Sailing in Uncharted Waters: 2022 Scenarios

1.08.22
About Stearns Financial Group

Stearns Financial Group is a nationally-recognized wealth manager with offices in Chapel Hill and Greensboro, NC and clients around the U.S.

SFG distinguishes itself with cultural integrity and thoughtful strategies:

- A trademarked Financial Plan process that is multi-scenario driven for today’s uncharted waters.
- A disciplined investment process that has attracted over $1.8 billion in managed assets.
- Thoughtful leaders who are regularly featured in national publications and lead best practice sessions for local, regional and national financial conferences and consumer investment groups like the American Association of Individual Investors.
- A fiduciary duty with no hidden sales agendas.
- Community leaders who have earned three national community service awards.

Stearns Financial has been called “one of the leading scenario experts in the financial industry” by the Financial Planning Association.

www.StearnsFinancial.com

Plan Ahead. Play Smart.
Current Considerations for Investing

1. The Federal Reserve has indicated they will be normalizing policy over the next several years. **Can they thread the needle?**

2. Bonds are at a multi-decade low and have a low probability of exceeding inflation in the next three to five years. **Do they still have value for defense?**

3. As the vaccine rollout has allowed the U.S. economy to largely reopen, U.S. stocks have rallied off the pandemic lows and many are at or above fair value. **Should we be worried about the Omicron or future COVID variants?**

4. Inflation has been surging. **Should we be worried about our personal budgets or corporate earnings?**

5. An environment of low interest rates and modest inflation justifies some highervaluations. **How long will it last?**
Current Considerations for Investing

6. Many international stocks remain below fair value and have better return prospects (and better dividend yields) in the next three to five years. How much to allocate?

7. The U.S. remains a strong hub of innovation – the techno-industrial revolution we are currently in justifies higher valuations in technology companies and tech-enabled companies, up to a reasonable level. What is reasonable? How much to allocate?

8. Private real assets, well managed in good growth areas, remains a good core growth asset, however current valuations are stretched in many areas. Options in real assets?

9. Many alternative assets like private equity and venture capital are in a sweet spot, but too much money chasing too few good companies warrants some caution. Who should consider these alternatives?
Facts Worth Knowing About 2021 Markets

1. The S&P 500 outperformed the NASDAQ for the first time since 2016 and the second time since 2011.


3. The 3-year aggregate price return on the S&P 500 is 90.13%, the highest level since 1999.

4. Global cash inflows into ETFs roughly doubled in 2021 from 2020 levels to $1.14 trillion. Global ETF AUM is roughly $10 trillion.

5. S&P 500 operating earnings are on track to have increased by 49% in 2021, with an increase in revenues of 15.8%, and an increase in profit margins of 28.8%

6. Never before has University of Michigan Sentiment data declined by double digits for two years in a row only to have the S&P 500 log two consecutive double-digit gains.

Source: Strategas Research, 1.03.22
### SAILING IN UNCHARTED WATERS: 2022 SCENARIOS

Source: Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management.

**Large cap:** S&P 500, **Small cap:** Russell 2000, **EM Equity:** MSCI EME, **DM Equity:** MSCI EAFE, **Comdty:** Bloomberg Commodity Index, **High Yield:** Bloomberg Global HY Index, **Fixed Income:** Bloomberg US Aggregate, **REITs:** NAREIT Equity REIT Index, **Cash:** Bloomberg 1-3m Treasury.

The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg US Aggregate, 5% in the Bloomberg 1-3m Treasury, 5% in the Bloomberg Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period from 12/31/06 to 12/31/21. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns. Guide to the Markets – U.S. Data are as of December 31, 2021.
S&P 500 Valuation Measures


Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1996, and J.P. Morgan Asset Management for December 31, 2021. Current next 12-months consensus earnings estimates are $228. Average P/E and standard deviations are calculated using 25 years of IBES history. Shiller’s P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody’s Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. *P/CF is a 20-year average due to cash flow availability.

Earnings are Robust

Source: FactSet, Compustat, Standard & Poor’s, J.P. Morgan Asset Management. EPS levels are based on annual operating earnings per share. Percentages may not sum due to rounding. Past performance is not indicative of future returns. “2021 earnings estimates are based on forecasts from FactSet Market Aggregates.


SAILING IN UNCHARTED WATERS: 2022 SCENARIOS
Source: BEA, Compustat, FactSet, Standard & Poor’s, J.P. Morgan Asset Management. Past performance is not indicative of future returns. *Labor share of income and profit margins are shown on a 4-quarter moving average basis.

Strategas:
“Top-Down Ests. Project Stronger EPS Growth Than Bottom-Up Data
With the average 2022 EPS estimate at $231, strategists expect earnings growth to be around 12%. This is notably stronger than the bottom-up estimate data, which suggests earnings will come in around $223 for a growth rate of about 8%.”

Source: Strategas Research, Bloomberg, 1.03.22

SAILING IN UNCHARTED WATERS: 2022 SCENARIOS
SAILING IN UNCHARTED WATERS: 2022 SCENARIOS

Source: IHS Markit, J.P. Morgan Asset Management
*Participants in IHS Markit’s PMI business surveys, conducted in 44 countries, are asked: “Are your suppliers’ delivery times slower, faster or unchanged on average than one month ago?”. Index includes the manufacturing and construction sectors. A reading of 50 = no change, >50 = faster delivery time, <50 = slower delivery time. **Participants are asked: “Are input/output prices the same, higher or lower?”. Values shown reflect the composite index, which includes both manufacturing and services. A reading of 50 = no change, >50 = price increase, <50 = price decrease.

Guide to the Markets – U.S. Data are as of December 31, 2021
COVID-19: Cases, Fatalities and Immunity

**Source:** Centers for Disease Control and Prevention, Johns Hopkins CSSE, Our World in Data, J.P. Morgan Asset Management.

*Share of the total population that has received at least one vaccine dose. **Est. Infected only represents the number of people who may have been infected by COVID-19 by using the CDC’s estimate that 1 in 4.2 COVID-19 infections were reported. ***Est. Infected & vaccinated reflects those that have been both infected and vaccinated, assuming those infected equally likely to be vaccinated as those not infected.


SAILING IN UNCHARTED WATERS: 2022 SCENARIOS
SAILING IN UNCHARTED WATERS: 2022 SCENARIOS

Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department.
Estimates are based on the Congressional Budget Office (CBO) July 2021 Update to the Budget and Economic Outlook, except for 2021 estimates of the federal deficit and net debt levels. These estimates and the details on the breakdown of spending, excluding net interest, are J.P. Morgan Asset Management estimates. Other spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Note: Years shown are fiscal years. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward statements, actual events, results or performance may differ materially from those reflected or contemplated.

SAILING IN UNCHARTED WATERS: 2022 SCENARIOS

Consumer balance sheet

3Q21, trillions of dollars outstanding, not seasonally adjusted

- Total assets: $182.7 tn
- 3Q07 Peak: $85.1 tn
- 1Q09 Low: $73.9 tn

- Homes: 25%
- Other tangible: 5%
- Deposits: 9%
- Pension funds: 19%
- Other financial assets: 42%

- Total liabilities: $18.0 tn
- Mortgages: 65%

Household debt service ratio

Debt payments as % of disposable personal income, SA

- 1Q80: 10.8%
- 3Q07: 13.2%
- 4Q07: 9.0%
- 4Q21: **9.0%**

Household net worth

Not seasonally adjusted, USD billions

- 3Q07: $70,728
- 4Q21: $150,788

Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA.

Data include households and nonprofit organizations. SA – seasonally adjusted. *Revolving includes credit cards. Values may not sum to 100% due to rounding. **4Q21 figures for debt service ratio and household net worth are J.P. Morgan Asset Management estimates.

Guide to the Markets – U.S. Data are as of December 31, 2021
MSCI EAFE and MSCI USA relative performance
U.S. dollar, total return, cumulative outperformance*

Regime change determined when there is sustained outperformance of one region over the other for a cumulative 12 months.

Source: FactSet, MSCI, J.P. Morgan Asset Management. *Cycles of outperformance include a qualitative component to determine turning points in leadership. Past performance is not indicative of future returns.


SAILING IN UNCHARTED WATERS: 2022 SCENARIOS
Growth or Value?

(Left) Growth is represented by the Russell 1000 Growth Index and Value is represented by the Russell 1000 Value Index. *Long-term averages are calculated monthly since December 1997. **Dividend yield is calculated as the next 12-month consensus dividend divided by most recent price. (Right) *Communication services correlation is since 3Q13 and based on back tested data by JPMAM. **Financials correlation is since 4Q19. Guide to the Markets – U.S. Data are as of December 31, 2021.
The top 10 S&P 500 companies are based on the 10 largest index constituents at the beginning of each month. The weight of each of these companies is revised monthly. As of 12/1/21, the top 10 companies in the index were AAPL (6.8%), MSFT (6.5%), AMZN (3.9%), TSLA (2.3%), GOOGL (2.2%), GOOG (2.1%), NVDA (2.1%), FB (1.9%), BRK.B (1.3%), JPM (1.2%), and JNJ (1.2%). The remaining stocks represent the rest of the 494 companies in the S&P 500.

Source: FactSet, Standard & Poor’s, J.P. Morgan Asset Management.

Churn Under Surface
SAILING IN UNCHARTED WATERS: 2022 SCENARIOS

Valuation dispersion between the 20th and 80th percentile of S&P 500 stocks

<table>
<thead>
<tr>
<th></th>
<th>25-yr. average</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median S&amp;P 500 P/E</td>
<td>16.0</td>
<td>20.3</td>
</tr>
<tr>
<td>Valuation spread</td>
<td>11.3</td>
<td>21.7</td>
</tr>
</tbody>
</table>

Source: Compustat, FactSet, Standard & Poor’s, J.P. Morgan Asset Management.
The Fed and Interest Rates

Federal funds rate expectations


Market expectations are based off of the USD Overnight Index Forward Swap rates. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.

Inflation and Interest Rate Considerations

INFLATION GREATER THAN 4% HAS HISTORICALLY LED TO SIGNIFICANT MULTIPLE COMPRESSION

RISING RATES WOULD ALSO BE A HEADWIND TO MULTIPLES SHOULD IT OCCUR
Future U.S. Stock Valuation
Scenario 1 - Normalization

Premise: Interest rates normalize back to pre-2008 levels by 2026 due to above trend economic growth. The 10 year treasury yield in this scenario = 4%, the longer term historical average.

S1 Assumptions:
- Stock valuations (Price/Earnings Ratio) decline from current 20X earnings to historical average of 15X earnings.
- Earnings growth for the S&P 500 index equals 12% in 2022, and 8% per year afterwards (higher than average in demand growth driven economy).

Scenario 1 Result:
- S&P 500 earnings grow by 50%, but valuation contracts by 25%.
- S&P 500 value = 5% growth per year plus 2% dividends = 7% total return.
- Volatility = High [Any disruption in profit margins and earnings will create rolling corrections]

SFG Probability Likelihood of Scenario 1: Low - Moderate
Future U.S. Stock Valuation
Scenario 2 – Partial Normalization

Premise: Interest rates increase by 2026, but are lower than historical average due to modest Federal Reserve policies and super trend forces containing inflation, especially automation. The 10 year treasury yield in this scenario = 3%, double current levels.

S2 Assumptions:
- Stock valuations (Price/Earnings Ratio) decline from current 20X earnings to 17X earnings.
- Earnings growth for the S&P 500 index equals 12% in 2022, and 6% per year afterwards (historical average).

Scenario 1 Result:
- S&P 500 earnings grow by 36%, but valuation contracts by 15%.
- S&P 500 value = 4% growth per year plus 2% dividends = 6% total return.
- Volatility = High [Any disruption in profit margins and earnings will create rolling corrections]

SFG Probability Likelihood of Scenario 2: Moderate - High
Potential Valuation Headwinds & Tailwinds

**Potential Headwinds**

1. Inflation for companies (supply chain bottlenecks & labor costs)
2. Regulatory increases
3. Corporate tax rates
4. Geo-political wildcards (especially China, Russia, Iran)
5. Insider trading (just taking some chips off the table, or something else?)
6. Federal Reserve missteps as they “normalize” monetary conditions
7. Higher future interest rates negatively impact big tech companies (discounts future earnings value)
8. Anything to dampen animal spirits/confidence (new COVID variant, black swan events)

Source: Strategas Research, 1.03.22
Potential Tailwinds

1. Massive cash on the sidelines
2. Earnings at the higher end of 2022 projections (12%)
3. No alternative (yet) to riskier assets
4. Automation helping profit margins
5. New more flexible supply chains
6. Stock buybacks at record levels (helps earnings growth)
7. Anything to strengthen animal spirits/confidence (lack of bad news, demand driven economy, power balance after mid-term elections?)

Source: Strategas Research, 1.03.22
## Bull Market Top Checklist

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2007</th>
<th>Current</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blow-off top</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>With the market essentially flat over the last three months, market appears to be consolidating.</td>
</tr>
<tr>
<td>2. Heavy inflows into equity market funds</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>ETFs have seen large inflows but overall equity fund flows are underwhelming in aggregate. Money market mutual fund assets remain high as well.</td>
</tr>
<tr>
<td>3. Big pick-up in M&amp;A activity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>M&amp;A activity has begun robust for the last five quarters and currently the pipeline remains strong. Many M&amp;A advisory firms are on pace for record years.</td>
</tr>
<tr>
<td>4. IPO activity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>While IPO activity has slowed considerably from earlier in the year, 2021 is on pace to be a record year.</td>
</tr>
<tr>
<td>5. Rising real interest rates</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Real rates remain well into negative territory.</td>
</tr>
<tr>
<td>6. Weakening upward earnings revisions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Earnings revisions turned lower from their record levels and have begun to stabilize.</td>
</tr>
<tr>
<td>7. Erosion in number of stocks making new highs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Breadth has narrowed from earlier this year. The average S&amp;P 500 stock is down about ~14% compared the index just being down 4%.</td>
</tr>
<tr>
<td>8. Shift towards defensive leadership</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Defensive sectors have begun to outperform over the last week but it would be too soon to call them leadership.</td>
</tr>
<tr>
<td>9. Widening credit spreads</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Both investment grade and high yield spreads have widened only marginally from all-time lows.</td>
</tr>
</tbody>
</table>
### SAILING IN UNCHARTED WATERS: 2022 SCENARIOS

The latest MacroQuant recommendations and a discussion of the MacroQuant model can be found here. Tactical recommendations are shown only for assets covered by the MacroQuant model. MacroQuant recommendations may differ from the more subjective views expressed in the rest of the matrix.

**Relative to MSCI ACWI (Currency Unhedged).**

***Relative to Bloomberg Barclays Global Aggregate (Currency Hedged).***

****In trade-weighted terms.

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**Source:** BCA Research - Global Investment Strategy, 12.02.21

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#### BCA View Matrix

<table>
<thead>
<tr>
<th>Global Asset Allocation</th>
<th>MacroQuant Tactical Recommendations</th>
<th>Global Investment Strategy Views</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-Month</td>
<td>12-Month</td>
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<tr>
<td>Equities</td>
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<td>Fixed Income</td>
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<tr>
<td>Cash</td>
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<td>3</td>
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<tr>
<td>Global Equities (Region)**</td>
<td></td>
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<tr>
<td>US</td>
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<td>Euro Area</td>
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<td>Canada</td>
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<td>Japan</td>
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<tr>
<td>EM</td>
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<tr>
<td>Global Fixed Income***</td>
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<td>Investment Grade</td>
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<td>High Yield</td>
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<td>Duration</td>
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<tr>
<td>Inflation Protection</td>
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<tr>
<td>Global Fixed Income (Region)***</td>
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<tr>
<td>US Treasuries</td>
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<td>UK Gilts</td>
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<td>German Bunds</td>
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<td>Yen</td>
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<td>EM Sovereign</td>
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<td>Currency****</td>
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<td>GBP</td>
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<td>JPY</td>
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<td>CAD</td>
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<td>AUD</td>
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<td>EM Currencies</td>
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<td>Commodities (vs USD)</td>
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<td></td>
<td>Gold</td>
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<tr>
<td></td>
<td>Softs</td>
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**Legend:**

- 1 - Denotes Strong Underweight/Very Bearish View.
- 2 - Denotes Underweight/Bearish View.
- 3 - Denotes Neutral View.
- 4 - Denotes Overweight/Bullish View.
- 5 - Denotes Strong Overweight/Very Bullish View.
### Strategas Recommended Asset Allocation (Dec'21)

<table>
<thead>
<tr>
<th>Equities</th>
<th>Bonds</th>
<th>Cash &amp; Equivalents</th>
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<tbody>
<tr>
<td>B'mark</td>
<td>MSCI ACWI</td>
<td>Barclays Agg</td>
</tr>
<tr>
<td>Domestic</td>
<td>34%</td>
<td>28%</td>
</tr>
<tr>
<td>International</td>
<td>28%</td>
<td>Extended Credit*</td>
</tr>
<tr>
<td>Total</td>
<td>62%</td>
<td>30%</td>
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<table>
<thead>
<tr>
<th>Overweight</th>
<th>IG Corporates</th>
<th>Bank Loans*</th>
<th>Gold</th>
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</thead>
<tbody>
<tr>
<td>Dev AC Core</td>
<td>21.7%</td>
<td>14.7%</td>
<td>4%</td>
</tr>
<tr>
<td>US LC Value</td>
<td>8.7%</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>US MC Value</td>
<td>3.1%</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>US SC Core</td>
<td>3.1%</td>
<td></td>
<td>8%</td>
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<table>
<thead>
<tr>
<th>Neutral</th>
<th>Agencies</th>
<th>ABS/CMBS</th>
<th>US Dollar EMD*</th>
<th>TIPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>US LC Growth</td>
<td>12.4%</td>
<td>1.5%</td>
<td>0.9%</td>
<td>0.6%</td>
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<tr>
<td>EM AC Core</td>
<td>6.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US MC Growth</td>
<td>1.9%</td>
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</table>

<table>
<thead>
<tr>
<th>Underweight</th>
<th>US MBS</th>
<th>U.S. Treasuries</th>
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</thead>
<tbody>
<tr>
<td>US LC Core</td>
<td>5.1%</td>
<td>7.5%</td>
</tr>
<tr>
<td>US MC Core</td>
<td>0.0%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

*May not add due to rounding at the bottom of the table.

Source: Strategas Securities – Global Asset Allocation, 12.17.21

SAILING IN UNCHARTED WATERS: 2022 SCENARIOS
Private real assets have historically generated more return with less risk than a 60/40 portfolio.

Source: Versus Capital Research, Morningstar Direct, NCREIF, JP Morgan, MSCI. Note: Pricing methodologies for private real assets indices and public market indices differ. Private real assets use a quarterly appraisal-based methodology while public indices use public market auction-based methodologies. The quarterly appraisal-based methodology of private real assets may result in a lack of price transparency as compared to public market indices. Private real assets investments may also have higher costs and less liquidity than the other investments represented. Past performance is no guarantee of future returns. See disclosure pages at end for index descriptions.

SAILING IN UNCHARTED WATERS: 2022 SCENARIOS

30-Year Trailing Risk-Reward Chart (6/30/1991 - 6/30/2021)
Big Data and Analytics: Capabilities with data sets too large and complex to manipulate or interrogate with standard methods or tools. Related subthemes include the "Internet of Things," machine learning, and artificial intelligence.

Networks and Computer Systems: Technology leaps ranging from hyperconnectivity and integrated systems, to service continuity and new software-defined architectures, will have a massive impact on the way people think of connecting applications and software with hardware.

Nanotechnology: The branch of technology that deals with dimensions and tolerances of less than 100 nanometers, especially the manipulation of individual atoms and molecules. We see a range of potential applications spanning medicine, computing, manufacturing, and travel.
Morningstar’s 9 Future Themes

- **Medicine and Neuroscience**: Sciences, such as neurochemistry and experimental psychology, that deal with the nervous system and brain. Key advancements in unlocking the human genome have created an infrastructure of biomarkers, while paradigm shifts in biotechnology that can alter the immune system are radically changing the way we treat diseases.

- **Energy and Environmental Systems**: This involves the exploration of renewable energy sources—including solar, wind, water, and batteries. As organizations set processes to help reduce environmental impacts and increase operating efficiency, new avenues for technological advancement across sectors will open up.

- **Robotics**: The branch of technology that deals with the design, construction, operation, and application of robots. Advances in robotics, specifically when combined with other exponential technologies, have seemingly infinite potential applications, spanning technology, industrial, medical, and consumer-facing channels.
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- **3D Printing**: A process for making a physical object from a three-dimensional digital model. The emerging trend is ready for mainstream consumption and has ample potential to disrupt several industries, from industrial manufacturing and medicine, to consumer products and retail.

- **Bioinformatics**: The science of collecting and analyzing complex biological data. The "quantified sell" trend of acquiring data to quantify aspects of an individual's daily life has exponential potential to positively affect both the duration and quality of life.

- **Financial-Services Innovation**: The search for and acknowledgement of emerging funding sources, platforms, currencies, and stored and transferred value. We not only think about opportunities to efficiently expand production but also the underlying currencies used (including cryptocurrencies), as well as structural shifts in technology and payment delivery methods.
Returns are based on price index only and do not include dividends. Intra-year drops refer to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2021, over which time period the average annual return was 9.4%.

Index Definitions

All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses. The volatility of the indexes could be materially different from that of a client’s portfolio.

**Equities:**
The MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada.
The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.
The Russell 2000 Index measures the performance of the 2,000 smallest companies in the Russell 3000 Index.
The S&P 500 Index is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The S&P 500 Index focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

**Fixed income:**
The Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than three months and more than one month, are rated investment grade, and have $250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non-convertible.
The Bloomberg Barclays U.S. Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and nonagency). The index has an average maturity generally in the intermediate-term range (5-7 years). Provided the necessary inclusion rules are met, US Aggregate-eligible securities also contribute to the multicurrency Global Aggregate Index and the U.S. Universal Index, which includes high yield and emerging markets debt. The U.S. Aggregate Index was created in 1986 with history backfilled to January 1, 1976.
The Bloomberg Barclays Global High Yield Index is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the U.S. High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets subcomponents are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

**Other asset classes:**
The Bloomberg Commodity Index and related sub-indices are composed of futures contracts on physical commodities and represents 22 separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc.
The NAREIT EQUITY REIT Index is designed to provide the most comprehensive assessment of overall industry performance and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.
Index Definitions (cont’d)

**Versus Capital Research Slide Indices:**

**Private Real Assets Index Blend:** represented by a 50% allocation to private real estate, and a 16.66% allocation each to private infrastructure, private timberland, and private farmland.

**Private Real Estate:** NCREIF Property Index (NPI) measures the appraised values of over 7,000 core commercial operating properties (apartment, hotel, industrial, office and retail) acquired on behalf of tax-exempt institutions and held in a fiduciary environment. Each property’s return is weighted by its market value.

**Private Infrastructure:** JP Morgan OECD Core/Core+ Infrastructure: This modelled time series is representative of stable (core/core-plus) mature long-life infrastructure assets in OECD countries. The index was constructed from cash-flows of approximately 50 mature infrastructure assets in the U.S. and EU-15 countries selected from a broader pool of over 200 assets by omitting assets with significant construction, traffic, licensing risk and capex needs. JP Morgan then applied capital expenditure, maintenance and leverage assumptions using sector averages calculated on a rolling two-year basis at each quarter. Changes in discount rate were approximated using available data from the National Council of Real Estate Investment Fiduciaries (NCREIF) to arrive at estimated total returns. The following infrastructure asset types are represented in the dataset: Electricity Distribution, Natural Gas Distribution, Water and Waste Water Distribution, Ports, Airports and Toll Roads. MSCI Global Quarterly Infrastructure Asset Index measures the equity performance of infrastructure assets globally. Nine infrastructure asset owners contribute asset valuations for 123 individual infrastructure assets with a gross asset value of $61 Billion. Returns are time weighted and currency movements are excluded from return metrics.

**Private 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. All properties in the Farmland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors—the great majority being pension funds. As such, all properties are held in a fiduciary environment.

**Private 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. All properties in the Timberland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors—the great majority being pension funds. As such, all properties are held in a fiduciary environment.

**S&P Real Assets Index:** is designed to measure global property, infrastructure, commodities, and inflation-linked bonds using liquid and investable component indices that track public equities, fixed income and futures.
Index Definitions (cont’d)

**Versus Capital Research Slide Indices (cont’d):**

**Real Estate Index** is a custom blended index broadly covering the global real estate equity and debt securities markets. From 7/9/12 – 10/5/15 the blended index was composed of 80% Dow Jones Global Select Real Estate Securities Index and 20% BBgBarc IG REITs TR USD. From 10/6/15 – Forward the blended index is composed of 80% Dow Jones Global Select Real Estate Securities Index and 20% Dow Jones Global Select Real Estate Securities Corporate Bond Index.

**Real Assets Index** is a custom blended index broadly covering the global real assets equity, debt and commodity markets. The blended index is composed of: 26.67% Dow Jones Brookfield Global Infrastructure Composite Index, 10.00% S&P Global LargeMidCap Commodity and Resources Index, 3.33% S&P Global Timber & Forestry Index, 13.33% Dow Jones Commodity Index, 20.00% Dow Jones Brookfield Global Infrastructure Broad Market Corporate Bond Index, 20.00% S&P Global LargeMidCap Commodity and Resources Corporate Bond Index, 6.67% S&P Global Developed Sovereign Inflation-Linked Bond (USD Index).

**US Equity – S&P 500 Index** measures the performance of 500 widely held stocks in US equity market. Standard and Poor's chooses member companies for the index based on market size, liquidity and industry group representation. Included are the stocks of industrial, financial, utility, and transportation companies. Since mid 1989, this composition has been more flexible and the number of issues in each sector has varied. It is market capitalization-weighted.

**US Bonds - BBgBarc US Agg Bond Index** is an unmanaged index representing more than 5,000 taxable government, investment-grade corporate and mortgage-backed securities, and is generally considered a barometer of the US bond market.

**MSCI ACWI Index** is a commonly followed equity index that captures large and mid cap representation across 23 Developed Markets (DM) and 26 Emerging Markets (EM) countries. With 2,844 constituents, the index covers approximately 85% of the global investable equity opportunity set.

**US Fund Multistrategy Category (Morningstar)** - these funds offer investors exposure to several different alternative investment tactics. Funds in this category have a majority of their assets exposed to alternative strategies. An investor’s exposure to different tactics may change slightly over time in response to market movements. Funds in this category include both funds with static allocations to alternative strategies and funds tactically allocating among alternative strategies and asset classes. The gross short exposure is greater than 20%. 