

CHIEF INVESTMENT OFFICE

# Executive Summary Chart Book Momentum Toward Recovery

January 2021  
Q4 2020

# Important Information

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# 4th Quarter Macro and Markets Recap

4th quarter of 2020 in review.

## MACRO

- **The global economy continues to rebound even with the resurgence in coronavirus (Covid-19) cases.** The global manufacturing purchasing managers index (PMI) for manufacturing, a gauge of cyclical momentum, reached its highest level in almost three years. More than two-thirds of country's manufacturing PMIs have returned to expansion territory.
- U.S. economic growth forecasts continue to be revised higher. BofA Global Research<sup>1</sup> projects fourth quarter growth was 5% SAAR\* and expects 4.6% growth in 2021. The U.S. consumer will likely be a solid pillar of support in 2021. With the help of fiscal stimulus, the personal savings rate is relatively high at the same time wealth is rising (rising home and equity prices are helping) and financial obligations are low, a powerful setup for consumer spending in 2021.
- Aggressive monetary and fiscal stimulus continue to support a positive, self-reinforcing growth dynamic that is likely set to receive an additional boost from vaccinations, unleashing consumer pent-up demand all over the world next year.
- Growth in China, the second largest economy in the world, has recovered faster than the rest of the world and may be set for above trend growth in 2021.

## FIXED INCOME

- **Fixed Income continued its broad advance in Q4, with credit risk outperforming materially, as the recovery trade continued.** The overall broad U.S. fixed income market was up 0.6%, with high yield (HY) up 6.5%, investment grade (IG) up 3.1%, and municipals up 2.0% as measured by the ICE BofA indexes.
- 10-Year U.S. Treasury yields, however, continued to move higher, finishing the quarter +23 basis points (bps) higher at 0.92%. Treasury returns were negative for the quarter, with a total return of -0.9% as measured by the ICE BofA U.S. Treasury Index.
- Inflation expectations continued to increase, as markets positively digest the effect of very accommodative monetary policy and supportive fiscal policy. 10-Year inflation expectations, as measured by U.S. Treasuries and Treasury Inflation-Protected Security (TIPS), increased from 1.63% to 1.99% by the end of 2020.
- The ICE BofA International Sovereign debt Index gained 2.3% in Q4, while ICE Emerging Market Sovereign debt gained 4.5%.

## EQUITIES

- **Global equities continued to grind higher as investors remained optimistic about the economic recovery amid positive vaccine developments.** Developed Markets (DMs), as illustrated by the MSCI World Net Total Return (NTR) Index, advanced by 14.0% in Q4 while the MSCI Emerging Markets NTR index added 19.7%. MSCI Austria (47.3%) performed best among Developed Markets (DMs), while MSCI Colombia (48.7%) led Emerging Markets (EMs) for the quarter.
- In the U.S., the S&P 500 rose 12.1% on a total return basis last quarter. Energy (25.8%) and Financials (22.5%) were the top performers while Consumer Staples (5.6%) and Real Estate (4.1%) lagged. Small-Caps (31.4%), as represented by the Russell 2000 Index significantly outperformed Large Caps (13.7%), as represented by the Russell 1000 Index. Across styles, Value (16.3%) outperformed Growth (11.4%) in the Russell 3000.
- MSCI Latin America (34.8%) enjoyed a strong quarter while MSCI EMEA (16.3%) and MSCI Emerging Asia (18.9%) also saw strong performance.

## ALTERNATIVE INVESTMENTS\*\*

- **Commodities rallied in the 4th quarter as global growth recovered.** The Bloomberg Commodity Index was up over 10% for the quarter West Texas Intermediate (WTI) Crude (+18%) rallied in the quarter, but natural gas fell and touched a new low late in the quarter. Agriculture commodities surged (+21%) led by Soybeans (+27%). Industrial metals also rose sharply (+14%) outpacing precious metals which rose 2.4% with gold rising slightly (+0.6%).
- The Bloomberg U.S. dollar index (BBDXY) slumped (-4.8%) as the Euro (+4.2%) and Aussie Dollar (+7.4%) gained. The Chinese Yuan gained 4.1% versus the dollar while the Mexican Peso (+11.2%) and South African Rand (+14%) led Emerging Market currencies higher.
- The HFRX Global Hedge Fund index (5%) performed well in Q4 with Equity Long/Short (7%) strategies standing out. U.S. Mortgage REITs (38%) spiked for the quarter, as did Global MLPs (50%) and Preferred stocks (11%).

<sup>1</sup>BofA Global Research is research produced by BofA Securities, Inc. ("BofAS") and/or one or more of its affiliates. BofAS is a registered broker-dealer, Member SIPC, and wholly owned subsidiary of Bank of America Corporation. \*SAAR-Seasonally Adjusted Annual Rate. \*\*Many products that pursue Alternative Investment strategies, specifically Private Equity and Hedge Funds, are available only to qualified investors. Source: Chief Investment Office. Data as of January 6, 2021. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.

# Portfolio Strategy and Asset Allocation

## TACTICAL SHIFTS

January 2021

- We raised our overall allocation to Equities slightly, and lowered our Cash allocation, to position for continued economic recovery and to add cyclical to portfolios. Within Equities we upgraded U.S. Small-cap Value (where applicable) to slight overweight, and Emerging Markets (EMs) to neutral; while lowering our allocation to U.S. Large-caps (but we remain overweight). We also raised this month our allocation to Mortgage-Backed Securities (MBS) to neutral, and further lowered our allocation to U.S. Treasuries.

## FIXED INCOME

- Consider a short-duration positioning relative to a stated benchmark that is aligned to investment goals.
- Treasuries should always be considered as an asset class for most investors' portfolios, especially to complement portfolios with equity risk. However, investors with less need to manage short-term, day-to-day equity volatility or who have higher ability to withstand price volatility, should minimize Treasury allocations as much as practicable while favoring high-quality, investment-grade spread products.
- For HY allocations, consider an equal weighting between HY unsecured bonds and secured leveraged loans, and caution that near-term, strong performance may not be sustainable.
- We continue to suggest conservative positioning in securities with less extension and price risk. Therefore, we continue to counsel that investors maintain a significant weight to the sector, as it is a large component of the high-quality bond market and a direct beneficiary of Fed intervention, but the opportunity set is currently still greater in the IG corporate sector.

## MARKET VIEWS

- ✓ We expect a “grind-it-out” year in equity returns that far outpace fixed income
- ✓ Within equities, we expect a more diversified rotation; within fixed income we prefer high-quality and shorter-duration positioning
- ✓ Reflation, steeper yield curve, and weaker U.S. dollar help support risk assets for longer. Investor sentiment has risen

## EQUITIES

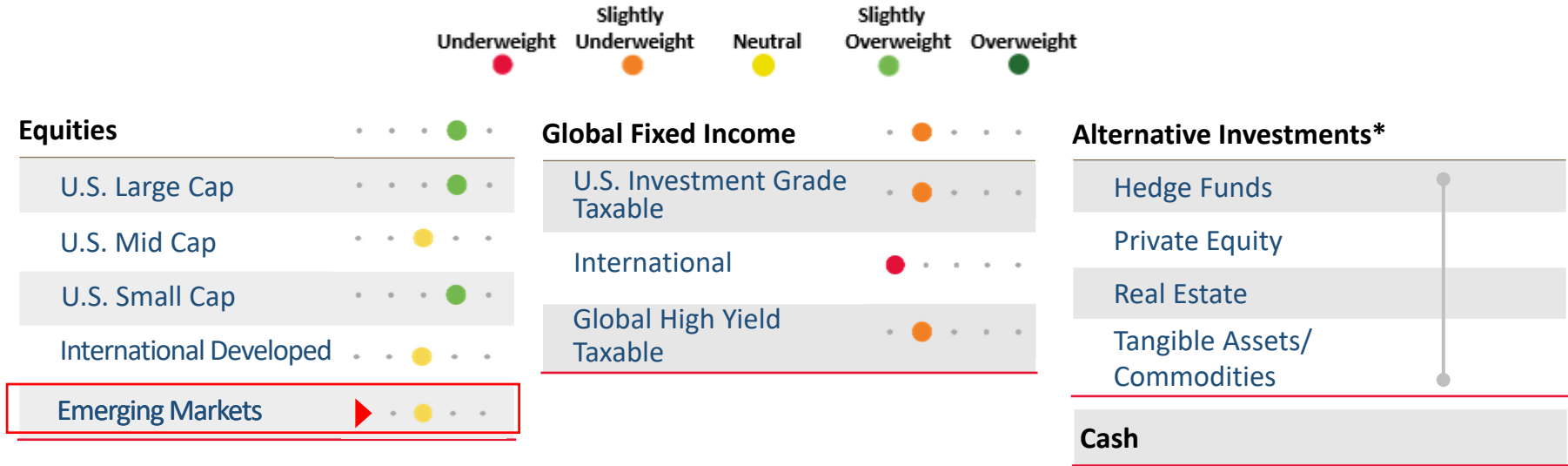
- We believe investors should balance Quality and Growth in their equity allocations with Cyclical exposure, especially if one is significantly under-allocated there. We continue to favor U.S. equities, are neutral International Developed equities and are upgrading Emerging Markets from underweight to neutral.
- The U.S. remains our preferred equity region relative to the rest of the world, with stronger balance sheets on aggregate, greater exposure to secular growth industries, and improving earnings revisions. U.S. Large-caps offer a balance of Quality, Yield and Growth factors, while Small-caps offer higher cyclical and relatively more attractive valuations.
- Fundamentals appear to be improving into 2021 as global synchronized growth picks up, manufacturing and trade further improve, China activity reaches pre-pandemic levels, and the U.S. dollar weakens—all of which should benefit EMs.
- We favor Technology and Healthcare sectors in the long term due to the secular rise in spending on innovation, productivity and health infrastructure. Industrials, Financials and Materials are positioned for continued economic recovery.

## ALTERNATIVE INVESTMENTS\*

- We advocate for a diversified approach when investing in Hedge Funds. Consider incremental allocations to equity long/short strategies available to qualified investors.
- We believe Private Equity strategies are long-term potential portfolio return enhancers with unique access to specialized deals unavailable to traditional investors. We expect that savvy managers will likely deploy dry powder opportunistically to buyout and distressed areas of the market, via direct and through secondary investments.
- We would place emphasis on direct Real Estate investments in well-located properties in strong regions of the country that exhibit attractive rent-roll and cash-flow characteristics, and have the potential to bridge into the next cycle, providing a long-term hedge against inflation.

\*Many products that pursue Alternative Investment strategies, specifically Private Equity and Hedge Funds, are available only to qualified investors. **Asset Allocation and diversification do not ensure a profit or protect against loss in a declining market. Bank of America, Merrill, their affiliates, and advisors do not provide legal, tax or accounting advice. You should consult your legal and/or tax advisors before making any financial decisions.** Source: GWIM Investment Strategy Committee (GWIM ISC) as of January 5, 2020. **Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.** CIO views are subject to change.

# CIO Asset Class Strategy Views



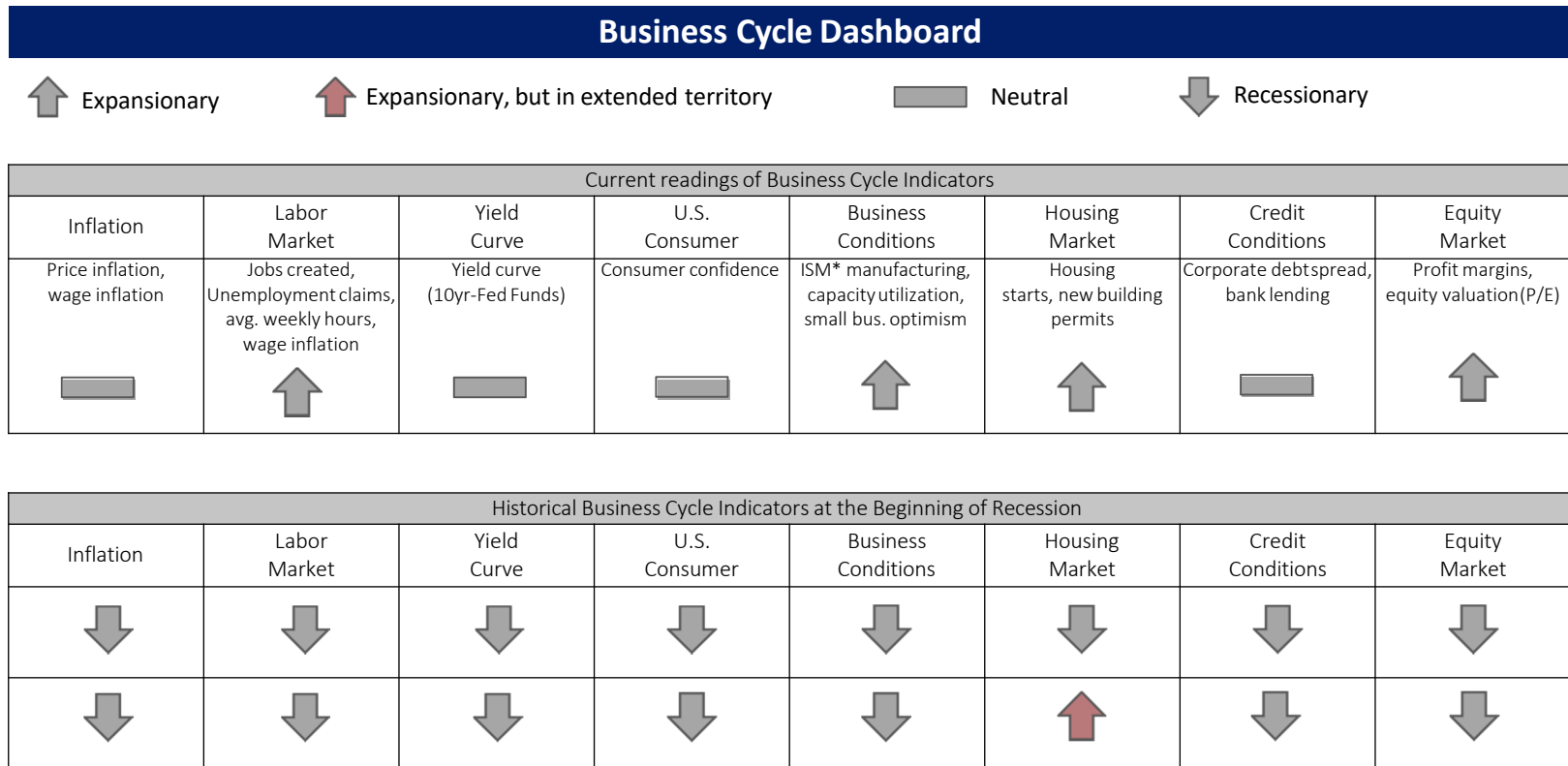
**ALTERNATIVE INVESTMENTS NOTE:** Given the differences in liquidity characteristics between AI and traditional investments, the AI portfolio positioning and CIO asset class views have been neutral rated versus our strategic allocations. These types of investments, in our opinion, should not be viewed at the asset class level on a tactical basis, rather the tactical positioning should be expressed at the sub asset level. We will continue to provide strategy level guidance for qualified AI investors and believe allocations to AI can introduce differentiated returns which can complement existing traditional holdings by enhancing returns, reducing risk, and capitalizing on opportunities not available in traditional investments.

- CORE PORTFOLIO FUNDAMENTALS**
- Generate attractive cash flows across asset classes
  - Active rebalancing during periods of outsized weakness and strength
  - Focus on risk-adjusted returns and goal alignment

When assessing your portfolio in light of our current guidance, consider the tactical positioning around asset allocation in reference to your own individual risk tolerance, time horizon, objectives and liquidity needs. Certain investments may not be appropriate, given your specific circumstances and investment plan. Certain security types, like hedged strategies and private equity investments, are subject to eligibility and suitability criteria. Your financial advisor can help you customize your portfolio in light of your specific circumstances. \*Many products that pursue Alternative Investment strategies, specifically Private Equity and Hedge Funds, are available only to qualified investors. Source: GWIM Investment Strategy Committee (GWIM ISC) as of January 5, 2021. **Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.** CIO views are subject to change.

# U.S. Business Cycle Indicator Dashboard

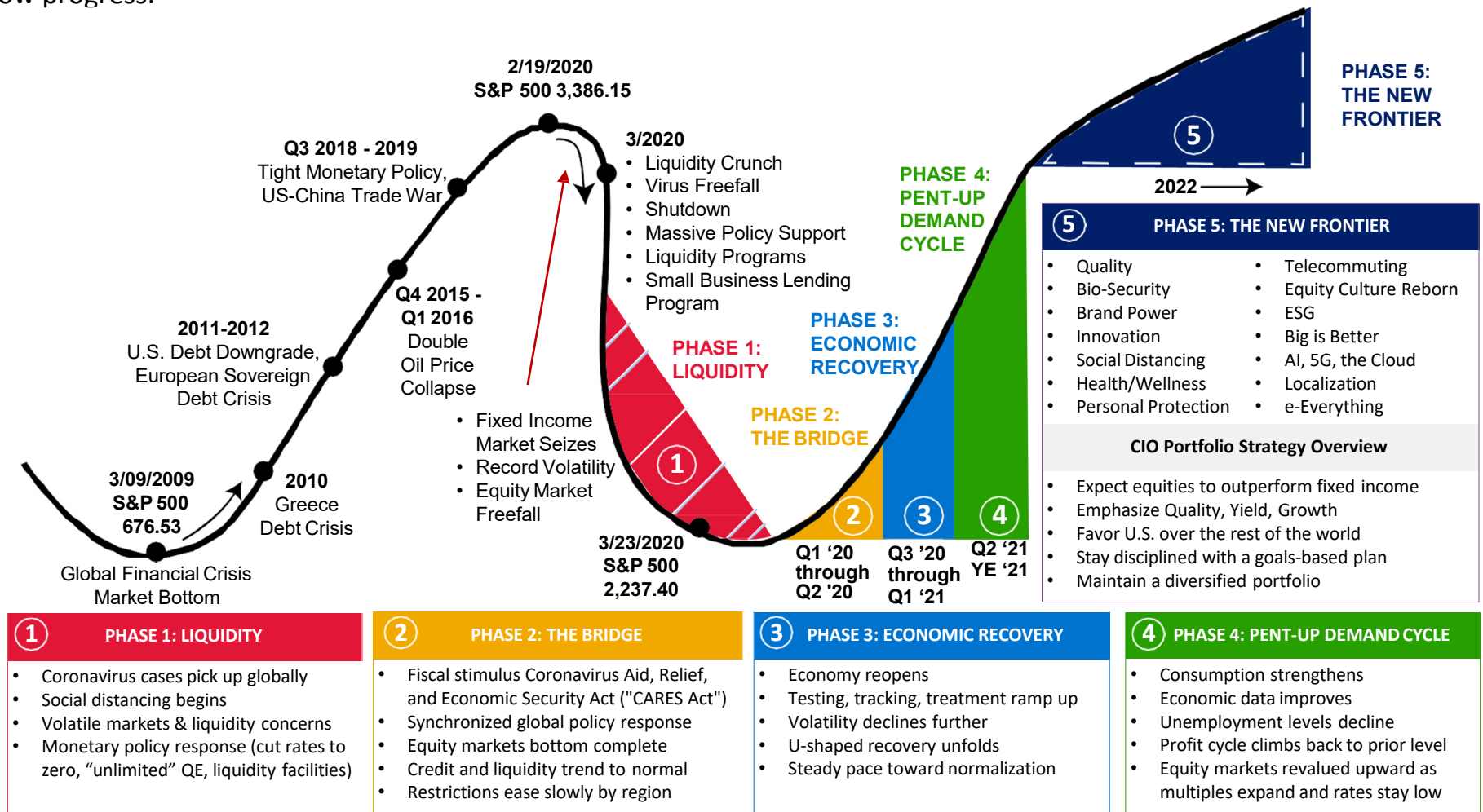
The CIO tracks various metrics (below), which currently indicate that the U.S. economy continues to recover.



\*ISM= Institute for Supply Management. Indicator is in extended territory if majority of data tracked in that category is outside the bounds of what we consider to be moderate levels.  
 Sources: Bloomberg; Haver Analytics; Federal Reserve Bank of St. Louis; Chief Investment Office. Data as of January 5, 2021. **Past performance is no guarantee of future results.** The economic and market forecasts presented are for informational purposes as of the date of this report. There can be no assurance that the forecasts will be achieved. There is no guarantee that this trend will continue.  
**Please refer to appendix for asset class proxies and index definitions.**

# The Journey Along the Great Separation

As the journey out of the valley and over the bridge concludes, the potential phases of recovery remain largely in focus. Now past the initial phases, Phase 3 (our current status), we continue to look forward to the vaccines rollout, improved treatments for the coronavirus, and a better understanding of best practices as the economic recovery continues to show progress.



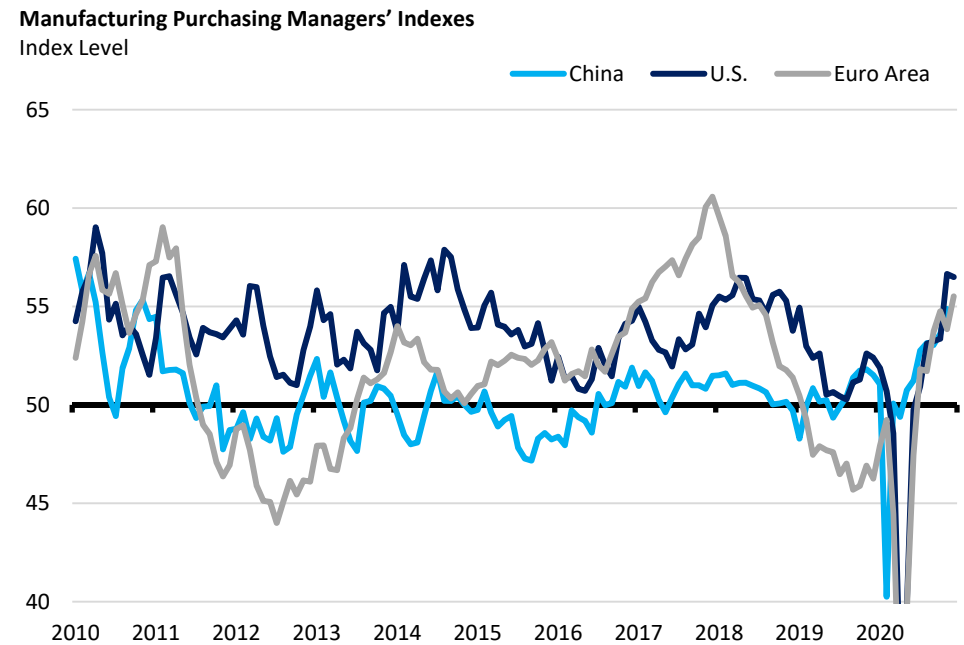
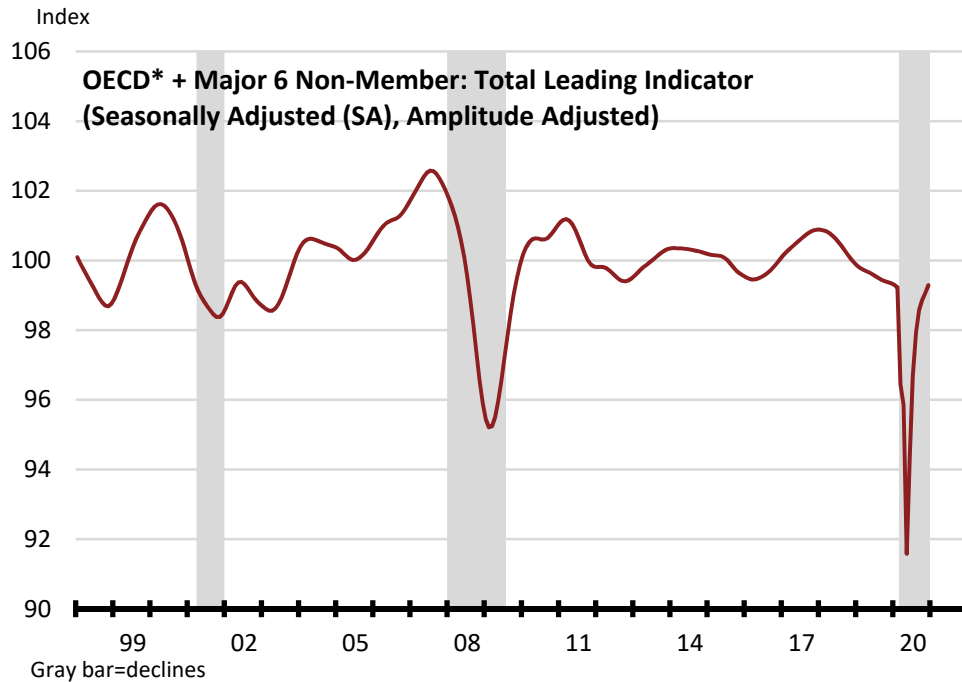
Source: Chief Investment Office. Data as of September 2020. CIO views are subject to change. The economic and market forecasts presented are for informational purposes as of June 2020. Economic or financial forecasts are inherently limited and should not be relied on as indicators of future investment performance

# The Global Economy Rebounds From Uncharted Territory

The two main engines of this synchronized global expansion, the U.S. and China, are positioned for strong growth in 2021 as the pandemic looks to fade, helped by several new highly effective vaccines that are expected to be deployed over the next six months. Unprecedented fiscal policy in the U.S. plus monetary accommodation is a powerful combination.

**Aggressive monetary and fiscal stimulus plus a boost from coronavirus vaccinations should unleash consumer pent-up demand all over the world this year. Global leading economic indicators reflect this confluence of factors.**

**Global manufacturing survey data showing a synchronized pickup in global cyclical momentum.**



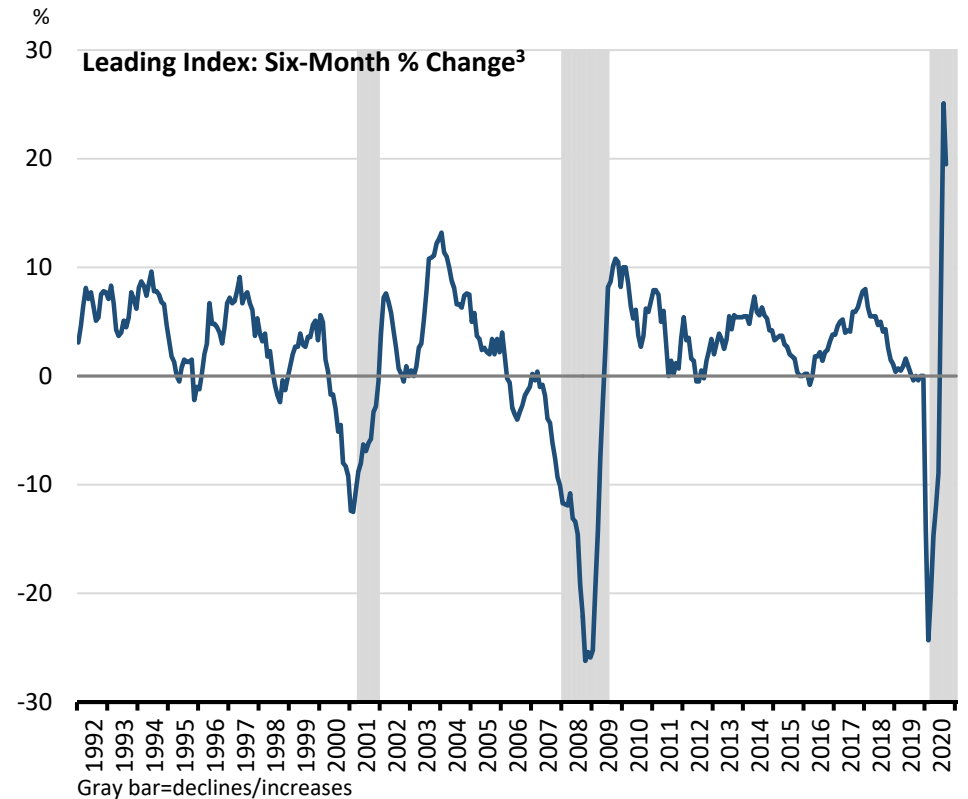
\*Organisation for Economic Co-operation and Development.

Sources: (Left) Organization for Economic Cooperation & Development; Haver Analytics. (Right) Bloomberg. Data as of December 20, 2020. **Please refer to appendix for asset class disclosures and index definitions. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index.**



# Economic Data in the U.S. Suggest the Economic Recovery Has Legs

Economists were overly pessimistic in the middle of 2020 and economic data consistently beat expectations. Leading indicators suggest the pickup in growth seen in the third and fourth quarters has staying power.



Sources: Bloomberg; Chief Investment Office. Data as of December 18, 2020. <sup>2</sup>The Citi Economic Surprise Indices measure data surprises relative to market expectations. <sup>3</sup>Leading indicators include economic variables that tend to move before changes in the overall economy.

# The Lingering Effects of the Fiscal Policy Response are Positive

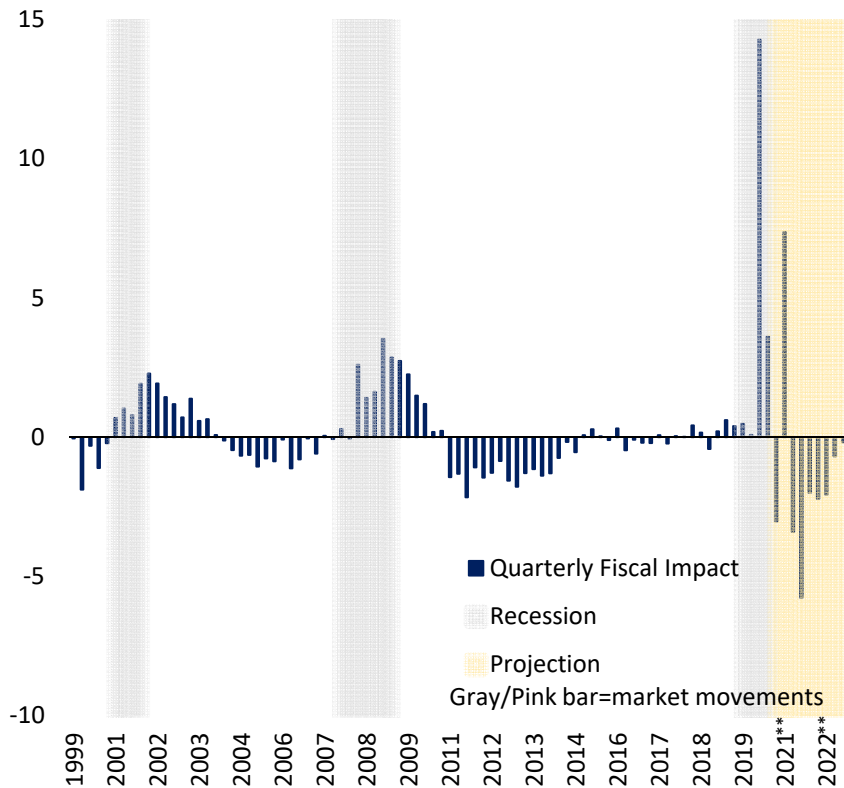
The federal government has injected massive rounds of economic relief and stimulus into the economy to provide support to consumers, small businesses and disrupted industries.

The Brookings Institute estimates the first round of stimulus pushed up GDP growth by 14 percentage points in Q2 of 2020. The remaining effects of the first fiscal stimulus as well as the December 2020 relief package are expected to be supportive of growth through 2021.

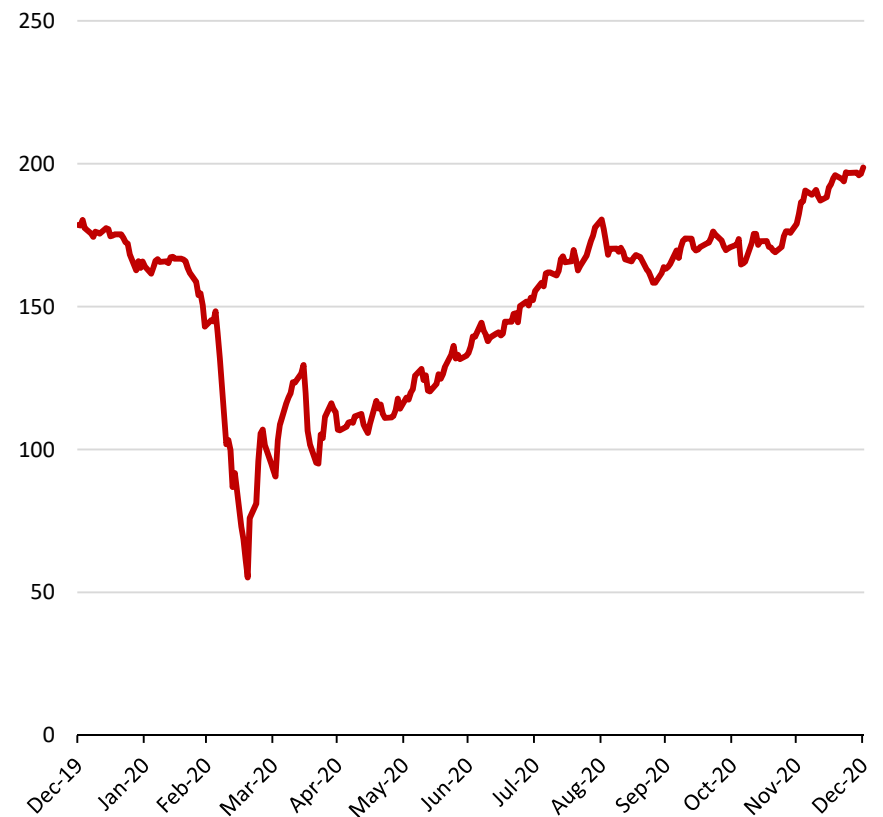
10-Year break-evens, a gauge for market inflation expectations, have now moved to levels higher than before the pandemic, a sign that investors feel both current monetary and fiscal policy should be supportive enough to keep the recovery intact.

## Brookings Institute Hutchins Center Fiscal Impact Measure\*

Contribution of Fiscal Policy to Real GDP Growth (%)



## U.S. 10-year Breakeven\*\*\*

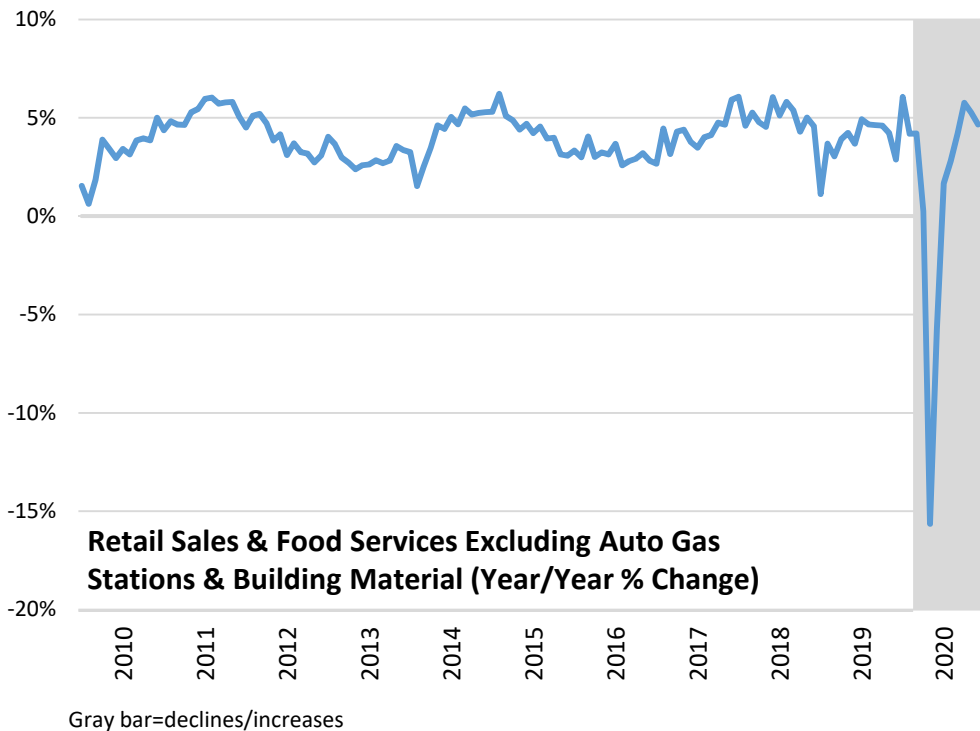


\*The Brookings Institute Hutchins Center Fiscal Impact Measure shows how much local, state and federal tax and spending policy adds to or subtracts from overall economic growth, and provides a near-term forecast of fiscal policies economic activity. \*\*Estimate. \*\*\*10-year breakevens measure the difference between the 10-year Treasury and Treasury Inflation Protected Securities, and serves as an indication of the markets' inflation expectations over a 10-year horizon. Source: (Left) Brookings Institute Hutchins Center. Data as of December 24, 2020. (Right) Bloomberg. Data as of December 31, 2020. **Past performance is no guarantee of future results.**

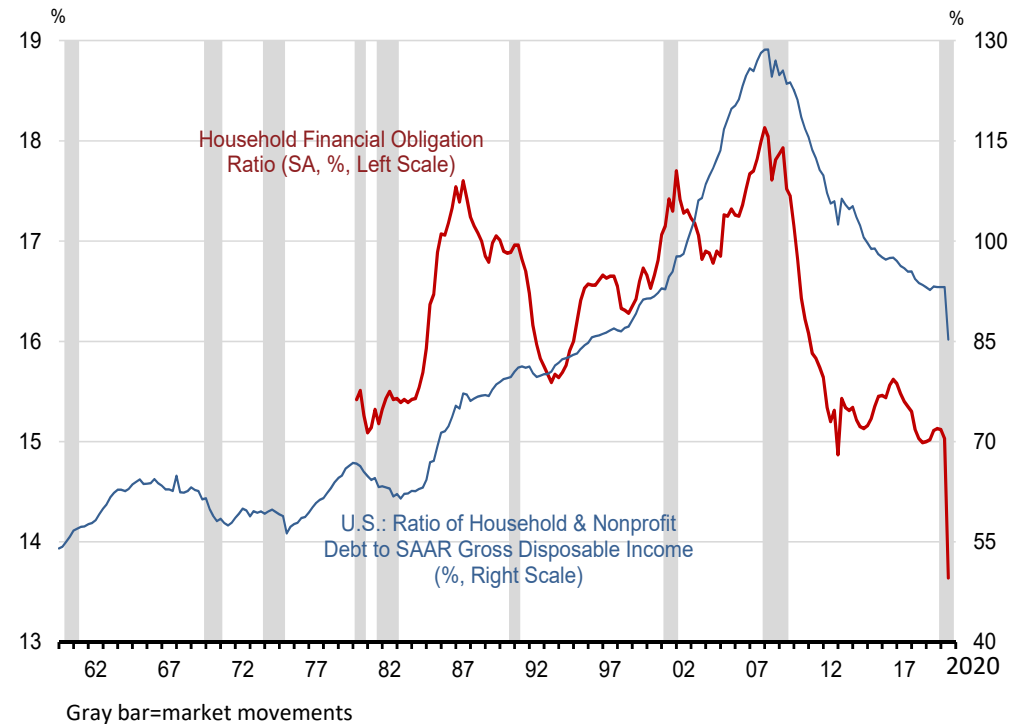
# The U.S. Consumer Remains Resilient as Job Growth Continues

With the help of fiscal stimulus, many U.S. consumers have lived well within their means during the pandemic. The personal savings rate is relatively high at the same time wealth is rising and financial obligations are low, a powerful setup for consumer spending in 2021. Real consumer spending growth this year could be the fastest we have seen in decades.

**Retail sales data show the U.S. consumer continues to replace experiences with goods.**



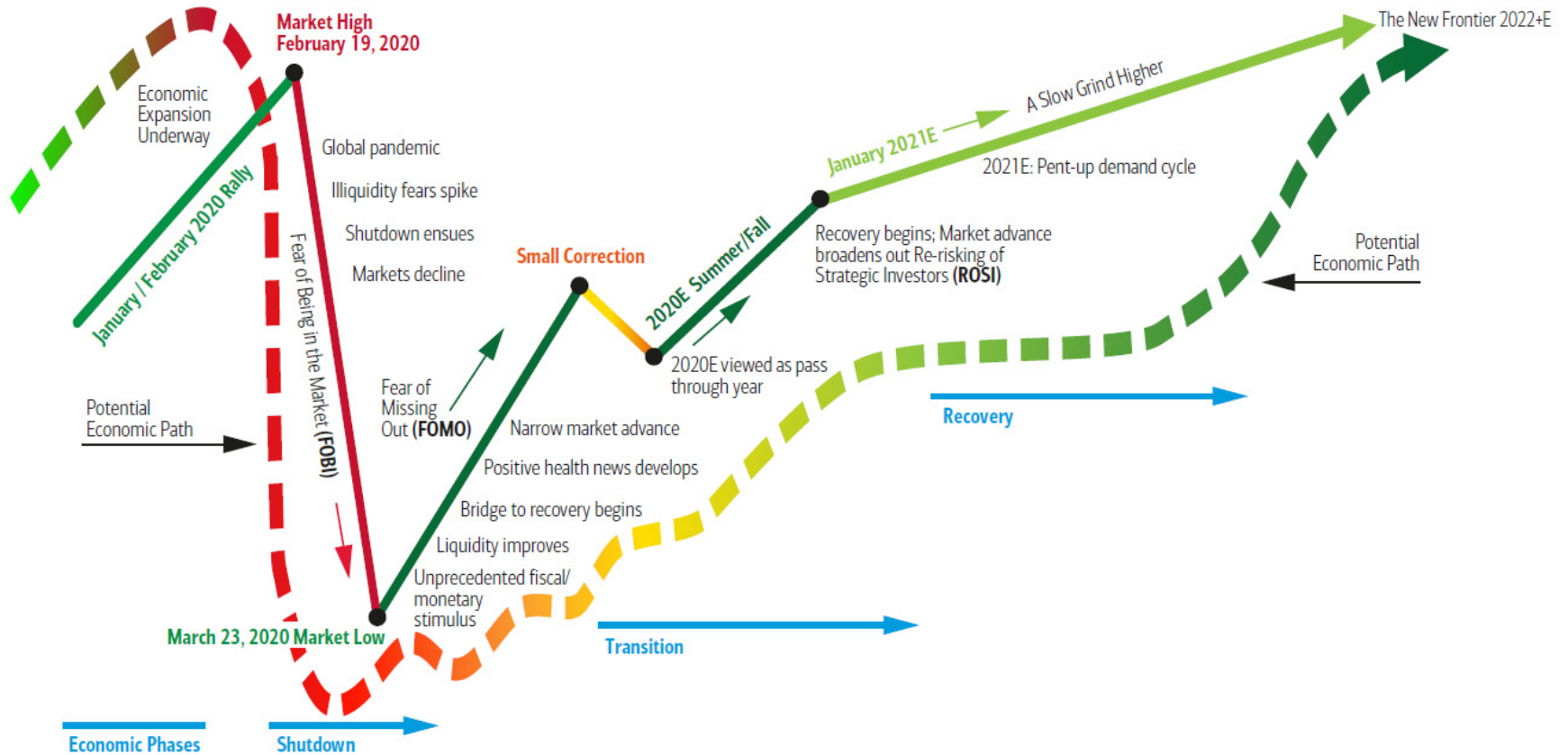
**Record low household financial obligations ratio sets consumer up for strong 2021.**



Sources: (Left): U.S. Census Bureau. Data as of December 16, 2020. (Right): World Bank; Bureau of Economic Analysis. Data as of December 18, 2020.

# Shaping up: A “Square Root” Type Recovery Shape

We expect the market recovery to experience a “square root” shape as it continues to develop through 2021 prior to the New Frontier unfolding.



## CIO's Phases of the Workout Process



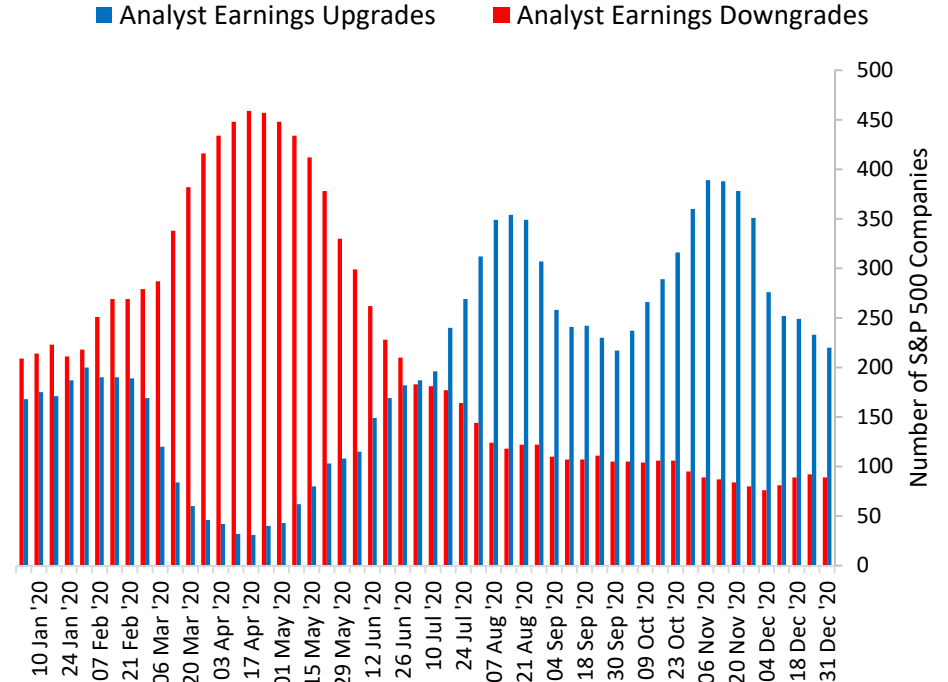
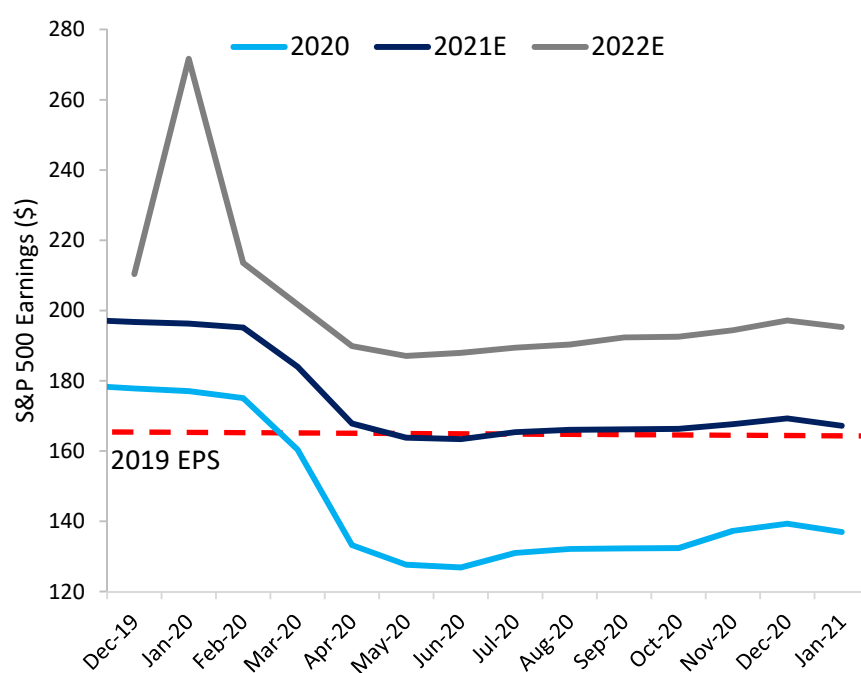
E=Estimate. Source: Chief Investment Office as of January 5, 2021. **Past performance is no guarantee of future results.** The economic and market forecasts presented are for informational purposes as of January 5, 2021 and may change without notice. Economic or financial forecasts are inherently limited and should not be relied on as indicators of future investment performance.

# Profit Expectations Continue To Pick Up

Corporate earnings suffered a major blow resulting from economic shutdown and analysts rapidly downgraded expectations going forward amidst the uncertainty. As the economic recovery has advanced and businesses chart the path forward, pessimism has given way to optimism and profit expectations are currently rising.

Bottoms-up earnings estimates for the S&P 500 have picked up from their trough, and future estimates point to a complete earnings rebound in 2021.

After a sea of analyst downgrades in response to the sharp recession, upgrades are currently outnumbering downgrades by a ratio greater than 2:1 as the recovery progresses.



E=Estimate. Source: Left Chart: Factset, Chief Investment Office. Data as of January 1, 2021. Right Chart: Factset, Chief Investment Office. Data as of January 1, 2021. Short term performance shown to illustrate more recent trend. **Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to Appendix for Asset Class Proxies, Index Definitions and Important Disclosures.**

# Indicators Suggest Bullishness For Equities

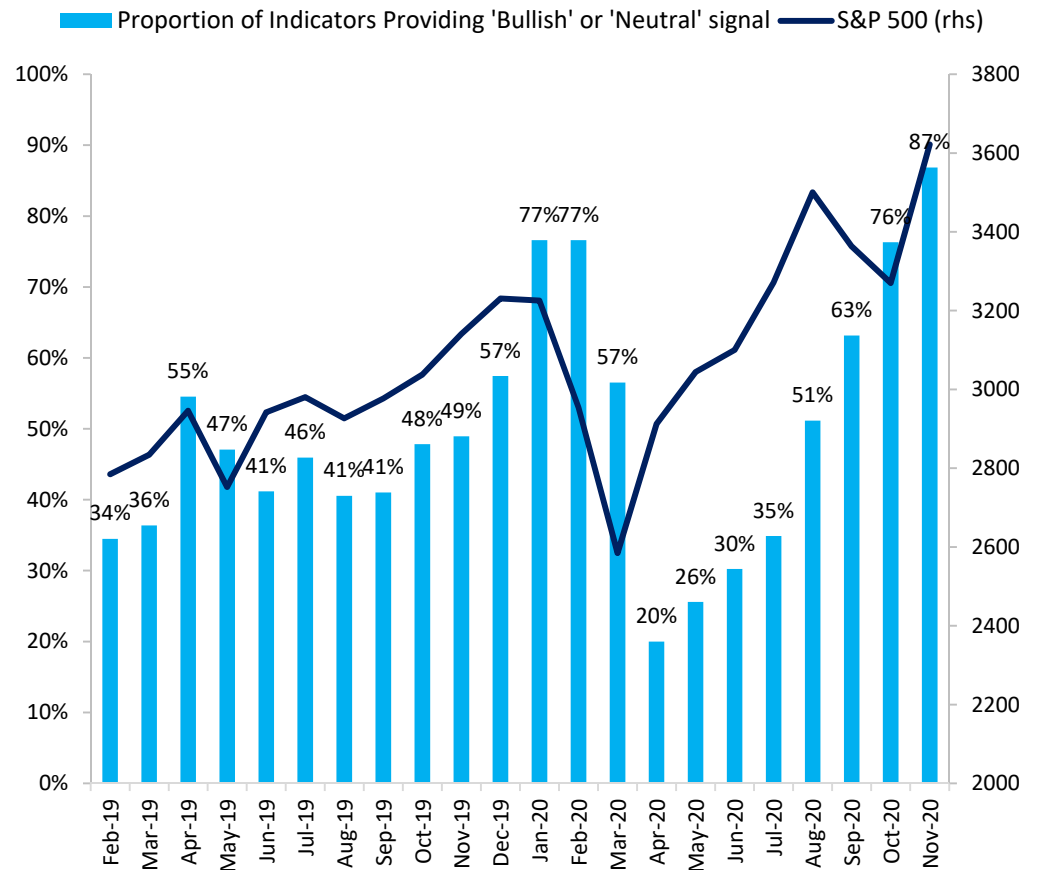
The stock market is a forward-discounting mechanism and performance has currently improved along with leading indicators, leading less optimistic coincident or backward looking data.

During periods of labor market weakness the S&P 500 has historically averaged greater monthly returns as the combined policy response from fiscal and monetary authorities often suggests improving economic conditions and increased liquidity.

The proportion of 'Bullish' or 'Neutral' indicators tracked by BofA Global Research has surged to 87% after a multi-year trough in April. Equities have typically demonstrated a meaningful correlation in performance with the direction and magnitude of these signals.

Unemployment Rate	Frequency	Avg. Monthly Return	Annualized Return
> 8%	10%	1.8%	21.2%
6.6% < 8%*	19%	1.1%	13.7%
5% < 6.5%	38%	0.5%	6.5%
< 5%	33%	0.4%	4.4%

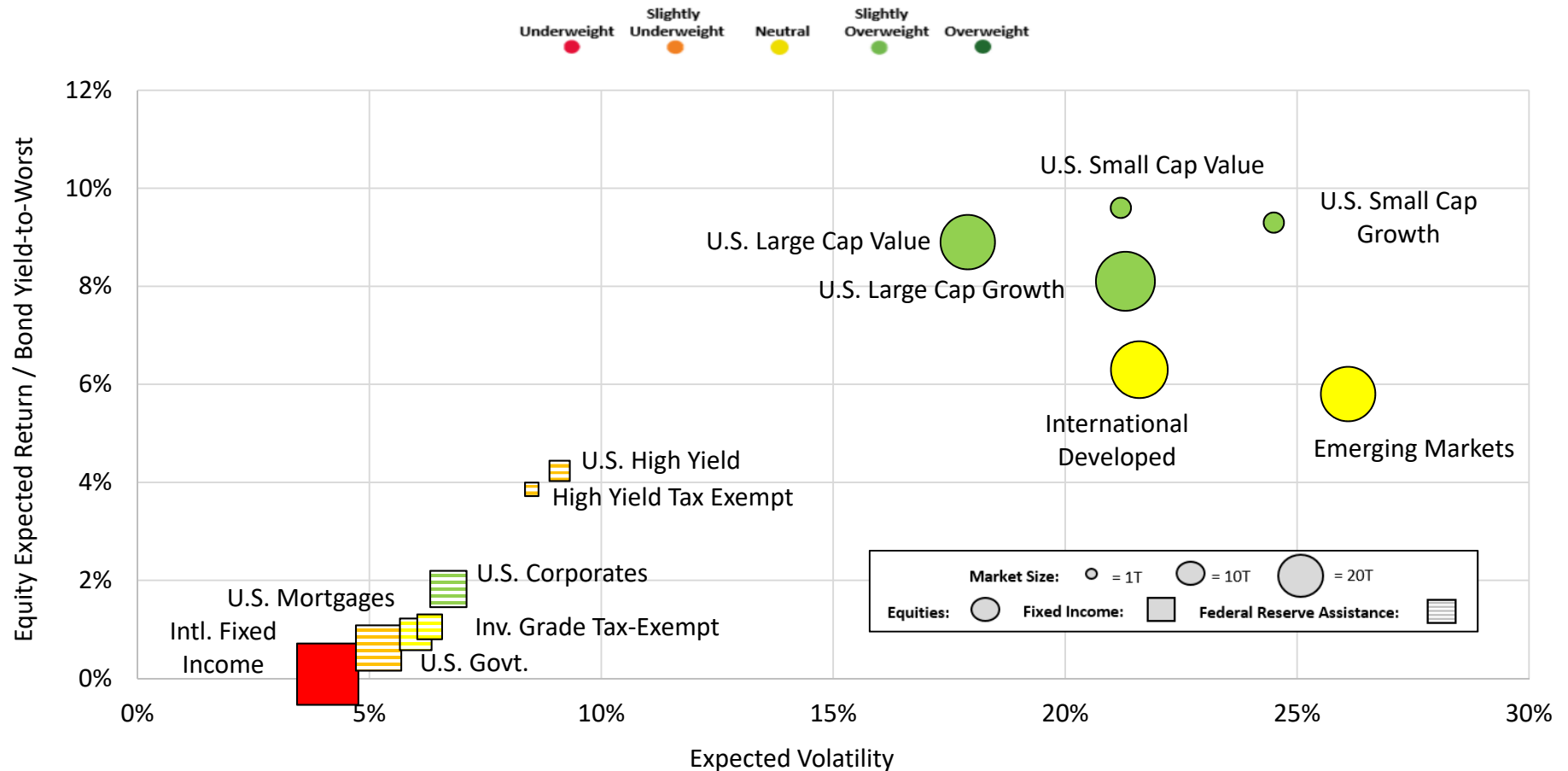
\* Unemployment Rate 6.7% as of November 30, 2020



(Sources: (Left) Chief Investment Office, Bloomberg, Bureau of Labor Statistics. Data from May 1953 through December 2020. (Right) Sources: Chief Investment Office, BofA Global Research, Bloomberg. Data as of November 13, 2020. Please refer to appendix for asset class proxies and index definitions. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index.

# From a Risk and Return Perspective, Diversification Remains Prudent

A comparison of cross asset risk and return metrics highlights the tradeoffs between holding certain assets over others and helps address why investors should maintain a well-balanced, diversified portfolio.

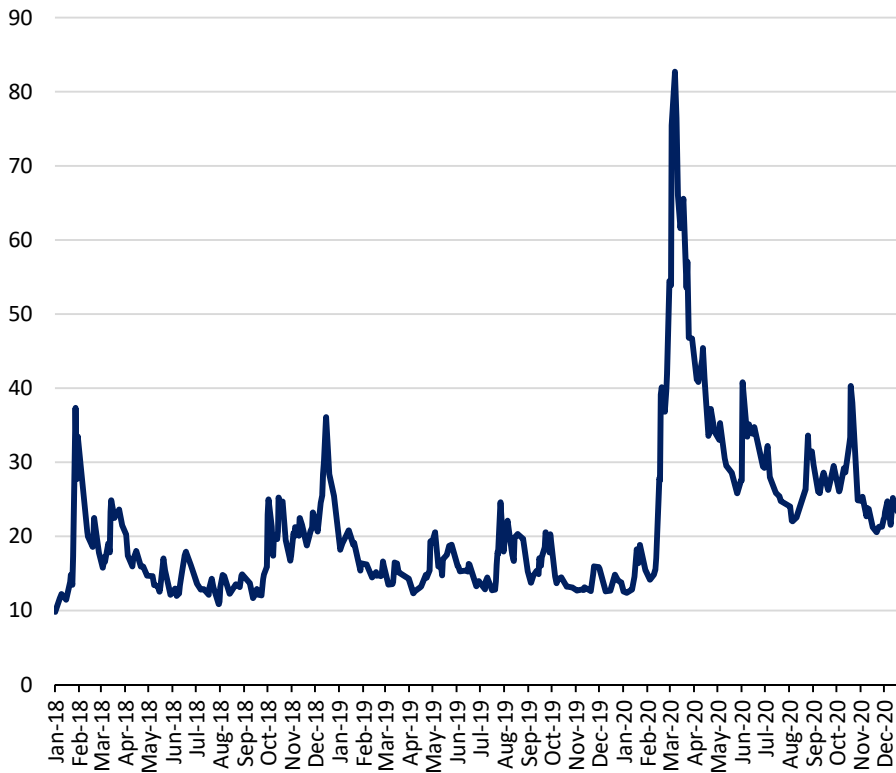


Note: Expected volatility is based off of CIO expectations of the variation an asset will exhibit during a specified time period as reflected in Merrill's Capital Market Assumptions, and yield reflects the yield-to-worst for fixed income securities. The size of the bubble reflects each index's respective market value, and the color reflects the CIO's tactical view. Squares with patterns indicate where Federal Reserve accommodation currently lies. Municipals are grossed up at highest Federal tax rate for comparison purposes, and yields on High-Yield and High-Yield municipals are adjusted for credit losses. Sources: Chief Investment Office; Bloomberg. Data as of January 5, 2020. **Diversification does not ensure a profit or protect against loss in declining markets. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies and index definitions.**

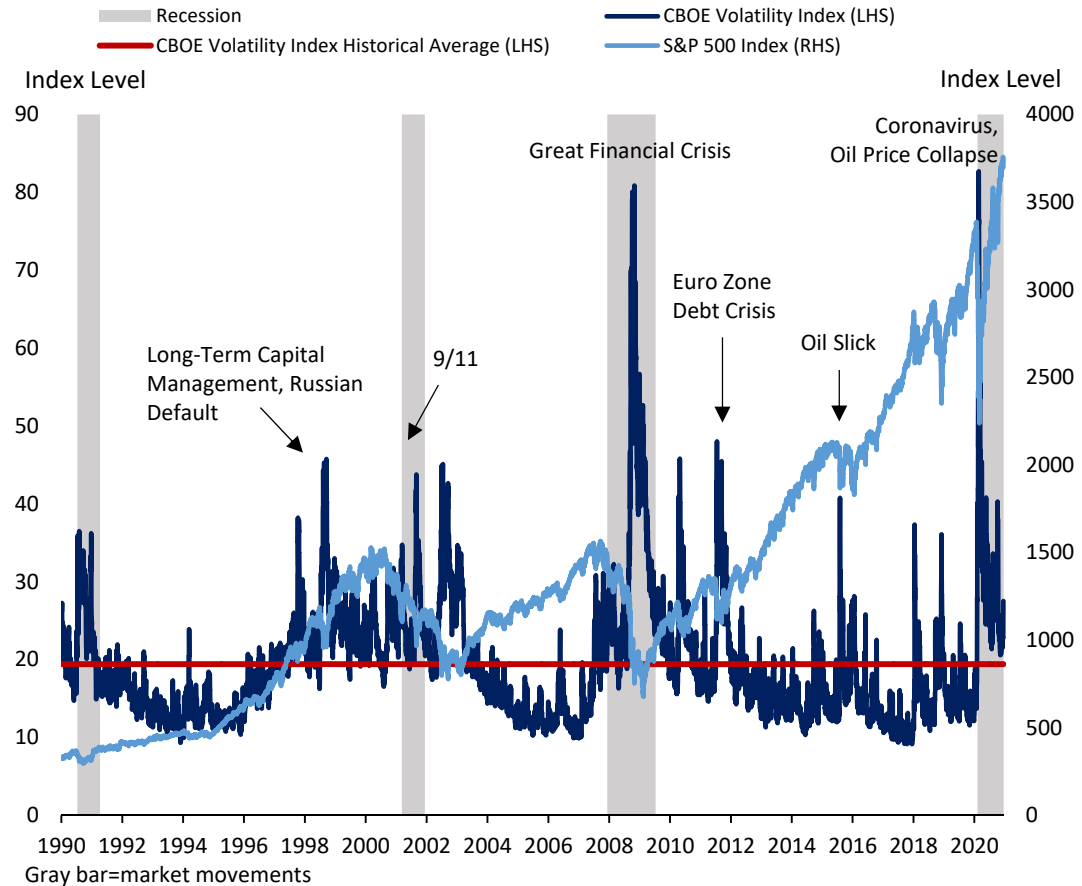
# Volatility Has Recently Receded, But Consider Any Elevated Periods As Opportunities To Rebalance

Equity market volatility on market down days has currently receded significantly relative to the start of the pandemic.

VIX Level on Days the S&P 500 Ended Lower for the Day



Equity returns typically recover following volatility spikes.



Source: Bloomberg. Data as of December 31, 2020. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to Appendix for Asset Class Proxies, Index Definitions and Important Disclosures.



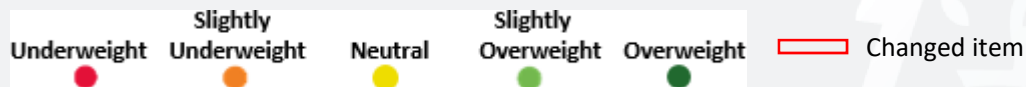
# CIO Thematic Investing

Taking the long view, the following themes and subthemes are among the most powerful structural forces in the world. They are macro in nature but carry significant risks and reward for companies, both large and small. Gaining exposure to these themes may be a key ingredient of successful investing. A key development we see in 2021 is the emerging growth themes gaining a strong footing and begin to separate from the “big story and promise but little-to-no-profit” areas.

Theme	Comments
Big Data	The massive growth in unstructured data being created by connected machines, devices and systems is fueling data processing and Data Analytics. Complementing Artificial Intelligence technologies are replete with applications for big data. The size of the digital world and Internet of Things (IoT) is accelerating the migration of data and applications to a Cloud Computing environment. Data Centers and cloud-based Storage will capture incremental data created.
Demographics	Several demographic transitions serve as important arbiters of future growth. With elongated life expectancies globally, Longevity for older populations will mean a renewed focus on healthcare, aged-care, financials, and consumer products and services for longer, serving as a multi-trillion dollar opportunity. Both the Millennials (born 1981-1996) and Gen Z (born 1997-2012) will likely have greater influence over the next decade on consumer spending and preferences. Even given the shorter-term impairments to the emerging market asset class view, we believe the Emerging Market Consumer represents a powerful middle class consuming cohort over the longer term. Uplifting the Bottom Billions, or poorest socio-economic group with growing access to electricity, internet and sanitation can also offer a demographic dividend for multinational companies.
Climate Change	With emphasis from the new administration, a much greater focus on health, renewable energy, clean water and sanitation, and other industries will support a more sustainable future. Companies that embrace more climate-friendly business models and operations, as well as consumer products and services, are likely to enjoy sustained growth opportunities over the long-term. Key investment opportunities: Renewable Energy (Solar, Wind, and Hydrogen), Energy-Efficiency such as building systems, Water/Waste Management, and Energy Storage & Distribution.
Future Mobility	The future of mobility hinges on Next-Gen Infrastructure. This includes the telecom industry’s deployment of the 5G network, which could prove to be the greatest accelerant and enabler to Smart Cities (smart buildings, safety and security), Autonomous Vehicles, and unmanned Drones. The growing Electric Vehicle market will demand installation of charging equipment and fuel peripheral industries such as battery material demand.
Security	Expanding the IoT means security for a growing ecosystem of devices and end points. With the increase in time spent on online platforms, (as well as adoption of online Payments/FinTech), Data Privacy/Surveillance and governance will play a larger role in a post-pandemic world, as will bolstering Cybersecurity defenses and budgets. With the commercialization of space, cybersecurity will likely extend to Space-based assets (think satellites, data links, weather monitoring and GPS).
Post-Covid World	In the post-pandemic recovery, we believe the factory of the future will be based closer to home and driven by Robotics (Industrial/Service Automation) not humans, hastening reshoring by creating Dual/Local Supply Chains, notably in high-end activities and manufacturing. The fusion of Health and Technology through HealthTech capabilities, could result in greater investments in telemedicine, disease surveillance and patient monitoring. Just as healthcare has gone digital, technology will increasingly dictate e-Everything, as we’ve seen e-Commerce, eSports and eLearning gain traction. An increased focus on environmental, social, governance, (ESG) factors and metrics promotes the shift toward stakeholder capitalism.

Source: Chief Investment Office as of January 5, 2020.

# CIO Portfolio Guidance – Equities



## Equities



We retain our positive view on equities based upon favorable relative valuations and improving global growth. Corporate profits are in an uptrend as forward estimates have increased, policy remains supportive, and global growth grinds higher in a bumpy fashion. We remain overweight the U.S., neutral International Developed, and we upgraded EMs to neutral.

## U.S. Large Cap



Given our expectation for episodic volatility, we recommend higher-quality exposure, Growth should continue to benefit from accelerated secular trends but Value, which has higher exposure to cyclical sectors, should benefit from an improved pace of earnings growth and economic normalization. We believe a balance of both is appropriate. At the sector level, we continue to favor Technology and Healthcare for secular exposure but have become more constructive on cyclical sectors like Industrials, Financials and Materials.

## U.S. Mid Cap



Mid-cap firms tend to have stronger fundamentals than small-caps, and valuations appear attractive for an investor with a long time horizon.

## U.S. Small Cap



Small-caps have more leverage in this cycle but have relatively attractive valuations and could benefit in a more cyclical rotation. We upgraded Small-cap Value (where appropriate).

## International Developed



Global economic recovery is expected to continue in 2021, alongside the roll-out of the coronavirus vaccines, which may benefit more cyclically oriented International Developed markets. A substantial monetary and fiscal policy thrust in Europe and Japan, paired with relatively attractive valuations are supports for international equities, while ongoing cross-border frictions between the major economies pose a relative headwind given greater international exposure.

## Emerging Markets



We upgraded EM equities to neutral from underweight as fundamentals appear to be improving into 2021 as global synchronized growth picks up, manufacturing and trade further improve, China activity reaches pre-pandemic levels, and the U.S. dollar weakens.

Source: GWIM Investment Strategy Committee (GWIM ISC) as of January 5, 2020. CIO views are subject to change **Please refer to appendix for asset class proxies and index definitions.**

# CIO Equity Sector Views

Sector	CIO View			Comments
	Underweight	Neutral	Overweight	
Information Technology	•	•	•	<p>The pandemic accelerated the digital transitions for many industries, and supports the secular growth trends for cloud computing, machine learning and artificial intelligence (AI), data centers, software, cybersecurity and semiconductors. We are in the early innings for machine learnings and AI, and the pandemic forced the adoption of digital payments by older generations that are now frequent users. This accelerated the digital payments industry by several years without cannibalizing futures sales. Traditional hardware exposure is still increasingly commoditized. Valuation is extended, therefore look for GARP (growth at a reasonable price) in software and cyclical exposure in semiconductors. Free cash flow, balance sheet strength, dividend growth, and earnings growth remain strong fundamental drivers for the sector.</p>
Consumer Discretionary	•	•	•	<p>The ongoing shift to omnichannel retailing should continue to alter consumer behaviors due to the pandemic. Fiscal stimulus and asset value inflation could provide further support to strong consumer sentiment. Favor strong global consumer brands with solid balance sheets and a history of dividend growth over weaker brick-and-mortar retailers that could face declining store traffic trends. Cyclical tailwinds from both housing and autos could provide additional potential upside opportunities to the growth outlook. The pent-up demand for re-opening activities and services could be an additional catalyst for the consumer in 2021. Neutral valuation.</p>
Healthcare	•	•	•	<p>Expect rising spending on healthcare globally—focused primarily on diagnostics, consumables, drug development and medical devices. Hospital spending on capital equipment could be more pressured over the next few quarters due to coronavirus-related challenges. Fewer headwinds near term regarding drug pricing, benefiting the pharmaceutical and biotech industries. Emphasize exposure to positive trends in animal health, medical technology and telemedicine, tools, diagnostics and select biotech. Valuation is a bit extended with lower momentum.</p>
Financials	•	•	•	<p>Bank stock repurchase programs have been reinstated by the Federal Reserve and are now tied to earnings power, along with dividends, which should be a tailwind for the sector in the near term. In addition, bank credit costs peaked in the first half of 2020 and loan loss reserves are adequate. Reserve releases are likely over the next 12 months, with the potential to add to earnings and capital return. Given structural headwinds in insurance, we prefer market exchanges that evolved into fee-based data and analytics providers. We also favor alternative asset managers, like private equity, which consistently draw fund inflows, typically benefit from low interest rates, and maintain pricing power in management fees. U.S. banks remain well capitalized and trade at attractive valuations with improving momentum.</p>
Industrials	•	•	•	<p>Relative performance improving with help from a weaker dollar, higher commodity prices, increasing inflation expectations and a recovery in global purchasing managers' indexes. Sequential earnings are recovering and set up for growth year-over-year. Cyclical end markets, including transportation, machinery and general manufacturing, are seeing improvement; however, mixed fundamental outlooks persist as commercial aerospace and oil &amp; gas-related industries are slower to recover. We expect the weakening trend in the dollar to support the multi-national industrial companies. Extended valuation on a relative basis and softening momentum.</p>
Communication Services	•	•	•	<p>Traditional media continues to see pressure from cord-cutting, a negative trend for traditional cable and media companies, but the positive trends for internet usage, video streaming, and gaming can provide growth. However, some of this growth was pulled forward last year due to the pandemic and work-from-home trends. Advertising could see a rebound to some degree, but regulatory uncertainties and concerns could be a near term overhang for sector.</p>
Materials	•	•	•	<p>Specialty chemicals and agriculture may benefit from a consumer-led recovery in the U.S. and China, while reshoring* and fiscal stimulus are potential tailwinds for construction aggregates and industrial gases. Depressed demand continues to weigh on cyclical commodities although the rally in industrial metals and their performance relative to precious metals in recent months is a positive sign. Nascent improvement in automotive and industrial end markets may lead to an inventory restocking cycle. Materials stocks have extended valuation with soft momentum.</p>
Consumer Staples	•	•	•	<p>Consumer Staples face tougher first half revenue and earnings comps in 2021 as we lap the pandemic driven stay-at-home benefits from last year. Risks of a rotation out of defensive positioning and into risk-on positioning offsets the strong fundamentals and consistent cash flows in this sector. Historically, Staples performance is a function of relative earnings growth and the sector could face decelerating earnings growth in 2021, especially compared to cyclical areas expected to see improving earnings growth. Relatively attractive valuation and weakening momentum.</p>
Energy	•	•	•	<p>Even with recent improvements, global energy demand remains depressed compared to pre-pandemic levels and refinery utilization rates in general sit around the 75-80% range compared to ideal levels north of 90%. However, global demand could recover over the course of 2021 and thereby potentially reduce above average global inventories (supply). The sector still faces headwinds from the transition to clean energy, lower renewable energy costs and increasing environmental, social and governance focus by investors. Concerns remain that as oil prices move higher, increased production could come online if oil prices appreciate to the \$60 range and could slow the global inventory drawdown. This could potentially put a ceiling in place for the sector. Conversely, further rotations into value and cyclical stocks could drive some renewed flows into this out of favor sector. Continue to emphasize companies that are low-cost producers with balance sheet strength and low break-evens. Relatively attractive valuation but lower momentum.</p>
Utilities	•	•	•	<p>Expect consistent earnings results; however, post the crisis, potential rotations out of defensive stocks is a headwind. Emphasize utilities with growing renewable power generation from wind and solar and de-emphasize ones that rely strictly on coal-power generation. Earnings and dividend growth opportunities remain for utilities that can capitalize on the transition to greater renewable power generation and positive demographic trends. Relatively unattractive valuation and lower momentum.</p>
Real Estate	•	•	•	<p>Consumer and corporate changes like remote work, e-commerce, less travel, etc. are headwinds for commercial real estate companies (e.g., office), leisure (e.g., hotels), mall operators and owners. Emphasize data centers, communication infrastructure and industrial real estate with a focus on e-commerce distribution facilities. Relatively attractive valuation and improving momentum.</p>



Source: GWIM Investment Strategy Committee (ISC) as of January 5, 2021. CIO views are subject to change. \*Reshoring: the practice of transferring a business operation that was moved overseas back to the country from which it was originally relocated.

Please refer to appendix for asset class proxies and index definitions. Past performance is no guarantee of future results

# Economic and Market Forecasts

	Q1 2020A	Q2 2020A	Q3 2020A	Q4 2020A	2020A	Q1 2021E	2021E
Real global GDP (% y/y annualized)	-	-	-	-	-3.5*	-	5.3
Real U.S. GDP (% q/q annualized)	-5.0	-31.4	33.1	5*	-3.5*	1.0	4.6
CPI inflation (% y/y)	1.5	0.6	1.4	1.2*	1.2*	1.6	2.2
Core CPI inflation (% y/y)	2.1	1.2	1.7	1.6*	1.7*	1.5	1.8
Unemployment rate (%)	3.8	13.0	8.8	6.8*	8.1*	6.8	5.9
Fed funds rate, end period (%)	0.08	0.08	0.09	0.09	0.09	0.13	0.13
10-Year Treasury, end period (%)	0.67	0.66	0.68	0.91	0.91	1.00	1.50
S&P 500 end period	2585	3100	3363	3756	3756	-	3800
S&P earnings (\$/share)	33	28	39	38*	138*	36	165
Euro/U.S. dollar, end period	1.10	1.12	1.17	1.22	1.22	1.20	1.25
U.S. dollar/Japanese yen, end period	108	108	105	103	103	103	100
Oil (\$/barrel, avg. of period, WTI**)	46	29	40	44	40	46	47

The forecasts in the table above are the base line view from BofA Global Research. The Global Wealth & Investment Management (GWIM) Investment Strategy Committee (ISC) may make adjustments to this view over the course of the year and can express upside/downside to these forecasts.

A=Actual. E/=Estimate. \*\* WTI: West Texas Intermediate. S&P 500 represents the year-end target for 2021.

Sources: BofA Global Research; GWIM ISC as of January 8, 2021.

BofA Global Research is research produced by BofA Securities, Inc. ("BofAS") and/or one or more of its affiliates. BofAS is a registered broker-dealer, Member SIPC, and wholly owned subsidiary of Bank of America Corporation.

**Past performance is no guarantee of future results.** The economic and market forecasts presented are for informational purposes as of the date of this report. There can be no assurance that the forecasts will be achieved. There is no guarantee that this trend will continue. **Please refer to appendix for asset class disclosures and index definitions.**

# Asset Class Performance with Balanced Return Portfolio & Private Equity

Key market index returns, 2011 – 2020\*, highest to lowest

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Real Estate 11.62%	High Yield FI 19.60%	Private Equity 43.46%	US LC Equity 13.25%	Real Estate 11.09%	US SC Equity 21.31%	EM Equity 37.28%	Real Estate 11.12%	US LC Equity 31.75%	US LC Equity 22.37%
Invest. Grade FI 7.84%	EM Equity 18.22%	US SC Equity 38.82%	US MC Equity 13.22%	US LC Equity 2.36%	High Yield FI 14.27%	Int. Dev. Equity 24.21%	International FI 3.17%	US MC Equity 30.54%	Private Equity 20.96%
International FI 4.04%	US MC Equity 17.28%	US MC Equity 34.76%	Real Estate 13.05%	International FI 1.35%	US MC Equity 13.80%	US LC Equity 22.96%	Cash 1.87%	US SC Equity 25.52%	US SC Equity 19.96%
High Yield FI 3.12%	Private Equity 16.85%	US LC Equity 32.41%	International FI 9.07%	Invest. Grade FI 0.55%	Tangible Assets 11.77%	US MC Equity 18.52%	Invest. Grade FI 0.01%	Int. Dev. Equity 22.49%	EM Equity 18.31%
US LC Equity 2.83%	Int. Dev. Equity 16.41%	Int. Dev. Equity 21.02%	Invest. Grade FI 5.97%	Cash 0.05%	US LC Equity 11.33%	CIO BR Port. 14.94%	US LC Equity -3.08%	Private Equity 22.43%	US MC Equity 17.10%
Cash 0.10%	US SC Equity 16.35%	Real Estate 12.50%	US SC Equity 4.89%	Hedge Funds -1.12%	EM Equity 11.19%	US SC Equity 14.65%	High Yield FI -4.06%	CIO BR Port. 20.43%	CIO BR Port.** 9.88%
US MC Equity -1.55%	US LC Equity 16.04%	Hedge Funds 9.13%	Hedge Funds 2.98%	CIO BR Port. -1.29%	Private Equity 9.87%	Private Equity 13.16%	Hedge Funds -4.75%	EM Equity 18.42%	Int. Dev. Equity 7.59%
CIO BR Port. -2.00%	Real Estate 9.29%	High Yield FI 7.33%	CIO BR Port. 2.41%	US MC Equity -2.44%	Real Estate 9.73%	High Yield FI 10.43%	CIO BR Port. -7.74%	High Yield FI 12.56%	Invest. Grade FI 7.51%
US SC Equity -4.18%	International FI 6.59%	CIO BR Port. 3.89%	Private Equity 1.71%	High Yield FI -2.72%	CIO BR Port. 6.47%	Real Estate 8.90%	US MC Equity -9.06%	Hedge Funds 10.45%	High Yield FI 7.03%
Hedge Funds -5.25%	CIO BR Port. 6.49%	International FI 1.33%	Cash 0.03%	Int. Dev. Equity -3.04%	Hedge Funds 5.44%	Hedge Funds 8.59%	US SC Equity -11.01%	Invest. Grade FI 8.72%	Hedge Funds** 7.02%
Private Equity -10.83%	Hedge Funds 6.36%	Cash 0.07%	High Yield FI 0.01%	US SC Equity -4.41%	International FI 5.20%	Invest. Grade FI 3.54%	Tangible Assets -11.25%	Tangible Assets 7.69%	International FI 4.20%
Int. Dev. Equity -12.21%	Invest. Grade FI 4.21%	Invest. Grade FI -2.02%	EM Equity -2.19%	Private Equity -9.42%	Int. Dev. Equity 2.75%	International FI 2.51%	Private Equity -13.08%	International FI 7.57%	Cash 0.67%
Tangible Assets -13.32%	Cash 0.11%	EM Equity -2.60%	Int. Dev. Equity -4.32%	EM Equity -14.92%	Invest. Grade FI 2.65%	Tangible Assets 1.70%	Int. Dev. Equity -14.09%	Real Estate 5.66%	Tangible Assets -3.12%
EM Equity -18.42%	Tangible Assets -1.06%	Tangible Assets -9.52%	Tangible Assets -17.01%	Tangible Assets -24.66%	Cash 0.33%	Cash 0.86%	EM Equity -14.57%	Cash 2.28%	Real Estate*** -7.92%

Source: Morningstar Direct. Income and dividends are included in all returns figures. CIO Balanced Return Portfolios represents GWIM Strategic Asset Allocation Low Tax Policy Benchmark. \*Data as of December 31, 2020. \*\*Hedge Funds & Balanced Returns Portfolio Data is as of 11/30/2020. \*\*\*Real Estate Benchmark is a blend of 50% NCREIF NPI & 50% NAREIT Composite for the year 2020 (subject to revision) data through 9/30/2020. Results shown are based on an index and are illustrative; they assume reinvestment of income and no transaction costs or taxes. Indexes are unmanaged. Direct investment cannot be made in an index. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies, methodology and index definitions.

# Asset Class Volatility with Balanced Return Portfolio & Private Equity

Key market index volatility, 2011 – 2020\*, highest to lowest

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Private Equity 27.51%	EM Equity 18.84%	Private Equity 15.97%	US SC Equity 14.86%	EM Equity 16.91%	Private Equity 19.19%	Private Equity 9.85%	Private Equity 18.84%	Private Equity 17.45%	Private Equity 37.41%
EM Equity 23.46%	Int. Dev. Equity 15.68%	EM Equity 11.31%	EM Equity 13.01%	Private Equity 15.03%	US SC Equity 17.51%	US SC Equity 7.42%	US SC Equity 18.51%	US SC Equity 17.08%	US SC Equity 34.86%
Real Estate 22.68%	Tangible Assets 14.58%	Int. Dev. Equity 11.25%	Tangible Assets 12.95%	Tangible Assets 14.65%	EM Equity 17.02%	EM Equity 6.26%	US MC Equity 14.86%	EM Equity 15.75%	US MC Equity 30.71%
US SC Equity 22.28%	Real Estate 14.56%	US SC Equity 10.44%	Private Equity 12.78%	Int. Dev. Equity 14.47%	US MC Equity 12.68%	Tangible Assets 5.47%	US LC Equity 14.84%	US MC Equity 14.25%	Int. Dev. Equity 25.77%
US MC Equity 18.91%	Private Equity 13.95%	US MC Equity 9.07%	US MC Equity 9.98%	US SC Equity 13.87%	Int. Dev. Equity 12.57%	Real Estate 4.83%	EM Equity 14.79%	US LC Equity 12.18%	EM Equity 24.95%
Tangible Assets 18.63%	US SC Equity 12.39%	Tangible Assets 8.64%	Int. Dev. Equity 9.33%	US LC Equity 13.71%	Tangible Assets 11.92%	US MC Equity 4.13%	Int. Dev. Equity 11.84%	Int. Dev. Equity 11.14%	US LC Equity 24.66%
Int. Dev. Equity 18.56%	US MC Equity 10.60%	US LC Equity 8.07%	US LC Equity 7.60%	US MC Equity 11.27%	US LC Equity 9.46%	US LC Equity 3.79%	CIO BR Port. 9.09%	Tangible Assets 9.36%	Tangible Assets 19.96%
US LC Equity 14.62%	US LC Equity 10.20%	CIO BR Port. 6.83%	CIO BR Port. 6.43%	CIO BR Port. 8.13%	CIO BR Port. 7.27%	Int. Dev. Equity 3.72%	Tangible Assets 9.00%	CIO BR Port. 8.74%	CIO BR Port.** 19.25%
CIO BR Port. 13.35%	CIO BR Port. 8.03%	Real Estate 5.99%	Real Estate 6.02%	High Yield FI 6.13%	High Yield FI 6.42%	High Yield FI 2.18%	Hedge Funds 5.03%	High Yield FI 5.60%	High Yield FI 17.01%
High Yield FI 10.59%	High Yield FI 5.98%	High Yield FI 5.44%	High Yield FI 5.03%	Real Estate 5.15%	Real Estate 4.26%	International FI 2.07%	Real Estate 4.55%	Hedge Funds 4.71%	Hedge Funds** 13.38%
Hedge Funds 6.26%	Hedge Funds 4.62%	Hedge Funds 3.51%	Hedge Funds 3.11%	Hedge Funds 4.31%	Hedge Funds 4.01%	CIO BR Port. 1.69%	High Yield FI 3.87%	Real Estate 4.41%	Real Estate*** 12.88%
International FI 2.59%	Invest. Grade FI 1.92%	Invest. Grade FI 3.05%	Invest. Grade FI 2.21%	International FI 2.96%	Invest. Grade FI 3.55%	Invest. Grade FI 1.46%	Invest. Grade FI 2.98%	Invest. Grade FI 3.28%	International FI 3.46%
Invest. Grade FI 2.25%	International FI 1.60%	International FI 2.74%	International FI 1.54%	Invest. Grade FI 2.82%	International FI 3.19%	Hedge Funds 1.14%	International FI 1.56%	International FI 3.17%	Invest. Grade FI 3.27%
Cash 0.03%	Cash 0.02%	Cash 0.02%	Cash 0.01%	Cash 0.03%	Cash 0.05%	Cash 0.09%	Cash 0.10%	Cash 0.10%	Cash 0.30%

Source: Morningstar Direct. Standard deviation (annualized) is a statistical measurement of the range of an asset class's total returns over the respective calendar years. In general, a higher standard deviation means greater volatility. Volatility is calculated on the basis of monthly returns. CIO Balanced Return Portfolios represents GWIM Strategic Asset Allocation Low Tax Policy Benchmark. . \*Data as of December 31, 2020. \*\*Hedge Funds & Balanced Returns Portfolio Data is as of 11/30/2020. \*\*\*Real Estate Benchmark is a blend of 50% NCREIF NPI & 50% NAREIT Composite for the year 2020 (subject to revision) data through 9/30/2020. Results shown are based on an index and are illustrative; they assume reinvestment of income and no transaction costs or taxes. Indexes are unmanaged. Direct investment cannot be made in an index. Past performance is no guarantee of future results. Please refer to appendix for asset class proxies, methodology and index definitions.

# U.S. Equities

## Historical Sector Performance

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Materials 3.48%	Cons Staples -4.26%	Technology 47.23%	Energy 31.54%	Energy 31.37%	Real Estate 41.48%	Energy 34.40%	Cons Staples -15.43%	Technology 61.72%	Real Estate 32.32%	Utilities 19.91%	Financials 28.81%	Cons Disc 43.08%	Real Estate 30.19%	Cons Disc 10.11%	Energy 27.36%	Technology 38.83%	Health Care 6.47%	Technology 50.29%	Technology 43.89%
Cons Disc 2.78%	Materials -5.45%	Materials 38.19%	Real Estate 28.79%	Utilities 16.84%	Comm Svcs 36.80%	Materials 22.53%	Health Care -22.81%	Materials 48.59%	Cons Disc 27.66%	Cons Staples 13.99%	Cons Disc 23.92%	Health Care 41.46%	Utilities 28.98%	Health Care 6.89%	Comm Svcs 23.48%	Materials 23.84%	Utilities 4.11%	Comm Svcs 32.69%	Cons Disc 33.30%
Industrials -5.74%	Real Estate -9.50%	Cons Disc 37.41%	Utilities 24.28%	Real Estate 12.56%	Energy 24.21%	Utilities 19.38%	Utilities -28.98%	Cons Disc 41.31%	Industrials 26.73%	Health Care 12.73%	Real Estate 19.74%	Industrials 40.68%	Health Care 25.34%	Cons Staples 6.60%	Financials 22.80%	Cons Disc 22.98%	Cons Disc 0.83%	Financials 32.13%	Comm Svcs 23.61%
Cons Staples -6.40%	Energy -11.13%	Industrials 32.19%	Comm Svcs 19.86%	Financials 6.48%	Utilities 20.99%	Technology 16.31%	Comm Svcs -30.49%	Real Estate 27.10%	Materials 22.20%	Real Estate 11.39%	Comm Svcs 18.31%	Financials 35.63%	Technology 20.12%	Technology 5.92%	Industrials 18.86%	Financials 22.18%	Technology -0.29%	Industrials 29.37%	Materials 20.73%
Financials -8.95%	Financials -14.64%	Financials 31.03%	Industrials 18.03%	Health Care 6.46%	Financials 19.19%	Cons Staples 14.18%	Cons Disc -33.49%	Industrials 20.93%	Energy 20.46%	Comm Svcs 6.26%	Health Care 17.89%	Technology 28.43%	Cons Staples 15.98%	Real Estate 4.68%	Materials 16.69%	Health Care 22.08%	Real Estate -2.22%	Real Estate 29.01%	Health Care 13.45%
Energy -10.39%	Health Care -18.82%	Real Estate 28.82%	Cons Disc 13.24%	Materials 4.42%	Cons Disc 18.64%	Industrials 12.03%	Energy -34.87%	Health Care 19.70%	Comm Svcs 18.97%	Cons Disc 6.13%	Industrials 15.35%	Cons Staples 26.14%	Financials 15.20%	Comm Svcs 3.40%	Utilities 16.28%	Industrials 21.03%	Cons Staples -8.38%	Cons Disc 27.94%	Industrials 11.06%
Health Care -11.95%	Cons Disc -23.82%	Utilities 26.26%	Materials 13.20%	Cons Staples 3.58%	Materials 18.63%	Comm Svcs 11.95%	Industrials -39.92%	Financials 17.22%	Cons Staples 14.11%	Energy 4.72%	Materials 14.97%	Materials 25.60%	Industrials 9.83%	Financials -1.53%	Technology 13.85%	Cons Staples 13.49%	Comm Svcs -12.53%	Cons Staples 27.61%	Cons Staples 10.75%
Comm Svcs -12.25%	Industrials -26.34%	Energy 25.63%	Financials 10.89%	Industrials 2.32%	Cons Staples 14.36%	Health Care 7.15%	Real Estate -42.31%	Cons Staples 14.89%	Financials 12.13%	Technology 2.41%	Technology 14.82%	Energy 25.07%	Cons Disc 9.68%	Industrials -2.53%	Cons Disc 6.03%	Utilities 12.11%	Financials -13.03%	Utilities 26.35%	Utilities 0.48%
Technology -25.87%	Utilities -29.99%	Health Care 15.06%	Cons Staples 8.16%	Technology 0.99%	Industrials 13.29%	Cons Disc -13.21%	Technology -43.14%	Energy 13.82%	Technology 10.19%	Industrials -0.59%	Cons Staples 10.76%	Utilities 13.21%	Materials 6.91%	Utilities -4.84%	Cons Staples 5.38%	Real Estate 10.85%	Industrials -13.29%	Materials 24.58%	Financials -1.69%
Utilities -30.44%	Comm Svcs -34.11%	Cons Staples 11.57%	Technology 2.56%	Comm Svcs -5.63%	Technology 8.42%	Real Estate -17.85%	Materials -45.66%	Utilities 11.91%	Utilities 5.46%	Materials -9.75%	Energy 4.61%	Comm Svcs 11.47%	Comm Svcs 2.99%	Materials -8.38%	Real Estate 3.39%	Energy -1.01%	Materials -14.70%	Health Care 20.82%	Real Estate -2.17%
Real Estate NA	Technology -37.41%	Comm Svcs 7.08%	Health Care 1.68%	Cons Disc -6.36%	Health Care 7.53%	Financials -18.63%	Financials -55.32%	Comm Svcs 8.93%	Health Care 2.90%	Financials -17.06%	Utilities 1.29%	Real Estate 1.60%	Energy -7.78%	Energy -21.12%	Health Care -2.69%	Comm Svcs -1.25%	Energy -18.10%	Energy 11.81%	Energy -33.68%

Source: Morningstar Direct. U.S. equities represented by the S&P 500 Index GIC sectors. Returns calculated are total returns. **Results shown are based on an index and are illustrative; they assume reinvestment of income and no transaction costs or taxes. Indexes are unmanaged. Direct investment cannot be made in an index.** Data as of December 31, 2020. Past performance is no guarantee of future results. Please refer to appendix for asset class appendix and index definitions.

APPENDIX



# Glossary

**3 Month London Interbank Offered Rate (LIBOR)** : A 3-month average of the LIBOR, which is a variable rate based on the interest rates that the leading banks charge each other for short-term loans.

**3 Month Treasury Bill (T-Bill)**: Treasury Bond maturing within 90 days.

**Alpha**: A measure of risk-adjusted performance relative to a comparative benchmark, aka residual return.

**After Tax Yield Ratio**: Compares the after-tax corporate bond yield to the after-tax yield from municipal bonds.

**Beta**: A measure of the sensitivity of the returns of the Asset to the comparative benchmark.

**Consumer Price Index (CPI) Level**: Base Year 1982-84: 100. The CPI represents changes in prices of all good and services purchased for consumption by urban households. User fees and sales and excise taxes paid by the consumer are also included. Income taxes and investment items are not included.

**CPI Core Index Level**: Base year 1982-84; it excludes food and energy items from the Consumer Price Index Level.

**Current Account Deficit**: Occurs when a country's total import of goods, services and transfers is greater than the total export; this situation makes a country a net debtor to the rest of the world.

**Developed Market**: A country that is most developed in terms of its economy and capital markets. The country must be high-income, but this also includes openness to foreign ownership, ease of capital movement, and efficiency of market institutions.

**Earnings Per Share (EPS) Growth**: An illustration of the growth of earnings per share over time, this profitability metric is often depicted in a year-over-year fashion.

**Emerging Market**: A country that is progressing toward becoming advanced, as shown by some liquidity in local debt and equity markets and the existence of some form of market exchange and regulatory body.

**Factor Investing**: An investment strategy that tends to target specific drivers of asset class returns (such as earnings growth, for example) while also often enhancing diversification and reducing volatility.

**GDP - Nominal**: Gross Domestic Product (GDP) equals the total income of everyone in the economy or the total expenditure on the economy's good and services. GDP includes only the value of final goods and services. Nominal GDP measures the value of goods and services at current dollar prices.

**GDP - Real**: The chain-weighted GDP measure of goods and services at constant dollar prices. The base year changes continuously over time (e.g., 1995, process measures real growth from 1995 to 1996). The figures are then linked to a chain that can compare goods and services in any two years. Chain-weighted figures never let prices get too far out of date.

**High Yield OAS**: Option-adjusted spread (OAS) is the yield spread which has to be added to a benchmark yield curve to discount a security's payments to match its market price, using a dynamic pricing model that accounts for embedded options

**HY Leverage Ratio**: Net Debt divided by last 12 months earnings before interest taxes and amortization (EBITDA)

**Investment Grade OAS**: Option-adjusted spread (OAS) is the yield spread which has to be added to a benchmark yield curve to discount a security's payments to match its market price, using a dynamic pricing model that accounts for embedded options

**Jobless Claims**: Average weekly initial claims for unemployment insurance: measures the average number of new claims for unemployment compensation per week.

**Price/Earnings (P/E) Ratio**: Ratio of the price of a stock and the company's earnings per share, this valuation metric is often quoted on a forward twelve month or trailing twelve month basis.

**Standard Deviation**: Annualized Standard Deviation is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution.

**Spread**: The difference between the bid and ask price or between the high and low price. For securities, it refers to the difference in yield on different securities.

**U.S. Employees Non-Farm Private Payrolls**: A statistic that represents the total number of paid U.S. workers except for farm workers, general government employees, employees of nonprofit organizations that provide assistance to individuals and private household employees. The Non-Farm Private Payroll represents about 80% of the workers who produce the U.S. Gross Domestic Product.

# Asset Class Proxies

Asset Class	Index	Index Description
Inflation	IA SBBI US Inflation	The Consumer Price Index for All Urban Consumers, or CPI-U, is used by IA SBBI to measure inflation, which is the rate of change of consumer goods prices. All inflation measures are constructed by the U.S. Department of Labor, Bureau of Labor Statistics, Washington.
Cash	IA SBBI US 30 Day TBill TR USD & BofA U.S. Treasury Bills 3 months	For the IA SBBI U.S. Treasury Bill Index, the CRSP U.S. Government Bond File is the source from 1926 to 1976. Each month a one-bill portfolio containing the shortest-term bill having not less than one month to maturity is constructed. (The bill's original term to maturity is not relevant). The ICE BofA Global Research US 3-Month Treasury Bill Index is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not beyond, three months from the rebalancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date.
US Large Cap Growth	Russell 1000 Growth Total Return	Russell 1000 Growth Total Return 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.
US Large Cap Value	Russell 1000 Value Total Return	Russell 1000 Value Total Return 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.
US Small Cap Growth	Russell 2000 Growth Total Return	Russell 2000 Growth Total Return measures the performance of the broad growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.
US Small Cap Value	Russell 2000 Value Total Return	Russell 2000 Value Total Return measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 2000 companies with lower price-to-book ratios and lower expected growth values.
International Equity	MSCI Daily TR Net World Ex USA USD	The MSCI World ex USA Index captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries – excluding the United States. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
Emerging Markets	MSCI Daily TR Net EM USD	The MSCI Emerging Markets (EM) Index captures large and mid cap representation across 23 Emerging Markets countries and targets coverage of approximately 85% of the free float adjusted market capitalization in each country.
North America	MSCI Daily TR Net North America	The MSCI North America Index is designed to measure the performance of the large and mid cap segments of the US and Canada markets. The index covers approximately 85% of the free float-adjusted market capitalization in the US and Canada.
Developed Europe ex-UK	MSCI Daily TR Net Europe Ex U.K. USD	The MSCI Europe ex UK Index captures large and mid cap representation across 14 Developed Markets (DM) countries in Europe. The index covers approximately 85% of the free float-adjusted market capitalization across European Developed Markets excluding the UK.
UK	MSCI Daily TR Net UK USD	The MSCI United Kingdom Index is designed to measure the performance of the large and mid cap segments of the UK market. The index covers approximately 85% of the free float-adjusted market capitalization in the UK.
Japan	MSCI Daily TR Net Japan USD	The MSCI Japan Index is designed to measure the performance of the large and mid cap segments of the Japanese market. The index covers approximately 85% of the free float-adjusted market capitalization in Japan.
Developed Asia Pacific ex-Japan	MSCI Daily TR Net Pacific Ex Japan USD	The MSCI AC Asia ex Japan Index captures large and mid cap representation across 2 Developed Markets countries (Hong Kong and Singapore) and 8 Emerging Markets countries (China, India, Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand) in Asia. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
U.S. Government & Quasi Government	ICE BofA AAA U.S. Treasury/Agency Master	The ICE BofA US Treasury & Agency Index tracks the performance of US dollar denominated US Treasury and non-subordinated US agency debt issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one year remaining term to final maturity, at least 18 months to maturity at time of issuance, a fixed coupon schedule and a minimum amount outstanding of \$1 billion for sovereigns and \$250 million for agencies.
U.S. Mortgage Backed	ICE BofA Mortgage Master	The ICE BofA US Mortgage Backed Securities Index tracks the performance of US dollar denominated fixed rate and hybrid residential mortgage pass-through securities publicly issued by US agencies in the US domestic market. 30-year, 20-year, 15-year and interest-only fixed rate mortgage pools are included in the Index provided they have at least one year remaining term to final maturity and a minimum amount outstanding of at least \$5 billion per generic coupon and \$250 million per production year within each generic coupon.
U.S. Corp Master	ICE BofA U.S. Corp Master	The ICE BofA US Corporate Index tracks the performance of US dollar denominated investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of \$250 million.
USD High Yield	ICE BofA High Yield Cash Pay	The ICE BofA US Cash Pay High Yield Index tracks the performance of US dollar denominated below investment grade corporate debt, currently in a coupon paying period, that is publicly issued in the US domestic market.
International Fixed Income	ICE BofA Global Broad Market TR ex USD (Hedged)	The ICE BofA Global Broad Market Excluding US Dollar Index tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities, excluding all securities denominated in US dollars.
Global Governments	ICE BofA Global Govt Bond Index + ICE BofA Global Large Cap Quasi-Govt Index (Hedged)	(i) The ICE BofA Global Government Index tracks the performance of publicly issued investment grade sovereign debt denominated in the issuer's own domestic currency. (ii) The ICE BofA Global Large Cap Quasi-Government Index tracks the performance of large capitalization investment grade quasi-government debt publicly issued in the major domestic and euro-bond markets, including agency, foreign government, local government, supranational and government guaranteed securities. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch).

# Asset Class Proxies (continued)

Asset Class	Index	Index Description
Global Corporates	ICE BofA Global Broad Market Corp (Hedged)	The ICE BofA Global Corporate Index tracks the performance of investment grade corporate debt publicly issued in the major domestic and euro-bond markets. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date and a fixed coupon schedule.
Global Mortgages	ICE BofA Global Broad Market Collateralized (Hedged)	The ICE BofA Global Collateralized Index tracks the performance of investment grade securitized and collateralized debt, including mortgage backed, asset backed, commercial mortgage backed, covered bond, and US mortgage pass-through securities publicly issued in the major domestic and euro-bond markets. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch).
Global HY / EM	ICE BofA Global HY Country External Corp & Govt + ICE BofA Global High Yield (Unhedged)	(i) The ICE BofA Global High Yield Country External Corporate & Government Index tracks the performance of USD and EUR denominated emerging market debt, including sovereign, quasi-government and corporate securities. (ii) The ICE BofA Global High Yield Index tracks the performance of USD, CAD, GBP and EUR denominated below investment grade corporate debt publicly issued in the major domestic or euro-bond markets.
Private Equity	Cambridge Associates U.S. Private Equity Index	An index is based on return data compiled for private equity funds (including buyout, growth equity and mezzanine funds) that represent the majority of institutional capital raised by private equity partnerships formed since 1986.
Event Driven	HFRI Event Driven (Total) Index	Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to 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. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.
Equity Hedge	HFRI Equity Hedge (Total) Index	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.
Relative Value	HFRI Relative Value (Total) Index	Investment Managers who maintain positions in which the investment thesis 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. RV position may be involved in corporate transactions also, but as opposed to 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.
Global Macro/CTA	HFRI Macro: Discretionary Thematic Index	Discretionary Thematic strategies are primarily reliant on the evaluation of market data, relationships and influences, as interpreted by an individual or group of 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; frequently employing spread trades to isolate a differential between instrument identified by the Investment Manager to be inconsistent with expected value. Portfolio positions typically are predicated on the evolution of investment themes the Manager expects to materialize over a relevant time frame, which in many cases contain contrarian or volatility focused components.

# Methodology

CIO Balanced Return

Strategic Asset Allocation

The model performance represented within this presentation reflects investment returns which incorporate CIO tactical asset allocation and investment manager changes made overtime (known here as "The Reference Model"). Inception of the Reference Model is April 1, 2008. Changes to The Reference Model's composition of investments (both asset class weightings and specific investment strategies) are tracked continuously utilizing FactSet® to calculate monthly performance and to effectuate any necessary changes. Modifications to The Reference Model's asset class weights or investment strategies typically occur at the month-end closest to that of the announced change. GWIM ISC makes all tactical asset allocation decisions and CIO Portfolio Management team makes all fund selection decisions

Policy Benchmark refers to the CIO Balanced Return Low Tax Policy Benchmark. The policy benchmark for a Balanced Return investment objective (as of 012/31/2020) consisted of ICE BofA U.S. Treasury Bills 3 months 2%, Russell Top 200 TR 21%, Russell Mid-Cap TR 13%, Russell 2000 TR 7%, MSCI Daily TR Net World Ex USA USD 12%, MSCI Daily TR Net EM USD 6%, Bloomberg Barclays US Agg TR USD 14%, ICE BofA Global Broad Market TR ex USD (Hedged) 5%, Bloomberg Barclays Global High Yield TR USD (Unhedged) 2%, Hedge Fund Research HFRI Fund Weighted Composite 14%, Bloomberg Commodity TR 4%.

# Index Definitions

**AAll Investor Sentiment:** The sentiment survey measures the percentage of individual investors who are bullish, bearish, and neutral on the stock market short term; individuals are polled from the AAll Web site on a weekly basis.

**Alerian MLP Index** is a composite of the 50 most prominent energy master limited partnerships and is calculated by Standard & Poor's using a float-adjusted, market capitalization-weighted methodology. The total return index is calculated on an end-of-day basis and is disseminated daily through its ticker symbol, AMZX, on the New York Stock Exchange.

**BofA Financial Stress Index:** See BofA Global Research Financial Stress Index definition

**Bloomberg Agriculture Subindex:** The index is composed of futures contracts on coffee, corn, cotton, soybeans, soybean oil, soybean meal, sugar, and wheat. It reflects the return of underlying commodity futures price movements only and is quoted in USD.

**Bloomberg Barclays US Aggregate Bond Index** is a market capitalization-weighted index, meaning the securities in the index are weighted according to the market size of each bond type. Most U.S. traded investment grade bonds are represented.

**Bloomberg Barclays U.S. MBS Index** tracks fixed-rate agency mortgage backed pass-through securities guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

**Bloomberg Barclays U.S. 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.

**Bloomberg Commodity Index** is made up of 22 exchange-traded futures on physical commodities, which are weighted to account for economic significance and market liquidity.

**Bloomberg Copper Subindex TR:** Bloomberg Copper Subindex Total Return Index

**Bloomberg Energy Subindex TR:** The index is composed of futures contracts on crude oil, heating oil, unleaded gasoline, and natural gas. It reflects the return on fully collateralized futures positions and is quoted in USD.

**Bloomberg Industrial Metals Index:** The index is composed of longer-dated futures contracts on aluminum, copper, nickel, and zinc. It reflects the return on fully collateralized positions and is quoted in USD.

**Bloomberg Livestock Subindex:** The index is composed of futures contracts on live cattle and lean hogs. It reflects the return of underlying commodity futures price movements only. It is quoted in USD.

**Bloomberg Euro Index:** Measures the value of the Euro against the U.S. Dollar

**Bloomberg Real Index:** Measures the value of the Brazilian Real against the U.S. Dollar

**Bloomberg Yuan Index:** Measures the value of the Chinese Yuan against the U.S. Dollar

**ICE BofA 5-7 Year US Corporate Index** is a subset of The BofA US Corporate Index including all securities with a remaining term to final maturity greater than or equal to 5 years and less than 7 years.

**ICE BofA 5-7 Year US Municipal Securities Index** is a subset of The BofA US Municipal Securities Index including all securities with a remaining term to final maturity between 5-7 years

**ICE BofA 5-7 Year US Treasury Index** is a subset of The BofA US Treasury Index including all securities with a remaining term to final maturity greater than or equal to 5 years and less than 7 years.

**ICE BofA All Maturity All Euro Government Index:** The BofA All Maturity All Euro Government Index tracks the performance of EUR denominated sovereign debt publicly issued by Euro member countries in either the eurobond market or the issuer's own domestic market.

**ICE BofA Global Broad Market Index:** The BofA Global Broad Market Index tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities.

**ICE BofA Global Broad Market Index:** The BofA Global Broad Market Index tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities.

**ICE BofA Global Emerging Markets Sovereign Index** tracks the performance of U.S. dollar-denominated debt of sovereign issuers domiciled in countries with a BB or lower foreign currency long-term sovereign debt rating

**ICE BofA Global Financial Stress Index** is a Bank of America calculated, cross market measure of risk, hedging demand and investor flows in the global financial system. Levels greater/less than 0 indicate more/less financial market stress than normal. Apart from the headline GFSI, there are three sub-indices, RISK, FLOW and SKEW.

**ICE BofA Global Sovereign Broad Market Index** tracks the performance of local currency-denominated debt of Investment Grade-rated sovereign issuers.

**ICE BofA High Yield Master Index** tracks the performance of below Investment Grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market. "Yankee" bonds (debt of foreign issuers issued in the U.S. domestic market) are included in the index provided the issuer is domiciled in a country having an Investment Grade foreign currency long-term debt rating (based on a composite of Moody's and S&P).

**ICE BofA Municipal Masters Index** tracks the performance of the Investment Grade U.S. tax-exempt bond market.

**ICE BofA U.S. Broad Market Index** tracks the performance of U.S. dollar-denominated Investment Grade government and corporate public debt issued in the U.S. domestic bond market, including collateralized products such as mortgage pass-through and asset-backed securities.

**ICE BofA U.S. Corporate Master Index** tracks the performance of U.S. dollar-denominated Investment Grade corporate public debt issued in the U.S. domestic bond market. Qualifying bonds must have at least one year remaining term to maturity, a fixed coupon schedule and a minimum amount outstanding of \$150 million. Bonds must be rated Investment Grade based on a composite of Moody's and S&P.

**ICE BofA US Agency Index** tracks the performance of U.S. dollar denominated U.S. agency senior debt issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch).

**ICE BofA US Inflation-Linked Treasury Index** tracks the performance of US dollar denominated inflationlinked sovereign debt publicly issued by the US government in its domestic market.

**ICE BofA US Treasury Index** tracks the performance of U.S. dollar denominated sovereign debt publicly issued by the U.S. government in its domestic market.

**ICE BofA CCC & Lower US High Yield Index** tracking the performance of US dollar denominated below investment grade rated corporate debt publically issued in the US domestic market. This subset includes all securities with a given investment grade rating CCC or below.

**ICE BofA U.S. Corporate Master Index** tracks the performance of U.S. dollar-denominated Investment Grade corporate public debt issued in the U.S. domestic bond market. Qualifying bonds must have at least one year remaining term to maturity, a fixed coupon schedule and a minimum amount outstanding of \$150 million. Bonds must be rated Investment Grade based on a composite of Moody's and S&P.

**Brent Crude Oil** is a classification of sweet light crude oil and is a major benchmark price for oil purchases worldwide.

**Citigroup Economic Surprise Index:** The Citi Economic Surprise Indices measure data surprises relative to market expectations. A positive reading means that data releases have been stronger than expected and a negative reading means that data releases have been worse than expected.

**Cleveland Fed Financial Stress Index:** The CFSI is designed to track distress in the U.S. financial system on a continuous basis.

# Index Definitions (continued)

**Conference Board U.S. Leading Credit Index:** This index is consisted of six financial indicators: 2-years Swap Spread (real time), LIBOR 3 month less 3 month Treasury-Bill yield spread (real time), Debit balances at margin account at broker dealer (monthly), AAI Investors Sentiment Bullish (%) less Bearish (%) (weekly), Senior Loan Officers C&I loan survey – Bank tightening Credit to Large and Medium Firms (quarterly), and Security Repurchases (quarterly) from the Total Finance-Liabilities section of Federal Reserve’s flow of fund report.

**DJ Credit Suisse AllHedge Equity Market Neutral Index** measures the aggregate performance of equity market neutral funds. Equity market neutral funds typically take both long and short positions in stocks while seeking to reduce exposure to the systemic risk of the market (i.e., a beta of zero is desired).

**DJ Credit Suisse AllHedge Fixed Income Arbitrage Index** measures the aggregate performance of fixed income arbitrage funds. Fixed income arbitrage funds typically attempt to generate profits by exploiting inefficiencies and price anomalies between related fixed income securities. Fixed income arbitrage funds seek to limit volatility by hedging out exposure to the market and interest rate risk.

**DJ Credit Suisse AllHedge Global Macro Index** measures the aggregate performance of global macro funds. Global macro funds typically focus on identifying extreme price valuations and leverage is often applied on the anticipated price movements in equity, currency, interest rate and commodity markets

**DJ Credit Suisse AllHedge Index** is an asset-weighted hedge fund index derived from the market leading Dow Jones Credit Suisse Hedge Fund Index. The Dow Jones Credit Suisse AllHedge Index provides a rules-based measure of an investable portfolio. Index performance data is published monthly and constituents are rebalanced semi-annually according to the sector weights of the Dow Jones Credit Suisse Hedge Fund Index.

**DJ Credit Suisse AllHedge Long Short Equity Index** measures the aggregate performance of long/short equity funds. Long/short equity funds typically invest in both long and short sides of equity markets, generally focusing on diversifying or hedging across particular sectors, regions or market capitalizations

**DJ Credit Suisse AllHedge Managed Futures Index** measures the aggregate performance of managed futures funds. Managed futures funds (often referred to as CTAs or Commodity Trading Advisors) typically focus on investing in listed bond, equity, commodity futures and currency markets globally.

**DXY Index** indicates the general international value of the U.S. dollar. The Index does this by averaging the exchange rates between the dollar and major world currencies.

**FTSE NAREIT All Equity REITS:** tracks the performance of all Equity REITs not designated as Timber REITs or Infrastructure REITs.

**FTSE NAREIT U.S. Real Estate Index** is a performance index based on publicly traded real estate investment trusts (REITs) that span commercial real estate space across the U.S. economy. The index series provides investors with exposure to all investment and property sectors. A REIT is a company that owns and, in most cases, operates income-producing real estate such as apartments, shopping centers, offices, hotels and warehouses. Some REITs also engage in financing real estate. To qualify as a REIT, a company must distribute at least 90% of its taxable income to its shareholders annually. A company that qualifies as a REIT is permitted to deduct dividends paid to its shareholders from its corporate taxable income. As a result, most REITs remit at least 100% of their taxable income to their shareholders and therefore owe no corporate tax.

**FTSE®EPRA®/NAREIT® Global Index** is a free float, market capitalization-weighted real estate index designed to represent publicly traded equity REITs and listed property companies globally.

**Global Economic Policy Uncertainty Index:** This concept tracks the general state of the economy as it relates to businesses. It can include broad economy-wide conditions or specific economic conditions of a particular industry. The GEPU Index is a GDP-weighted average of national EPU indices for 18 countries: Australia, Brazil, Canada, Chile, China, France, Germany, India, Ireland, Italy, Japan, the Netherlands, Russia, South Korea, Spain, Sweden, the United Kingdom, and the United States. Each national EPU index reflects the relative frequency of own-country newspaper articles that contain a trio of terms pertaining to the economy (E), policy (P) and uncertainty (U). In other words, each monthly national EPU index value is proportional to the share of own-country newspaper articles that discuss economic policy uncertainty in that month. For a detailed discussion of how we construct the country-level EPU indices, see Measuring Economic Policy Uncertainty.

**Gold** reflects the gold spot price and is quoted in U.S. dollars per Troy Ounce.

**HFRI Equity Hedge (Total) Index:** 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.

**HFRI Event Driven Index** - Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to 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. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

**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. Dollar and have a minimum of \$50 Million under management or a twelve month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

**HFRI Macro: Systematic Diversified Index** - Systematic: Diversified strategies have investment processes typically as function of mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. Strategies which employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative process which focus on statistically robust or technical patterns in the return series of the asset, and 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, discernable trending behavior. Systematic: Diversified strategies typically would expect to have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

# Index Definitions (continued)

**HFRI Relative Value Index** - Investment Managers who maintain positions in which the investment thesis 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. RV position may be involved in corporate transactions also, but as opposed to 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. The constituent funds of the HFRI Relative Value (Total) Index - Asset Weighted are weighted according to the AUM reported by each fund for prior month.

**HFRI Global Hedge Fund Index:** The HFRI Global Hedge Fund Index is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage, and relative value arbitrage.

**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.

**Institute for Supply Management Purchasing Managers Index:** a broad index of manufacturing activity in the United States measuring new orders, production, employment, supplier deliveries and prices.

**J.P. Morgan Global Manufacturing Purchasing Managers' Index:** The Global Report on Manufacturing is compiled by IHS Markit based on the results of surveys covering over 12,000 purchasing executives in over 40 countries. Together these countries account for an estimated 95% of global manufacturing output.

**LPX 50 TR USD Index:** The LPX50 is a global index that consists of the 50 largest liquid LPE companies covered by LPX Group.

**Merrill Lynch Option Volatility Estimate (MOVE) Index:** This is a yield curve weighted index of the normalized implied volatility on 1-month Treasury options.

**MSCI ACWI ex USA Index** captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 23 Emerging Markets (EM) countries. With 1,854 constituents, the index covers approximately 85% of the global equity opportunity set outside the US.

**MSCI ACWI Index** captures large and mid cap representation across 23 Developed Markets (DM) and 23 Emerging Markets (EM) countries. With 2,484 constituents, the index covers approximately 85% of the global investable equity opportunity set.

**MSCI Austria Net Total Return USD Index:** The MSCI Austria Index is designed to measure the performance of the large and mid cap segments of the Austrian market. With 5 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Austria.

**MSCI Brazil Net Total Return USD Index:** The MSCI Brazil Index is designed to measure the performance of the large and mid cap segments of the Brazilian market. With 57 constituents, the index covers about 85% of the Brazilian equity universe.

**MSCI China Index:** The MSCI China Index captures large and mid cap representation across China H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 150 constituents, the index covers about 85% of this China equity universe.

**MSCI EAFE (Europe, Australasia, and Far East) Index** comprises 21 MSCI country indices, representing the Developed Markets outside of North America.

**MSCI Emerging Asia Net Total Return USD Index:** The MSCI Emerging Markets (EM) Asia Index captures large and mid cap representation across 9 Emerging Markets countries\*. With 567 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Emerging Latin America Net Total Return USD Index:** The MSCI EM Latin America Index is a free float-adjusted market capitalisation weighted index that is designed to measure the equity market performance of emerging markets in Latin America.

**MSCI Emerging Markets Index** captures large and mid cap representation across 23 Emerging Markets (EM) countries. With 832 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

**MSCI Europe non-U.K. Index** is a free float-adjusted market capitalization index designed to measure Developed Market equity performance in Europe. As of July 2009, the index consisted of 15 Developed Market country indexes: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland.

**MSCI Japan Index** is designed to measure the performance of the large and mid cap segments of the Japanese market. With 319 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

**MSCI Brazil Index:** measures the performance of the large and mid cap segments of the Brazilian market.

**MSCI Hong Kong Index:** measures the performance of the large and mid cap segments of the Hong Kong market.

**MSCI India Index:** measures the performance of the large and mid cap segments of the Indian market.

**MSCI Pacific ex Japan Index** captures large and mid cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 150 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Portugal Net Total Return USD Index:** The MSCI Portugal Index is designed to measure the performance of the large and mid cap segments of the Portuguese market. With 3 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Portugal.

**MSCI USA Defensive Sectors Index** is based on MSCI USA Index, its parent index and captures large and mid-cap segments of the US market. The index is designed to reflect the performance of the opportunity set of global defensive companies across various GICS® sectors. All constituent securities from Consumer Staples, Energy, Healthcare, Telecommunication Services and Utilities are included in the Index.

**MSCI USA Defensive Sectors Index** is based on MSCI USA Index, its parent index and captures large and mid-cap segments of the US market. The index is designed to reflect the performance of the opportunity set of global defensive companies across various GICS® sectors. All constituent securities from Consumer Staples, Energy, Healthcare, Telecommunication Services and Utilities are included in the Index.

**MSCI USA ESG Leaders Index** is a capitalization weighted index that provides exposure to companies with high Environmental, Social and Governance (ESG) performance relative to their sector peers.

**MSCI ESG Emerging Markets Leaders Index** is a capitalization weighted index that provides exposure to companies with high Environmental, Social and Governance (ESG) performance relative to their sector peers.

**MSCI ESG World Leaders Index** is a capitalization weighted index that provides exposure to companies with high Environmental, Social and Governance (ESG) performance relative to their sector peers.

# Index Definitions (continued)

**MSCI USA Index** is designed to measure the performance of the large and mid cap segments of the US market. With 630 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the U.S.

**MSCI USA Momentum Index** is based on MSCI USA Index, its parent index, which captures large and mid cap stocks of the US market. It is designed to reflect the performance of an equity momentum strategy by emphasizing stocks with high price momentum, while maintaining reasonably high trading liquidity, investment capacity and moderate index turnover.

**MSCI USA Quality Index** is based on the MSCI USA Index, its parent index, which includes large and mid cap stocks in the US equity market. The index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity, stable year-over-year earnings growth and low financial leverage.

**MSCI USA Size Index:** Based on MSCI USA Index, its parent index, which captures large and mid cap stocks of the US market. It aims to reflect the performance of a low size strategy with relatively high investment capacity.

**MSCI World ex USA Index** captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries -- excluding the United States. With 1,022 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI World Value Index** captures large and mid cap securities exhibiting overall value style characteristics across 23 Developed Markets (DM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

**NASDAQ Composite Index:** A broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market. The index was developed with a base level of 100 as of February 5, 1971.

**National Financial Conditions Index (NFCI)** provides a comprehensive weekly update on U.S. financial conditions in money markets, debt and equity markets and the traditional and "shadow" banking systems. Positive values of the NFCI indicate financial conditions that are tighter than on average, while negative values indicate financial conditions that are looser than on average.

**NCREIF Farmland:** The NCREIF Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual farmland properties acquired in the private market for investment purposes only.

**NCREIF Property Index:** The objective of the NPI is to provide a historical measurement of property-level returns to increase the understanding of, and lend credibility to, real estate as an institutional investment asset class.

**NCREIF Timberland:** The NCREIF Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only.

**NCREIF U.S. Real Estate:** The NCREIF US Real Estate Index is a quarterly time series composite return measure of investment performance of a large pool of US Real Estate properties.

**NFIB U.S. Small-Business Optimism Index** is compiled from a survey that is conducted each month by the National Federation of Independent Business (NFIB) of its members. The index is a composite of 10 seasonally adjusted components based on the following questions: plans to increase employment, plans to make capital outlays, plans to increase inventories, expect economy to improve, expect real sales higher, current inventory, current job openings, expected credit conditions, now a good time to expand, and earnings trend.

**Nikkei-225 Stock Average** is a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange.

**Philadelphia Federal Index:** A regional federal-reserve-bank index measuring changes in business growth. The index is constructed from a survey of participants who voluntarily answer questions regarding the direction of change in their overall business activities. The survey is a measure of regional manufacturing growth. When the index is above 0 it indicates factory-sector growth, and when below 0 indicates contraction.

**Russell 2000 Index®** measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

**Russell 3000 Growth Index** measures the performance of those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 3000 Index** is composed of 3000 large U.S. companies, as determined by market capitalization.

**Russell 3000 Value Index** measures the performance of those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth values.

**S&P 400 Mid Cap Index** is representative of 400 stocks in the mid-range sector of the domestic stock market, representing all major industries.

**S&P 500 Buyback Index** measures the performance of the top 100 stocks with the highest buyback ratio (cash paid for common shares buyback in the last four calendar quarters divided by the total market capitalization of common shares) in the S&P 500.

**S&P 500 Cyclical ex-financials** is designed to reflect the performance of the opportunity set of U.S. cyclical companies across various GICS® sectors. All constituent securities from Consumer Discretionary, Industrials, Information Technology and Materials are included in the index.

**S&P 500 Defensives** is designed to reflect the performance of the opportunity set of U.S. cyclical companies across various GICS® sectors. All constituent securities from Consumer Staples, Energy, Healthcare, Telecommunication Services and Utilities are included in the index.

**S&P 500 Dividend Aristocrats index** is designed to measure the performance of S&P 500 index constituents that have followed a policy of consistently increasing dividends every year for at least 25 consecutive years.

**S&P 500 Financials Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® financials sector.

**S&P 500 Energy Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® energy sector.



# Index Definitions (continued)

**S&P 500 Defensives** is designed to reflect the performance of the opportunity set of U.S. cyclical companies across various GICS® sectors. All constituent securities from Consumer Staples, Energy, Healthcare, Telecommunication Services and Utilities are included in the index.

**S&P 500 Dividend Aristocrats Index** is designed to measure the performance of S&P 500 index constituents that have followed a policy of consistently increasing dividends every year for at least 25 consecutive years.

**S&P 500 Financials Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® financials sector.

**S&P 500 Energy Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® energy sector.

**S&P 500 Materials Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® materials sector.

**S&P 500 Consumer Discretionary Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® consumer discretionary sector.

**S&P 500 Consumer Staples Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.

**S&P 500 Utilities Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® utilities sector.

**S&P 500 Communication Services Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® communication services sector.

**S&P 500 Industrials Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® industrials sector.

**S&P 500 Information Technology Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® information technology sector.

**S&P 500 Real Estate Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® real estate sector.

**S&P 500 Health Care Index** comprises of those companies included in the S&P 500 that are classified as members of the GICS® health care sector.

**S&P 500 High Dividend Index** serves as a benchmark for income seeking equity investors. The index is designed to measure the performance of 80 high yield companies within the S&P 500 and is equally weighted to best represent the performance of this group, regardless of constituent size.

**S&P 500 Index**, widely regarded as the best single gauge of the U.S. equities market, includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Although the index focuses on the large-cap segment of the market, with approximately 75% coverage of U.S. equities, it is also an ideal proxy for the total market.

**S&P Preferred Stock Index**: tracks the performance of S&P 500 preferred equity shares.

**S&P 500 Information Technology Index** comprises those companies included in the S&P 500 that are classified as members of the GICS® information technology sector.

**S&P 500 Low Volatility Index** measures performance of the 100 least volatile stocks in the S&P 500. The index benchmarks low volatility or low variance strategies for the U.S. stock market. Constituents are weighted relative to the inverse of their corresponding volatility, with the least volatile stocks receiving the highest weights.

**S&P 500 Total Return Index**. Calculated intraday by S&P based on the price changes and reinvested dividends of the S&P 500 Index with a starting date of Jan 4, 1988.

**Ten-Year Treasury** relates the yield on a security to its time to maturity and is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market.

**Tokyo Stock Exchange Tokyo Price Index (TOPIX)** is a capitalization-weighted index of all companies listed on the First Section of the Tokyo Stock Exchange. The index is supplemented by the subindices of the 33 industry sectors.

**TOPIX-Banks Index** is a capitalization-weighted index of all the banks listed on the First Section of the Tokyo Stock Exchange and is one of the 33 industry sectors of the TOPIX Index (TPX).

**U.S. 5yr Forward Breakeven**: Yields are yield to maturity and pre-tax. The rates are comprised of Generic United States Breakeven forward rates: nominal forward 5 years minus US inflation-linked bonds forward 5 years.

**U.S. S&P 500 Composite 1500 Growth Total Return Index** measures growth stocks using three factors: sales growth, the ratio of earnings change to price, and momentum.

**U.S. S&P 500 Composite 1500 Value Total Return Index** measures value stocks using three factors: the ratios of book value, earnings, and sales to price.

**U.S. S&P Composite 1500 Total Return Index** combines three leading indices, the S&P 500®, the S&P MidCap 400®, and the S&P SmallCap 600®, to cover approximately 90% of U.S. market capitalization.

**University of Michigan Consumer Sentiment Index**: Surveys of Consumers collects data on consumer attitudes and expectations summarized in the Consumer Sentiment, in order to determine the changes in consumers' willingness to buy and to predict their subsequent discretionary expenditures.

**US Trade Weighted Real Broad Dollar**: An effective exchange rate (also known as a trade-weighted exchange rate) is a weighted average of the individual exchange rates of a particular country with its main trading partners.

**VIX Index**: The Chicago Board Options Exchange Standard and Poor's Volatility Index, reflects a market estimate of future volatility, based on the weighted average of the implied volatilities for a wide range of strikes

**WTI crude oil** reflects the Bloomberg West Texas Intermediate Crushing Crude Oil Spot Price. The price is derived by adding spot market spreads to the NYMEX contract. Units are in U.S. dollars per barrel and is traded intraday.

# Important Disclosures

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Alternative investments are intended for qualified investors only. Alternative Investments such as derivatives, hedge funds, private equity funds, and funds of funds can result in higher return potential but also higher loss potential. Changes in economic conditions or other circumstances may adversely affect your investments. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity, and your tolerance for risk.

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