Introduction
The Morningstar Lifetime Index Funds (the "Funds") are target-date collective investment funds whose objective is to seek to match the total return of the Morningstar® Lifetime Allocation Indexes using a passive management approach. Given the Funds' objective, this document is intended to provide plan sponsors and their consultants background on the investment thinking and methodology behind the Morningstar Lifetime Allocation Index series.

Target-date funds have cemented their place as a preferred default investment for workers in U.S. defined contribution retirement plans. More than 80% of plan sponsors offer target-date options, and research suggests that target-date funds will capture 88% of new contributions and hold more than 35% of total defined-contribution assets by the end of 2019 (Cerulli Associates, 2014). Target-date portfolios are attractive for many reasons: They combine sophisticated techniques into a simple and easy-to-use package, are often cost-effective, and can provide regulatory relief for plan sponsors who use them as a qualified default investment alternative.

As interest in target-date funds grew, Morningstar, Inc. created a tool to help investors better understand these funds. Since 2009, the Morningstar® Lifetime Allocation Indexes have helped consultants and plan sponsors benchmark performance and conduct due diligence on a wide range of target-date fund families. UBS Asset Management Trust Company ("UBS AM") has teamed up with Morningstar and Morningstar Investment Management LLC1 to design the Funds as a low-cost, diversified, and passively managed series of target-date funds that seek to track the Morningstar® Lifetime Allocation Index series.

Exhibit 1 The Morningstar® Lifetime Indexes

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Equity Exposure %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2050</td>
<td>100</td>
</tr>
<tr>
<td>2055</td>
<td>75</td>
</tr>
<tr>
<td>2060</td>
<td>50</td>
</tr>
<tr>
<td>2065</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: Morningstar.

1. Morningstar Investment Management LLC is a registered investment advisor and subsidiary of Morningstar, Inc.
Morningstar’s Approach to Building Glide Paths

Morningstar’s long history as an investment thought leader along with the pioneering asset allocation work of Morningstar Investment Management\(^2\) provide the basis for its glide path construction methodology. More than a million investors are exposed to Morningstar’s glide path methodology through the retirement managed account and target-date solutions of Morningstar's registered investment advisor subsidiaries.

Within the Morningstar Lifetime Index Funds, Morningstar implements its total wealth approach to investing, based on average U.S. demographic data. Morningstar's total wealth approach takes a holistic view of an average investor’s assets, which helps Morningstar construct an appropriate glide path. Morningstar incorporates the total value and risk attributes of an average investor, and uses financial assets (e.g., a 401(k) plan balance) as a “completion portfolio” to ensure diversification of the individual’s total wealth.

This total wealth approach considers assets that are often overlooked, such as human capital and pension wealth. Human capital can be thought of as the present value of an individual’s future wage income, while pensions represent assets like Social Security retirement benefits and/or defined benefit plan benefits. Although it is intuitive to separate pensions into a different category given the high certainty of the income stream, we think of unaccrued pensions as deferred labor income, and as such, as a form of human capital.

A fundamental part of the total wealth process is understanding how an individual’s wealth changes over one’s lifetime (i.e., the lifecycle). For example, human capital usually dominates the total wealth of younger investors, as depicted in Exhibit 2. As individuals age, they tend to save money for retirement, thereby accumulating financial assets (e.g., a 401(k) balance), as well as accruing benefits in pension plans and Social Security. In other words, over time investors can convert a portion of their salary (i.e., human capital) into financial capital by saving and accruing pension and other retirement benefits, both of which can be used to fund retirement.

Morningstar’s total wealth approach:
- A holistic view of an average investors assets
- Considers assets that are often overlooked, such as human capital and pension wealth
- Incorporates how an individual’s wealth changes over one’s lifetime

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\(^2\) This methodology was designed by Ibbotson Associates, Inc., which was founded in 1977, acquired by Morningstar, Inc. in 2006, and merged into Morningstar Investment Management LLC as of the close of business on December 31, 2015.
Understanding human capital

Morningstar believes that human capital is a relatively bondlike asset—it usually pays a steady “coupon” in the form of a paycheck but also varies across business cycles, by job skills, as well as by the specific occupation and industry of the worker. Morningstar’s research\(^3\) suggests that for an average investor, human capital is approximately 30% stocklike and 70% bondlike, similar to a high-yield bond. This mix varies by industry and occupation, for example, tenured university professors tend to have relatively secure jobs with stable income and therefore relatively safe human capital, while other workers with jobs in cyclical industries (e.g., mining) or in occupations with high levels of variable compensation (e.g., sales) have riskier human capital. Individuals with riskier human capital generally should have more conservative investment portfolios, and vice versa.

Younger workers usually have higher weights to human capital as a function of their total wealth. Because human capital is bondlike and untradeable, from a total wealth perspective most younger workers have an over allocation to a bondlike asset from a total wealth perspective; therefore, their financial assets typically should be invested more aggressively to achieve a more balanced risk level from a total wealth perspective. As the relative value of human capital (as a percentage of total wealth) declines as the individual ages, financial capital in general should be invested more conservatively to help ensure total wealth risk remains balanced throughout the lifecycle.

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Risk tolerance and risk preference

Risk tolerance and risk preference are often used interchangeably, but they are very different concepts. Risk tolerance is a combination of risk capacity and risk preference. Risk capacity is an investor’s ability to take on risk given the composition of their total wealth, while risk preference is the individual’s desire to take on risk. These two types of risk combine to determine an appropriate total wealth allocation. Morningstar’s approach focuses on risk capacity—what we believe to be a more accurate method of estimating an investor’s risk, and how it changes over a participant’s lifetime. Risk preference is incorporated within the total wealth methodology that is used to construct the Morningstar® Lifetime Allocation Index Funds.

Integrating modern portfolio theory

Morningstar believes that another important concept when building portfolios is modern portfolio theory, mostly the work of Nobel Prize winners Harry Markowitz and William Sharpe, and the idea that there is a single, global, all-inclusive basket containing all tradable (financial capital) and non-tradable (human capital) assets that should be held at their respective market values. This market portfolio has the best possible risk and return characteristics of any portfolio. The key implication is that all investors should attempt to replicate the weighting scheme of this all-inclusive market basket with their own portfolios. More precisely, investors should organize a portion of their total economic worth to emulate the market portfolio and then either borrow or lend money to create a complete mix that meets their particular risk appetite.

In an operationalized version of modern portfolio theory, Morningstar approximates the high-level stock-bond split, using this as the target “reference portfolio” for an investor with average risk capacity and average risk preference. In practice, this is an efficient zone within which we select a reference portfolio tailored to the investor. By altering our assumptions around the reference portfolio, different levels of risk capacity, and different risk preferences we can produce a myriad of potential glide paths. By assuming a more bond-like reference portfolio coupled with high risk capacity and high risk preference assumptions, Morningstar arrives at an aggressive glide path appropriate for investors with relatively high risk capacity and high risk preference. Conversely, by assuming a more equity-like reference portfolio coupled with a relatively low risk capacity and low risk preference, Morningstar arrives at a conservative glide path appropriate for investors with relatively low risk capacity and low risk preference.
The optimal Total Wealth portfolio

Using the total wealth framework described above, Morningstar has created its three Morningstar® Lifetime Allocation Indexes. These indexes have different glide paths that are appropriate for a wide range of investors.

Armed with an appropriate stock-bond target reference portfolio informed by modern portfolio theory, together with information on the investor’s out-of-plan assets, housing wealth, and human capital (including defined benefit pension and Social Security benefits), the stock-bond asset allocation for the investor’s in-plan assets is simply the mix that brings their total wealth closest to the efficient target reference portfolio for the investor’s total wealth.

Within its target-date products, Morningstar uses median participant information at each age cohort to make assumptions on participant out-of-plan holdings, housing wealth, and guaranteed benefits (pension and Social Security). Using those assumptions within the total wealth framework, Morningstar creates the shape of the glide path of the Morningstar Lifetime Allocation Indexes. This process is depicted for a hypothetical plan participant in Exhibit 4.
Plan assets are adjusted to bring the sum of all parts closest to the Total Wealth Target.

Source: Morningstar.

Determining Sub-Asset Class Targets

Once Morningstar determines the target equity/fixed-income allocation for target retirement date using its total wealth approach, the next step is to determine the sub-asset-class targets. Morningstar uses a number of industry-leading techniques, including some of the most advanced asset allocation approaches, to determine the detailed asset class weights. This section discusses Morningstar's expertise in three areas: how Morningstar formulates capital market assumptions; how Morningstar incorporates non-normal returns and downside risk in the portfolio optimization routine; and how Morningstar builds different portfolios based on the target date vintage.

Capital Market Assumptions

Capital market assumptions ("CMAs") are a key part of any asset allocation optimization. CMAs are an estimate of future expected returns, risk levels, and correlations for various asset classes. Morningstar is an industry leader in generating return forecasts; early studies formed the basis of our "building-block approach," which aims to bring a reliable framework to the estimation of CMAs for the key asset classes.

Morningstar has enhanced its CMA approach over time, based on what they've learned. A recent improvement includes introducing a supply-side model so that Morningstar can more accurately incorporate valuations into our forecasts. Additionally, Morningstar has developed a methodology to forecast the higher moments associated with return distributions, such as skewness and kurtosis, a concept discussed in greater detail in the next section.

Optimizing Portfolios (Asset Allocations) in a Non-Normal World

Introduced more than 60 years ago by Harry Markowitz, mean-variance optimization ("MVO") remains one of the most common approaches used to build portfolios today. Morningstar has
pioneered and embraced substantial improvement to traditional MVO; Morningstar refers to this as “Markowitz 2.0.” Traditional MVO relies on the first two moments of the return distribution, mean and variance, which is appropriate only if returns are normally distributed (that is, if annual return data fall into a bell curve). But empirical evidence strongly suggests that asset class returns are not normally distributed, especially at higher frequencies. Normal distributions assign relatively small probabilities to extreme events that empirically seem to occur approximately 10 times more often than the normal distribution predicts. Return distributions are generally tilted to the left of the mean (i.e., have negative skewness), and have fatter tails (i.e., are leptokurtic) than would be expected if returns followed a true normal distribution.

Morningstar incorporates skewness and kurtosis when building these portfolios, which can lead to important differences in the attractiveness of asset classes when constructing portfolios. Incorporating these “higher moments” of return distribution is done by changing the portfolio optimization objective function from focusing solely on total risk (i.e., standard deviation) to “tail risk,” or downside risk. Thus, Morningstar optimizes the target date portfolios to minimize the impact of returns below a certain threshold, and its preferred risk measure (which replaces standard deviation) is called mean conditional value at risk, or mean-CVaR. Using a mean-CVaR approach, combined with other techniques to help minimize estimation error, such as resampling, can yield materially different portfolios than those designed using traditional MVO, as noted by Xiong and Idzorek (2011). Specifically, portfolios built using a mean-CVaR approach aim to deliver greater downside protection without giving up returns in rising markets.

Efficient Retirement Portfolios
Morningstar believes that investment management process was traditionally focused on total return; that is, it sought to maximize risk-adjusted return without considering the risks associated with funding the goal (i.e., the retirement income liability). For example, retirees generally seek to generate income from the portfolio for life, increased annually by inflation. Therefore, inflation is a key risk that should be explicitly modeled when determining the optimal allocation for a retiree.

Optimization routines that incorporate the risk of the liability are often referred to as “liability-driven” or “liability-relative” investing. Traditionally these approaches have been applied mostly in the defined benefit pension space; however, they are increasingly being used to build income strategies for retirees. The theoretical advantage of liability-relative optimization approaches over the more traditional asset-only optimization framework is depicted in Exhibit 6.

The top two panels in Exhibit 6 represent an asset-only approach and the bottom two panels represent a liability-relative approach. On the left side of both panels, the blue line representing the evolving value of the liability is identical. In the top left graph, we see that the asset-only

approach leads to a portfolio of assets with a value that may not always move in the same direction as the value of liabilities because the portfolio of assets is determined in isolation. This can lead to a portfolio whose health (and/or the cost associated with funding the portfolio) can vary significantly over time. In contrast, in the bottom left graph, we see that the liability-relative approach can lead to an asset portfolio with a value that should move in sync with the value of the liabilities because the asset portfolio is determined in the presence of the liability. This in turn leads to a portfolio whose health (and/or the cost associated with funding the portfolio) is steadier over time. Additionally, it leads to an asset allocation policy that will more likely increase the portfolio’s value when the net present value of the liability is increasing, for example during periods of high inflation or falling interest rates. As such, in the absence of new funding cash flows, the asset allocation should be more capable of maintaining its real purchasing power throughout retirement.

Exhibit 5 The Benefit of a Liability-Relative Optimization Space Approach

Asset-only Approach

<table>
<thead>
<tr>
<th>Value of Liabilities vs Value of Assets</th>
<th>Portfolio Health/Funding Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Graph" /></td>
<td><img src="image2" alt="Graph" /></td>
</tr>
<tr>
<td>Time</td>
<td></td>
</tr>
</tbody>
</table>

Liability-relative Approach

<table>
<thead>
<tr>
<th><img src="image3" alt="Graph" /></th>
<th><img src="image4" alt="Graph" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td></td>
</tr>
</tbody>
</table>

Source: Morningstar.

Asset allocations throughout the Morningstar® Lifetime Allocation Indexes are largely based upon a liability-relative version of Morningstar’s advanced mean-CVaR framework. This is especially important for participants near or in retirement. The focus of liability-relative optimization, often referred to as surplus optimization, is on the variance of the investor’s total portfolio, which comprises financial and human capital on the asset side of the balance sheet and the investor’s
retirement income liability on the other side. The difference between the value of the assets and the
value of the liabilities represents the surplus or deficit. This leads to certain types of assets classes
—such as shorter-duration bonds, high-quality credit bonds, U.S. Treasury Inflation Protected
Securities (TIPS), large-cap domestic equities, and real estate investment trusts—being favored for
older investors, and other asset classes—such as long-term nominal bonds, domestic small-cap
equities, international equities, and emerging market equities—being favored for younger investors.

Exhibit 6  Asset Allocation Over a Lifetime

Younger investors are relatively unconcerned with currency exposure, and human capital typically
provides a reasonable defense against inflation. As bonds enter the glide path, these initial
allocations are generally fulfilled with long-duration nominal bonds. As investors approach their
50s, allocations to non-U.S. equity, emerging markets, and small-cap equities slowly decline to a
point where we would characterize them as average. Additionally, the increasing allocation to
bonds is usually now implemented with a mixture of long and intermediate bonds. With retirement
looming and human capital declining relative to financial capital, a gradual shift from nominal bonds
to inflation-linked bonds begins. As investors move into retirement, the allocation to bonds
generally continues to grow. Within bonds, the duration of the overall mix is designed to decrease
and there is usually a greater emphasis on inflation-linked bonds. Within equities, there is typically
relatively low exposure to non-U.S., emerging markets, and small caps. Exhibit 8 depicts how this
methodology is implemented for the Morningstar Moderate Index Fund.
**Exhibit 7** Asset Allocation for the Morningstar Moderate Index Fund

![Asset Allocation Chart](chart.png)

Source: Morningstar.

**Exhibit 8** Asset Allocation Percentages for the Morningstar Moderate Index Fund

<table>
<thead>
<tr>
<th>Index Fund</th>
<th>2060</th>
<th>2055</th>
<th>2050</th>
<th>2045</th>
<th>2040</th>
<th>2035</th>
<th>2030</th>
<th>2025</th>
<th>2020</th>
<th>2015</th>
<th>2010</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-/Mid-Cap</td>
<td>38</td>
<td>40</td>
<td>41</td>
<td>42</td>
<td>42</td>
<td>40</td>
<td>36</td>
<td>31</td>
<td>27</td>
<td>24</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Small-Cap</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Non-U.S. Developed</td>
<td>25</td>
<td>24</td>
<td>24</td>
<td>23</td>
<td>22</td>
<td>20</td>
<td>17</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Emerging Market</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>U.S. REIT</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Long-Term U.S. Core</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Intermediate U.S. Core</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>14</td>
<td>17</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Short-Term U.S. Core</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Global Government Bonds</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
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<tr>
<td>TIPS</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>3</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>15</td>
<td>18</td>
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<tr>
<td>Long Only Commodity</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Cash</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
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<tr>
<td><strong>Total</strong></td>
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<td>100</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Morningstar.
Index Construction

The Morningstar® Lifetime Allocation Index Family

The Morningstar Lifetime Allocation Index family consists of three groups of indexes to match the three risk profiles, representing three unique glide paths: conservative, moderate, and aggressive. Each glide path consists of approximately 13 target-date vintages or indexes, ranging from a 2060 retirement target date to 2005 target date (i.e., someone who is already in retirement), as well as a final Income index representing the landing point for a given glide path. The Morningstar Lifetime Index funds feature an all passive implementation of the indexes as shown in Exhibit 9.

Exhibit 9  Morningstar Lifetime Index Fund Allocations

<table>
<thead>
<tr>
<th>Fund</th>
<th>Growth</th>
<th>Moderate</th>
<th>Conservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2060</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2050 Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2040 Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030 Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020 Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010 Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000 Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Morningstar.

Exhibit 10  The Morningstar Lifetime Allocation Index Funds Constituents

Source: Morningstar.

Sub-Index Construction

Equity Indexes
The Morningstar® US Market Index℠ is constructed by selecting 97% of the largest stocks in the investable universe. The three cap indexes are constructed using the following guidelines:

- The Morningstar® Large Cap Index℠ is constructed by selecting the largest stocks that constitute 70% of market capitalization of the investable universe.
- The Morningstar® Mid Cap Index℠ represents the next largest stocks that constitute 20% of market capitalization of the investable universe.
- The Morningstar® Small Cap Index℠ represents the next largest stocks that constitute 7% of the market capitalization of the investable universe.

Within each of the size indexes, index constituents are assigned to one of three style indexes:

- The value-oriented index contains those stocks that, within the relevant size index, have a stronger value orientation than growth orientation.
- The growth-oriented index contains those stocks that, within the relevant size index, have a stronger growth orientation than value orientation.
- The core index contains those stocks that have value and growth characteristics of similar degree.

Exhibit 11 The Morningstar Equity Index Funds

<table>
<thead>
<tr>
<th>U.S. Market</th>
<th>Value</th>
<th>Core</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-Cap</td>
<td>Large Value</td>
<td>Large Core</td>
<td>Large Growth</td>
</tr>
<tr>
<td>Mid-Cap</td>
<td>Mid Value</td>
<td>Mid Core</td>
<td>Mid Growth</td>
</tr>
<tr>
<td>Small-Cap</td>
<td>Small Value</td>
<td>Small Core</td>
<td>Small Growth</td>
</tr>
</tbody>
</table>

Source: Morningstar.
Non-U.S. Equity Exposure

The Morningstar® Developed Ex-US Index\textsuperscript{SM} and the Morningstar® Emerging Markets Index\textsuperscript{SM} are used to give the Morningstar Lifetime Indexes diversified foreign exposure.

Fixed-Income Indexes

The cornerstone of the Morningstar® US Bond Index family is a set of 13 indexes with the following breakdown:

- A broad market index: Morningstar® Core Bond Index\textsuperscript{SM} (MCBI).
- Three composite term-structure indexes that can be combined to form the MCBI: Morningstar® Short-Term Core Bond Index\textsuperscript{SM}, Morningstar® Intermediate Core Bond Index\textsuperscript{SM}, and Morningstar® Long-Term Core Bond Index\textsuperscript{SM}.
- Six sector sub-indexes divided by maturity, three each for U.S. government bonds and corporate bonds.

Exhibit 11 The Morningstar Fixed Income Bond Index Funds

<table>
<thead>
<tr>
<th>Morningstar Core Bond Index (MCBI)</th>
<th>U.S. Gov't</th>
<th>Corporate</th>
<th>Mortgage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shore-term</td>
<td>Short-term</td>
<td>Short-term</td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>Intermediate</td>
<td>Intermediate</td>
<td>Mortgage</td>
</tr>
<tr>
<td>Long-Term</td>
<td>Long-Term</td>
<td>Long-Term</td>
<td></td>
</tr>
</tbody>
</table>

Source: Morningstar.

The Morningstar® TIPS Index\textsuperscript{SM} is also utilized to provide inflation protection. The index has the following characteristics:

- All TIPS with at least one year remaining to maturity are included
- All bonds in the index have a fixed rate

Non-U.S. Bond Exposure

The Morningstar® Ex-US Gov Bond Index\textsuperscript{SM} is used for foreign bond exposure.
Morningstar® Long-Only Commodity® Index

The Morningstar® Long-Only Commodity Index® is a fully collateralized commodity futures index that is long in all eligible commodities. This index provides investors with a means of understanding the performance of the commodity futures markets and serves as an investment vehicle or benchmark for investment performance of commodities as an asset class.

For more information on any of the index constituents, please visit the Morningstar Index website and reference Methodology Documents.

Fund Management

The Morningstar Lifetime Index Funds (the “Funds”) are target-date collective investment funds whose investment objective is to seek to match the total return of the Morningstar® Lifetime Allocation Indexes. The Funds use a “passive” investment approach in attempting to match the investment performance of the indexes. They do not attempt to “beat” the indexes by actively buying and selling investments. The Funds are "funds-of-funds" which gain exposure to different asset classes primarily by investing in other funds investing in those asset classes.

The Funds are managed by UBS Asset Management Trust Company ("UBS AM"), a member of the UBS Asset Management division of UBS Group AG. UBS Asset Management is a globally integrated business allowing its clients to benefit from the significant breadth and depth of its investment and research expertise. UBS Asset Management is a large scale asset manager with a wide range of traditional, hedge fund, real estate, infrastructure, and private equity investment capabilities.

Passive strategies are a core investment capability at UBS Asset Management. UBS Asset Management has over thirty years of experience in managing index tracking portfolios, with a stable team of experienced investment professionals around the globe. UBS Asset Management manages passive portfolios across asset classes including equities, fixed income and commodities. This is supported by a long-term track record, a strong technology platform including proprietary portfolio management and asset allocation systems and rigorous risk controls. UBS Asset Management believes passive investing requires manager skill, experience and technology to achieve the best performance possible while seeking to closely track the underlying benchmark.

As illustrated in the following chart, UBS Asset Management manages its passive portfolios by applying a disciplined portfolio construction process, balancing risk and transaction costs effectively.
Exhibit 12 The UBS Asset Management Passive Portfolios Portfolio Construction Process

<table>
<thead>
<tr>
<th>Controlling Risk</th>
<th>Minimizing Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio are monitored on UBS AM's state of the art proprietary portfolio management and risk systems. The combination of experienced investment professionals and UBS AM's proprietary systems allow them to deliver portfolios which closely track their underlying benchmarks in a risk-controlled manner.</td>
<td>Transaction costs are the bane of an index manager’s existence. UBS AM seeks to minimize costs to maximize the value of the Funds’ investments.</td>
</tr>
</tbody>
</table>

Intelligent Tracking Portfolio
The resulting portfolio is intelligently constructed and implemented in a low cost manner. It is closely aligned with the underlying risk characteristics of the benchmark and determined by the portfolio’s objectives.

Proprietary Systems & Technology
Trading & Execution
Independent Risk Management
Compliance Monitoring

Source: UBS Asset Management.

Disclosures
The Morningstar Lifetime Index Funds (the "Funds") are collective investment funds under the UBS (US) Group Trust (the "Group Trust"). The Funds were created for the collective investment and reinvestment of assets of certain eligible corporate and governmental employee benefit plans pursuant to the Group Trust’s Declaration of Trust, as amended and restated from time to time.

UBS Asset Management Trust Company ("UBS AM"), an Illinois-chartered trust company, is the trustee of the Group Trust and the investment manager of the Funds. UBS AM is a member of the UBS Asset Management division of UBS Group AG. It has retained Morningstar Investment Management LLC ("Sub-Advisor"), a registered investment adviser and subsidiary of Morningstar, Inc., to act as its investment subadvisor for the Funds. Morningstar Investment Management acts as a non-discretionary sub-advisor for the Funds by monitoring performance and tracking error of the Funds, and providing recommendations on the ongoing management of the Funds. Morningstar Investment Management is not acting in the capacity of advisor to individual investors. Morningstar Investment Management also assists UBS Global AM with the marketing and promotion of the Funds.

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There is no guarantee that a Fund will actually achieve any objectives, performance expectations, risk or return targets set forth in this document, the Fund's disclosure document or elsewhere. Before selecting the Funds as an investment option, plan sponsors should carefully consider the Funds' investment objectives, risk factors, and charges and expenses. Plan sponsors should carefully read the Group Trust's Declaration of Trust and the Funds' disclosure documents before selecting the Funds. Risks associated with an investment in a Fund, include, without limitation: new fund risk, target date fund risk, management risk, index tracking risk, risk of loss, market risk, equity risks, fixed income risks, foreign country and emerging markets risks, inflation-linked instruments risk, high yield bond risk, currency risk, commodities risk, and derivatives risk.

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