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# Agenda

## 4:00 PM

I. Call to Order  
Mr. John Litscher

## 4:00 PM

II. Open Session Meeting Minutes - September 13, 2022  
Mr. John Litscher

## 4:00 PM

III. Graystone Consulting Update - Market Commentary Third Quarter 2022  
Messrs. Matt Conway, Tom Parks; Mses. Kelli Schrade, Kristina Van Liew

### Presentation - Graystone Market Commentary - Third Quarter 2022

## 4:10 PM

IV. Closed Session  
Mr. John Litscher  
Motion to enter into closed session pursuant to Wisconsin Statutes section 19.85(1)(e) for the discussion of the following investment matters which for competitive reasons require a closed session: review and approval of closed session minutes, review of UW Health capital markets and portfolio – Third Quarter 2022, review of UW Health’s investment portfolio international growth managers, and discuss recommendation of private real estate managers.

## 5:02 PM*

V. Return to Open Session  
*Estimated time to return to Open Session

## 5:02 PM

VI. ACTION: Approval of International Growth Manager Changes  
Mr. John Litscher  
(Motion to approve Graystone Consulting’s recommendation regarding UW Health’s investment portfolio international growth manager changes as discussed in Closed Session)

## 5:04 PM

VII. ACTION: Approval of Private Real Estate Managers  
Mr. John Litscher  
(Motion to approve private Graystone Consulting’s recommendation of real estate managers as discussed in Closed Session)

## 5:30 PM

VIII. Adjourn
Open Session
Market Commentary

Graystone Consulting | December 7, 2022

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A Much-Needed Breath

Eager to mark an end to this bear market, many investors are asking whether we’ve reached the bottom yet.

Total Returns – Through October 2022

<table>
<thead>
<tr>
<th>Index</th>
<th>Q3 2022</th>
<th>YTD 2022</th>
<th>October 2022</th>
<th>1-YR Trailing</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P 500</td>
<td>-4.9%</td>
<td>-17.7%</td>
<td>8.1%</td>
<td>-14.6%</td>
</tr>
<tr>
<td>Russell 2000</td>
<td>-2.2%</td>
<td>-16.9%</td>
<td>11.0%</td>
<td>-18.6%</td>
</tr>
<tr>
<td>MSCI EAFE</td>
<td>-9.4%</td>
<td>-23.2%</td>
<td>5.4%</td>
<td>-23.0%</td>
</tr>
<tr>
<td>MSCI Emerging Markets</td>
<td>-11.6%</td>
<td>-29.4%</td>
<td>-3.1%</td>
<td>-31.0%</td>
</tr>
<tr>
<td>MSCI ACWI</td>
<td>-6.7%</td>
<td>-20.8%</td>
<td>6.1%</td>
<td>-19.6%</td>
</tr>
<tr>
<td>Barclays Aggregate</td>
<td>-4.8%</td>
<td>-15.7%</td>
<td>-1.3%</td>
<td>-15.7%</td>
</tr>
</tbody>
</table>

Source: Bloomberg. Data as of October 31, 2022. For index definitions to the indices referenced in this report please visit the following: [https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions](https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions)

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material. Investment and services offered through Morgan Stanley Smith Barney LLC. Member SIPC. Graystone Consulting, a business of Morgan Stanley.
Bear Market’s Second Act: Earnings Outlook

Even without a recession, the mean reversion of profits in 2023 translates to a 10%-to-15% decline from current earnings estimates.

Earnings Estimate Uncertainty Is on the Rise

Large Dispersion in EPS Estimates From the Sell Side

Earnings Downgrades Outpace Upgrades Globally

Small Business Profit Outlooks Looks Disappointing

Structural Shocks Lead to Uncharted Territory

The pandemic's structural shocks to the labor supply will be slow to repair as inflation remains high in near term, but a decline looms.

- Vehicles make up the lion's share of core good's inflation...

\[
\text{Contribution to Core Goods Price Level (ppts, vs Feb-20)}
\]

- Labor Force Participation below pre-Covid levels...

\[
\text{Labor Force Participation Rate and Total Employment}
\]

- Even with shelter inflation pressures remaining high, lower medical services inflation and vehicle price deflation will help lower inflation...

- But the Fed is committed to stay the course on higher rates even as awareness of adverse effects to growth grows

“The economy is being driven by very different forces. What we don’t know is whether we’ll be going back to something that looks like, or a little bit like, what we had before.”

Jerome Powell - March 2022

“Reducing inflation is likely to require a sustained period of below-trend growth, and there will very likely be some softening of labor market conditions.”

Jerome Powell - September 2022
In 2022, the Fed’s followed an aggressive, hawkish path, raising rates from near zero to 4% in just 8 months.

Most tightening cycles do not end until the Federal Funds rate exceeds CPI inflation.
It’s Going to be Okay…..

A lot of the pain has already been felt – markets rarely finish at their sharpest lows

Morgan Stanley’s Chief Investment Officer, Lisa Shalett

“Cyclical bear markets driven by policy, like the one we are in now, play out differently for bonds and stocks. Equity bear markets tend to evolve in two stages: first, recalibration of valuation multiples and then, earnings downgrades. Bond bear markets are typically more linear, with interest rates rapidly adjusting to their ultimate destination.”

S&P 500 Annual Price Change & Calendar Year Maximum Declines

Source: Data through September 30, 2022. Bloomberg, Morgan Stanley Wealth Management GIC. Intra-year declines are defined as the peak-to-trough decline during the year based on price return.
Business Cycles Mattered More than Oval Office Occupant

S&P 500 Annual Price Returns & Morgan Stanley Cycle Indicator

Larger returns have been associated more with recoveries and expansions than presidential party control, while lower returns have been associated more with downturns and repairs.

Average Monthly S&P 500 Price Return During Different Business Cycles

<table>
<thead>
<tr>
<th></th>
<th>Downturn</th>
<th>Repair</th>
<th>Recovery</th>
<th>Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>0.27%</td>
<td>0.73%</td>
<td>0.74%</td>
<td>0.65%</td>
</tr>
<tr>
<td>Republican</td>
<td>0.01%</td>
<td>0.48%</td>
<td>0.33%</td>
<td>0.72%</td>
</tr>
<tr>
<td>Democrat</td>
<td>0.72%</td>
<td>1.29%</td>
<td>1.06%</td>
<td>0.59%</td>
</tr>
</tbody>
</table>


The Morgan Stanley Cycle Indicators measure the deviation from historical norms for macro factors including employment, credit conditions, corporate behavior and the yield curve. The repair phase occurs due to the lag time between when these factors are beginning to improve and when they turn positive.
Looking Abroad: Food & Energy Insecurity Looms

Geopolitical impacts on energy and food

Energy Inflation is Greater in Europe Than in the US

Europe continues to import record levels of natural gas. 65% of US exports landed in Europe

Corn has been Ukraine’s main grain export while wheat has shrunk

This is a very different mix to the pre-war composition

Source: Ministry of Agrarian Policy and Food of Ukraine and Morgan Stanley Research
Morgan Stanley Forecasts


### S&P 500 Earnings Estimates

<table>
<thead>
<tr>
<th>Landscape</th>
<th>Earnings</th>
<th>Price/Earnings Multiple</th>
<th>Price Target</th>
<th>Upside/Downside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bull Case</td>
<td>$244</td>
<td>18.2</td>
<td>4,450</td>
<td>24.1%</td>
</tr>
<tr>
<td>Base Case</td>
<td>$219</td>
<td>17.7</td>
<td>3,900</td>
<td>8.8%</td>
</tr>
<tr>
<td>Bear Case</td>
<td>$205</td>
<td>16.3</td>
<td>3,350</td>
<td>-6.6%</td>
</tr>
</tbody>
</table>

*Current S&P 500 Price: 3,586*

Note: Price targets are based on estimated 2023 earnings. 
Source: MS & Co. Research as of Sept. 30, 2022

### Morgan Stanley & Co. Forecasts (as of Sept. 30, 2022)

<table>
<thead>
<tr>
<th>REAL GDP GROWTH (%)</th>
<th>10-YR GOVT. BOND YIELD (%)</th>
<th>HEADLINE INFLATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2022E</td>
</tr>
<tr>
<td>Global</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euro Zone</td>
<td></td>
<td></td>
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<tr>
<td>UK</td>
<td></td>
<td></td>
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<tr>
<td>Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emerging Markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Morgan Stanley & Co. Research

### Global Economic Forecasts

- **Global GDP Growth**
  - 2021: 6.3%
  - 2022E: 2.6%
  - 2023E: 2.6%

- **10-Year Government Bond Yield**
  - Q3 ’22E: 4.00%
  - Q1 ’23E: 3.75%

- **Headline Inflation**
  - 2021: 3.6%
  - 2022E: 8.0%
  - 2023E: 5.3%

Source: Morgan Stanley & Co. Research
Important Disclosures
Glossary of Terms

**Active Contribution Return:** The gain or loss percentage of an investment relative to the performance of the investment benchmark.

**Active Exposure:** The percentage difference in weight of the portfolio compared to its policy benchmark.

**Active Return:** Arithmetic difference between the manager’s return and the benchmark’s return over a specified time period.

**Actual Correlation:** A measure of the correlation (linear dependence) between two variables X and Y, with a value between +1 and -1 inclusive. This is also referred to as coefficient of correlation.

**Alpha:** A measure of a portfolio’s time weighted return in excess of the market’s return, both adjusted for risk. A positive alpha indicates that the portfolio outperformed the market on a risk-adjusted basis, and a negative alpha indicates the portfolio did worse than the market.

**Best Quarter:** The highest quarterly return for a certain time period.

**Beta:** A measure of the sensitivity of a portfolio’s time weighted return (net of fees) against that of the market. A beta greater than 1.00 indicates volatility greater than the market.

**Consistency:** The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product’s performance.

**Core:** Refers to an investment strategy mandate that is blend of growth and value styles without a pronounced tilt toward either style.

**Cumulative Selection Return (Cumulative Return):** Cumulative investment performance over a specified period of time.

**Distribution Rate:** The most recent distribution paid, annualized, and then divided by the current market price. Distribution rate may consist of investment income, short-term capital gains, long-term capital gains, and/or return of capital.

**Down Market Capture:** The ratio of average portfolio returns over the benchmark during periods of negative benchmark return. Lower values indicate better product performance.

**Downside Risk:** A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. The higher the value, the more risk the product has.

**Downside Semi Deviation:** A statistical calculation that measures the volatility of returns below a minimum acceptable return. This return measure isolates the negative portion of volatility: the larger the number, the greater the volatility.

**Drawdown:** A drawdown is the peak-to-trough decline during a specific period of an investment, fund or commodity.

**Excess over Benchmark:** The percentage gain or loss of an investment relative to the investment’s benchmark.

**Excess Return:** Arithmetic difference between the manager’s return and the risk-free return over a specified time period.

**Growth:** A diversified investment strategy which includes investment selections that have capital appreciation as the primary goal, with little or no dividend payouts. These strategies can include reinvestment in expansion, acquisitions, and/or research and development opportunities.

**Growth of Dollar:** The aggregate amount an investment has gained or lost over a certain time period, also referred to as Cumulative Return, stated in terms of the amount to which an initial dollar investment would have grown over the given time period.

**Investment Decision Process (IDP):** A model for structuring the investment process and implementing the correct attribution methodologies. The IDP includes every decision made concerning the division of the assets under management over the various asset categories. To analyze each decision’s contribution to the total return, a modeling approach must measure the marginal value of every individual decision. In this respect, the hierarchy of the decisions becomes very important. We therefore use the IDP model, which serves as a proper foundation for registering the decisions and relating them to each other.

**Information Ratio:** Measured by dividing the active rate of return by the tracking error. The higher the Information Ratio, the more value-added contribution by the manager.

**Jensen’s Alpha:** The Jensen’s alpha measure is a risk-adjusted performance measure that represents the average return on a portfolio or investment above or below that predicted by the capital asset pricing model (CAPM) given the portfolio’s or investment’s beta and the average market return. This metric is also commonly referred to as alpha.

**Kurtosis:** A statistical measure that is used to describe the distribution, or skewness, of observed data around the mean, sometimes referred to as the volatility of volatility.

**Maximum Drawdown:** The drawdown is defined as the percent retrenchment from a fund’s peak to the fund’s trough value. It is in effect from the time the fund’s retrenchment begins until a new fund high is reached. The maximum drawdown encompasses both the period from the fund’s peak to the fund’s valley (length), and the time from the fund’s valley to a new fund high (recovery). It measures the largest percentage drawdown that has occurred in any fund's data record.

**Modern Portfolio Theory (MPT):** An investment analysis theory on how risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward.

**Mutual Fund (MF):** An investment program funded by shareholders that trade in diversified holdings and is professionally managed.

**Peer Group:** A combination of funds that share the same investment style combined as a group for comparison purposes.

**Peer/Plan Sponsor Universe:** A combination of asset pools of total plan investments by specific sponsor and plan types for comparison purposes.

**Performance Ineligible Assets:** Performance returns are not calculated for certain assets because accurate valuations and transaction data for these assets are not processed or maintained by us. Common examples of
these include life insurance, some annuities and some assets held externally.

**Performance Statistics:** A generic term for various measures of investment performance measurement terms.

**Portfolio Characteristics:** A generic term for various measures of investment portfolio characteristics.

**Preferred Return:** A term used in the private equity (PE) world, and also referred to as a “Hurdle Rate.” It refers to the threshold return that the limited partners of a private equity fund must receive, prior to the PE firm receiving its carried interest or “carry.”

**Ratio of Cumulative Wealth:** A defined ratio of the Cumulative Return of the portfolio divided by the Cumulative Return of the benchmark for a certain time period.

**Regression Based Analysis:** A statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables.

**Residual Correlation:** Within returns-based style analysis, residual correlation refers to the portion of a strategy’s return pattern that cannot be explained by its correlation to the asset-class benchmarks to which it is being compared.

**Return:** A rate of investment performance for the specified period.

**Rolling Percentile Ranking:** A measure of an investment portfolio’s ranking versus a peer group for a specific rolling time period (i.e. Last 3 Years, Last 5 years, etc.).

**R-Squared:** The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

**SA/GF (Separate Account/Commingled Fund):** Represents an acronym for Separate Account and Commingled Fund investment vehicles.

**Sector Benchmark:** A market index that serves as a proxy for a sector within an asset class.

**Sharpe Ratio:** Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance results in.

**Standard Deviation:** A statistical measure of the range of a portfolio's performance; the variability of a return around its average return over a specified time period.

**Total Fund Benchmark:** The policy benchmark for a complete asset pool that could consist of multiple investment mandates.

**Total Fund Composite:** The aggregate of multiple portfolios within an asset pool or household.

**Tracking Error:** A measure of standard deviation for a portfolio's investment performance, relative to the performance of an appropriate market benchmark.

**Treynor Ratio:** A ratio that divides the excess return (above the risk free rate) by the portfolio’s beta to arrive at a unified measure of risk adjusted return. It is generally used to rank portfolios, funds and benchmarks. A higher ratio is indicative of higher returns per unit of market risk. This measurement can help determine if the portfolio is reaching its goal of increasing returns while managing market risk.

**Up Market Capture:** The ratio of average portfolio returns over the benchmark during periods of positive benchmark return. Higher values indicate better product performance.

**Upside Semi Deviation:** A statistical calculation that measures the volatility of returns above an acceptable return. This return measure isolates the positive portion of volatility: the larger the number, the greater the volatility.

**Value:** A diversified investment strategy that includes investment selections which tend to trade at a lower price relative to its dividends, earnings, and sales. Common attributes are stocks that include high dividend, low price-to-book ratio, and/or low price-to-earnings ratio.

**Worst Quarter:** The lowest rolling quarterly return for a certain time period.

**Information Disclosures**

*The performance data shown reflects past performance, which does not guarantee future results. Investment return and principal will fluctuate so that an investor’s shares when redeemed may be worth more or less than original cost. Please note, current performance may be higher or lower than the performance data shown. For up to date month-end performance information, please contact your Financial Advisor or visit the funds’ company website.

Investors should carefully consider the fund’s investment objectives, risks, charges and expenses before investing. The prospectus and, if available the summary prospectus, contains this and other information that should be read carefully before investing. Investors should review the information in the prospectus carefully. To obtain a prospectus, please contact your Financial Advisor or visit the funds’ company website.

Past performance is no guarantee of future results.

Investing involves market risk, including possible loss of principal. **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. **Value investing** involves the risk that the market may not recognize that securities are undervalued and they may not appreciate as anticipated. **Small and mid-capitalization companies** may lack the financial resources, product diversification and competitive strengths of larger companies. The securities of small capitalization companies may not trade as readily as, and be subject to higher volatility than those of larger, more established companies. **Bond funds** and bond holdings have the same interest rate, inflation and credit risks that are associated with the underlying bonds owned by the funds. The return of principal in bond funds, and in funds with significant bond holdings, is not guaranteed. **International securities’** prices may carry additional risks, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes and differences in financial and accounting standards. International investing may not be for everyone. These risks may be magnified in emerging markets. **Alternative investments**, including private equity funds, real estate funds, hedge funds, managed futures funds, and funds of hedge funds, private equity, and managed futures funds, are speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in a fund, potential lack of diversification, absence and/or delay of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and risks associated with the operations, personnel and processes of the advisor. **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; and MLP interests in the real estate sector are subject to special risks, including interest rate and property value fluctuations, as well as risks related to general and economic conditions. Because of their narrow focus, MLPs maintain exposure to price volatility of commodities and/or underlying assets and tend to be more volatile than investments that diversify across many sectors and companies. MLPs are also subject to additional risks including: investors having limited control and rights to vote on matters affecting the MLP, limited access to capital, cash flow risk, lack of liquidity, dilution risk, conflict of interests, and limited call rights related to acquisitions.

Mortgage backed securities also involve prepayment risk, in that faster or slower prepayments than expected on underlying mortgage loans can dramatically alter the yield-to-maturity of a mortgage-backed security and prepayment risk includes the possibility that a fund may invest the proceeds at generally lower interest rates.

Tax managed funds may not meet their objective of being tax-efficient.

Real estate investments are subject to special risks, including interest rate and property value fluctuations, as well as risks related to general and economic conditions. High yield fixed income securities, also known as “junk bonds”, are considered speculative, involve greater risk of default and tend to be more volatile than investment grade fixed income securities.

Credit quality is a measure of a bond issuer’s creditworthiness, or ability to repay interest and principal to bondholders in a timely manner. The credit ratings shown are based on security rating as provided by Standard & Poor’s, Moody’s and/or Fitch, as applicable. Credit ratings are issued by the rating agencies for the underlying securities in the fund and not the fund itself, and the credit quality of the securities in the fund does not represent the stability or safety of the fund. Credit ratings shown range from AAA, being the highest, to D, being the lowest based on S&P and Fitch’s classification (the equivalent of Aa and C, respectively, by Moody’s). Ratings of BBB or higher by S&P and Fitch (Baa or higher by Moody’s) are considered to be investment grade-quality securities. If two or more of the agencies have assigned different ratings to a security, the highest rating is applied. Securities that are not rated by all three agencies are listed as “NR”.

“Alpha tilt strategies” comprise a core holding of stocks that mimic a benchmark type index such as the S&P 500 to which additional securities are added to help tilt the fund toward potentially outperforming the market in an effort to enhance overall investment returns. Tilt strategies are subject to significant timing risk and could potentially expose investors to extended periods of underperformance.”

Custom Account Index: The Custom Account Index is an investment benchmark based on your historical target allocations and/or manager selection that you may use to evaluate the performance of your account. The Custom Account Index does take into consideration certain changes that may have occurred in your portfolio since the inception of your account, i.e., asset class and/or manager changes. However, in some circumstances, it may not be an appropriate benchmark for use with your specific account composition. For detailed report of the historical composition of this blend please contact your Financial Advisor.

Peer Groups

Peer Groups are a collection of similar investment strategies that essentially group investment products that share the same investment approach. Peer Groups are used for comparison purposes to compare and illustrate a clients investment portfolio versus its peer across various quantitative metrics like performance and risk. Peer Group comparison is conceptually another form of benchmark comparison whereby the actual investment can be ranked versus its peer across various quantitative metrics.

All Peer Group data are provided by Investment Metrics, LLC.

The URL below provides all the definitions and methodology about the various Peer Groups: https://www.invmetrics.com/style-peer-groups

Peer Group Ranking Methodology

A percentile rank denotes the value of a product in which a certain percent of observations fall within a peer group. The range of percentile rankings is between 1 and 100, where 1 represents a high statistical value and 100 represents a low statistical value.

The 30th percentile, for example, is the value in which 30% of the highest observations may be found, the 65th percentile is the value in which 65% of the highest observations may be found, and so on.

Percentile rankings are calculated based on a normalized distribution ranging from 1 to 100 for all products in each peer group, where a ranking of 1 denotes a high statistical value and a ranking of 100 denotes a low statistical value. It is important to note that the same ranking methodology applies to all statistics, implying that a ranking of 1 will always mean highest value across all statistics.

For example, consider a risk/return assessment using standard deviation as a measure of risk. A percentile ranking equal to 1 for return denotes highest return, whereas a percentile ranking of 1 for standard deviation denotes highest risk among peers.

In addition, values may be used to demonstrate quartile rankings. For example, the third quartile is also known as the 75th percentile, and the median is the 50th percentile.

Alternatives

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Your interests in Alternative Investments, which may have been purchased through us, may not be held here, and are not covered by SIPC. The information provided to you: 1) is included solely as a service to you, and certain transactions may not be reported; 2) is derived from you or another external source for which we are not responsible, and may have been modified to take into consideration capital calls or distributions to the extent applicable; 3) may not reflect actual shares, share prices or values; 4) may include invested or distributed amounts in addition to a fair value estimate; and 5) should not be relied upon for tax reporting purposes.

Alternative Investments are illiquid and may not be valued daily. The estimated valuation provided will be as of the most recent date available and will be included in summaries of your assets. Such valuation may not be the most recent provided by the fund in which you are invested. No representation is made that the valuation is a market value or that the interest could be liquidated at this value. We are not required to take any action with respect to your investment unless valid instructions are received from you in a timely manner. Some positions reflected herein may not represent interests in the fund, but rather redemption proceeds withheld by the issuer pending final valuations which are not subject to the investment performance of the fund and may or may not accrue interest for the length of the withholding.

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 suitable 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 of these risks may include but are not limited to:• Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices;• Lack of liquidity in that there may be no secondary market for a fund;• Volatility of returns;• Restrictions on transferring interests in a fund;• Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized;• Absence of information regarding valuations and pricing;• Complex tax structures and delays in tax reporting;• Less regulation and higher fees than mutual funds; and• Risks associated with the operations, personnel, and processes of the manager. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management’s interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund.

Indices are unmanaged and investors cannot directly invest in them. Composite index results are shown for illustrative purposes and do not represent the performance of a specific investment.

Past performance is no guarantee of future results. Actual results may vary. Diversification does not assure a profit or protect against loss in a declining market.

Any performance or related information presented has not been adjusted to reflect the impact of the additional fees paid to a placement agent by an investor (for Morgan Stanley placement clients, a one-time upfront Placement Fee of up to 3%, and for Morgan Stanley investment advisory clients, an annual advisory fee of up to 2.5%), which would result in a substantial reduction in the returns if such fees were incorporated.

For most investment advisory clients, the program account will be charged an asset-based wrap fee every quarter ("the Fee"). In general, the Fee covers investment advisory services and reporting. In addition to the Fee, clients will pay the fees and expenses of any funds in which their account is invested. Fund fees and expenses are charged directly to the pool of assets the fund invests in and impact the valuations. Clients must understand that these fees and expenses are an additional cost and will not be included in the Fee amount in the account statements.
2022 Capital Market Assumptions

We represented ultrashort fixed income represented by 90-day T-bills, fixed income & preferreds by Bloomberg Barclays US Aggregate Index, short-term fixed income by Bloomberg Barclays Aggregate 1-3 Year Index, US taxable fixed income by Bloomberg Barclays US Aggregate Index, international fixed income by Barclays Global Aggregate Non-USD (Hedged) Index, inflation-linked securities by Bloomberg Barclays Global Inflation-Linked Index, high yield fixed income by Barclays Global High Yield Corporate Index and emerging market fixed income by JP Morgan EMBI Global Index. All other are based on proprietary models. Strategic annualized return and volatility estimates are based on a seven-year time horizon. Secular annualized return and volatility estimates are based on a 20-year time horizon. Annualized volatility estimates are based on data with longest available history through Feb. 26, 2021. Estimates are for illustrative purposes only, are based on proprietary models and are not indicative of the future performance of any specific investment, index or asset class. Actual performance may be more or less than the estimates shown in this table. Estimates of future performance are based on assumptions that may not be realized. Investor appropriateness: Morgan Stanley Wealth Management recommends that investors independently evaluate each asset class, investment style, issuer, security, instrument or strategy discussed. Legal, accounting and tax restrictions, transaction costs and changes to any assumptions may significantly affect the economics and results of any investment. Investors should consult their own tax, legal or other advisors to determine appropriateness for their specific circumstances. Investments in private funds (including hedge funds, managed futures funds and private equity funds) are speculative and include a high degree of risk.