UW Health Investment Sub-Committee

December 6, 2023, 4:00 PM - 5:30 PM

Via WebEx

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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>4:00 PM</td>
<td><strong>I. Call to Order</strong></td>
<td>Dr. Venkat Rao</td>
</tr>
<tr>
<td>4:00 PM</td>
<td><strong>II. Open Session Meeting Minutes - September 22, 2023</strong></td>
<td>Dr. Venkat Rao</td>
</tr>
<tr>
<td>4:00 PM</td>
<td><strong>III. Review of Investment Charter Changes</strong></td>
<td>Mr. Robert Flannery</td>
</tr>
<tr>
<td></td>
<td>Approval</td>
<td>Attachment - Revised UW Health Investment Sub-Committee Charter - Approved October 26, 2023</td>
</tr>
<tr>
<td></td>
<td>Report/Discussion</td>
<td>Presentation - Market Commentary</td>
</tr>
<tr>
<td>4:30 pm</td>
<td><strong>V. Closed Session</strong></td>
<td>Dr. Venkat Rao</td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td>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 and discussion of UW Health portfolio (third quarter - 2023), large cap managers’ presentation, UW Health’s investment portfolio managers, and private real estate update.</td>
</tr>
<tr>
<td>5:25 PM</td>
<td>*<em>VI. <em>Return to Open Session - Tentative</em></em></td>
<td>Dr. Venkat Rao</td>
</tr>
<tr>
<td></td>
<td>Approval</td>
<td>Agenda item IX discussion will determine if returning to Open Session is warranted. If it is not, the meeting will adjourn.</td>
</tr>
<tr>
<td>5:26 PM</td>
<td><strong>VII. ACTION: AB Concentrated Growth</strong></td>
<td>Approval</td>
</tr>
<tr>
<td>5:30 PM</td>
<td><strong>VIII. Adjourn</strong></td>
<td></td>
</tr>
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</table>
Investment Sub-Committee Charter

Effective as of October 26, 2023
Introduction
The University of Wisconsin Hospitals and Clinics Authority ("UWHCA") Investment Sub-Committee (the “Investment Sub-Committee”) is a standing Sub-Committee of the Finance Committee of the UWHCA Board of Directors (the “Finance Committee”). The Investment Sub-Committee reports to the UWHCA Finance Committee.

Purpose
The purpose of the Investment Sub-Committee is to establish, implement, maintain, and oversee an ongoing investment program for the Fund (as hereinafter defined) consistent with the Investment Policy Statement (as hereinafter defined), in a manner which protects the financial position of UW Health (as defined herein) while supporting UW Health’s mission. As used herein, “UW Health” refers to UWHCA, University of Wisconsin Medical Foundation (“UWMF”), Swedish American Health System Corporation (“SAHSC”) and their wholly-owned subsidiaries, SwedishAmerican Hospital (SAH) and SwedishAmerican Health Foundation (“SAHF”); and “Fund” means the single pool of investment assets of UWHCA, UWMF, the Swedish American Hospital Operating Fund (“SAH Operating”) and the Swedish American Health Foundation (“SAHF”) as contributed to the Fund from time to time by each of UWHCA, UWMF, SAH Operating, and SAHF (each an “Investor”) from time to time under that certain Investment Pooling Agreement entered into among such parties and effective as of January 25, 2018, as the same may be amended from time to time (the “Pooling Agreement”).

Membership
The Investment Sub-Committee shall be comprised of nine (9) members (“Members”), appointed by the Chairperson of the UWHCA Board. In making such appointments, the Chairperson shall appoint two (2) UWHCA Board Directors; two (2) individuals nominated by SAHSC; and five (5) individuals nominated by UW Health-Madison. The Investment Sub-Committee Chairperson shall also be designated by the Chairperson of UWHCA Board. A majority of the members of the Investment Sub-Committee shall be populated with persons such that each of the following relevant areas of experience is represented: Financial Literacy, Investment Knowledge, Risk Management, Analytical Skills, Investment Evaluation, Portfolio Management and Healthcare Industry Knowledge. One individual member of the Investment Sub-Committee may satisfy more than one of the aforementioned core competencies.

For purposes hereof, an “independent member” is a person who (a) is not an executive officer or employee of any of the entities constituting UW Health, and (b) does not have a material relationship with UW Health which in the opinion of the Board would interfere with the exercise of independent judgment in carrying out their responsibilities. Appointees may include persons who are not members of the Board.
Members of the UW Health Investment Sub-Committee shall serve until their resignation or removal by the Chairperson of the UWHCA Board, or in the case of any Member designated by the SAHSC Board, until the SAHSC Board makes a written request of the Chairperson of the UWHCA Board to remove such Members. Vacancies in the UW Health Investment Sub-Committee shall be filled by the Chairperson of UWHCA Board and provided by nomination of the SAHSC, or UW Health-Madison, as applicable, in accordance with the committee composition requirements set forth in this charter.

Meetings
The Chair or his/her delegate shall preside at meetings of the Investment Sub-Committee and shall set the agenda. The Investment Sub-Committee shall meet at least quarterly and otherwise as often as deemed necessary or appropriate, in its judgment, to discharge its duties and responsibilities. Meetings of the Investment Sub-Committee may be held in-person and/or via telephonic or electronic or video conference, and at such times and places as the Investment Sub-Committee determines. A majority of the then-sitting members of the Investment Sub-Committee shall constitute a quorum for the transaction of business at any meeting of the Investment Sub-Committee.

Manner of Acting
Each member of the Investment Sub-Committee shall have one (1) vote on all matters brought before the Investment Sub-Committee within the scope of its authority. The act of a majority of the members of the Investment Sub-Committee at a meeting at which a quorum is present shall be the act of the Investment Sub-Committee.

Duties and Responsibilities of the Investment Sub-Committee
In addition to carrying out any other responsibilities delegated to the Investment Sub-Committee by the Finance Committee from time to time, the Investment Sub-Committee shall:

Investment Policy Statement, Portfolio Risk and Key Reserve Attributes
- Develop, maintain, and review and revise from time to time, as appropriate, in each case subject to the Finance Committee approval, an investment policy for UW Health outlining the objectives and guidelines for and constraints on investment of the Fund (the “Investment Policy Statement”) and all other documents governing the investment and overall management of the Fund.
- At least annually, evaluate the target for Fund levels for appropriateness given business and operating environment risks and opportunities.
- At least annually, gather relevant input from the Finance Committee regarding risk tolerance and key Fund portfolio characteristics, including but not limited to expected return, volatility, duration and liquidity.
- In light of the foregoing information and evaluation, evaluate whether there are any necessary or desirable changes to be made to the Investment Policy Statement (including the Asset Allocation Guidelines set forth therein) or other applicable governing documents.
Investment Performance, Investment Service Providers and Costs
- Review the investment performance of the Fund relative to its performance benchmarks on a quarterly basis.
- Monitor and evaluate investment managers for the Fund at least quarterly.
- Determine whether investment consultants, managers, custodians and any other service provider with respect to the Fund should be retained or replaced and take appropriate action with respect to the same.
- Approve the retention of new Investment Managers or termination of contracts with then-current Investment Managers. At least annually, assess whether fees incurred by or on behalf of the Fund portfolios are appropriate and reasonable.

Oversight of Implementation of Investment Policy Statement
- At least quarterly, ensure compliance with the Investment Policy Statement by verifying that Fund balances are invested accordingly.
- Ensure operational functions, including, but not limited to, rebalancing and reserve funding, are performed appropriately by UW Health Staff or its designee.

Other Duties and Responsibilities of the Sub-Committee
- Review, at least annually, the Investment Sub-Committee’s charter and recommend any proposed changes to the Finance Committee for approval.
- Review, at least annually, the Investment Policy Statement (including the Asset Allocation Guidelines therein) and recommend any proposed changes thereto to the Finance Committee for approval.
- Report formally to the Finance Committee at least annually on the Investment Sub-Committee findings and recommendations.
- Be responsible to the Finance Committee and maintain minutes or other records of the Investment Sub-Committee meetings and activities.
- Ensure that the Fund is managed in accordance with any applicable laws and/or regulations.
- Review, evaluate and make recommendations to the Finance Committee with respect to any request to make additions to Allowed Assets or exceptions to Prohibited Assets under the Investment Policy Statement, and in evaluating such requests, shall consider UW Health’s investment objectives and values and mission.
- Such other responsibilities regarding the Fund as may be delegated to the Investment Sub-Committee from time to time by the Finance Committee.

Authority to Engage Advisers
On an annual basis the Finance Committee will review the performance of the Fund, investment managers, investment custodians and investment consultants in coordination with the Investment Sub-Committee. The Investment Sub-Committee has authority to retain and replace investment managers when it deems appropriate, and shall have authority to approve fees and terms of retention, without the prior permission of the Finance Committee, and shall be provided the necessary resources for such purpose.
Executive Liaison
The management liaison to the Investment Sub-Committee is the Chief Financial Officer of UWHCA.
Investment Sub-Committee Meeting

Open Session
Market Commentary

Graystone Consulting | December 6, 2023

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Dear Valued Client,

The third quarter brought negative total returns of 3.6% for the S&P 500 as two sectors (communication services and energy) posted gains and the other nine sectors experienced price declines quarter-over-quarter. Over the same time frame, the Russell 2000 Index (small cap) fell 5.1%, while the Bloomberg US Aggregate Index, a broad measure of the US bond market, dropped 3.2% as interest rates rose. Yield curve inversion continued during the quarter as short-term debt instruments maintained higher yields than long-term debt instruments. The yield on the 10-year US Treasury note closed the third quarter at 4.57% (up from the 3.83% at the end of the second quarter), while the yield on 3-month Treasury bills was 5.45%, up from 5.28% at the close of the second quarter.

The simultaneous sell-off of US equites and bonds in Q3 coincided with tightening financial conditions. Concerns over the growing US deficit, a government bond downgrade, and revised issuance forecasts fed further increases in long-term fixed income, as equity markets turned down on higher economic projections from the Fed, all but confirming our thesis that higher-for-longer rates will be here for the foreseeable future. Since equities peaked in mid-July, the US dollar has ticked up approximately 6.5% and oil has risen 35% from its trough. We view this as another significant headwind to the profits of US multinationals. We estimate that about one-third of S&P Index profits are exposed to these factors, with the largest tech companies being particularly susceptible. Furthermore, as we keep an eye on the strong dollar, tightening financial conditions, and softer S&P 500 profits, we emphasize the importance of earnings expectations. The ability of companies to outperform earnings expectations, which have been revised higher over the previous two months, could provide some relief from the decline in equities.

With the current economic backdrop, we remain underweight equites and have a strong preference for fixed income. We recommend balancing factor exposures between defensive and cyclicals, growth and value, and mega cap versus small cap. Considering the higher-for-longer rate environment, we are overweight fixed income as we do believe that this regime will create opportunities for attractive risk-adjusted coupons with the potential for capital gains if the Federal Reserve begins rate cuts in 2024.

Lastly, on the labor market front, the September payrolls were stronger than expected, with upward revisions to prior months. There were 336k jobs added in the month of September vs. market consensus of 174k. Although this most recent nonfarm payroll puts a November 1 hike back on the table, we maintain our view that the Fed will remain on an extended hold from July 2023 until making the first of four 25bp cuts commencing in March 2024. Relatively stable unemployment, labor force participation, and average hourly earnings showcase the strength of the economy and support the idea of a “soft landing” as long as inflation continues to decelerate.

Third Quarter Market Pullback

Market Digests Higher For Longer

<table>
<thead>
<tr>
<th>Total Returns – Q3 2023</th>
<th>Q1 2023</th>
<th>Q2 2023</th>
<th>Q3 2023</th>
<th>YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P 500</td>
<td>7.5%</td>
<td>8.7%</td>
<td>-3.3%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Russell 2000</td>
<td>2.7%</td>
<td>5.2%</td>
<td>-5.1%</td>
<td>2.5%</td>
</tr>
<tr>
<td>MSCI EAFE</td>
<td>8.5%</td>
<td>3.0%</td>
<td>-4.1%</td>
<td>7.1%</td>
</tr>
<tr>
<td>MSCI Emerging Markets</td>
<td>4.0%</td>
<td>0.9%</td>
<td>-2.9%</td>
<td>1.8%</td>
</tr>
<tr>
<td>NASDAQ (Comp)</td>
<td>17.1%</td>
<td>13.1%</td>
<td>-3.9%</td>
<td>27.1%</td>
</tr>
<tr>
<td>Barclays Aggregate</td>
<td>3.0%</td>
<td>-0.8%</td>
<td>-3.2%</td>
<td>-1.2%</td>
</tr>
</tbody>
</table>

Source: Bloomberg. Data as of September 30, 2023. For index definitions to the indices referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions

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US Equity Markets Remain in a Bear Market

With Continuing Narrow Market Leadership

The 2022 Bear Market Retracement Impressive Mostly for “Magnificent Seven”

Change as of October 9th, 2023

Source: Morgan Stanley Wealth Management GIC, Bloomberg. Magnificent 7 refers to Alphabet, Amazon, Apple, Meta Platforms, Microsoft, Nvidia, Tesla
Elevated Geopolitical Risk Factors Ahead
Growing Headwinds Stirring Across the Globe

Spiraling US Budget Deficit Could Hurt US Growth

Strong Fiscal Headwinds: Larger Deficits + Higher Borrowing Costs

Geopolitical Tensions & The Economic Fallout

- Russia’s invasion of Ukraine continues to inhibit world grain supplies, impacting food prices
- Israel and Hamas Conflict escalation could destabilize oil markets
- Taiwan, the global leader in semiconductor production, fragile grip on independence from China

Source: Morgan Stanley Wealth Management GIC, Bloomberg
New Fed Regime: Tightening Financial Conditions

New set of factors driving rates higher: Excess Treasury Supply, Ratings Downgrades, Policy Uncertainty, Buyer hurdles for Japan and China, and Shifting Global Yield Dynamics

The Rally Has Stalled As Rates Have Continued To Increase

S&P 500 Index (left axis)
US 10-Year Treasury Yield (right axis)

The September FOMC Meeting Surprised Markets, Charting A New Path Further Impacted By Inflation

Source: Morgan Stanley Wealth Management GIC, Bloomberg, GIO
Strong Labor, But Consumer Headwinds Building

Consumers Feeling The Effects Of The New Fed Rate Regime

**Labor Markets Begin to Loosen**

![Chart showing US Unemployment Rate and Jobs Plentyful Minus Jobs Hard To Get over time](chart)

**US Credit Card Balances Increase**

![Chart showing US Credit Card Balances and Commercial Bank Interest Rate over time](chart)

**Impact Of Federal Student Loan Payment Freeze Ending**

![Bar chart showing percentage of students unable to make payments](chart)

**Auto Loan Delinquencies On The Rise**

![Chart showing US Auto Loan Delinquencies over time](chart)

After a strong run, the third quarter brought a pause to the markets. However, significantly better GDP growth has been a pleasant surprise.

<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>2022</td>
<td>2023E</td>
</tr>
<tr>
<td>Global</td>
<td>3.4</td>
<td>2.9</td>
</tr>
<tr>
<td>US</td>
<td>2.0</td>
<td>2.2</td>
</tr>
<tr>
<td>Euro Zone</td>
<td>3.4</td>
<td>0.4</td>
</tr>
<tr>
<td>UK</td>
<td>4.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Japan</td>
<td>1.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Emerging Markets</td>
<td>4.0</td>
<td>4.1</td>
</tr>
<tr>
<td>China</td>
<td>3.0</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley & Co. Research

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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, 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.
Disclosures

**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 Aaa 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 client’s 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](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.
Disclosures

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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Disclosures

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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.

As fees are deducted quarterly, the compounding effect will be to increase the impact of the fees by an amount directly related to the gross account performance. For example, for an account with an initial value of $100,000 and a 2.5% annual fee, if the gross performance is 5% per year over a three-year period, the compounding effect of the fees will result in a net annual compound rate of return of approximately 2.40% per year over a three-year period, and the total value of the client’s portfolio at the end of the three-year period would be approximately $115,762.50 without the fees and $107,372.63 with the fees.
Disclosures

Please see the applicable Morgan Stanley Smith Barney LLC Form ADV Part 2A for more information including a description of the fee schedule. It is available at www.morganstanley.com/ADV<http://www.morganstanley.com/ADV> or from your Financial Advisor/Private Wealth Advisor.

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 does not provide tax or legal advice. Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

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If your account is invested in mutual funds or exchange traded funds (collectively "funds"), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund's share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at www.morganstanley.com/ADV.

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may affect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instance, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at www.morganstanley.com/ADV, or contact your Financial Advisor / Private Wealth Advisor.

SIPC insurance does not apply to precious metals, other commodities, or traditional alternative investments.
Disclosures

2023 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.

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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.
Glossary of Terms

**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/CF (Separate Account/Comingled Fund):** Represents an acronym for Separate Account and Comingled 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.