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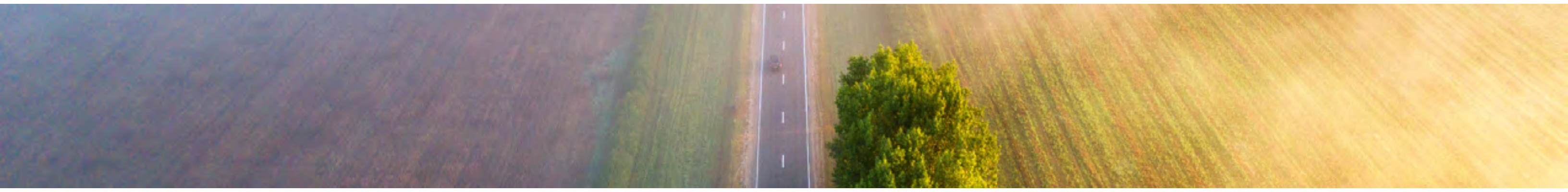
INVESTMENT STRATEGY



Global Investment Committee | March 2021

On the Markets

The Engraved Invitation Has Arrived

Michael Wilson
Chief Investment Officer
Chief US Equity Strategist
Morgan Stanley & Co. LLC

Things are really looking up. First, fourth quarter earnings were surprisingly strong. Earnings per share for the S&P 500 clocked in 18% above consensus estimates as our operating leverage theme played out. Unemployment remains high, but government support means many companies haven't seen a precipitous fall in revenue. Instead, fourth quarter sales grew 1% year over year. With lower employment costs and other operating expenses, profit margins have moved to near all-time highs. The profits recession is over.

Next, after a slow start, the vaccination rollout has picked up nicely. New cases and hospitalizations are down 70%, leading some health experts to suggest we may achieve herd immunity as early as April. While I hate to jinx it, but could life in the US be back to normal by Memorial Day?

Finally, Congress is working on another fiscal stimulus to support the economy until we are finally rid of this disease. Latest talks suggest this bill could be as big as $1.5 trillion, which is 50% greater than the one passed at the end of last year when COVID-19 cases and hospitalizations were raging. In my view, this stimulus package is too large given recent developments, but that doesn't seem to be a deterrent.

It should be no surprise that equity markets have done so well for the past six months. After all, they are discounting machines and, as usual, they anticipated these developments. On the other hand, longer-term interest rates tend to be slower to discount the future, often waiting for the engraved invitation that arrived last month. As a result, rates moved up sharply as they discounted these positive developments all at once. This adjustment is having a negative impact on equity valuations, especially the richest ones, but these lower valuations tend to be offset by better earnings. The adjustment in equity valuation is likely not over yet.

All of this is normal at this stage of a new bull market, and supports our call for modest returns at the index level this year but excellent opportunities still beneath the surface. As such, we continue to shun egregiously priced growth stocks while focusing on those that are reasonably priced. We favor stocks that can benefit from rising rates and inflation, such as banks, materials and energy; we also turn toward the reopening beneficiaries in the consumer and business services sectors as we look to return to normal activities this spring. ■

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ECONOMICS

Into the Stimulus Slingshot

Ellen Zentner, Chief US Economist, Morgan Stanley & Co.

Political outcomes since January have led our US public policy strategists to expect an additional $1.0 trillion to $1.5 trillion in fiscal stimulus related to COVID-19, likely to be delivered this month. Incorporating this additional stimulus lifts our 2021 GDP forecast to 6.5% from 5.9%. Accordingly, our 2022 GDP growth moves up to 5.0% from 4.1% (see table). The level of GDP returns to its pre-pandemic level in the second quarter of this year (unchanged from our previous expectation), but returns to trend—the path of GDP had there been no downturn—one quarter sooner, in 2021's third quarter.

Morgan Stanley & Co.'s Updated Economic Forecast

	2019	2020	2021			2022		
	Actual	Base	Bear	Base	Bull	Bear	Base	Bull
Real GDP	2.2%	-3.5%	3.3%	6.5%	9.7%	3.0%	5.0%	7.0%
Consumer Price Index	1.8	1.2	2.2	2.5	2.6	1.6	2.1	2.5
Core PCE Price Index	1.6	1.4		2.2			2.1	
Unemployment Rate (four-quarter avg.)	3.5	6.7		5.1			4.0	
Policy Rate (end of period)	1.625	0.125	0.125	0.125	0.125	0.125	0.125	0.125

Source: Morgan Stanley & Co. Economics as of Jan. 29, 2021

The backdrop of the pandemic and the progress of vaccinations matters a great deal to the outlook. We expect economic activity to begin ramping up this month as we pass through peak cases, becoming more robust over the course of the year as the cloud of COVID-19 thins. We expect the buying power of US households to soar this year as government transfers, rebate checks and service-sector jobs flowing back to the labor market fuel consumer spending. A build-up of excess savings helps sustain demand throughout the forecast horizon.

Unemployment. Nearly 80% of job losses have been concentrated in the sectors most affected by COVID-19, and it is these jobs that are poised to return to some degree as restrictions are lifted. In our forecast, job gains drive the unemployment rate lower, from 6.7% at the end of 2020 to 5.0% by December 2021 and further to 4.0% by the end of 2022. This is unchanged from our previous estimates as stronger growth is met with increased labor force participation.

Inflation. Stronger growth leads to higher inflation in the near term. We see significant price adjustments coming in the mobility-linked sectors of inflation, and that should come alongside goods inflation that may remain elevated as inventories and supply chains remain constrained. We now see the spring peak in the core Personal Consumption Expenditures Index at around 2.4% year over year, and higher sustained inflation thereafter, ending the year at a 2.2% annual rate, up from 2.0% from our previous estimate. After taking into account tougher year-over-year comparisons, inflation dips in the spring of 2022 but ends the year slightly higher than previously expected at 2.3%.

Interest Rates. Through it all, we expect the Federal Reserve to remain patient, lifting rates only gradually beginning in the third quarter of 2023. By design, the Fed's flexible average inflation targeting framework and maximum employment criteria for raising interest rates will lead to a lagged policy reaction in this and future cycles compared with past cycles. In particular, in the second half of this year, the Fed will assume upward pressure on inflation from supply constraints is transitory, and it will take its time in gauging if any of the price pressures prove persistent. Still, even after core PCE inflation has moved convincingly above 2%, we expect the Fed to tolerate an overshoot for some time before lifting rates.

Tapering. Before raising rates the Fed must first take its foot off the gas pedal. Chair Jerome Powell has stressed that it is too early to discuss removing accommodation, and so tapering asset purchases is a matter of providing accommodation—but at a slower pace. In our forecast, the COVID-19 cloud will have thinned by midyear and it will be apparent the recovery has been gaining sustainable steam. We continue to expect Chair Powell to convey a message at the June Federal Open Market Committee meeting that tapering the balance sheet could be on the horizon. We expect the official announcement to come at the December meeting that tapering will begin January 2022, at a monthly pace of $10 billion in Treasuries and $5 billion in mortgage-backed securities. On this schedule, the size of the balance sheet will grow to $8.7 trillion by year-end 2021 and $9.0 trillion by year-end 2022.

Risks. The downside risks to our forecasts are threefold, and they would stem primarily from: Vaccine rollout that does not progress as we expect; a stimulus package that fails to pass; and/or household response to the vaccine and reopening of the economy that is more tepid than anticipated. ■

ECONOMICS

In Search of the Signs of Pent-Up Demand

Chris Baxter, Investment Strategist, Morgan Stanley Wealth Management
Nick Lentini, CFA, Associate, Morgan Stanley Wealth Management

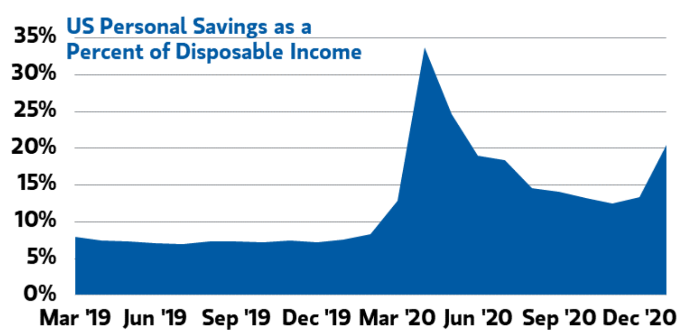
The aggressive US policy response to the global pandemic boosted economic growth, slowed job losses and provided a shot-in-the-arm for consumer spending early in the recession. With the end of COVID-19 finally in sight, investors have become increasingly focused on the consumer and the role they will play in driving the next leg of the bull market.

Consumer balance sheets are flush with excess savings—$1.6 trillion through 2020—and Morgan Stanley & Co.'s economists project that they will accumulate another $1 trillion this year. Recent spending has been concentrated in goods due to the adverse COVID-19 impact on services. As the economy reopens, we see consumer demand shifting toward services, which historically comprise 70% of all consumer spending. We believe there is a strong case for pent-up consumer demand to surge into the second half of 2021, causing consumer spending to flourish, inflation to pick up and GDP to grow at a 6.5% rate for the year.

Below, we discuss areas of the economy and the market where we see signs of the cash that can fund pent-up demand. Shipping, housing and semiconductors are usually early-cycle leaders, but we believe the consumer-driven rebound will carry into the second half.

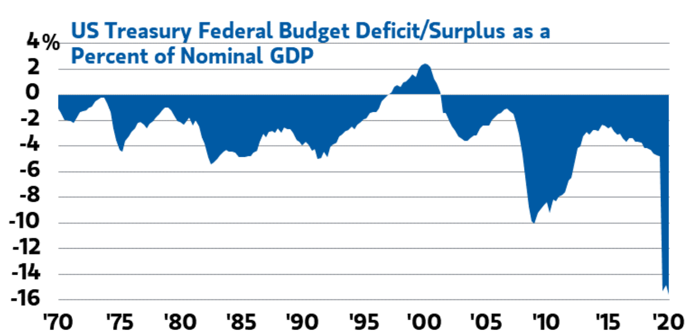
With Fewer Places to Spend, Household Savings Built Up During the Pandemic

At the start of the recession, US personal savings as a percent of disposable income soared to an all-time high of 33.7% from 8.3%; as of the latest reading; the savings rate is still an above-average 20.5% (see chart). The nationwide economic shutdown left many with few places to spend last year, spurring a pattern of saving that provided households with a buffer nearly twice the level seen just four quarters prior. The December stimulus has supported consumers through the first two months of the year, and now the Biden administration is seeking a $1.9 trillion package. MS & Co. policy strategists expect this package to win congressional approval, providing a bridge to consumers—specifically in lower-income cohorts—into the summer when an economic reopening seems feasible.



Source: Bloomberg as of Jan. 31, 2021

Aggressive Stimulus Means a Dramatic Increase in the Federal Budget Deficit

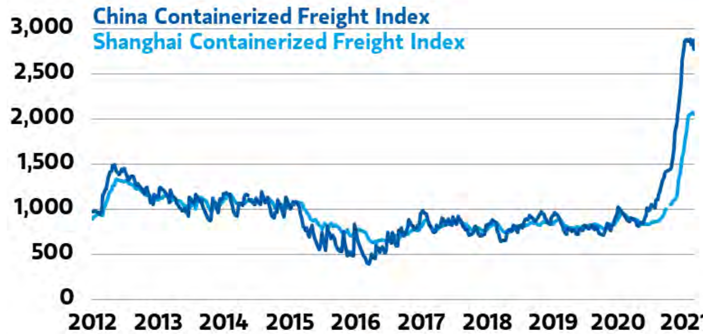


Source: Bloomberg as of Dec. 31, 2020

The stimulus saga began last April when a nearly $2 trillion stimulus was passed, followed by a $900 billion stimulus package in December, and finally a proposed $1.9 trillion package that we believe could arrive this month. Such high levels of spending have resulted in the federal government having to borrow and run a large deficit. At the end of last year, it was about 15% of GDP (see chart). The purpose of that deficit spending is to spark economic growth, and MS & Co. Chief US Economist Ellen Zentner now forecasts 6.5% GDP growth for 2021. If the consumer response to the reopening is stronger than expected, we could see an upside surprise in GDP.

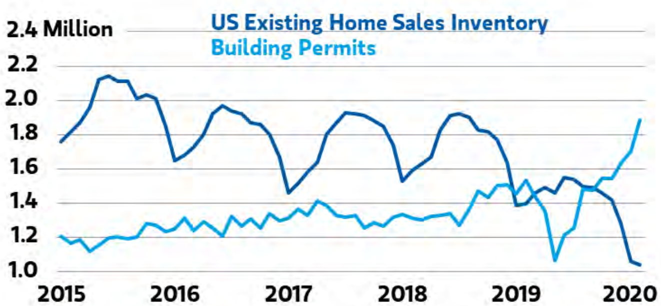
A Spike in Shipping Rates Indicates a Revival of Demand

One of the extraordinary demonstrations of recovery in global demand has been the spike in shipping rates. Remarkably, the China and Shanghai Containerized Freight Indexes—both used to measure the cost of freight between China and the rest of the world—have risen by 128% and 223%, respectively, since March 2020 (see chart). As the first country to recover from the recession and the only major economy to post positive GDP growth in 2020, China is seen as a bellwether for economic reopening. Chinese consumer demand has remained resilient, while US demand for Chinese goods has skyrocketed. As the US moves toward a summer reopening, we see the elevated level of demand for consumer goods remaining firm—and positive for the shipping industry.



Source: Bloomberg as of Feb. 26, 2021

Sharp Increase in Building Permits Should Alleviate the Low Inventory of Homes for Sale

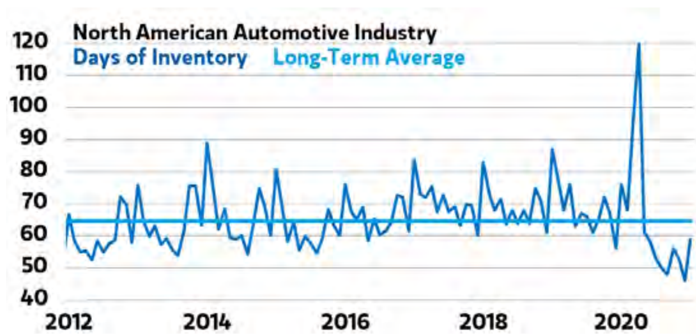


Source: Bloomberg as of Jan. 31, 2021

It is no secret that home prices have risen quickly, with the latest reading from the S&P CoreLogic Case-Shiller Home Price Index measuring at 9.5% year over year. Higher prices have been caused not only by an increase in demand, but also by the secular decline in supply that dates back to the financial crisis. Last July, those supply and demand metrics crossed, leading to the current shortage in housing inventory (see chart). As homebuilders look to meet this demand, and given the trend away from urban centers, we foresee the rise in homebuilding persisting for years. Housing historically represents 15% to 18% of GDP, and we expect housing's positive contributions to cascade into future spending through knock-on homeowner purchases of durable goods and local services.

Auto Inventory Slumped as Shortage of Chips Slowed or Stopped Assembly Lines

Semiconductors are not a consumer item by themselves, but they're often components in everything from automobiles to mobile phones to kitchen appliances. Semiconductor stocks are typically early cycle performers and, indeed, the Philadelphia Semiconductor Index has rallied 131% since the market trough in March 2020. Recently, semiconductor demand has outdriven supply capacity to the extent that the next six months of production are already booked. Such shortages have caused a manufacturing slowdown. Global auto plants have idled factories due to the chip shortage, even prompting the Biden administration to investigate how to bolster supply. Though the supply of autos increased in January, it followed a months-long decline (see chart). MS & Co. analysts project this pent-up demand to continue well into the third quarter as end-users of semiconductors fulfill current demand and replenish their depleted inventories.



Source: Bloomberg as of Jan. 19, 2021

EQUITIES

Beyond the Reopening

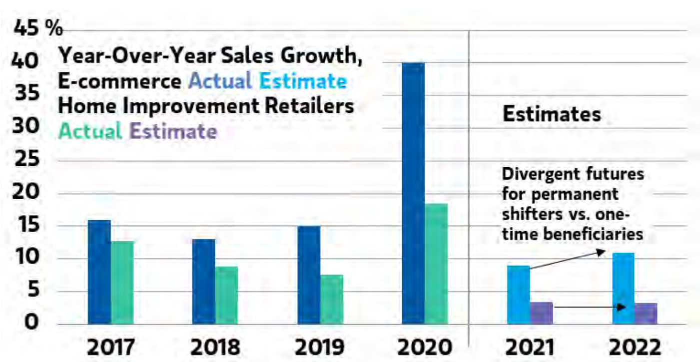
Sachin Manchanda, Investment Strategist, Morgan Stanley Wealth Management

Sean O'Loughlin, Investment Strategist, Morgan Stanley Wealth Management

The pure "reopening" trade has been a powerful market force over the past six months. In fact, the MS & Co. Reopening Beneficiaries basket, a group of 26 companies, has outperformed the S&P 500 by 34% since Nov. 9, the day of announcement of COVID-19 vaccine efficacy data. With much of the initial boost from the reopening already priced in, the better opportunities likely lie in identifying what the world might look like in 2022 and beyond. As a framework to aid in this endeavor, we see companies affected by COVID-19 falling into three buckets: those that will benefit from a permanent shift in consumer or business behavior; those that saw a one-time benefit and will struggle to maintain momentum; and "toss-ups," where the jury is still out on whether they thrive or not in the reopened world.

Permanent Shifters. Perhaps the clearest beneficiary in this bucket is e-commerce. Brian Nowak, internet analyst for MS & Co., estimates that 2020 represented a three-year acceleration in e-commerce adoption. Yet despite the strong embrace of e-commerce, analysts estimate top-line growth of 9% in 2021, but then speed up to 11% in 2022 (see chart). We believe the anticipated deceleration this year is at odds with the likelihood that, for many consumers, e-commerce adoption is a one-way trend.

E-Commerce Boomed in the Lockdown, And Still Seems Ripe for Gains



Source: Bloomberg, MS & Co. as of Jan. 14, 2021

Next, we believe the digital transformation of enterprises of all sizes is likely to continue. Just as the shutdown catalyzed many to try ordering groceries online, "work from home" was an eye-opener for many small- and medium-sized businesses, showing how much efficiency could be improved through digital adoption. Finally, the "stay at home" stampede to online streaming services and video games has potentially brought forward years of adoption as many consumers embraced consoles and mobile gaming for the first time. MS & Co. estimates mobile gaming users grew 20% in 2020, adding approximately four years' worth of new gamers during the pandemic.

One-Time Beneficiaries. Our bucket of one-time beneficiaries is larger, and likely not comprehensive. Key examples include recreational vehicles and fitness equipment manufacturers, packaged foods producers and anyone who makes hand sanitizer. We also see risk that, despite a strong housing market, home improvement retailers will face difficult comparisons in 2021, as the "nesting" behavior of 2020 likely wanes as consumers venture out. Finally, following a rush to equip millions of home offices in 2020, certain areas of tech hardware seem primed for disappointment.

Toss-Ups. These industries have been either significantly benefitted from or significantly have been harmed by the pandemic, but their futures are not clear. For example, last-mile delivery services have boomed. Whether consumers and businesses will continue to pay high fees for the convenience to be seen. On the other side of the divide are companies heavily exposed to leisure and business travel, such as online travel agencies. While the return of consumer leisure travel may seem to be a forgone conclusion, the outlook for business travel is murkier. Finally, and perhaps the biggest toss-up of all, is the city as an economic entity. Will the ability to work from anywhere doom the office and the downtown as we know it? Or will the intangible benefits to company culture and to innovation coming from in-person interaction overwhelm the benefits from slashing real estate expenses?

Within the framework of permanent shifters, one-time beneficiaries and toss-ups, how should we identify investment opportunities? Start by avoiding one-time beneficiaries. Within the permanent shifters, investors should seek to identify those areas where the market is failing to credit a company for the sustainability of its growth. Said another way, who are the permanent shifters that the market is pricing more like a one-time beneficiary? E-commerce seems a likely mispricing, given the mismatch in sales-growth history and expectations. The digital transformation as well will create significant opportunities, not only among the enablers of that digital transformation but also among the transformers themselves—such as banks who are early and effective adopters of mobile technology, or industrials who drive margin improvement via automation.

However the biggest opportunities will be in the toss-ups. The market rewards an out-of-consensus but ultimately correct view. Here, we see opportunities in retail and real estate, where some of the stocks are pricing in permanent structural impairment. We recommend focusing on the stocks within these groups. ■

EQUITIES

Extremes Hitting Resistance

Lisa Shalett, Chief Investment Officer, Head of the Global Investment Office, Morgan Stanley Wealth Management

In terms of market momentum, the first quarter of 2021 has started where 2020 left off. Most stock indexes are at or near all-time highs and corporate credit spreads are at or approaching historic tights. It's hard to argue with the optimism. The stimulus measures from both the Federal Reserve and Congress have sustained hope for a V-shaped economic recovery this year.

What's more, the material improvement in the COVID-19 data—the halving of infection and hospitalization rates from the January peaks, and an accelerating vaccine rollout—has cemented procyclical and bullish sentiment. Further bolstering confidence has been the fourth quarter 2020 corporate earnings season, which was marked by surprisingly strong operating leverage and profit resilience. All this suggests that the recession's damage to profits may already be in the rearview mirror, a notion that has helped drive extremely positive trends in forward earnings revisions.

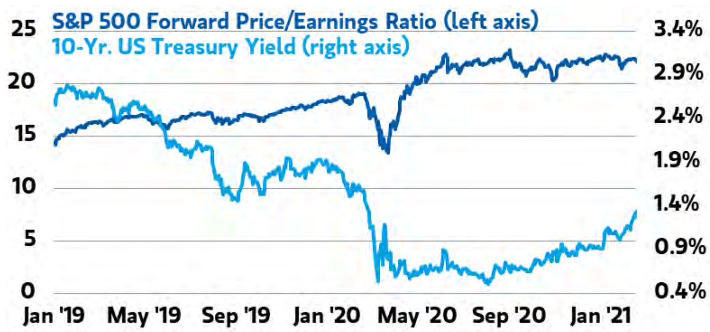
REFLATION EVIDENCE. Finally, recent macroeconomic reports support the reflationary thesis. January retail sales, the first to benefit from the latest round of fiscal stimulus, was a blowout, showing month-over-month gains of 5.3% versus expectations for 1.1%. It also set a new all-time high for monthly spending. The Producer Price Index, an indicator of inflation in the supply chain, was also stronger than expected. Gains in both goods and services pushed monthly price improvements to 1.3%, the largest month-over-month increase since December 2009. This aggressive surge in monthly inflation corroborates the jump in the ISM Manufacturing Prices Paid Index, reflecting both broad-based higher global commodity prices and supply chain disruptions.

This unquestionably constructive backdrop has quashed controversy, created a tight consensus around economic and market outcomes, and propelled positioning in progrowth asset classes like cyclicals, small caps and emerging market (EM) equities, and created a tight consensus around economic and market outcomes. Consider the strength of the Russell 2000, a small-cap stock index. It's nearly doubled since last March's trough, and 11.6% for the year to date while S&P 500 Index is up less than 2% this year. What's more, the Russell 2000's breadth, measured as share of the index trading above 200-day moving averages, is nare a 25-year high. Equally concerning is that this narrowing of consensus has pushed valuations to extremes, with every asset class index that we follow now in the top 5% of valuation for the last 20 years. The Buffett Indicator, which is the ratio of total US stock market capitalization to GDP, now registers 147%, dwarfing the prior high of 127% reached in 1999.

INTERNATIONAL IMPROVEMENT. Even the long-suffering international indexes have come alive. The MSCI World Index, for example, is at its highest price/earnings (P/E) ratio since 2009. While valuation overshoots are to be expected given prodigious monetary and fiscal accommodation, valuation is the only emerging constraint on further market gains. The near-unanimous embrace of the strong-recovery scenario has created skewing and crowding in market positioning and undermined portfolio diversification efforts as positive cross-asset correlations are now well above average. This leaves markets increasingly fragile and vulnerable to correction.

Much market strength hinges on perceptions about the 10-year US Treasury yield. Even as the 10-year yield has increased nearly threefold from last August's all-time low of 0.5%, the S&P 500's historically high P/E has proven resilient, sticking to an extremely narrow range of 21 to 23 (see chart). Many have resisted calling out the market valuation as dangerous because of the extremely low interest rates. With the 10-year yield now pressing up against 1.4% and up 50 basis points so far this year, the S&P 500 equity risk premium is a below-average 325 basis points.

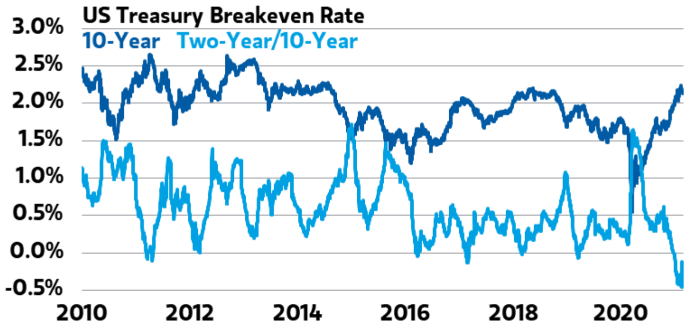
Rising Treasury Yield Could Be a Headwind to Valuation Multiples



Source: Bloomberg as of Feb. 26, 2021

POTENTIAL HEADWINDS. When will the upward move in the cost of capital become a headwind? We think we are getting close to that point. As we have noted previously, rising inflation expectations have driven the uptick in nominal interest rates. The real 10-year yield has remained anchored near -1%. Thus far, this has allowed investors to embrace Fed rhetoric that "inflationary threats are completely transitory." Confirmation of that underlying assumption is seen in the recent inversion of the two-year/10-year inflation breakeven curve (see chart). This is the first time we have seen this level of dispersion between near- and longer-term inflation expectations since 2017.

Inversion of Treasury Breakevens at Extremes



Source: Bloomberg as of Feb. 26, 2021

What if real rates, economic growth and realized inflation surprise on the upside? In their Feb. 19 report, "High Real Yields—A Playbook," Morgan Stanley & Co.'s global rates team argues that real yields are too low in "every measurable way" and are likely to rise. What if real GDP growth, which MS & Co. economists now forecast at 6.5% for 2021, overshoots on a better-than-expected stimulus package? What if herd immunity allows near full economic reopening by early summer, unleashing explosive pent-up demand for consumer services? What if the most recent University of Michigan consumer forecast of 3.3% year-ahead inflation is correct instead of the Fed's expected 2.0%? Will Fed policy be forced to shift? On the earnings side, what if current earnings revision momentum completely stalls or even reverses as higher input and commodity costs hit profit margins at the same time that costs related to recalling laid-off workers come back onto financial statements?

Market returns are strongest when controversy and uncertainty is high, valuations are attractive and sentiment is bearish. We are far from such conditions today. Ingredients for a powerful economic rebound from the COVID-19 crisis are increasingly validated by the real-time data. What's more, the rosy recovery outlook is broadly reflected in corporate earnings estimates and valuations, which have almost universally hit extremes.

We can easily argue for markets to overshoot given the backdrop of further positive catalysts over the next few months, but our advice is to be selective. Focus on relative valuations and correlations that will enhance portfolio diversification. Watch the rate of change of corporate earnings forecasts, as well as the 10-year Treasury yield. Consider taking profits in high-beta winners and rebalancing portfolios toward relative-value plays in financials and European and Indian stocks. We also like high-quality, dividend-paying defensives with below-average betas found in the consumer staples, utilities and telecom sectors. ■

SUSTAINABILITY

Falling Cost of Renewable Energy Sparks Demand Growth

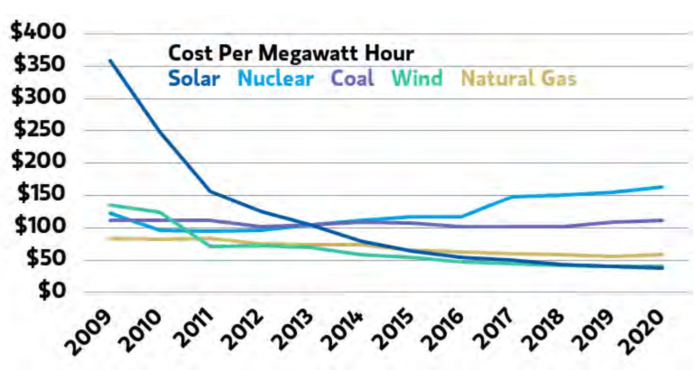
Brandon Dees, Investment Analyst, Morgan Stanley Wealth Management
Kelley McKee, Investment Analyst, Morgan Stanley Wealth Management

If you thought electric vehicles were a niche product or a "green dream," think again. In January, General Motors announced it would phase out gasoline-powered vehicles and target to sell only zero-emission electric cars by 2035. This change is indicative of a broader tectonic shift across the economy, as concerns about climate change spike and the cost of renewable energy continues to decline.

CLEAN ENERGY. Renewable energy, or "green energy," refers to energy derived from renewable sources. Unlike fossil fuels, which are from finite, exhaustible sources, green energy can be generated by the sun, wind, water and biomass. Solar and wind are perhaps the most well-known sources of renewable energy, but other areas have also emerged. Importantly, renewable energy is cleaner in terms of carbon dioxide emissions, a major cause of climate change, and is better for the planet from the perspective of managing finite resources. Investors have multiple options, both public and private, to access this burgeoning sector.

Perhaps what's sparked the most interest in renewables is that costs have declined significantly in recent years (see chart). In fact, renewables are now among the cheapest forms of power generation in the world. Lazard's 2020 Levelized Cost of Energy Analysis shows how the cost of solar fell to $37 per megawatt hour (MWh) in 2020 from $359 per MWh in 2009, a 90% decline.

Renewables Are Now Less Costly Than Traditional Energy Sources



Source: Lazard's Levelized Cost of Energy Analysis as of October 2020

Similarly, the cost of wind energy dropped 70% in the same period to $40 per MWh from $135 per MWh. This puts the cost of wind and solar below that of traditional sources such as natural gas, at $59 per MWh, and coal, at $112 per MWh. Not only do renewables represent a cleaner choice, but also potentially a more cost-effective one.

GREATER DEMAND. As costs have decreased, demand for renewables has increased, and market share has grown. According to the US Energy Information Administration, 17% of US utility-scale electricity generation came from renewable energy sources in 2019. This is expected to grow significantly in the coming decades. According to Bloomberg's New Energy Finance (BNEF) 2018 Outlook, renewables are expected to account for 64% of global electricity supply by 2050.

In the US, more than 30 states have set renewable energy targets. For example, New York has set a target of having 100% of energy come from renewable sources by 2040. California is targeting to go to 100% renewable sources by 2045, and Washington DC is seeking to do the same by 2032. Moreover, as part of the Green New Deal, President Biden is seeking to ensure that the US transitions to a 100% clean energy economy and reaches net-zero emissions by 2050. President Biden has also targeted a 50% reduction to the US carbon footprint by 2035. With these targets in place, demand for renewables is expected to surge.

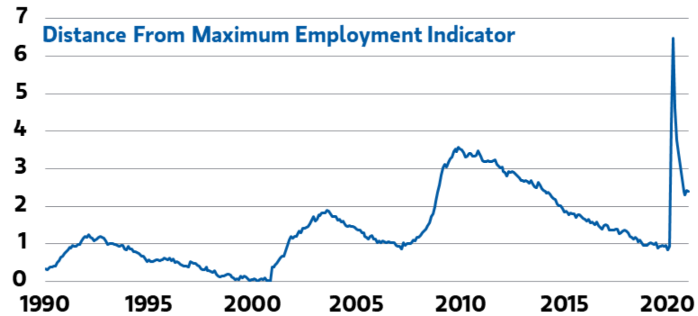
INVESTMENT OPPORTUNITIES. The shift in the US power mix will require a sizable capital investment in renewable energy infrastructure. BNEF estimates that $5 trillion to $10 trillion of investment will be needed in order to facilitate this transition. This means that renewable energy, and the infrastructure needed to generate, transport, and store it, represents a sizable investment opportunity.

In the public markets, renewables have rallied significantly. The S&P Clean Energy Index advanced 141.3% last year, though it has pulled back 7.9% so far this year. While public renewables saw triple digits, Global Investment Manager Analysis (GIMA) notes that public markets inherently involve greater volatility and are currently priced at elevated levels. As an alternative, there are private strategies that invest in renewable energy. As part of the 2021 Alternative Investment Themes, GIMA emphasizes infrastructure and green energy as a way to increase portfolio diversification and generate attractive, tax-deferred alternative income. In particular, GIMA favors strategies that take a diversified approach, investing across solar, wind, and other renewable energy sources in order to offset the impact of sunlight and weather variations on energy production. ■

Short Takes

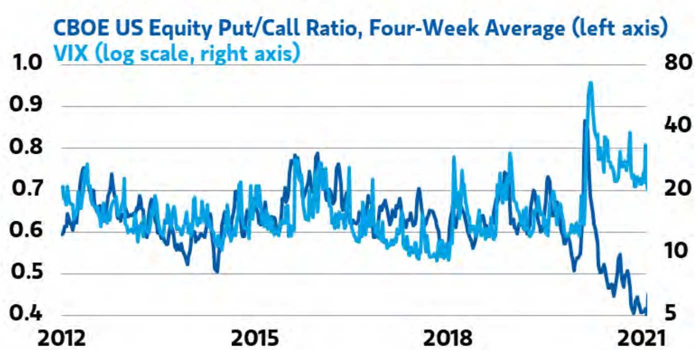
"Maximum Employment" Metric Suggests Long Recovery for the Labor Market

The Federal Reserve is expected to keep its aggressive policy support in place at least through 2023. This means near-zero interest rates and bond purchases may continue until the Fed achieves its goals of a 2% average inflation rate and "maximum employment." Notably, Fed Chair Jerome Powell says the Fed will focus on broad labor market health, not just the unemployment rate, to assess maximum employment. To that end, Cornerstone Macro, an independent research firm, has developed a "Distance From Maximum Employment Indicator" that estimates the labor market's distance from its 30-year peak in the early 2000s (see chart). In addition to the unemployment rate, the indicator incorporates 21 other factors such as the duration of unemployment, unemployment claims, labor participation rates, wage growth and job openings. The indicator is now at 2.5 standard deviations from maximum employment. Given that level, Cornerstone anticipates that the labor market could require five-plus years to reach maximum employment.—*Vibhor Dave*



Source: Cornerstone Macro as of Jan. 31, 2021

Divergent Sentiment Indicators Suggest a Market Susceptible to a Downside Shock

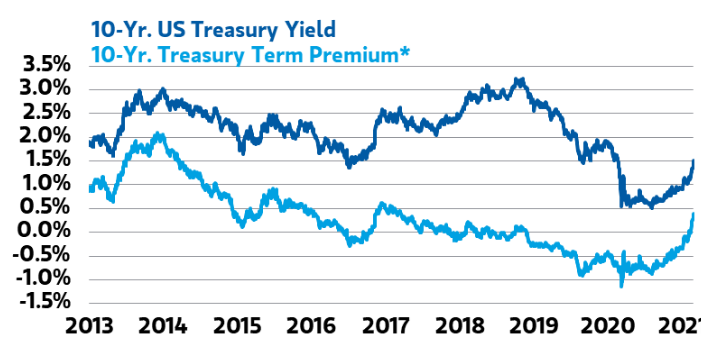


Source: Bloomberg as of Feb. 26, 2021

A bullish investor may buy a call option in which the payoff is tied to upward moves in the underlying stock. The payoff in a put option comes with a downward move, so an investor might buy a put to get downside protection for particular holding. When the ratio of puts to calls declines, it's an indicator of rising bullish sentiment. Typically, the put/call ratio closely tracks the VIX, an index of broad equity market volatility also known as the "fear index." However, since the bear market bottom last March, the two have decoupled (see chart). As stocks recovered, the VIX has come down somewhat but remains elevated. The historically low put/call ratio might indicate more complacency than the VIX would suggest. With investors buying less downside protection, markets may be more susceptible to a downside shock.—*Nathan Wagener*

Rising Term Premiums Are a Force Driving the 10-Year US Treasury Yield

A bond's "term premium" reflects the changes in supply and demand, which can affect prices, and changes in inflation, which can affect the future value of bond payments. When the market anticipates a change in these two risks in the form of tapering or an increase in inflation, the term premium rises, as it did in 2013 (see chart). Term premiums have been negative since 2018, mostly due to the Federal Reserve's market intervention. However, term premiums are up more than 50 basis points this year and are now slightly positive, mostly due to inflation expectations. As a result, the term premium has been driving the 10-year Treasury yield higher as the risk to owning bonds has increased.—*Jonah Silverman*



*Calculated with the Adrian-Crump-Moench method.
Source: Bloomberg as of Feb. 25, 2021

SUSTAINABILITY

The Future of Food: Complexities and Compromises

Jessica Alsford, CFA, Global Head of Sustainability Research, Morgan Stanley & Co. International PLC+

The global food system needs to reinvent itself over the next 30 years in order to produce 50% more food, help 2.5 billion people escape malnutrition and cut some 13 gigatons of carbon emissions. There are solutions, but compromises have to be made as none of them can solve all the challenges of providing sufficient, low carbon, healthy and sustainable food for the 10 billion people who will inhabit the planet in 2050.

The problems facing the global food supply chain are not new, but with a renewed focus on this area among policymakers, we see 2021 as a potentially pivotal moment. The EU has already announced its "Farm to Fork" strategy, with more detailed proposals to emerge over the next four years. These include: mandatory front-of-package nutrition labelling, targets for food waste reduction, initiatives to stimulate reformulation of processed food, a requirement for the food industry to integrate sustainability into corporate strategies, the EU carbon farming initiative and the reduction in the usage of pesticides and fertilizers.

Outside Europe, policies from President Biden include investment in precision agriculture, while China President Xi has outlined a vision for green development, which could include agriculture. The 2021 UN Food Systems Summit aims to "launch bold new actions to transform the way the world produces and consumes food." This has the potential to mobilize both the public and private sector in the same way the UN Climate Change Conference did for climate change.

We have identified 10 sectors that offer solutions, and assess them against a backdrop of developing technology, changing consumer preferences and shifting policy (see chart). Four are our preferred sectors, given the scope of this report, and three have high growth potential but address niche markets. We are more cautious on the remaining three because they raise sustainability issues. Together, these sectors offer investors the opportunity to gain exposure to a combined market growing at mid-to-high single digits with 2030 revenue potential in excess of $1 trillion, a market size similar to that of the global pharmaceutical sector.

Preferred Sectors

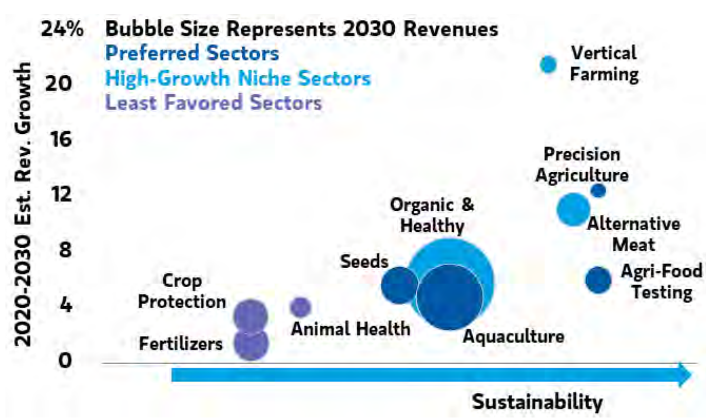
Precision Agriculture. Precision agriculture brings technology and data to farming in order to optimize efficiency and productivity, as well as reduce the use of fertilizers and crop protection products. It covers a range of different approaches including satellite data, drones, sensors, automation and robotics. Both the EU and President Biden have voiced support for this technology. We anticipate growth in the low teens over the next decade, resulting in a market worth of about $17 billion in revenues.

Seeds. Innovation in seeds has driven the bulk of yield enhancements during the last 30 years on both the conventional and genetically modified (GM) sides. Research and development continues, and new projects have significant potential for reducing crop loss and optimizing the use of key resources such as nitrogen, land and water. This is a scalable solution that can be used globally; we forecast a 5% to 7% compound annual growth rate (CAGR) to 2030, reaching market revenues of about $100 billion.

Agri-Food Testing. This covers many stages across the agriculture and goods supply chain; for example. agricultural and crop analysis and inspection, cargo inspection of raw materials and crops, product ingredient stability testing analysis, labelling regulation conformity and certification, and ongoing quality control testing. Regulation is also accelerating and provides a structural tailwind for the agri-food testing industry. We expect a 5%-7% CAGR through 2030 to a market size of $52 billion.

Aquaculture. The key for meeting the growing demand for fish globally is aquaculture, as the majority of marine fisheries are either fully or overfished. Fish is a source of healthy low-fat protein and is far less carbon-intensive to produce than beef. Sustainable practices need to be adopted such as limiting the use of antibiotics, use of sustainable feed and preventing the escape of farm-raised fish into the wild. We forecast a 5% CAGR for the next decade to reach revenues in excess of $300 billion.

Key Solutions for Reinventing The Global Agri-Food Industry



Source: Euromonitor, FAO, Mordor Intelligence, Statista, Morgan Stanley Research as of Dec. 6, 2020

High-Growth Niche Sectors

Vertical Farming. The advantages of vertical farms are that they are pesticide-free and use 70% to 95% less water than traditional farming. Up to 99% less space is needed compared with conventional agricultural methods, with productivity as much as 300 times higher than that of a field farmer. However, it is only practical for high-value crops such as leafy greens and strawberries, and thus its scale will be limited. We expect an approximately 25% CAGR through 2030 to a market of $20 billion.

Alternative Meat. Burgers made from plant-based products emit 90% less greenhouse gases than traditional equivalents and use 99% less water. There are already some newly public companies in this market, and many large food companies have also made investments. We estimate that achieving a 16% CAGR would result in about 3% of the global meat market coming from these alternatives by 2030. We estimate that, together, revenues from plant-based meat and milk could be worth more than $80 billion by 2030.

Organic and Naturally Healthy Food. The benefits of organic and naturally healthy food are clear and the EU is focused on increasing organic farming and improving access to healthy, nutritious food. However, globally, there are limits to both areas. Organic farming produces lower yields, while cost and convenience can put a cap on the uptake of healthy food. Even so, we forecast a 6% CAGR, reaching a market size of $570 billion by 2030.

From a Sustainability Perspective, We Are Cautious

Fertilizers. These products increase yields, thus reducing the need to cultivate new land, which may include deforestation. However, application rates have already hit a plateau in the US and Europe, with limited upside in other regions, too. In addition, there is a regulatory headwind, with the EU aiming to reduce fertilizer consumption 20% by 2030, and the CAGR is only expected to be 1% to 2% for nitrogen and 2% for potash-based fertilizers. Two new areas to watch, though, are green ammonia and biofertilizers.

Crop Protection. Products such as fungicides, herbicides and insecticides improve crop yields, thus helping with the need to produce more food for a growing and increasingly wealthy population. However, as with fertilizers, the EU wants to reduce the use of chemical pesticides. The CAGR is likely to be about 3%, but companies that can develop biologically based products should be at a relative advantage.

Animal Health. Vaccines, parasiticides, medicated feed additives, anti-infectives and diagnostics, can help to improve productivity in the livestock industry. However, the use of antibiotics must be done responsibly to reduce the risk of antibiotic resistance in humans. We assume an underlying 4% CAGR, but the EU intends to reduce sales of antimicrobials for farmed animals and in aquaculture by 50% by 2030. ■

This article was excerpted from "The Future of Food: Complexities and Compromises," a Dec. 6, 2020, Bluepaper from Morgan Stanley & Co. Research. For a copy of the full report, contact your Financial Advisor.

Q&A

Demystifying China's Economy and Markets

China's growth over the past year and its long-term trajectory interests investors, but transparency and geopolitical issues remain. "There's tremendous hunger to try and understand China's market and China's economy," explains Gabriela Santos, global market strategist at J.P. Morgan Asset Management. "Chinese equities and fixed income are going to become a bigger piece of global investors' portfolios." Santos recently spoke with Morgan Stanley Wealth Management's Tara Kalwarski about the "emerging" nation, which is now second only to the US in terms of the size of its economy, as well as its equity and fixed income markets. The following is an edited version of their conversation.

TARA KALWARSKI (TK): Where is China in terms of COVID-19?

GABRIELA SANTOS (GS): China and a few other countries in Asia were able to get past the pandemic without having to wait for the vaccine. Meanwhile, the rest of us need the vaccine to be able to get back to normal, especially when it comes to services and other pandemic-affected sectors.

In China, people are traveling. They're doing in-person meetings. Domestic flights, for example, are at 100% of pre-pandemic levels—but it's all within China. The way that they've been able to get through the pandemic is by restricting international travel quite severely.

TK: What is your high-level view of China?

GS: China is one of the most exciting growth opportunities of the next decade, given themes around consumption, tech innovation and renewables.

It has the second-largest economy in the world, having passed Japan in 2010. Last year, it was able to engineer a V-shaped recovery while the US was more like V-interrupted. Combine that one step forward for China, one step back for the US, with our growth expectations, and we expect China to surpass the US as the world's largest economy in 2027.

The most important stat about China is GDP per capita. China has made tremendous progress in the last decade: In 2019, China's per capita GDP was $10,000, which is similar to Brazil and still solidly an emerging market. It has the potential to double that figure in the next decade, and with that China will become a high-income, or developed country.

About 40% of China's population is middle class right now—but that's half a billion people, and there's the potential to close to double that over the next decade. So we're by no means done with the China growth story, and specifically the exciting theme about domestic consumption.

TK: How accurate is China's economic data?

GS: We can't take Chinese data at face value the same way that we do with US data, but we can work around it.

Three things come to mind. First, rather than taking a specific number at face value, we should focus on the trend. The trend tends to be correct in China. Did GDP grow 2.3% last year? Maybe not. But did GDP make a very impressive recovery from the worst recession in China's history? Yes.

Another thing we can do is see what China does rather than what China says. It's important to watch policy. Normalizing fiscal and monetary policy is a big priority for China right now. That's probably a sign that growth is okay. Otherwise, policymakers wouldn't be willing to do that.

Finally, we can piece together third-party or independent data to try to get a clearer picture. For example, we look at trading partner data such as Korean exports to confirm what China is saying. Another example would be to look at electricity generation or flight activity as a way to validate what's happening in manufacturing and services.

TK: What are the biggest risks or impediments to growth?

GS: Few emerging markets have escaped this middle-income trap. What usually ends up happening is that an emerging country gets to $10,000 GDP per capita, but not beyond that. That's the case for all of Latin America.

China needs to make sure that it can become a success story, like South Korea, and the way for it to do that—and this a priority in their Five-Year Plan—is with innovation. The Chinese government targets specific measures to track this. For example, China now has the largest number of yearly patent applications globally, a sign that it's producing its own intellectual property. Another measure is research and development (R&D) as a percentage of GDP, which China has more than doubled in the past 20 years. China will push to get closer to Japan's R&D spending.

China needs to continuously upgrade the value-added of its industry so it can move up the development scale on a sustainable basis. China needs to move from just assembling computers to producing the chips that go into them and creating the software that powers them.

Unlike much of the emerging markets, China has quite an old population, with about 10% of the population 65 and above —and the size of the senior cohort is forecast to double over the next decade. Because of their one-child policy, China's total population is expected to flatline over the next decade and then will start to contract.

Because China has this huge demographic issue, it's focusing on innovation and boosting productivity. It's also trying to upgrade the jobs in the labor force, like moving them to urban areas and making sure that salaries increase over time.

TK: Can you talk about the country's transition from an exports-driven to imports-driven economy?

GS: In terms of the Five-Year Plan, which is expected to be approved March 5, a key item on the supply side is tech innovation; on the demand side, there's "dual circulation." That's the new buzz word and it means deemphasizing exports and emphasizing domestic demand. It's dual circulation because China doesn't intend to close itself off from the world, but just become its own engine of growth.

China has already hit peak exports about a decade ago. It's no longer the factory of the world and more and more becoming the consumer and innovator of the world—and the kind of things that China exports is also changing. It's not really footwear, textiles and clothing. Those low-cost products have come down, and higher value-added products like machinery and electronics are making up for it.

TK: What does this mean for investors?

GS: You can play the China theme indirectly and directly. It's important to be able to do both.

If you look at global revenue exposure to China, it's about 6% for S&P 500 companies—the largest single-country exposure outside of the US. So China matters for US companies. For other countries, it matters even more. The MSCI All Country ex US Index has 17% revenue exposure to China, meaning companies in Europe, Japan and other emerging countries have a lot more exposure than US companies.

So an indirect play for China would be European luxury goods companies, for which China makes up 40% of demand. Another is emerging markets commodities companies, as China still has a huge demand for copper and iron ore.

Then there's the option of going directly to the source. The MSCI China Index has 90% of revenue from China, so most Chinese companies tap directly into the China story. There is value to going directly to Chinese markets for portfolios, especially A-shares, or the mainland market, for two reasons: First, this market has very low correlation to other markets, so it can serve as a diversifier in a global equity portfolio. Also, adding A-shares helps to improve one's total return potential, because of the growth opportunity.

That said, China is the second-largest equity market in the world behind the US, and it's one where stock selection is important. You don't necessarily want to own all the stocks. You want to zero-in on the highest-quality ones. This is really important in China, because not only is there lack of transparency around economic data, there's also lack of transparency around accounting practices. Having an investment manager that's studying these companies and sees how they affect the day-to-day lives of the locals is really important to validate any investment thesis.

China can also be a volatile and inefficient market, because it is retail-driven. That can create huge dislocations, and with an active manager, you can take advantage of that.

One last thing to note is the Chinese bond market, which is also the world's second-largest bond market, has a lot to offer in terms of income—about 200 basis points over US Treasuries—as well as diversification.

TK: Are there areas of the market that you would avoid?

GS: Close to one-third of H-shares and A-shares are state-owned enterprises, so by definition, they're not managed with shareholders' best interests in mind. Also, they're in "old China" sectors—energy, industrials and financials. We think those are sectors to underweight because they don't represent the "new China." What we really like is the dynamic, interesting story—more consumer discretionary, technology, health care and communication services, which also tend not to have very much state ownership.

TK: What might the new administration in the US mean for relations with China?

GS: Competition between the US and China will continue for the rest of our lives and probably our kids' lives. President Biden said he's reviewing the China relationship, so that we should hear a lot more about that later in the year. Based on testimony by Secretary of State Antony Blinken and Treasury Secretary Janet Yellen, we can get a flavor of the administration's approach. In one way, it's similar to the Trump administration in their diagnosis of China as the US' main strategic competitor. We expect limits to exports of cutting-edge technology will continue, especially semiconductors. We also expect a continuation of limits on China buying cutting-edge US companies.

In other respects, there's a little bit more room to try for some concessions from the Chinese. There's some room around the phase one trade agreement. Maybe there's some room around not increasing further the list of restricted companies for US investors.

Everything related to national security will continue to be redlined. So will restrictions on companies related to the Chinese military, and those related to the confrontation around human rights and democracy.

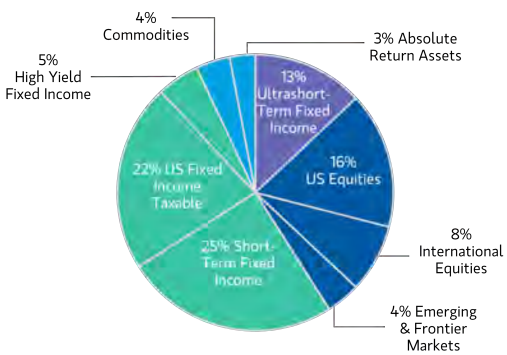
I think a mixture of competition, cooperation and some confrontation is here to stay. As investors, we need to be aware of them, but always ask ourselves whether any sort of announcement related to China is actually material in a financial or investment context, or whether certain things are more important in the geopolitical sphere. ■

Gabriela Santos is not an employee of Morgan Stanley Wealth Management or its affiliates. Opinions expressed by her are her own and may not necessarily reflect those of Morgan Stanley Wealth Management or its affiliates.

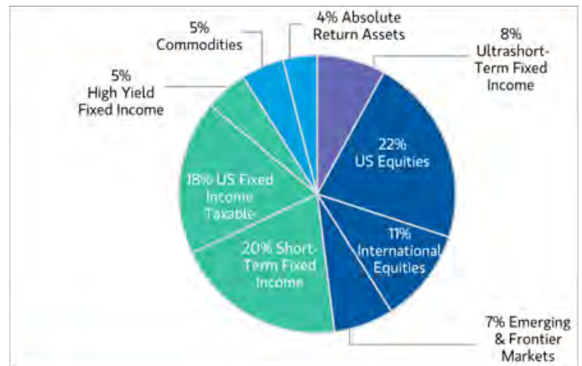
Global Investment Committee Tactical Asset Allocation

The Global Investment Committee provides guidance on asset allocation decisions through its various models. The five models below are recommended for investors with up to $25 million in investable assets. They are based on an increasing scale of risk (expected volatility) and expected return.

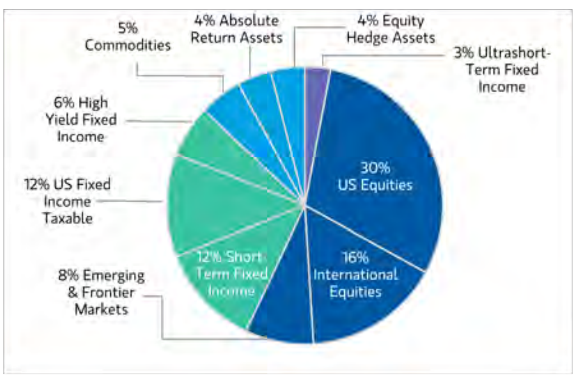
Wealth Conservation



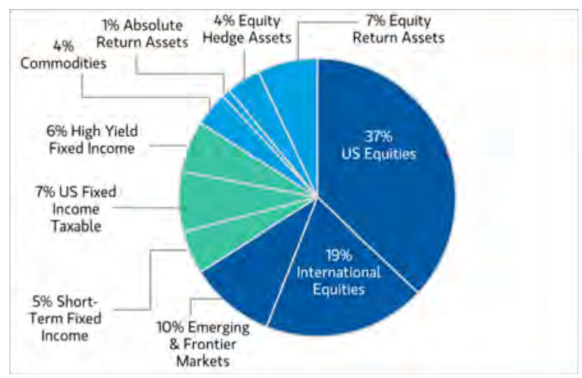
Income



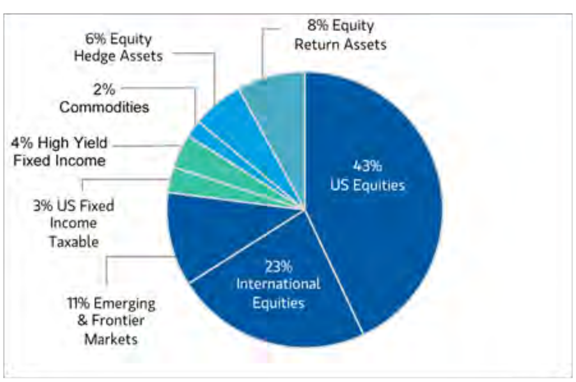
Balanced Growth



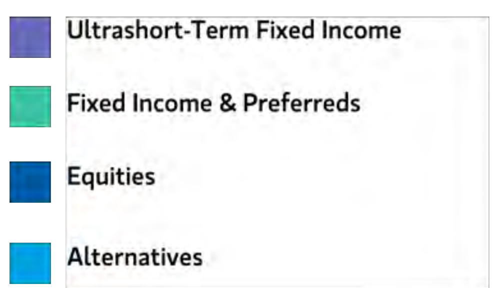
Market Growth



Opportunistic Growth



Key



Source: Morgan Stanley Wealth Management GIC as of Feb. 28, 2021

The Global Investment Committee provides guidance on asset allocation decisions through its various models. The five models below are recommended for investors with over $25 million in investable assets. They are based on an increasing scale of risk (expected volatility) and expected return.

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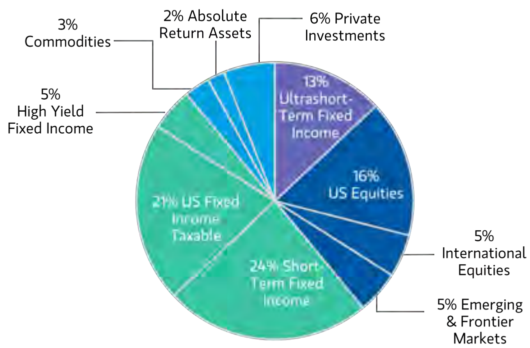
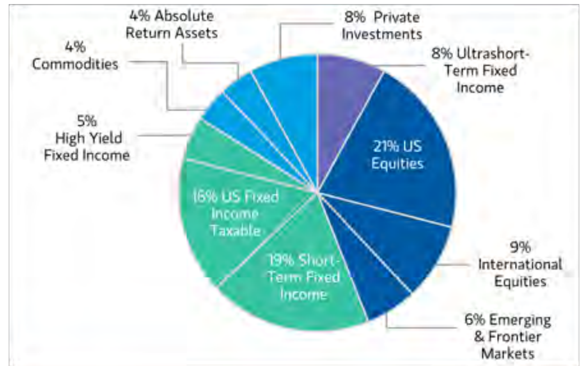
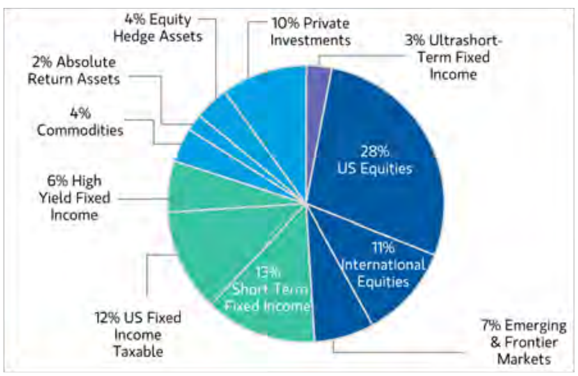


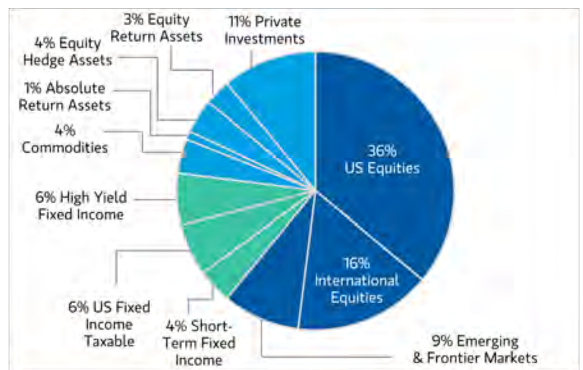
Income



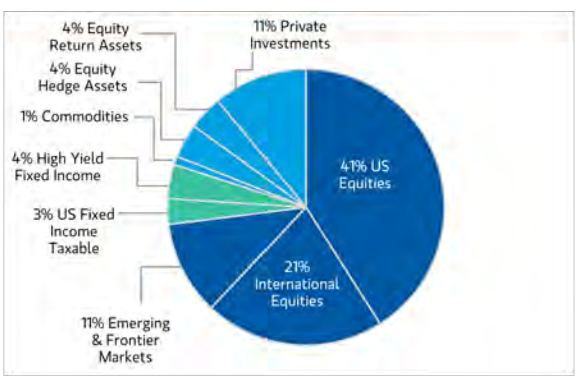
Balanced Growth



Market Growth



Opportunistic Growth



Key

- Ultrashort-Term Fixed Income
- Fixed Income & Preferreds
- Equities
- Alternatives

Source: Morgan Stanley Wealth Management GIC as of Feb. 28, 2021

Tactical Asset Allocation Reasoning

Global Equities	Relative Weight Within Equities	
US	Overweight	A V-shaped recovery is central to our thesis that a new business cycle and bull market have begun. Risks remain around policy changes, fiscal stimulus and the COVID-19 vaccine, but we expect 2021 GDP growth in the 5%-to-6% range, which should improve profits among cyclical and small-/mid-cap companies. We prefer active stock-picking rather than holding the S&P 500 Index, which is overly concentrated in large tech stocks. Those leaders are likely fully priced, facing tough year-over-year comparisons and decelerating sequential momentum.
International Equities (Developed Markets)	Market Weight	In Europe, prospects for fiscal stimulus and concrete moves toward pan-Europe fiscal integration are game-changers. In Japan, economic recovery is gaining momentum, and we expect shareholder-friendly and positive return-on-equity policies to persist. The weakening of the US dollar is a tailwind.
Emerging Markets	Overweight	China was the first country to enter the COVID-19 crisis and appears poised to be the first out. Resumption of economic activity during the second quarter should jump-start global growth, especially given huge government stimulus programs. Ample liquidity from the Fed and a weakening dollar should catalyze investor interest. China stands to gain the most from US tariff rollbacks and global trade dynamics should improve. Valuations are attractive and local central banks should be able to maintain accommodation and stimulus.
Global Fixed Income	**Relative Weight Within Fixed Income**	
US Investment Grade	Market Weight	We have recommended shorter-duration* (maturities) since March 2018, given the extremely low yields and potential capital losses associated with rising interest rates from such low levels, and had been pairing that position with a large exposure to long-term US Treasuries to hedge what we expected would be a modest correction in stocks. With long-term Treasury yields troughing for the cycle, we recently removed that position and resumed a benchmark exposure to duration. Recent dislocation of investment grade credit spreads and market illiquidity have created opportunities. Fed programs aimed at backstopping this market give reason to be an active bond selector.
International Investment Grade	Underweight	Negative interest rates suggest that this is not a preferred asset class for US-dollar clients at this time. Actively managed funds may provide very patient, risk-tolerant clients with income opportunities in select corporate credits.
Inflation-Protection Securities	Underweight	The “sudden stop” recession has caused a severe pricing of real interest rates, pushing them negative and near all-time lows. In the near term, upside appears limited.
High Yield	Overweight	High yield bonds remain at the epicenter of the dual risks from COVID-19 and the collapse in oil prices from the failure of OPEC negotiations. In our view, some of the most extreme risks have been discounted, especially in light of unprecedented monetary and fiscal policy intervention aimed not only at market liquidity but in bridging cash flow requirements. It’s time to ease in opportunistically, using active managers.
Alternative Investments	**Relative Weight Within Alternative Investments**	
REITs	Market Weight	Real estate investment trusts (REITs) were laggards in 2020 as the pandemic's impact on retail and urban office space weighed heavily on the sector. With real interest rates still negative and inflation expectations rising, we expect to be selective opportunistic investors in the sector this year.
Commodities	Overweight	The “sudden stop” global recession has driven commodities such as oil to multidecade lows. The rush to the "safe haven” US dollar, which is near its multiyear high, has exacerbated these dynamics. While we recognize the complexity of the geopolitical issues that surround oil, we believe that on a six-to-12-month basis the outlook for the global economy and overall demand will improve materially. Thus, we suggest risk-oriented clients establish exposure to the broad diversified asset class through the use of active managers. Pure passive exposure is not advised at this time.
Hedged Strategies (Hedge Funds and Managed Futures)	Overweight	The bear market associated with COVID-19 has driven volatility to historic extremes and led to wide dispersion in price performance and stock-level idiosyncratic risk. These factors tend to create a constructive environment for hedge fund managers who are good stock-pickers and can use leverage and risk management techniques to amplify returns. We prefer very active and fundamental strategies, especially equity long/short.

*For more about the risks to Duration, please see the Risk Considerations section beginning on page 17 of this report.
Source: Morgan Stanley Wealth Management GIC as of Feb. 28, 2021

Disclosure Section

The **Global Investment Committee (GIC)** is a group of seasoned investment professionals from Morgan Stanley & Co. and Morgan Stanley Wealth Management who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend asset allocation model weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

Jessica Alsford, Chris Baxter, Vibhor Dave, Brandon Dees, Nick Lentini, Tara Kalwarski, Sachin Manchanda, Kelley McKee, Sean O'Laughlin, Jonah Silverman, Nathan Wagener and Ellen Zentner are not members of the Global Investment Committee and any implementation strategies suggested have not been reviewed or approved by the Global Investment Committee.

Index Definitions

PHILADELPHIA SEMICONDUCTOR INDEX This is a capitalization-weighted index of the 30 largest companies primarily involved in the design, distribution, manufacturing and sale of semiconductors.

S&P GLOBAL CLEAN ENERGY INDEX This index measures the performance of 30 companies from around the world that are involved in the clean-energy related businesses, comprising a diversified mix of clearn energy production and clearn energy equipment and technology companies.

SHANGHAI SHIPPING EXCHANGE CHINA CONTAINERIZED FREIGHT INDEX This index is based on a sample of 14 shipping lines using 10 ports of departure in China.

SHANGHAI SHIPPING EXCHANGE SHANGHAI CONTAINERIZED FREIGHT INDEX This index reflects the spot rates of the Shanghai export container transport market. It includes both freight rates of 15 individual shipping routes and a composite index.

For index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions

Risk Considerations

Alternative Investments

The sole purpose of this material is to inform, and it in no way is intended to be an offer or solicitation to purchase or sell any security, other investment or service, or to attract any funds or deposits. Investments mentioned may not be appropriate for all clients. Any product discussed herein may be purchased only after a client has carefully reviewed the offering memorandum and executed the subscription documents. Morgan Stanley Wealth Management has not considered the actual or desired investment objectives, goals, strategies, guidelines, or factual circumstances of any investor in any fund(s). Before making any investment, each investor should carefully consider the risks associated with the investment, as discussed in the applicable offering memorandum, and make a determination based upon their own particular circumstances, that the investment is consistent with their investment objectives and risk tolerance.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing.

Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

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Hypothetical Performance

General: Hypothetical performance should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

Hypothetical performance results have inherent limitations. The performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation.

Despite the limitations of hypothetical performance, these hypothetical performance results may allow clients and Financial Advisors to obtain a sense of the risk / return trade-off of different asset allocation constructs.

Investing in the market entails the risk of market volatility. The value of all types of securities may increase or decrease over varying time periods.

This analysis does not purport to recommend or implement an investment strategy. Financial forecasts, rates of return, risk, inflation, and other assumptions may be used as the basis for illustrations in this analysis. They should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. No analysis has the ability to accurately predict the future, eliminate risk or guarantee investment results. As investment returns, inflation, taxes, and other economic conditions vary from the assumptions used in this analysis, your actual results will vary (perhaps significantly) from those presented in this analysis.

The assumed return rates in this analysis are not reflective of any specific investment and do not include any fees or expenses that may be incurred by investing in specific products. The actual returns of a specific investment may be more or less than the returns used in this analysis. The return assumptions are based on hypothetical rates of return of securities indices, which serve as proxies for the asset classes. Moreover, different forecasts may choose different indices as a proxy for the same asset class, thus influencing the return of the asset class.

An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment at $1.00 per share, it is possible to lose money by investing in the fund.

ETF Investing

An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. Investing in an international ETF also involves certain risks and considerations not typically associated with investing in an ETF that invests in the securities of U.S. issues, such as political, currency, economic and market risks. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economics. ETFs investing in physical commodities and commodity or currency futures have special tax considerations. Physical commodities may be treated as collectibles subject to a maximum 28% long-term capital gains rates, while futures are marked-to-market and may be subject to a blended 60% long- and 40% short-term capital gains tax rate. Rolling futures positions may create taxable events. For specifics and a greater explanation of possible risks with ETFs¸ along with the ETF's investment objectives, charges and expenses, please consult a copy of the ETF's prospectus. Investing in sectors may be more volatile than diversifying across many industries. The investment return and principal value of ETF investments will fluctuate, so an investor's ETF shares (Creation Units), if or when sold, may be worth more or less than the original cost. ETFs are redeemable only in Creation Unit size through an Authorized Participant and are not individually redeemable from an ETF.

Investors should carefully consider the investment objectives and risks as well as charges and expenses of an exchange-traded fund or mutual fund before investing. The prospectus contains this and other important information about the mutual fund. To obtain a prospectus, contact your Financial Advisor or visit the mutual fund company's website. Please read the prospectus carefully before investing.

MLPs

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk.

The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value.

MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV; and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Duration

Duration, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. Generally, if interest rates rise, bond prices fall and vice versa. Longer-term bonds carry a longer or higher duration than shorter-term bonds; as such, they would be affected by changing interest rates for a greater period of time if interest rates were to increase. Consequently, the price of a long-term bond would drop significantly as compared to the price of a short-term bond.

International investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with **emerging markets** and **frontier markets**, since these countries may have relatively unstable governments and less established markets and economies.

Investing in currency involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Managed futures investments are speculative, involve a high degree of risk, use significant leverage, have limited liquidity and/or may be generally illiquid, may incur substantial charges, may subject investors to conflicts of interest, and are usually appropriate only for the risk capital portion of an investor's portfolio. Before investing in any partnership and in order to make an informed decision, investors should read the applicable prospectus and/or offering documents carefully for additional information, including charges, expenses, and risks. Managed futures investments are not intended to replace equities or fixed income securities but rather may act as a complement to these asset categories in a diversified portfolio.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Physical precious metals are non-regulated products. Precious metals are speculative investments, which may experience short-term and long-term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. If sold in a declining market, the price you receive may be less than your original investment. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor. The Securities Investor Protection Corporation ("SIPC") provides certain protection for customers' cash and securities in the event of a brokerage firm's bankruptcy, other financial difficulties, or if customers' assets are missing. SIPC insurance does not apply to precious metals or other commodities.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Interest on municipal bonds is generally exempt from federal income tax; however, some bonds may be subject to the alternative minimum tax (AMT). Typically, state tax-exemption applies if securities are issued within one's state of residence and, if applicable, local tax-exemption applies if securities are issued within one's city of residence.

Treasury Inflation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Although they are backed by the full faith and credit of the U.S. Government as to timely payment of principal and interest, **Treasury Bills** are subject to interest rate and inflation risk, as well as the opportunity risk of other more potentially lucrative investment opportunities.

CDs are insured by the FDIC, an independent agency of the U.S. Government, up to a maximum of $250,000 (including principal and accrued interest) for all deposits held in the same insurable capacity (e.g. individual account, joint account, IRA etc.) per CD depository. Investors are responsible for monitoring the total amount held with each CD depository. All deposits at a single depository held in the same insurable capacity will be aggregated for the purposes of the applicable FDIC insurance limit, including deposits (such as bank accounts) maintained directly with the depository and CDs of the depository. For more information visit the FDIC website at www.fdic.gov.

The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price.

The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk.

The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield.

Some $25 or $1000 par **preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Principal is returned on a monthly basis over the life of a **mortgage-backed security.** Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Companies paying **dividends** can reduce or cut payouts at any time.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies. **Technology stocks** may be especially volatile. Risks applicable to companies in the **energy and natural resources** sectors include commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

Credit ratings are subject to change.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment.

The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Smith Barney LLC retains the right to change representative indices at any time.

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RSI1614694821536 03/2021