	17.0	0.0	17.0	17.0	0.0
	Hedge Funds–Relative Value	4.0	4.0	0.0	3.0	3.0	0.0	2.0	2.0	0.0
	Hedge Funds–Macro	4.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Event Driven	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	Hedge Funds–Equity Hedge	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	Private Equity	6.0	6.0	0.0	7.0	7.0	0.0	8.0	8.0	0.0

Strategic allocations are updated annually; last update was July 17, 2019. Tactical allocations are updated periodically; last update was April 9, 2020. Hedge fund allocations are based on private hedge fund capital market assumptions.

See next page for Growth data and Portfolio allocations across the efficient frontier, strategic and tactical.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Strategic and Tactical Asset Allocation

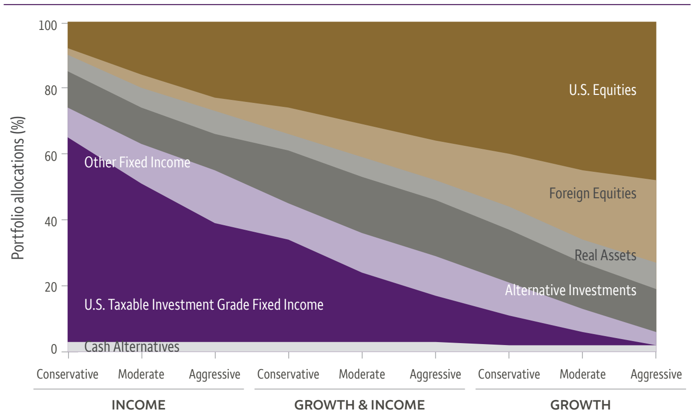
Four asset groups: fixed income, equities, real assets, alternative investments (continued)

GROWTH	CONSERVATIVE			MODERATE			AGGRESSIVE		
	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
CASH ALTERNATIVES	2.0	3.0	1.0	2.0	3.0	1.0	2.0	3.0	1.0
TOTAL FIXED INCOME	19.0	21.0	2.0	11.0	13.0	2.0	4.0	6.0	2.0
U.S. Taxable Investment Grade Fixed Income	9.0	13.0	4.0	4.0	7.0	3.0	0.0	2.0	2.0
U.S. Short Term Taxable	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
U.S. Intermediate Term Taxable	7.0	9.0	2.0	2.0	5.0	3.0	0.0	0.0	0.0
U.S. Long Term Taxable	2.0	2.0	0.0	2.0	0.0	-2.0	0.0	0.0	0.0
High Yield Taxable Fixed Income	5.0	3.0	-2.0	4.0	2.0	-2.0	2.0	2.0	0.0
Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Emerging Market Fixed Income	5.0	5.0	0.0	3.0	4.0	1.0	2.0	2.0	0.0
TOTAL EQUITIES	56.0	49.0	-7.0	66.0	59.0	-7.0	73.0	66.0	-7.0
U.S. Large Cap Equities	24.0	28.0	4.0	24.0	28.0	4.0	24.0	28.0	4.0
U.S. Mid Cap Equities	9.0	12.0	3.0	13.0	15.0	2.0	15.0	17.0	2.0
U.S. Small Cap Equities	7.0	0.0	-7.0	8.0	2.0	-6.0	9.0	3.0	-6.0
Developed Market Ex-U.S. Equities	9.0	5.0	-4.0	11.0	7.0	-4.0	12.0	8.0	-4.0
Emerging Market Equities	7.0	4.0	-3.0	10.0	7.0	-3.0	13.0	10.0	-3.0
TOTAL REAL ASSETS	7.0	11.0	4.0	7.0	11.0	4.0	8.0	12.0	4.0
Private Real Estate*	7.0	7.0	0.0	7.0	7.0	0.0	8.0	8.0	0.0
Commodities	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0
TOTAL ALTERNATIVE INVESTMENTS*	16.0	16.0	0.0	14.0	14.0	0.0	13.0	13.0	0.0
Hedge Funds–Relative Value	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hedge Funds–Macro	3.0	3.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
Hedge Funds–Event Driven	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hedge Funds–Equity Hedge	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Private Equity	9.0	9.0	0.0	10.0	10.0	0.0	11.0	11.0	0.0

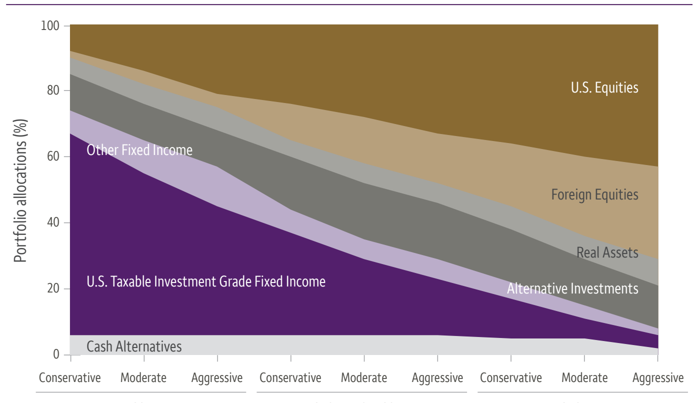
Strategic allocations are updated annually; last update was July 16, 2019. Tactical allocations are updated periodically; last update was April 9, 2020. Hedge fund allocations are based on private hedge fund capital market assumptions.

These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for each asset class. Depending on their tax bracket and on market conditions, investors may elect taxable or municipal bonds to implement their fixed income allocation. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.

Portfolio allocations across the efficient frontier–strategic



Portfolio allocations across the efficient frontier–tactical



*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

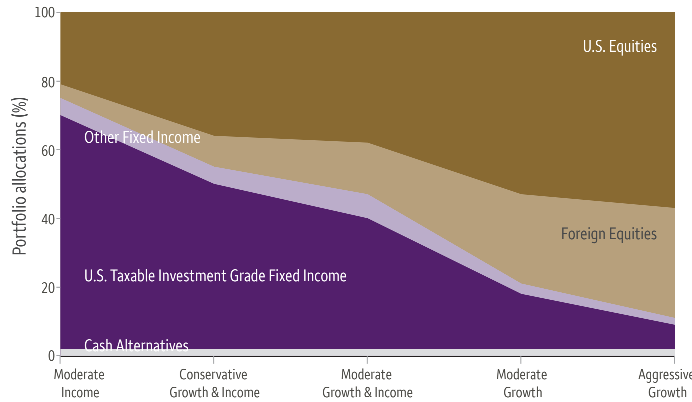
Cyclical Asset Allocation

Three asset groups: fixed income, equities, real assets

Quarterly update; as of April 2020

Our cyclical asset allocation process is based on a rolling three-year outlook—which means that the Global Investment Strategy Committee evaluates how the portfolios are expected to perform over the next 36 months based on asset valuations as well as economic and market outlooks. The cyclical approach is driven by fundamental valuations, which can lead to entering and exiting positions as opportunities arise. Over time, this approach may help avoid chasing unsustainable market swings driven by fear and greed near the end of cyclical declines or advances.

Portfolio allocations across the efficient frontier



Capital market assumptions (%)

		Moderate Income	Conservative Growth & Income	Moderate Growth & Income	Moderate Growth	Aggressive Growth
	CASH ALTERNATIVES	2	2	2	2	2
FIXED INCOME	TOTAL FIXED INCOME	73	53	44	18	8
	U.S. Short Term Taxable Fixed Income	21	9	5	2	0
	U.S. Intermediate Term Taxable Fixed Income	35	25	21	6	2
	U.S. Long Term Taxable Fixed Income	6	10	7	3	2
	High Yield Taxable Fixed Income	6	4	6	4	2
	Developed Market Ex-U.S. Fixed Income	—	—	—	—	—
	Emerging Market Fixed Income	5	5	5	3	2
EQUITIES	TOTAL EQUITIES	25	45	54	80	90
	U.S. Large Cap Equities	18	23	27	35	34
	U.S. Mid Cap Equities	5	12	14	19	21
	U.S. Small Cap Equities	0	5	4	7	10
	Developed Market Ex-U.S. Equities	2	3	4	8	11
	Emerging Market Equities	0	2	5	11	14
REAL ASSETS	TOTAL REAL ASSETS	0	0	0	0	0
	Commodities	—	—	—	—	—
TOTAL PORTFOLIO		100%	100%	100%	100%	100%

For more information, please request our most recent *Cyclical Asset Allocation Quarterly Report*.

Disclosures

Forecasts, targets, and estimates are not guaranteed and are based on certain assumptions and on our views of market and economic conditions which are subject to change.

Risk considerations

Past performance does not indicate future results. The value or income associated with a security or an investment may fluctuate. There is always the potential for loss as well as gain. Investments discussed in this report may be unsuitable for some investors depending on their specific investment objectives and financial position.

Asset allocation and diversification are investment methods used to manage risk. They do not assure or guarantee better performance and cannot eliminate the risk of investment losses. Your individual allocation may be different than the strategic long-term allocation above due to your unique individual circumstances, but is targeted to be in the allocation ranges detailed. The asset allocation reflected above may fluctuate based on asset values, portfolio decisions, and account needs.

Liquid alternative mutual funds are subject to market and investment specific risks. Investment returns, volatility and risk vary widely among them. They employ aggressive techniques not employed by traditional stock and bond mutual funds, including the use of short sales, leverage and derivatives. Short sales involve leverage and theoretically unlimited loss potential since the market price of securities sold short may continuously increase. The use of leverage in a portfolio varies by investment strategy. The use of leverage can magnify any price movements resulting in high volatility and potentially significant loss of principal. Derivatives generally have implied leverage and entail risks such as market, interest rate, credit, counterparty and management risks. Some of the strategies employed by liquid alternative mutual funds include equity hedge, event driven, macro and relative value. These strategies may, at times, be out of market favor for considerable periods which can result in adverse consequences for the investor and the fund.

Alternative investments, such as hedge funds, private capital funds, and private real estate funds, carry specific investor qualifications and involve the risk of investment loss, including the loss of the entire amount invested. While investors may potentially benefit from the ability of alternative investments to potentially improve the risk-reward profiles of their portfolios, the investments themselves can carry significant risks. Government regulation and monitoring of these types of investments may be minimal or nonexistent. There may be no secondary market for alternative investment interests and transferability may be limited or even prohibited.

Private debt strategies seek to actively improve the capital structure of a company often through debt restructuring and deleveraging measures. Such investments are subject to potential default, limited liquidity, the creditworthiness of the private company, and the infrequent availability of independent credit ratings for private companies.

The use of **alternative investment strategies**, such as Equity Hedge, Event Driven, Macro and Relative Value, are speculative and involve a high degree of risk. These strategies may expose investors to risks such as short selling, leverage risk, counterparty risk, liquidity risk, volatility risk, the use of derivatives and other significant risks. Distressed credit strategies invest in, and might sell short, the securities of companies where the security's price has been, or is expected to be, affected by a distressed situation. This may involve reorganizations, bankruptcies, distressed sales, and other corporate restructurings. Investing in distressed companies is speculative and involves a high degree of risk. Because of their distressed situation, these securities may be illiquid, have low trading volumes, and be subject to substantial interest rate and credit risks. Structured credit strategies aim to generate returns via positions in the credit sensitive area of the fixed income markets. The strategy generally involves the purchase of corporate bonds with hedging of interest rate exposure. The use of alternative investment strategies may require a manager's skill in assessing corporate events, the anticipation of future movements in securities prices, interest rates, or other economic factors. No assurance can be given that a manager's view of the economy will be correct which may result in lower investment returns or higher return volatility. Long/short credit strategies seek to mitigate interest rate and credit risks regardless of market environment through investment in credit-related and structured debt vehicles. These strategies involve the use of market hedges and involve risks associated with the use of derivatives, fixed income, foreign investment, currency, hedging, leverage, liquidity, short sales, loss of principal and other material risks.

Equity sector risks: *Communication services* companies are vulnerable to their products and services becoming outdated because of technological advancement and the innovation of competitors. Companies in the communication services sector may also be affected by rapid technology changes; pricing competition, large equipment upgrades, substantial capital requirements and government regulation and approval of products and services. In addition, companies within the industry may invest heavily in research and development which is not guaranteed to lead to successful implementation of the proposed product. Risks associated with the *Consumer Discretionary sector* include, among others, apparel price deflation due to low-cost entries, high inventory levels and pressure from e-commerce players; reduction in traditional advertising dollars; increasing household debt levels that could limit consumer appetite for discretionary purchases. *Consumer Staples industries* can be significantly affected by competitive pricing particularly with respect to the growth of low-cost emerging market production, government regulation, the performance of overall economy, interest rates, and consumer confidence. The *Energy sector* may be adversely affected by changes in worldwide energy prices, exploration, production spending, government regulation, and changes in exchange rates, depletion of natural resources and risks that arise from extreme weather conditions. Investing in *Financial Services companies* will subject a portfolio to adverse economic or regulatory occurrences affecting the sector. Some of the risks associated with investment in the *Health Care sector* include competition on branded products, sales erosion due to cheaper alternatives, research & development risk, government regulations and government approval of products anticipated to enter the market. Risks associated with investing in the *Industrial sector* include the possibility of a worsening in the global economy, acquisition integration risk, operational issues, failure to introduce to market new and innovative products, further weakening in the oil market, potential price wars due to any excesses industry capacity, and a sustained rise in the dollar relative to other currencies. *Materials industries* can be significantly affected by the volatility of commodity prices, the exchange rate between foreign currency and the dollar, export/import concerns, worldwide competition, procurement and manufacturing and cost containment issues. *Technology and Internet-related stocks*, especially of smaller, less-seasoned companies, tend to be more volatile than the overall market. *Real estate* has special risks including the possible illiquidity of underlying properties, credit risk, interest rate fluctuations and the impact of varied economic condition. *Utilities* are sensitive to changes in interest rates and the securities within the sector can be volatile and may underperform in a slow economy.

Investing in **commodities** is not suitable for all investors. Exposure to the commodities markets may subject an investment to greater share price volatility than an investment in traditional equity or debt securities. Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity. Products that invest in commodities may employ more complex strategies which may expose investors to additional risks.

Investments in **fixed-income securities** are subject to market, interest rate, credit/default, liquidity, inflation and other risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and principal. **High yield** fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities. **Municipal bonds** offer interest payments exempt from federal taxes, and potentially state and local income taxes. Municipal bonds are subject to credit risk and potentially the Alternative Minimum Tax (AMT). Municipal securities are also subject to legislative and regulatory risk which is the risk that a change in the tax code could affect the value of taxable or tax-exempt interest income.

Mortgage-related and asset-backed securities are subject to the risks associated with investment in debt securities. In addition, they are subject to prepayment and call risks. Changes in prepayments may significantly affect yield, average life and expected maturity. If called prior to maturity, similar yielding investments may not be available for the Fund to purchase. These risks may be heightened for longer maturity and duration securities.

Currency hedging is a technique used to seek to reduce the risk arising from the change in price of one currency against another. The use of hedging to manage currency exchange rate movements may not be successful and could produce disproportionate gains or losses in a portfolio and may increase volatility and costs.

Equity securities are subject to market risk which means their value may fluctuate in response to general economic and market conditions and the perception of individual issuers. Investments in equity securities are generally more volatile than other types of securities.

Disclosures *(continued)*

There is no guarantee that **dividend-paying stocks** will return more than the overall stock market. Dividends are not guaranteed and are subject to change or elimination. There are no guarantees that **growth** or **value** stocks will increase in value or that their intrinsic values will eventually be recognized by the overall market. The return and principal value of stocks fluctuate with changes in market conditions. The growth and value type of investing tends to shift in and out of favor.

Investing in **foreign securities** presents certain risks that may not be present in domestic securities. For example, investments in foreign, emerging and frontier markets present special risks, including currency fluctuation, the potential for diplomatic and potential instability, regulatory and liquidity risks, foreign taxation and differences in auditing and other financial standards.

Investing in **gold**, **silver** or other precious metals involves special risk considerations such as severe price fluctuations and adverse economic and regulatory developments affecting the sector or industry.

Investing in long/short strategies is not suitable for all investors. Short selling involves sophisticated investment techniques that can add additional risk, and involves the risk of potentially unlimited increase in the market value of the security sold short, which could result in potentially unlimited loss for the Fund.

Master Limited Partnerships (MLPs) involves certain risks which differ from an investment in the securities of a corporation. MLPs may be sensitive to price changes in oil, natural gas, etc., regulatory risk, and rising interest rates. A change in the current tax law regarding MLPs could result in the MLP being treated as a corporation for federal income tax purposes which would reduce the amount of cash flows distributed by the MLP. Other risks include the volatility associated with the use of leverage; volatility of the commodities markets; market risks; supply and demand; natural and man-made catastrophes; competition; liquidity; market price discount from Net Asset Value and other material risks.

There are special risks associated with investing in **preferred securities**. Preferred securities are subject to interest rate and credit risks and are generally subordinated to bonds or other debt instruments in an issuer's capital structure, subjecting them to a greater risk of non-payment than more senior securities. In addition, the issue may be callable which may negatively impact the return of the security. Preferred dividends are not guaranteed and are subject to deferral or elimination.

Investing in **real estate** involves special risks, including the possible illiquidity of the underlying property, credit risk, interest rate fluctuations and the impact of varied economic conditions.

Privately offered **real estate** funds are speculative and involve a high degree of risk. Investments in real estate and real estate investments trusts have special risks, including the possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions. There can be no assurance a secondary market will exist and there may be restrictions on transferring interests.

The prices of **small and mid-size company** stocks are generally more volatile than large company stocks. They often involve higher risks because smaller companies may lack the management expertise, financial resources, product diversification and competitive strengths to endure adverse economic conditions.

Sovereign debt are bonds issued by a national government in a foreign currency and are used to finance a country's growth. In addition to the risks associated with investing in international and emerging markets, sovereign debt involves the risk that the issuing entity may not be able or willing to repay principal and/or interest when due in accordance with the terms of the debt agreement.

Sustainable investing focuses on companies that demonstrate adherence to environmental, social and corporate governance principles, among other values. There is no assurance that social impact investing can be an effective strategy under all market conditions. Different investment styles tend to shift in and out of favor. In addition, a portfolio's social policy could cause it to forgo opportunities to gain exposure to certain industries, companies, sectors or regions of the economy which could cause it to underperform similar portfolios that do not have a social policy.

Treasury Inflation-Protected Securities (TIPS) are subject to interest rate risk, especially when real interest rates rise. This may cause the underlying value of the bond to fluctuate more than other fixed income securities. TIPS have special tax consequences, generating phantom income on the "inflation compensation" component of the principal. A holder of TIPS may be required to report this income annually although no income related to "inflation compensation" is received until maturity.

Economic index definitions

An index is unmanaged and not available for direct investment.

Inflation is the change in the **Consumer Price Index (CPI)**. The CPI measures the price of a fixed basket of goods and services purchased by an average consumer.

Core inflation is the change in the core **Consumer Price Index (CPI)**. The core CPI measures the price of a fixed basket of goods and services—excluding the volatile food and energy components—purchased by an average consumer.

Conference Board's Leading Economic Index (LEI) is a composite average of ten leading indicators in the U.S. It one of the key elements in the Conference Board's analytic system, which is designed to signal peaks and troughs in the business cycle.

Consumer Confidence Index measures consumer confidence, which is defined as the degree of optimism on the state of the economy that consumers are expressing through their activities of savings and spending. The Present Situation Index is based on overall consumer assessment of current business and labor market conditions and present economic situation. It is a major determinant for the CCI.

JPMorgan Emerging Market Currency Index tracks the performance of emerging-market currencies relative to the U.S. dollar.

The Morgan Stanley Capital International (MSCI) Emerging Markets Currency Index is an index of emerging market currencies versus the dollar, where the weight of each currency within the index matches the relevant country weight within the Morgan Stanley Capital International (MSCI) Emerging Markets Equity Index.

Purchasing Managers' Index (PMI) is an indicator of the economic health of the manufacturing sector. The PMI index is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment.

The Producer Price Index (PPI) program measures the average change over time in the selling prices received by domestic producers for their output.

The Institute of Supply Management (ISM) Purchasing Manager's Index gauges internal demand for raw materials/goods that go into end-production. An Index value over 50 indicates expansion; below 50 indicates contraction. The values for the index can be between 0 and 100.

The US Dollar Index (USDX, DXY) is an index (or measure) of the value of the United States dollar relative to a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies.

Institute for Supply Management (ISM) Manufacturing Index is based on surveys of more than 300 manufacturing firms by the Institute of Supply Management. The ISM Manufacturing Index monitors employment, production inventories, new orders and supplier deliveries.

The Institute of Supply Management (ISM) Non-manufacturing Index (ISM Services Survey) measures the rate and direction of change in activity in the nonmanufacturing industries. An index with a score over 50 indicates that the industry is expanding, and a score below 50 shows a contraction. The values for the index can be between 0 and 100.

Personal consumption expenditures (PCE) is the primary measure of consumer spending on goods and services in the U.S. economy. It accounts for about two-thirds of domestic final spending, and thus it is the primary engine that drives future economic growth.

Alternative investments—strategy definitions

Private Equity. **Cambridge Associates LLC U.S. Private Equity Index®** uses a horizon calculation based on data compiled from more than 1,400 institutional-quality buyout, growth equity, private equity energy, and subordinated capital funds formed between 1986 and 2017. The funds included in the index report their performance voluntarily and therefore the index may reflect a bias towards funds with records of success. Funds report unaudited quarterly data to Cambridge and Associates when calculating the index. The index is not transparent and cannot be independently verified because Cambridge Associates does not identify the funds included in the index. Because Cambridge Associates recalculates the index each time a new fund is added, the historical performance of the index is not fixed, can't be replicated and will differ over time from the day presented. The returns shown are net of fees, expenses and carried interest. Index returns do not represent fund performance.

Global Hedge Funds. **HFRI Fund Weighted Composite Index.** A global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net-of-all-fees performance in U.S. Dollars and have a minimum of $50 Million under management or a 12-month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

Disclosures *(continued)*

Relative Value. **HFRI Relative Value (Total) Index.** Strategy is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. Relative Value (RV) position may be involved in corporate transactions also, but as opposed to Event Driven (ED) exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

Arbitrage. **HFRI RV: Fixed Income Sovereign Index.** Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a sovereign fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple sovereign bonds or between a corporate and risk free government bond. Fixed Income Sovereign typically employ multiple investment processes including both quantitative and fundamental discretionary approaches and relative to other Relative Value Arbitrage sub-strategies, these have the most significant top-down macro influences, relative to the more idiosyncratic fundamental approaches employed.

Long/Short Credit. **HFRI RV: Fixed Income—Corporate Index.** Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed-income instrument. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk free government bond. They typically involve arbitrage positions with little or no net credit market exposure, but are predicated on specific, anticipated idiosyncratic developments.

Structured Credit/Asset Backed. **HFRI RV: Fixed Income—Asset Backed Index.** Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed-income instrument backed by physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments specifically securitized by collateral commitments, which frequently include loans, pools and portfolios of loans, receivables, real estate, machinery or other tangible financial commitments. Investment thesis may be predicated on an attractive spread given the nature and quality of the collateral, the liquidity characteristics of the underlying instruments and on issuance and trends in collateralized fixed-income instruments, broadly speaking. In many cases, investment managers hedge, limit, or offset interest-rate exposure in the interest of isolating the risk of the position to strictly the disparity between the yield of the instrument and that of the lower-risk instruments.

Macro. **HFRI Macro (Total) Index.** Encompass a broad range of strategies predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard-currency, and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches and long- and short-term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments rather than on realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to Equity Hedge (EH), in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

Systematic Macro. **HFRI Macro: Systematic Diversified Index.** Diversified strategies employing mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. Strategies are designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative processes which focus on statistically robust or technical patterns in the return series of the asset, and they typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean-reverting strategies. Although some strategies seek to employ counter-trend models, strategies benefit most from an environment characterized by persistent, discernible trending behavior. Typically have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

Discretionary Macro. **HFRI Macro: Discretionary Thematic Index.** Strategies primarily rely on the evaluation of market data, relationships and influences, as interpreted by individuals who make decisions on portfolio positions; strategies employ an investment process most heavily influenced by top-down analysis of macroeconomic variables. Investment Managers may trade actively in developed and emerging markets, focusing on both absolute and relative levels on equity markets, interest rates/fixed income markets, currency and commodity markets; they frequently employ spread trades to isolate a differential between instrument identified by the Investment Manager as being inconsistent with expected value. Portfolio positions typically are predicated on the evolution of investment themes the Manager expects to develop over a relevant time frame, which in many cases contain contrarian or volatility-focused components.

Event Driven. **HFRI Event Driven (Total) Index.** Maintains positions in companies currently or prospectively involved in corporate transactions of a wide variety including mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated and frequently involve additional derivative securities. Exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company-specific developments. Investment theses are typically predicated on fundamental (as opposed to quantitative) characteristics, with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

Activist. **HFRI ED: Activist Index.** Strategies may obtain or attempt to obtain representation on the company's board of directors in an effort to impact the firm's policies or strategic direction and in some cases may advocate activities such as division or asset sales, partial or complete corporate divestiture, dividends or share buybacks, and changes in management. Strategies employ an investment process primarily focused on opportunities in equity and equity-related instruments of companies that are currently or prospectively engaged in a corporate transaction, security issuance/repurchase, asset sales, division spin-off or other catalyst-oriented situation. These involve both announced transactions and situations in which no formal announcement is expected to occur. Activist strategies would expect to have greater than 50% of the portfolio in activist positions, as described.

Distressed Credit. **HFRI ED: Distressed/Restructuring Index.** Strategies focus on corporate fixed-income instruments, primarily corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceedings or financial-market perception of near-term proceedings. Managers are typically actively involved with the management of these companies; they are frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments that are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

Merger Arbitrage. **HFRI ED: Merger Arbitrage Index.** Strategies primarily focus on opportunities in equity and equity-related instruments of companies that are currently engaged in a corporate transaction. Merger Arbitrage involves primarily announced transactions, typically with limited or no exposure to situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross-border, collared, and international transactions that incorporate multiple geographic regulatory institutions, typically with minimal exposure to corporate credits. Strategies typically have over 75% of positions in announced transactions over a given market cycle.

Equity Hedge. **HFRI Equity Hedge (Total) Index.** Equity Hedge: Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

Directional Equity. **HFRX EH: Multi-Strategy Index.** Managers maintain positions both long and short in primarily equity and equity-derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified

Disclosures *(continued)*

or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage, holding period, concentrations of market capitalizations, and valuation ranges of typical portfolios. Managers typically do not maintain more than 50% exposure to any one Equity Hedge sub-strategy.

Equity Market Neutral. **HFRI EH: Equity Market Neutral Index.** Strategies employ sophisticated quantitative techniques to analyze price data to ascertain information about future price movement and relationships between securities. These can include both Factor-based and Statistical Arbitrage/Trading strategies. Factor-based investment strategies include strategies predicated on the systematic analysis of common relationships between securities. In many cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical Arbitrage/Trading strategies consist of strategies predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high-frequency techniques may be employed; trading strategies may also be based on technical analysis or designed opportunistically to exploit new information that the investment manager believes has not been fully, completely, or accurately discounted into current security prices. Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Note: While the HFRI Indices are frequently used, they have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and, therefore, the index may omit funds, the inclusion of which might significantly affect the performance shown. The HFRI Indices are based on information hedge fund managers decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Returns of the underlying hedge funds are net of fees and are denominated in USD.

Liquid alternatives—index definitions

Liquid alternatives are represented by the **Wilshire Liquid Alternative Index**. The Wilshire Liquid Alternative Index measures the collective performance of the five Wilshire Liquid Alternative strategies that make up the Wilshire Liquid Alternative Universe. The Wilshire Liquid Alternative Index is designed to provide a broad measure of the liquid alternative market by combining the performance of the Wilshire Liquid Alternative Equity Hedge Index, Wilshire Liquid Alternative Global Macro Index, Wilshire Liquid Alternative Relative Value Index, Wilshire Liquid Alternative Multi-Strategy Index and the Wilshire Liquid Alternative Event Driven Index.

Wilshire Liquid Alternative Equity Hedge Index measures the performance of the equity hedge strategy component of the Wilshire Liquid Alternative Index. Equity hedge investment strategies predominantly invest in long and short equities.

Wilshire Liquid Alternative Event Driven Index measures the performance of the event driven strategy component of the Wilshire Liquid Alternative Index. Event driven strategies predominantly invest in companies involved in corporate transactions such as mergers, restructuring, distressed, buy backs, or other capital structure changes.

Wilshire Liquid Alternative Global Macro Index measures the performance of the global macro strategy component of the Wilshire Liquid Alternative Index. Global macro strategies predominantly invest in situations driven by the macro-economic environment across the capital structure as well as currencies and commodities.

Wilshire Liquid Alternative Relative Value Index measures the performance of the relative value strategy component of the Wilshire Liquid Alternative Index. Relative value strategies are focused on the valuation discrepancy in the relationships between markets or securities.

Asset class index definitions

Fixed income representative indices

Bloomberg Barclays U.S. Corporate High Yield Index covers the universe of fixed-rate, noninvestment-grade debt.

U.S. Taxable Investment Grade Fixed Income. **Bloomberg Barclays US Aggregate Bond Index** is a broad-based measure of the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market.

Short Term Taxable Fixed Income. **Bloomberg Barclays US Aggregate 1-3 Year Bond Index** is the one to three year component of the Barclays US Aggregate Index, which represents fixed-income securities that are SEC-registered, taxable, dollar-denominated, and investment-grade.

Intermediate Term Taxable Fixed Income. **Bloomberg Barclays US Aggregate 5-7 Year Bond Index** is composed of the Bloomberg Barclays US Government/Credit Index and the Bloomberg Barclays US Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 5-7 years.

Long Term Taxable Fixed Income. **Bloomberg Barclays US Aggregate 10+ Year Bond Index** is composed of the Bloomberg Barclays US Government/Credit Index and the Bloomberg Barclays US Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 10 years or more.

Cash Alternatives/Treasury Bills. **Bloomberg Barclays US Treasury Bills (1–3M) Index** is representative of money markets.

U.S. Treasury. **Bloomberg Barclays US Treasury Index** includes public obligations of the U.S. Treasury with a remaining maturity of one year or more.

U.S. Municipal Bond. **Bloomberg Barclays Municipal Index** is considered representative of the broad market for investment grade, tax-exempt bonds with a maturity of at least one year.

U.S. Investment Grade Corporate Fixed Income. **Bloomberg Barclays US Corporate Bond Index** measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

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

U.S. Government. **Bloomberg Barclays US Government Bond Index** includes U.S.-dollar-denominated, fixed-rate, nominal U.S. Treasury securities and U.S. agency debentures.

Credit. **Bloomberg Barclays US Credit Index** includes investment-grade, U.S.-dollar- denominated, fixed-rate, taxable corporate- and government-related bonds.

Securitized. **Bloomberg Barclays US Mortgage Backed Securities (MBS) Index** includes agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

High Yield Taxable Fixed Income. **Bloomberg Barclays US Corporate High-Yield Index** covers the universe of fixed-rate, non-investment-grade debt.

Developed Market Ex-U.S. Fixed Income (Unhedged). **J.P. Morgan GBI Global ex-US Index (Unhedged)** in USD is an unmanaged index market representative of the total return performance in U.S. dollars on an unhedged basis of major non-U.S. bond markets.

Developed Market Ex-U.S. Fixed Income (Hedged). **J.P. Morgan Non-U.S. Global Government Bond Index (Hedged)** is an unmanaged market index representative of the total return performance, on a hedged basis, of major non-U.S. bond markets. It is calculated in U.S. dollars.

Emerging Market Fixed Income (U.S. dollar). **J.P. Morgan Emerging Markets Bond Index (EMBI Global)** currently covers more than 60 emerging market countries. Included in the EMBI Global are U.S.-dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities.

Emerging Market Fixed Income (Local Currency). **J.P. Morgan Government Bond Index-Emerging Markets Global** is a comprehensive global local emerging markets index, and consists of regularly traded, liquid fixed-rate, domestic currency government bonds.

Preferred Stock. **S&P U.S. Preferred Stock Index** is designed to measure the performance of the U.S. preferred stock market. Preferred stocks pay dividends at a specified rate and receive preference over common stocks in terms of dividend payments and liquidation of assets.

Disclosures *(continued)*

Equity representative indices

U.S. Large Cap Equities. **S&P 500 Index** is a capitalization-weighted index calculated on a total return basis with dividends reinvested. The index includes 500 widely held U.S. market industrial, utility, transportation and financial companies.

U.S. Large Cap Equities (Growth). **Russell 1000 Growth Index** measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

U.S. Large Cap Equities (Value). **Russell 1000 Value Index** measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values.

U.S. Mid Cap Equities. **Russell Midcap Index** measures the performance of the mid-cap segment of the U.S. equity universe.

U.S. Mid Cap Equities (Growth). **Russell Midcap Growth Index** measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell Midcap Index companies with higher price-to-book ratios and higher forecasted growth values.

U.S. Mid Cap Equities (Value). **Russell Midcap Value Index** measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap Index companies with lower price-to-book ratios and lower forecasted growth values.

U.S. Small Cap Equities. **Russell 2000 Index** measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

U.S. Small Cap Equities (Growth). **Russell 2000 Growth Index** measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-value ratios and higher forecasted growth values.

U.S. Small Cap Equities (Value). **Russell 2000 Value Index** measures the performance of the small-cap value segment of the U.S. equity universe. It includes those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

Developed Market Ex-U.S. Equities (U.S. dollar)/(Local). **MSCI EAFE Index** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of 21 developed markets, excluding the U.S. and Canada.

Developed Market Small Cap Equity (U.S. Dollar). The **MSCI EAFE Small Cap Gross Total Return USD (M2EASC Index)** is an equity index which captures small cap representation across developed markets countries around the world, excluding the U.S. and Canada. With 2,358 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country. Returns measured in U.S. Dollars.

Developed Market Small Cap Equity (Local Currency). The **MSCI EAFE Small Cap Gross Total Return Local Index (GCLDEAFE Index)** is an equity index which captures small cap representation across developed markets countries around the world, excluding the U.S. and Canada. With 2,358 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country. Priced in MSCI LCL Currency.

Emerging Market Equities (U.S. dollar)/(Local). **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of 23 emerging markets.

Frontier Market Equities (U.S. dollar)/(Local). **MSCI Frontier Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of 24 frontier (least developed) markets.

The MSCI All Country World Index (MSCI ACWI) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of 23 developed and 23 emerging markets.

The MSCI Australia Index is designed to measure the performance of the large and mid cap segments of the Australia market. With 69 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Australia.

MSCI Chile Index is designed to measure the performance of the large and mid-cap segments of the Chilean market. With 20 constituents, the index covers approximately 85% of the Chile equity universe.

MSCI Israel Index is designed to measure the performance of the large and mid cap segments of the Israel market. With 12 constituents, the index covers about 85% of the free float-adjusted market capitalization in Israel.

MSCI Hong Kong Index is designed to measure the performance of the large and mid-cap segments of the Hong Kong market. With 40 constituents, the index covers about 85% of the free float-adjusted market capitalization of the Hong Kong equity universe.

MSCI Russia Index is a free-float adjusted market capitalization weighted index that is designed to track the equity market performance of Russian securities listed on MICEX Stock Exchange. The MSCI Russia Total Return Index takes into account both price performance and income from dividend payments. The MSCI Russia Index is constructed based on the MSCI Global Investable Market Indexes Methodology, targeting a free-float market capitalization coverage of 85%.

MSCI India Index is designed to measure the performance of the large and mid cap segments of the Indian market. With 84 constituents, the index covers approximately 85% of the Indian equity universe.

MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. This report is not approved, reviewed, or produced by MSCI.

Real assets representative indices

Public Real Estate. **FTSE EPRA/NAREIT Developed Index** is designed to track the performance of listed real-estate companies and REITs in developed countries worldwide.

Domestic REITs. **FTSE NAREIT US All Equity REITs Index** is designed to track the performance of REITs representing equity interests in (as opposed to mortgages on) properties. It represents all tax-qualified REITs with more than 50% of total assets in qualifying real estate assets, other than mortgages secured by real property that also meet minimum size and liquidity criteria.

International REITs. **FTSE EPRA/NAREIT Developed ex US Index** is designed to track the performance of listed real estate companies in developed countries worldwide other than the United States.

Infrastructure. The **S&P Global Infrastructure Index** is designed to track 75 companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability. To create diversified exposure, the index includes three distinct infrastructure clusters: energy, transportation, and utilities.

MLPs. **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for this emerging asset class. The index, which is calculated using a float-adjusted, capitalization-weighted methodology, is disseminated real-time on a price-return basis and on a total-return basis.

Commodities (BCOM). **Bloomberg Commodity Index** is comprised of 23 exchange-traded futures on physical commodities weighted to account for economic significance and market liquidity.

Bloomberg Agriculture Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on coffee, corn, cotton, soybeans, soybean oil, soybean meal, sugar and wheat. It reflects the return of the underlying commodity futures and is quoted in USD.

Bloomberg Energy Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on crude oil, ultra-low sulfur diesel, unleaded gasoline, low sulphur gasoil, and natural gas. It reflects the return of the underlying commodity futures and is quoted in USD.

Bloomberg Industrial Metals Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on aluminum, copper, nickel and zinc. It reflects the return of the underlying commodity futures and is quoted in USD.

Bloomberg Precious Metals Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on gold and silver. It reflects the return of the underlying commodity futures and is quoted in USD.

Disclosures *(continued)*

General disclosures

Global Investment Strategy (GIS) and Global Alternative Investments are divisions of Wells Fargo Investment Institute, Inc. (WFII). WFII is a registered investment adviser and wholly owned subsidiary of Wells Fargo Bank, N.A., a bank affiliate of Wells Fargo & Company.

The information in this report was prepared by the Global Investment Strategy division of WFII. Opinions represent WFII opinion as of the date of this report and are for general informational purposes only and are not intended to predict or guarantee the future performance of any individual security, market sector or the markets generally. GIS does not undertake to advise you of any change in its opinions or the information contained in this report. Wells Fargo & Company affiliates may issue reports or have opinions that are inconsistent with, and reach different conclusions from, this report.

The information contained herein constitutes general information and is not directed to, designed for, or individually tailored to, any particular investor or potential investor. This report is not an offer to buy or sell or solicitation of an offer to buy or sell any securities mentioned. Do not use this report as the sole basis for investment decisions. Do not select an asset class or investment product based on performance alone. Consider all relevant information, including your existing portfolio, investment objectives, risk tolerance, liquidity needs, and investment time horizon. Your actual portfolio allocation may differ from the strategic and tactical allocations reflected in this report.

Wells Fargo Wealth and Investment Management, a division within the Wells Fargo & Company enterprise, provides financial products and services through bank and brokerage affiliates of Wells Fargo & Company. Brokerage products and services offered through Wells Fargo Clearing Services, LLC, a registered broker-dealer and non-bank affiliate of Wells Fargo & Company. Bank products are offered through Wells Fargo Bank, N.A.

Wells Fargo Securities is the trade name for the capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Securities, LLC, member NYSE, FINRA and SIPC and Wells Fargo Bank, National Association. Wells Fargo Bank, N.A. is a bank affiliate of Wells Fargo & Company.

Wells Fargo Advisors is registered with the U.S. Securities and Exchange Commission and the Financial Industry Regulatory Authority, but is not licensed or registered with any financial services regulatory authority outside of the U.S. Non-U.S. residents who maintain U.S.-based financial services account(s) with Wells Fargo Advisors may not be afforded certain protections conferred by legislation and regulations in their country of residence in respect of any investments, investment transactions or communications made with Wells Fargo Advisors.

Wells Fargo Advisors is a trade name used by Wells Fargo Clearing Services, LLC and Wells Fargo Advisors Financial Network, LLC, Members SIPC, separate registered broker-dealers and non-bank affiliates of Wells Fargo & Company.

Additional information is available upon request.

Valid through December 2021

CAR-0620-01567