Bringing it all together: portfolio construction trends and techniques

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Head of BlackRock Model Portfolios & Solutions

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Head of USWA Model Portfolio Investment Research

Wednesday, December 10th 2014
Trend towards advisor use of model portfolios

- 60% of Advisors’ AUM is in some type of model portfolio
- 46% of model portfolio AUM is in Advisors’ own model portfolios
- 75% of Advisors use model portfolios as the foundation for client portfolios
- $1,000,000,000,000,000 in assets industry-wide in Advisors driven Advisory platforms

Source: BlackRock FA Research, January 2014
Common Advisor Challenges

How can I build cost-effective, flexible client portfolios?

My client is trying to generate income from their portfolio?

How do I incorporate ETFs into my portfolios?

How do I protect against events like inflation or rising rates?
Advisors are increasingly charging a fixed, asset-based fee for advice. Positioning yourself as a fee-based Advisor can help improve your value to clients by delivering:

- **SMATER SOLUTIONS**
  Taking a more sophisticated, hands-on approach to portfolio construction

- **PERSONALIZED PORTFOLIOS**
  Implementing tactical asset allocation

- **BETTER VALUE**
  Building portfolios with no overlay fee can keep expenses low for clients
Evolve Your Portfolio for the New World of Investing

Institutional investors pioneered the blending of active and index investments, an approach financial advisors are increasingly adopting.

Source: BlackRock. For illustrative purposes only. Total industry net flows over the period were $1.03 trillion. * ETF flows include index mutual funds.
ETFs offer Efficient Market Exposure

With low fees and a tax efficient structure, you can quickly gain the market exposure you need.

ETFs can provide **liquid exposures** that can be efficiently rebalanced to take advantage of **market opportunity**.

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**Using ETFs and Mutual Funds for Tactical Investments**

- **BHYIX**: 20%
- **HYG**: 0% - 10%
- **BFRIX**: 20%
- **FLOT**: 0% - 10%

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**Consider iShares® ETFs for:**

- Core style-box exposures
- Asset allocation building blocks
- Short-term tactical investments

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This information should not be relied upon as research, investment advice or a recommendation regarding any security in particular. This information is subject to change. Please see Important Notes at the end of this presentation. There can be no assurance that an active trading market for shares of an ETF will develop or be maintained.
Taxes Taking a Bigger Bite

Long-term capital gains tax rates have risen by over 50%, and investors are demanding more tax-efficient solutions so they can keep more of what they earn.

- **23.8% capital gains tax rate**
- **1.5% capital gains distribution**

\[ \text{WHAT YOU KEEP} = \frac{23.8\% - 1.5\%}{15\%} \times 100\% = 0.36\% \]

0.36% of your investment goes to this year’s tax bill

Hypothetical example for illustrative purposes only. 1. Source: BlackRock, Morningstar as of 12/31/13. Represented by the oldest share class of each Open-End Mutual Fund in the United States that incepted on or before 10/31/13. Competitor ETFs represented by the two largest iShares ETF competitors based on AUM. Past distributions are not indicative of future distributions. Transactions in shares of the iShares Funds will generate tax consequences. iShares Funds are obliged to distribute portfolio gains to shareholders.
iShares ETFs can help you keep more of what you earn

The impact of expenses on your fund’s performance magnifies over time, making low fees especially important for long-term investments.

iShares Funds cost about 1/3 as much as the typical mutual fund.¹

You may owe taxes on your funds even if you didn’t sell any shares during the year, potentially eating into returns.

On average, the tax costs for iShares Funds are half that of active mutual funds.²

¹Morningstar, as of 6/30/14. Comparison is between the average Prospectus Net Expense Ratio for the oldest share class of iShares ETFs (0.37%) and active Open-End Mutual Funds (1.12%) that are available in the U.S. and have 10 year track records (excluding municipal bond and money market funds).
²“Tax cost” is a Morningstar measure of the impact of taxes on capital gains and income distributions on performance. The average tax cost of the iShares ETFs and active Open-End Mutual Funds included in the comparison = 0.53% and 1.05%, respectively.
The traditional active strategy has evolved

Rather than attempting to simply beat a benchmark, many outcome-oriented active strategies seek to achieve investment goals, like generating income or managing interest rate risk.

**ASSET ALLOCATION**
- Provide instant diversification and opportunistic rebalancing
- A core investment to build around

**ALTERNATIVE INVESTMENTS**
- More complex strategies that seek to be non-correlated to traditional stocks and bonds
- Can potentially stabilize portfolios in times of market stress

**UNCONSTRAINED**
- “Go-anywhere” to seek to take advantage of opportunities
- Maximize potential for manager skill to produce higher returns or lower volatility

**HIGH-CONVICTION MANAGERS**
- Any active management team with a sound, successful investment process you believe in
- Desired outcome: outperformance of a benchmark over a full market cycle after fees and taxes

For illustrative purposes only. Asset allocation and diversification strategies do not ensure profits in falling markets.
Bringing it altogether

Introducing BlackRock Model Portfolios
Put the Best of BlackRock to Work for You with Model Portfolios

SCALABLE ASSET ALLOCATION

SOPHISTICATED RISK ANALYTICS

FLEXIBLE AND COST-EFFECTIVE PORTFOLIOS
Put the Best of BlackRock to Work for You with Model Portfolios

SCALABLE ASSET ALLOCATION

SOPHISTICATED RISK ANALYTICS

FLEXIBLE AND COST-EFFECTIVE PORTFOLIOS
Our Model Portfolios

**Asset Allocation**

<table>
<thead>
<tr>
<th>STRATEGIC</th>
<th>Asset Allocation (% Equity/Fixed Income)</th>
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**Income**

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<th>TARGET INCOME</th>
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<td>Core Income</td>
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<th>BALANCED INCOME</th>
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<td>Volatility Focused Income</td>
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<td>Inflation Focused Income</td>
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<td>Rising Rates Focused Income</td>
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Get Started Today at www.blackrock.com/models

START:
Access at www.blackrock.com/models

SUBSCRIBE:
Simply click “subscribe” to Model Portfolios

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The Best of BlackRock….Delivered to You

FOLLOW:
As a subscriber you will receive:

- **Welcome Kit**: with the latest materials and letter explaining the benefits
- **Monthly Performance**: you’ll receive portfolio updates and a report on the latest market conditions
- **Quarterly Tactical Updates**: featuring insights on new allocations, plus risk analytics
- **Quarterly Q&A Call with Russ Koesterich**: where he answers your questions

Screenshots for illustrative purposes only.
Tactical Updates give you a repeatable, disciplined investment process

• Updated and emailed quarterly

I. Market commentary

II. Performance analysis

III. Allocation updates with rationale
Put the Best of BlackRock to Work for You with Model Portfolios

SCALABLE ASSET ALLOCATION

SOPHISTICATED RISK ANALYTICS

FLEXIBLE AND COST-EFFECTIVE PORTFOLIOS
BlackRock is trusted to manage some of the world’s toughest risks

Aladdin® risk technology monitors $14 trillion for some of the world’s largest institutions

- US and European governments have engaged us for critical risk assessments and banking sector stabilization strategies
- Portfolio consulting to help you identify risks and gaps, run scenario tests and optimize investment opportunities

$14 Trillion
Dollars analyzed by our proprietary risk management software, Aladdin®

30,000
Portfolios examined by Aladdin every minute of the day

24/7
All day, everyday, even while you’re sleeping, in-depth analysis is being delivered to the desks of our portfolio managers

As of September 30, 2014.
Gain access to our sophisticated risk analytics

Our institutional insights and risk analytics can provide you and your clients a deeper understanding of investment risks.

**BlackRock Target Income Mutual Fund/ ETF Model Portfolios – Risk Contribution**

**Rate Risk**
- Barclays US Aggregate Bond Index: 3.78%
- Core Income: 0.35%
- Moderate Income: 0.34%
- High Income: 1.08%
- Aggressive Income: 0.71%

**Credit Risk**
- Barclays US Aggregate Bond Index: -0.22%
- Core Income: 1.17%
- Moderate Income: 1.98%
- High Income: 2.85%
- Aggressive Income: 5.00%

**FX Risk**
- Barclays US Aggregate Bond Index: -
- Core Income: 0.01%
- Moderate Income: 0.01%
- High Income: 0.01%
- Aggressive Income: 0.01%

**Other Risk**
- Barclays US Aggregate Bond Index: 0.04%
- Core Income: 0.13%
- Moderate Income: 0.21%
- High Income: 0.23%
- Aggressive Income: 0.21%

**Total Standard Deviation**
- Barclays US Aggregate Bond Index: 3.60%
- Core Income: 1.66%
- Moderate Income: 2.54%
- High Income: 4.17%
- Aggressive Income: 5.93%

*Please see Important Notes at the end of this presentation.
All figures as of September 30, 2014. See Model Portfolios website for most up to date information. Asset allocation strategies do not assure profit and do not protect against losses.
Gain access to our sophisticated risk analytics

Provide insights to help understand how client portfolios may react to certain market conditions.

<table>
<thead>
<tr>
<th>BlackRock Target Income Mutual Fund/ETF Model Portfolios – Beta Exposures</th>
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<tbody>
<tr>
<td><strong>Barclays US Aggregate Bond Index</strong></td>
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<tr>
<td><strong>Beta to 10-Year Treasury Rates</strong></td>
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<td><strong>Beta to 2-Year Inflation Expectations</strong></td>
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<td><strong>Beta to Investment Grade Credit Spreads</strong></td>
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<td><strong>Beta to S&amp;P 500 Index</strong></td>
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<td><strong>Beta to USDX</strong></td>
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</tbody>
</table>

The Beta of a portfolio is a number describing the historical volatility of that portfolio in relation to the volatility of a selected benchmark. Betas for the model portfolios are estimated based on underlying fund holdings and risk factor exposures. A positive beta indicates a tendency for there to be co-movement with the benchmark, while a negative beta indicates that the portfolio and the benchmark tend to move in opposite directions. For example, a beta of +2 would indicate that for a given percentage change in the benchmark, the change in the value of the portfolio has historically tended to be twice that. **Past performance does not guarantee future results.** For beta definition, see Important Notes at the end of this presentation.

All figures as of September 30, 2014.
Put the Best of BlackRock to Work for You with Model Portfolios

SCALABLE ASSET ALLOCATION

SOPHISTICATED RISK ANALYTICS

FLEXIBLE AND COST-EFFECTIVE PORTFOLIOS
The Model Portfolios are managed by the Blackrock Model Portfolio & Solutions Team

- 50 team members globally, including 5 PhDs and 17 CFA charter holders

**Russ Koesterich, CFA**
Global Chief Investment Strategist, Head of BlackRock Model Portfolio & Solutions

**Michael Gates, CFA**
Head of USWA Model Portfolio Investment Research

BlackRock Model Portfolio & Solutions is a single team and platform of resources that delivers investment expertise and services designed to help clients build better portfolios.

**Investment Research (15)**
- Model Portfolios
- Portfolio Management

**Investment Strategy (7)**
- Macro-Economic Outlook
- Asset Allocation Views

**Investment Consulting (23)**
- Portfolio Construction
- Risk Analysis

**Functional Support (5)**

(#{}) – Number of team members
Strategic Models – ETF
Investment Process

**Selection**

Start with a broad universe of iShares ETFs spanning multiple asset classes.

- For long-term portfolios focus on core asset classes
- For tactical portfolios analyze the full-spectrum of asset classes (equities, fixed income and non-traditional)

<table>
<thead>
<tr>
<th>US Treasuries</th>
<th>US High Yield</th>
<th>US Equities</th>
<th>International Equities</th>
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</thead>
<tbody>
<tr>
<td>EM Debt (USD and Local Currency)</td>
<td>Minimum Volatility Equity</td>
<td>EM Equities</td>
<td></td>
</tr>
</tbody>
</table>

| US Investment Grade Fixed Income | Developed ex-US Sovereigns | US TIPS |

**Seek to Maximize Risk-Adjusted Return**

Seek to deliver portfolio goals with the best possible risk adjusted return, using the following ex-ante inputs:

1. **Return** of each asset class
2. **Volatility** of each asset class
3. **Correlations** across all asset classes

**Quarterly**

Quarterly asset allocation that seeks to deliver alpha over the target benchmark and can fluctuate from the target benchmark asset allocation.

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How does tactical allocation deliver alpha in the ETF-only model?

Two layers of tactical allocations

1) Broad Asset Class Tilts

2) Within Asset Class Selection

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### Strategic Models – ETF
**Current Portfolios**

Allocations as of October 14th, 2014.

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#### Asset Allocation (% Equity / Fixed Income)

<table>
<thead>
<tr>
<th>QUARTERLY ALLOCATION:</th>
<th>0/100</th>
<th>10/90</th>
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<td>Weighted Average Expense Ratio</td>
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<td>Standard Deviation</td>
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<td>4.98%</td>
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Allocations as of October 14th, 2014.

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**Blending Active/Index in action**

**The Hourglass:**
BlackRock’s framework for blending mutual funds and ETFs in client portfolios

**MF/ETF Models:**
The Hourglass in action. Blending high conviction mutual funds and efficient ETFs to achieve better investment results

**Mutual Funds**
- Access strategies that cannot be wrapped in an ETF, like:
  - Long/short strategies
  - Covered call writing
  - Unconstrained fixed income
  - Illiquid high yield bonds and bank loans
- Utilize active managers where we have conviction product
- Diversify return sources through active risk

**ETFs**
- Utilize Core iShares ETFs; all with expense ratios <20 bps
- Tax-efficient exposure may minimize capital gains distributions

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The strategies discussed are strictly for illustrative and educational purposes and should not be construed as a recommendation to purchase or sell, or an offer to sell or a solicitation of an offer to buy any security. There is no guarantee that any strategies discussed will be effective.
Start with a broad universe of iShares ETFs and BlackRock Mutual Funds spanning multiple asset classes. For long-term portfolios focus on core asset classes and active managers with a ‘go-anywhere’ mandate.

- US Treasuries
- US High Yield
- International Equities
- EM Debt (USD and Local Currency)
- US Investment Grade Fixed Income
- Developed ex-US Sovereigns
- US Equities
- EM Equities
- US TIPS

Seek to deliver portfolio goals with the best possible risk adjusted return, using the following ex-ante inputs:
1. Return of each asset class
2. Volatility of each asset class
3. Correlations across all asset classes

Long-term Mutual Fund and ETF asset allocation that seeks to have similar risk/return characteristics as the target benchmark.
Strategic Models – Mutual Fund/ETF
Access to the best of BlackRock

**FIXED INCOME**
- SIO & Total Return
  - Rick Rieder
- Global Long/Short Credit
  - Michael Phelps

**EQUITY**
- Basic Value
  - Bart Geer
- Global Long/Short Equity
  - Raffaele Savi

**MULTI-ASSET**
- Global Allocation
  - Dennis Stattman
- Multi-Asset Income & Multi-Asset Real Return
  - Michael Fredericks

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### Strategic Models – Mutual Fund/ETF

**Current Portfolios**

#### Risk/Return Benchmarks*

<table>
<thead>
<tr>
<th>Risk/Return</th>
<th>0/100</th>
<th>10/90</th>
<th>20/80</th>
<th>30/70</th>
<th>40/60</th>
<th>50/50</th>
<th>60/40</th>
<th>70/30</th>
<th>80/20</th>
<th>90/10</th>
<th>100/0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.55%</td>
<td>0.58%</td>
<td>0.61%</td>
<td>0.58%</td>
<td>0.55%</td>
<td>0.50%</td>
<td>0.46%</td>
<td>0.44%</td>
<td>0.45%</td>
<td>0.38%</td>
<td>0.32%</td>
</tr>
<tr>
<td>10</td>
<td>2.5%</td>
<td>3.0%</td>
<td>3.5%</td>
<td>4.7%</td>
<td>5.7%</td>
<td>7.2%</td>
<td>8.7%</td>
<td>10.7%</td>
<td>12.9%</td>
<td>13.9%</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

#### Weighted Average Expense Ratio

<table>
<thead>
<tr>
<th>Weighted Average Expense Ratio</th>
<th>BGCIX</th>
<th>BFMSX</th>
<th>BSIIX</th>
<th>MAHQX</th>
<th>AGG</th>
<th>FLOT</th>
<th>IEF</th>
<th>IEI</th>
<th>TIP</th>
<th>TLT</th>
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<tbody>
<tr>
<td>0%</td>
<td>8%</td>
<td>4%</td>
<td>0%</td>
<td>2%</td>
<td>18%</td>
<td>3%</td>
<td>0%</td>
<td>5%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>8%</td>
<td>10%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>16%</td>
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<td>20%</td>
<td>13%</td>
<td>15%</td>
<td>18%</td>
<td>20%</td>
<td>5%</td>
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<tr>
<td>25%</td>
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<td>35%</td>
<td>27%</td>
<td>19%</td>
<td>15%</td>
<td>15%</td>
<td>5%</td>
<td>2%</td>
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</tr>
<tr>
<td>33%</td>
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<td>52%</td>
<td>44%</td>
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<td>0%</td>
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<tr>
<td>42%</td>
<td>73%</td>
<td>73%</td>
<td>64%</td>
<td>52%</td>
<td>15%</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

#### Standard Deviation

<table>
<thead>
<tr>
<th>Standard Deviation</th>
<th>FIXED INCOME</th>
<th>EQUITY</th>
<th>MULTI-ASSET</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5%</td>
<td>86%</td>
<td>0%</td>
<td>14%</td>
</tr>
<tr>
<td>3.0%</td>
<td>73%</td>
<td>8%</td>
<td>19%</td>
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<tr>
<td>3.5%</td>
<td>64%</td>
<td>16%</td>
<td>20%</td>
</tr>
<tr>
<td>4.7%</td>
<td>52%</td>
<td>27%</td>
<td>20%</td>
</tr>
<tr>
<td>5.7%</td>
<td>44%</td>
<td>35%</td>
<td>21%</td>
</tr>
<tr>
<td>7.2%</td>
<td>30%</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td>8.7%</td>
<td>20%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>10.7%</td>
<td>10%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>12.9%</td>
<td>9%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>13.9%</td>
<td>6%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>15.4%</td>
<td>0%</td>
<td>13%</td>
<td>11%</td>
</tr>
</tbody>
</table>

#### Allocations as of August 29th, 2014.

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Standard Deviation: Standard deviation for the model portfolio is a statistical estimate measuring how dispersed returns are around an average. Standard deviation is estimated using the risk factor exposures and volatilities of the underlying funds, based on BlackRock Solutions multi-asset class risk models, and takes into account the correlations of these factors across the portfolio. Standard deviation is not meant to be a prediction of fund or model volatility and actual volatility of any portfolio based in whole or in part on the models shown will vary and may be higher.

Risk Component Contribution: Contribution to risk is an additive measure of risk. The contribution to risk of a factor exposure of the fund is calculated as the change in the total portfolio risk that results from a small incremental increase to that factor exposure. This risk measure takes into account correlations across exposures and captures the risk of these as well as how diversifying they are in the total portfolio. Risk contributions are designed to sum to equal the total volatility of the portfolio.

**Past performance does not guarantee future results.** Risk contribution factors here are:
- Total standard deviation of the portfolio is the sum of the risk contributions across rate, credit, FX and other risk.
- Rate risk contributions, which capture volatility associated with portfolio covariation with benchmark government interest rates.
- Credit risk contributions, which capture volatility associated with portfolio covariation with investment grade, high yield and distressed debt credit spreads over benchmark interest rates.
- FX risk contributions, which capture volatility associated with portfolio covariation with foreign exchange rate fluctuations.
- Other risk contributions capture the remaining portion of volatility that is idiosyncratic relative to Rate, Credit and FX risk.

Beta: The Beta of a portfolio is a number describing the historical volatility of that portfolio in relation to the volatility of a selected benchmark. Betas for the model portfolios are estimated based on underlying fund holdings and risk factor exposures. A positive beta indicates a tendency for there to be co-movement with the benchmark, while a negative beta indicates that the portfolio and the benchmark tend to move in opposite directions. For example then, a beta of +2 would indicate that for a given percentage change in the benchmark, the change in the value of the portfolio has historically tended to be twice that. **Past performance does not guarantee future results.**

The Beta to the S&P 500 Index measures the portfolio’s sensitivity to changes in the value of the S&P 500 index.
The Beta to 10-year Treasury Interest Rate measures the portfolio’s sensitivity to changes in the 10-year maturity US Treasury bond interest rate.
The Beta to 2-Year Inflation Expectations measures the portfolio’s sensitivity to changes in the market interest rate spread between 2-year US Treasuries and the 2-year US Treasury Inflation Protected Security.
The Beta to Investment Grade Spreads measures the portfolio’s sensitivity to changes in the credit spread of a diversified US investment grade bond index, as measured by the J.P. Morgan US Liquid Index.
The Beta to USDX (US Dollar Currency Index) measures the portfolio’s sensitivity to changes in the value of the US Dollar Index, which measures the average change in value of the USD versus major world currencies.
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