

VALUES ALIGNMENT FOR  
PUBLIC EQUITIES

# Values-Aligned Investing

1Q 2024



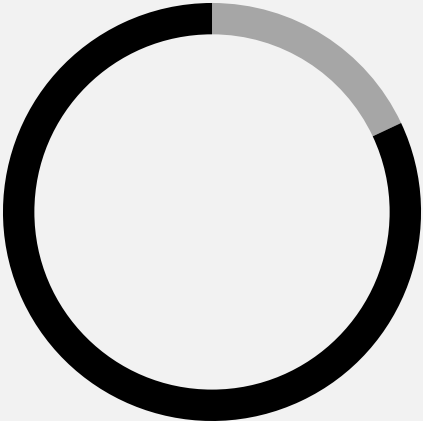
**aperio**<sup>®</sup>  
by BlackRock

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# Overview of Aperio

For nearly 25 years, we have partnered with advisors to offer personalized, tax-optimized indexed equity SMAs (separately managed accounts) that seek to reflect the individuality of each investor.

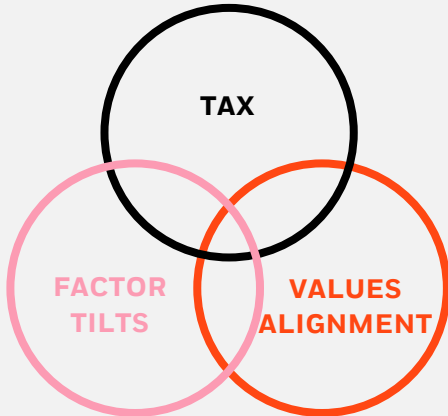
**AUM: \$91B**



■ 18% Non-Taxable \$16.2B  
■ 82% Taxable \$74.4B



■ 28% Values-Aligned \$25.5B



**Values-Aligned Accounts**

**2,940**

Source: Internal data.  
As of 3/31/2024

# Building a Custom Portfolio with Aperio

Our **customization capabilities** are a starting point to creating portfolios that reflect your equity allocation, personal values, and custom preferences.<sup>1</sup>

## Market exposure

Every account requires a benchmark. Select your exposure or work with our team to create a blended benchmark.<sup>2</sup>

### US

- Total Market
- Large Cap
- Large-Mid Cap
- Mid Cap
- Small-Mid Cap
- Small Cap

### Global

- Developed & Emerging
- Developed

### Non-US

- Developed & Emerging
- Developed
- Developed ex-Canada

### Blended benchmarks

Custom market-exposure weights to reflect allocations that differ from market-cap-weighted indexes.

## Values-Aligned Investing (VAI)

Integrate personal values by selecting from values-based strategies, tilts, exclusions, and active ownership options.

### Strategies

- General
- Environmental
- Social
- Faith-based

### Tilts

- Environmental
- Social
- Governance
- Geography-based

### \$5M and above

Partner with VAI team to build portfolio based on unique social profile.

1. Offerings subject to change and may not be available to all investors.

2. For full list of benchmarks available, please reference [Aperio Benchmark Menu](#).

## Tax management

For taxable clients, a tax management strategy is required.

### Loss harvesting

- Standard
- Aggressive
- Light

### Other tax management

- Tax-neutral

### Preferences

- Taxes vs. values-alignment
- Taxes vs. factors

### Gains budgets

- Annual vs. ad hoc
- Aperio Concentrated Equity Solutions (ACES)

### Specialty

- Private foundation excise taxes
- CRUT management

## Factor tilts

Create a factor-tilted portfolio using strategies designed to increase exposure to smart-beta factors.

### Beta-1

- Value
- Small Size + Value
- Size, Value + Profitability
- Value + Momentum
- Dividend Yield
- Multi-Factor
- Quality Value
- Growth

### Lower risk

- Low-Beta Quality
- Quality Light

# Aperio values-aligned portfolios

We align client values and investment goals by incorporating values-based screens and ratings, thematic tilts, and (if desired) tax optimization.

## Rules based

- Portfolios are built on transparent rules that clients help define.
- Values-based scoring is relative and **does not** explicitly exclude any companies.
- If an investor does not want to hold a particular company or type of company, **that must be flagged as a portfolio exclusion**.
- Low-scoring companies may remain in the portfolio if they help control for risk.

## Portfolio specific

- Aperio doesn't pick stocks. Our universe is index based, and we utilize a quantitative approach.
- Tracking error, risk tolerance, and tax sensitivity all may factor into final portfolio construction.
- We use an optimizer to minimize portfolio tracking error once client parameters are set.

## Data driven

- Data availability varies by market and depends on the methodology employed by third-party providers, which may be incomplete, inaccurate, or unavailable.\*
- A lag may occur between when a company change occurs and when it is reflected in the data set and in the portfolio.
- Transparency is key. Lack of corporate disclosure of ESG (environmental, social, and governance) data may affect final scoring.

## Custom fit

- Clients control the breadth and depth of their values-aligned strategies and can customize evaluation frameworks of companies held in their separately managed accounts (SMAs).
- Aperio's public equity SMAs may only be one aspect of a client's entire portfolio and mission-alignment goals.
- Clients may voice their preferences by selecting proxy voting guidelines and/or opting in to a shareholder advocacy program.


## Values agnostic

- Aperio represents clients across the political, religious, and values-based spectrum.
- We don't make value judgments in place of a client's own defined objectives.
- Aperio relies on data provided by other organizations (vendors etc.) and does not override ratings or data unless provided data are structurally inconsistent.

Process subject to change.

\*See "Important notes."

# Values- alignment process

- 
1. Clarify client values & create values policy statement
  2. Balance values & investment characteristics
  3. Engage in active ownership
  4. Report progress
  5. Research & resources

*Process subject to change.*

# Clarify client values & create values policy statement

# Tools available to reflect client values

## Exclusions

- Business activity
- Industry
- Company

## Tilts

Shifting toward companies that more closely reflect specific client values using Social Scores\*

## Active Ownership

- **Proxy Voting:** offers an opportunity for shareholders to vote in stockholder meetings on resolutions, such as the election of directors, executive compensation, and shareholder proposals
- **Shareholder Advocacy:** for clients wishing to participate in this program, Aperio is able to connect them with certain unaffiliated third-party shareholder advocacy groups that submit shareholder proposals

For our values-aligned strategies, Aperio is dependent upon third-party data that may be incomplete, inaccurate, or unavailable, which could adversely affect the assessment of companies based on these values-aligned factors. Aperio cannot guarantee the accuracy of the data disclosed by companies or collected by third-parties, including estimates made by third-party vendors when data are missing.

Third-Party ESG Data Providers: MSCI ESG Research, ISS ESG, Bloomberg, BlueStar Indexes®, and others as needed.

**\*See “Important notes” for details on Aperio scoring methodology and the limitations of data used to evaluate companies.** For more information, please see the [Aperio Social Scores](#) presentation.

## The Social Conversation

Aperio supports advisors from start to finish through the values-alignment process. We use our values-aligned investing expertise to assist your work in translating custom client values into Social Profiles.

Social Conversations are available to all investors regardless of account size. For accounts at the \$1 million level, Aperio uses the Social Conversation to translate investors' values into menu profiles. For accounts larger than \$5 million, the Social Conversation may help the client explore solutions beyond the menu.

*Process subject to change.*

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***The Aperio Social Conversation helps distill and prioritize client values***

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**It's an interactive process that focuses on capturing client values and mapping relevant data to them to implement in a portfolio solution**

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**Aperio offers two paths to values customization—the Values-Alignment Menu and, for larger accounts, full customization**

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# Aperio Values-Alignment Menu

The Aperio Values-Alignment Menu is one path to capturing and prioritizing your client’s values. With a completed menu, we can then create a portfolio that is better aligned with those values.

**For values-aligned offerings, Aperio is dependent upon third-party data that may be incomplete, inaccurate, or unavailable. Aperio cannot guarantee the accuracy of the evaluations of third-party data providers, or the estimates made by third-party vendors when data are missing. Please see Important Notes for inherent limitations of relying on this data.**

<sup>1</sup> Tilts may deviate, potentially significantly, from target levels based on account-specific circumstances (e.g., tax management, factors, and diversification) and are subject to change.

<sup>2</sup> Revenue figures for all values-aligned exclusions are provided by third-party data providers and are based on publicly reported information via sources such as company annual reports and regulatory filings. When available, company-reported revenue figures are used; revenue is estimated if exact figures have not been disclosed.

For illustrative purposes only.

## Do you want to choose a **strategy** building block?

Select only ONE.

NONE

### General ESG Strategy

[Aperio SRI: Scoring](#)

### Environmental Strategies

- [Environment: Scoring](#)
- [Climate Transition Aware: Scoring](#)  
(**US Green REIT** is available as a standalone strategy.)

### Social Strategies

[Animal-Friendly: Exclusions](#)

### Diversity

- [Diversity, Equity, and Inclusion: Exclusions & Scoring](#)
- [Racial Justice: Exclusions & Scoring](#)
- [Women’s Inclusion: Exclusions & Scoring](#)

### Faith-Based Strategies

- [Catholic Values: Exclusions & Scoring](#)
- [Catholic Values: Exclusions](#)
- [Islamic Values: Exclusions](#)
- [Jewish Values: Exclusions & Scoring](#)  
(includes Israel Exposure Tilt)

## How can **active ownership** help align your portfolio?

### Values-Aligned Proxy Voting

If Aperio votes proxies, default guidelines apply, unless otherwise directed

### Shareholder Advocacy

Opt-in to see opportunities offered by shareholder advocacy groups



Offerings are subject to change and may not be available to all investors. See the following slides for descriptions of strategies and tilts, including details on sources.

## Do you want to **tilt** toward companies aligned with your values?

Choose as many as you wish.

NONE

### Environmental Tilts

[Low-Carbon Footprint](#)

### Clean Technology Solutions

- +50% over the benchmark
- +150% over the benchmark (**NOTE:** This level is not available for S&P 500 Index.)

### Social Tilts

- [Disability Inclusion](#)
- [Political Spending Transparency](#)
- [Pro-LGBTQ Policies & Practices](#)
- [Pro-Veteran Employers](#)
- [Reproductive Rights](#)
- [Top Dept. of Defense Contractors](#)

### Governance Tilts

- [CEO Compensation](#)
- [Governance](#) (embedded in Aperio SRI strategy)

### Geography-Based Tilts

- [Israel Exposure](#) (included in Jewish Values strategy)

## Are you interested in **carbon credits**?

### Carbon Credit Program

Available only for certain portfolios using Low-Carbon Footprint Strategy. Indicate here to discuss eligibility with your Aperio relationship manager. Additional fees apply.

## Are there companies or industries you want to **exclude**?

Choose as many as you wish.

NONE

### Environmental Exclusions

#### Fossil Fuel Divestment

- [Carbon Reserves](#)
- [Fossil Fuel-Focused Utilities](#)
- [Fracking](#)
- [Tar Sands](#)

#### Sustainable Agriculture

- [Factory Farming](#)
- [GMOs](#)
- [Palm Oil: Production](#)

#### Exclude at revenue<sup>2</sup> threshold of:

	1st \$ of revenue	≥ 5% of revenue
<a href="#">Coal Extraction</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Oil &amp; Gas Distribution</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Oil &amp; Gas Pipelines &amp; Equipment</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Oil &amp; Gas Production</a>	<input type="radio"/>	<input type="radio"/>

[Nuclear Power](#)

### Social Exclusions

- [Abortion Services](#)
- [Anti-LGBTQ Policies](#)
- [Animal Testing: Pharma Only](#)
- [Animal Testing: Non-Pharma](#)
- [Fur](#)
- [Civilian Firearms: Production](#)
- [Civilian Firearms: Distribution](#)
- [Military Weapons](#)
- [Predatory Lending](#)

- [Private Prison Operations](#)
- [Sudan](#)
- [Iran](#)

#### Exclude at revenue threshold of:

	1st \$ of revenue	≥ 5% of revenue
<a href="#">Abortifacients</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Alcohol</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Contraceptives</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Gambling</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Pornography</a>	<input type="radio"/>	<input type="radio"/>
<a href="#">Tobacco</a>	<input type="radio"/>	<input type="radio"/>

### Governance Exclusions

- [No Women on Company Board](#)
- [No Racial or Ethnic Minorities on US Company Board](#)

### Company and Industry Exclusions

[Specific Companies](#)  
(Include identifier share classes.)

[Specific Industries](#)  
(List industries or sub-industries.)

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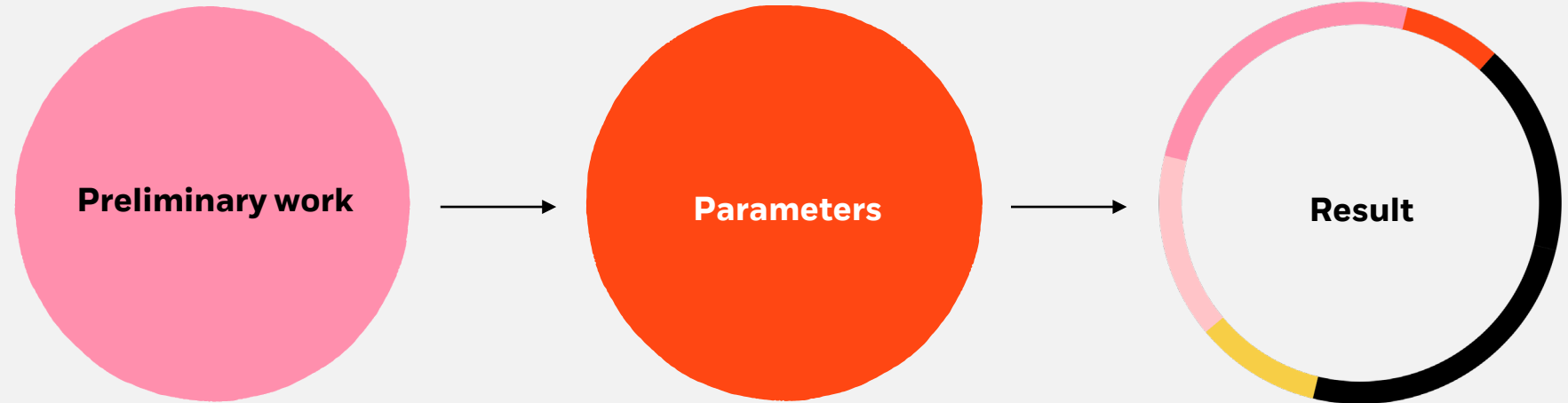
# Aperio values-aligned full customization

A personalized process of listening, prioritizing, and guiding to help translate client values into investments.

Social Conversations are available to all investors regardless of account size. For accounts at the \$1 million level, Aperio uses the Social Conversation to translate investors' values into menu profiles. For accounts larger than \$5 million, the Social Conversation may help explore solutions beyond the menu.

*Process subject to change.*

## Full customization tools



### Issue briefings

Deep dive into the specific data available, including methodologies, strengths, and weaknesses of the data.

### Surveys

When working with groups, Aperio can create a survey to determine which issues should be a part of the profile.

### Revenue thresholds

Clients may be interested in excluding companies at different levels of involvement than are available on the Values-Alignment Menu.

### Intensity of values tilt

Aperio can work with clients to determine how intensely to tilt the portfolio toward better-suited companies.

### Relative issue weightings

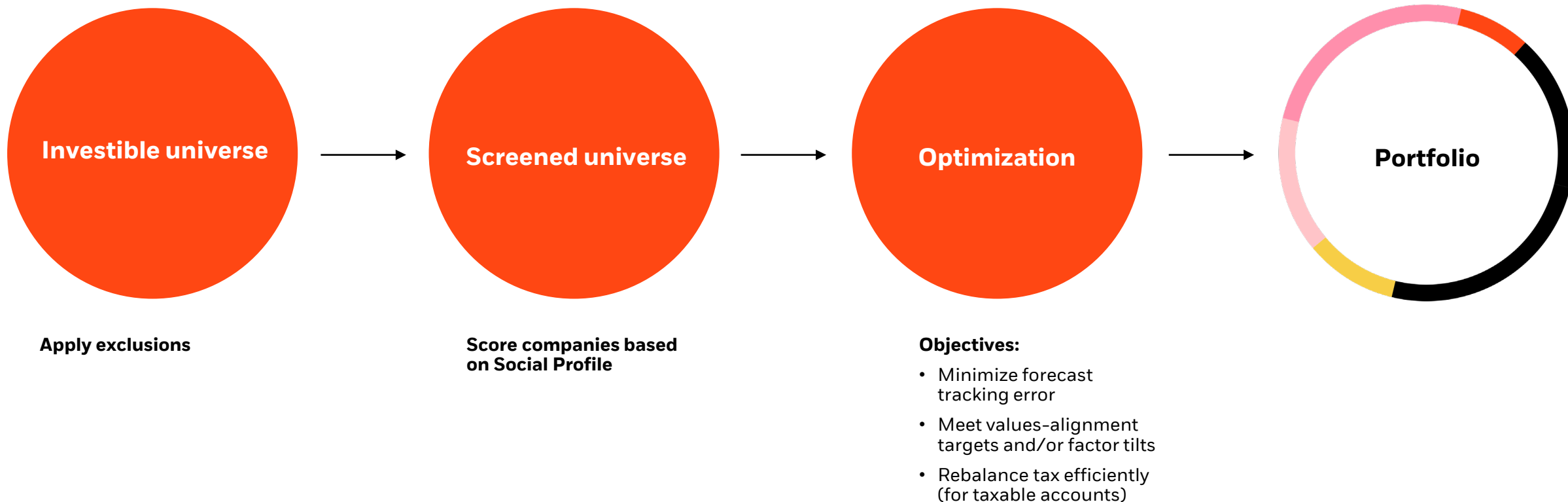
Clients can customize the relative importance of how their interests are expressed.

### Custom values policy statement

The client receives a customized memo summarizing their unique values profile.

# Balance values & investment characteristics

# Portfolio construction process



*Process subject to change.*

Note: Aperio scoring strategies typically seek to achieve a weighted-average Social Score higher than that of the comparison index. Multiple score objectives can be targeted simultaneously. Company Social Scores are an input into the portfolio optimization process. During the multi-factor optimization, the portfolio manager targets a specific weighted-average portfolio score (the objective), which the optimizer generates while mimicking the risk factor attributes of the underlying index as closely as possible. Realized tilt levels in client portfolios may vary, potentially significantly, based on account-specific circumstances (e.g., tax management).

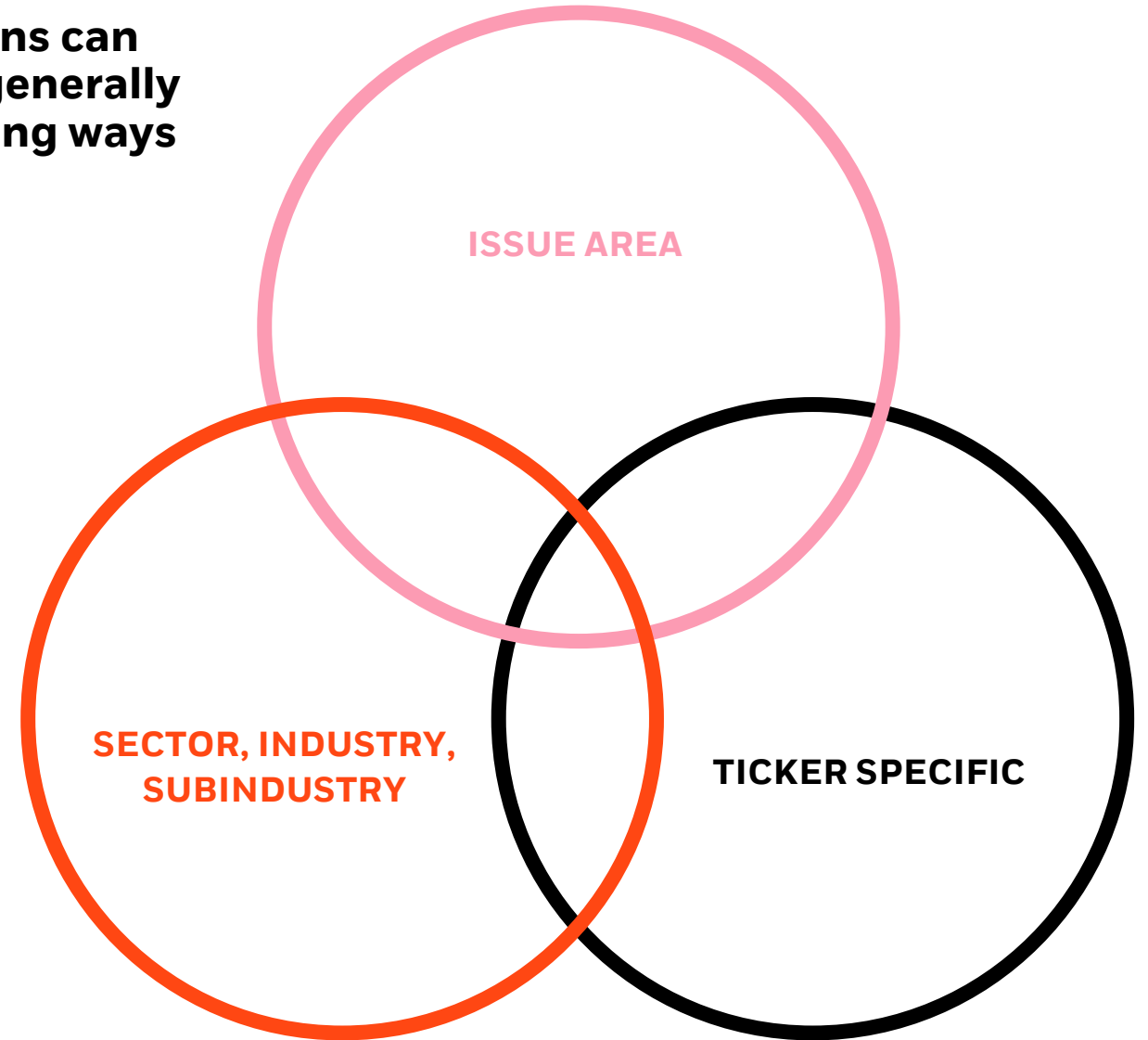
Forecast tracking error is the forecast annualized standard deviation of benchmark-relative returns. It is a point-in-time measure and not intended to provide assurance as to performance/limit on losses. See “Important notes” for details. In this case, the benchmark is the MSCI ACWI®, a global benchmark that reflects the range upon which Aperio is able to construct a values-aligned portfolio and is representative of the broad scope of equity securities from which a potential investor may choose.

See “Important notes” for information about Aperio Social Scores and how they are compiled, as well as the limitations of the data relied upon for scoring.

## Defining exclusions

Client-selected exclusions are applied to the investible universe, removing the relevant companies from consideration for the portfolio.

Any number of exclusions can be considered and are generally expressed in the following ways



# Scoring companies— an illustration

Companies are scored based on customizable, client-specified criteria.

### Additional considerations

- Company Social Scores are an input into the optimization
- Ultimate position sizes result from a combination of company scores, risk parameters, and other optimization constraints
- Note that companies with low scores can still make it into a portfolio unless they are explicitly excluded
- Values-oriented themes consist of multiple underlying ESG data points

Note: This table is being shown for illustrative purposes only and is not based on any actual portfolio. Client accounts will vary.

The Social Profile dictates the weights assigned to values-oriented themes						An aggregate "total score" is calculated for each company
SAMPLE COMPANY	DIVERSITY 20%	ENVIRONMENT 25%	HUMAN RIGHTS 25%	WORKFORCE 15%	CORPORATE GOVERNANCE 15%	SAMPLE TOTAL SCORE
A	Light Green	Light Red	Light Green	Light Grey	Light Red	Light Grey
B	Dark Green	Dark Green	Light Green	Light Green	Dark Green	Dark Green
C	Dark Green	Light Red	Light Green	Dark Red	Dark Green	Light Green
D	Light Grey	Dark Red	Light Grey	Light Red	Light Red	Light Red
E	Dark Red	Light Green	Light Grey	Light Grey	Light Grey	Light Grey
F	Light Red	Dark Green	Dark Red	Light Red	Light Red	Light Grey
G	Light Red	Light Red	Dark Red	Light Grey	Dark Red	Dark Red

### LEGEND



See "Important notes" for information about Aperio Social Scores and how they are compiled, as well as the limitations of the data relied upon for scoring. Aperio evaluates companies' records on values-aligned issues by using a variety of publicly available data. Our determinations are dependent on the accuracy and fullness of that data.

## Tilting portfolios based on client values

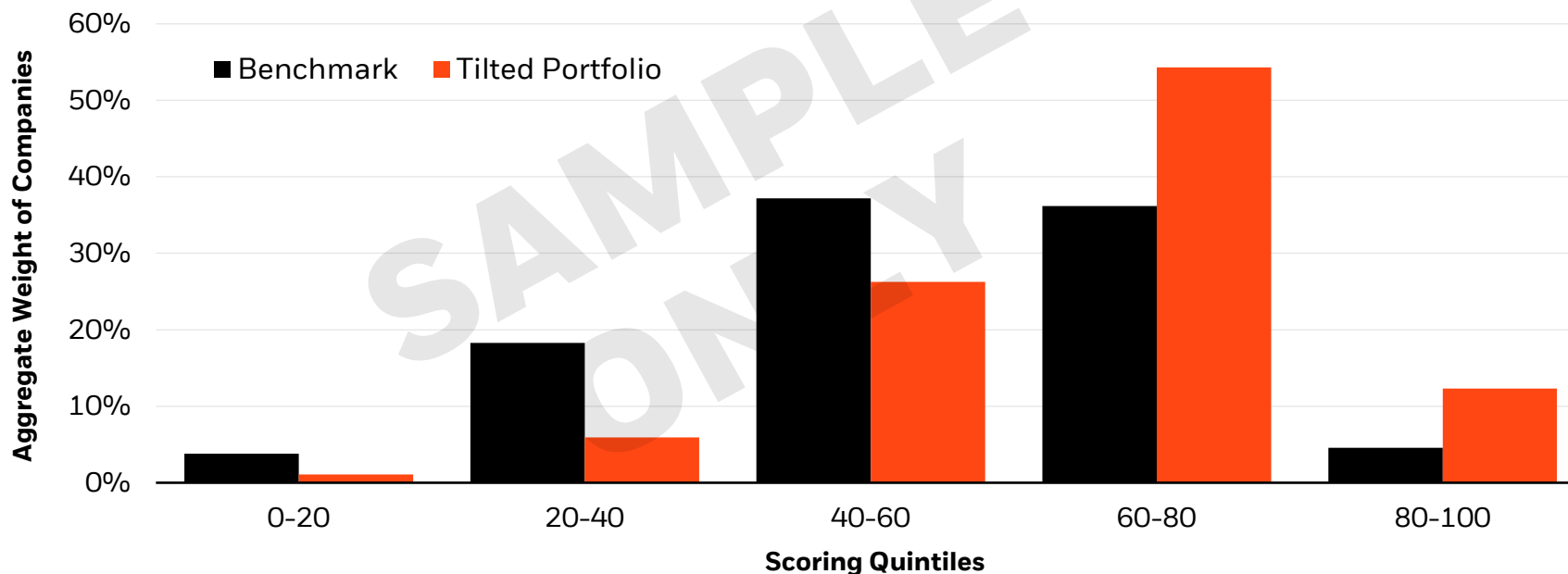
- Tilts target improvements in weighted-average portfolio scores
- Tilts result in directional shifts toward companies that are better aligned with a client's values-based preferences
- They are applied at the portfolio level and are benchmark relative
- They represent a directional improvement as it pertains to a values-oriented theme or strategy
- On average, companies that score higher have larger active weights in the portfolio

## Sample Tilt Using Aperio's SRI Strategy—An Illustration

**Example of +20% Improvement** in Weighted Average Aperio SRI Score\*

Benchmark Score: 52

Portfolio Score: 62



**For illustrative purposes only.**

Sample Aperio SRI Portfolio as of 04/28/2023. Benchmark is Russell 3000.

\*The 20% improvement represents the desired increase in the weighted-average portfolio score over the benchmark score.

The sample benchmark and sample portfolio scores are not based on an actual Aperio portfolio and are being shown for illustrative purposes only. It should not be assumed that clients who invest in an Aperio portfolio will have the same results reflected above. Social score tilts may deviate, potentially significantly, from target levels based on account-specific circumstances (e.g., tax management, factors, etc.) and are subject to change.

**See "Important notes" for information about Aperio Social Scores and how they are compiled, as well as the limitations of the data relied upon for scoring.**

Sources: Internal data and MSCI.

# Portfolio construction of values-aligned strategies

Aperio uses a multi-factor optimizer to construct portfolios with the targeted values-based exposures while seeking to control for risk and other factors.

## Optimized values-aligned construction and portfolio rebalancing seek to:

- Manage portfolio's values-alignment characteristics (based on client-selected exclusions and/or Social Score tilts\*)
- Rebalance tax efficiently (within client-selected tax guidelines)
- Control tracking error (within the client's values-aligned and tax management selections)
- Control stock-specific risk (within the client's values-aligned and tax management selections)
- Style factors
  - Value, Earnings Yield, Dividend Yield, Growth, Momentum, Long-Term Reversal, Prospect, Size, Mid-Capitalization, Liquidity, Beta, Residual Volatility, Leverage, Earnings Quality, Management Quality, Profitability
  - Sector, Industry, Subindustry
  - Country, Region

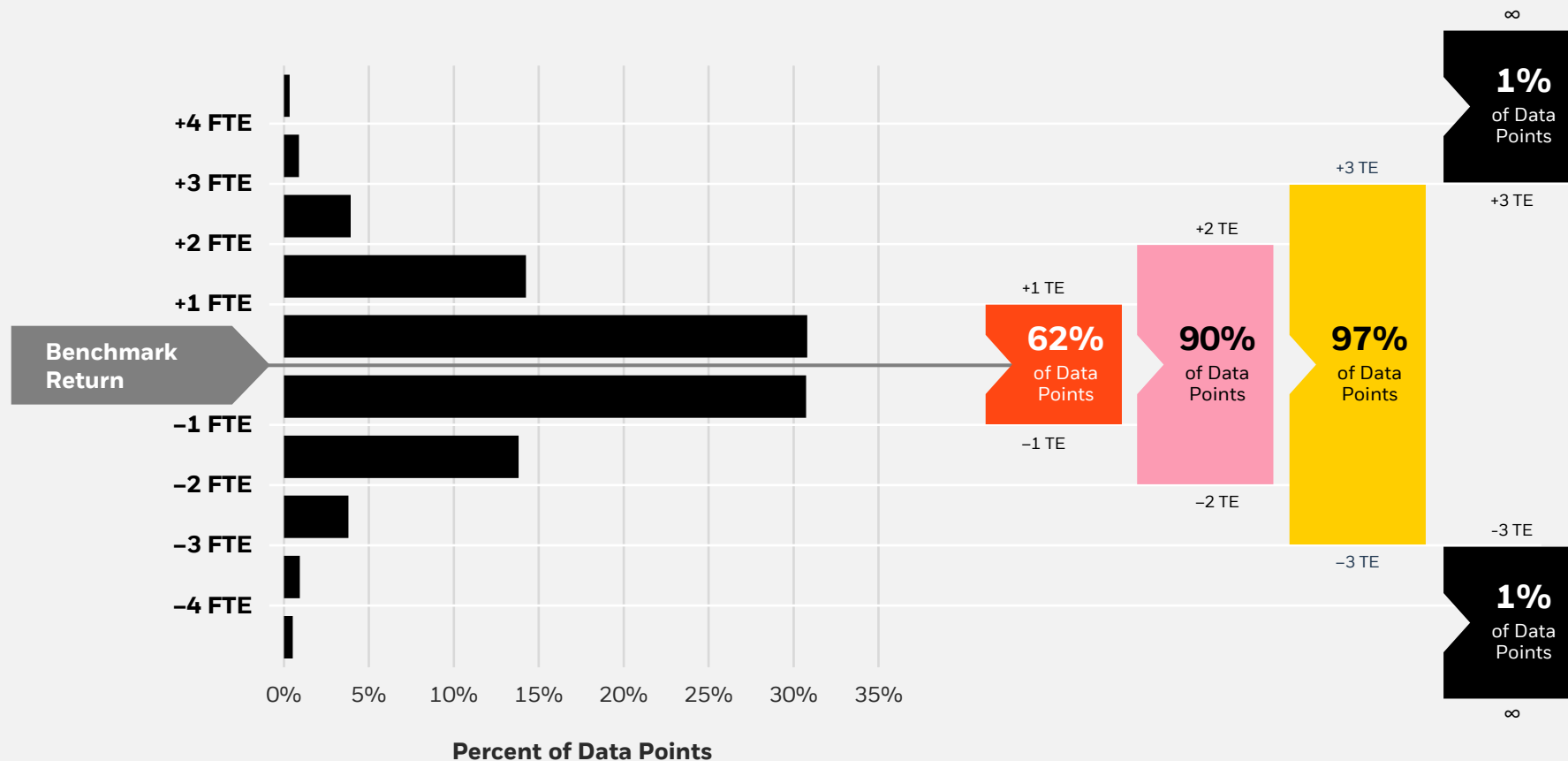
\*See "Important notes" regarding information on Aperio Social Scores and tilts.



# Forecast tracking error

The **differences** between a portfolio return and its benchmark return over time can be described as similar to a normal distribution with fatter tails.

Forecast tracking error can be used as a guide to understand the magnitude of underperformance risk.



Forecast tracking error is a risk measure as of a given date. Any changes in underlying assumptions, such as volatility, will alter these numbers, potentially significantly. See **“Important notes.”**

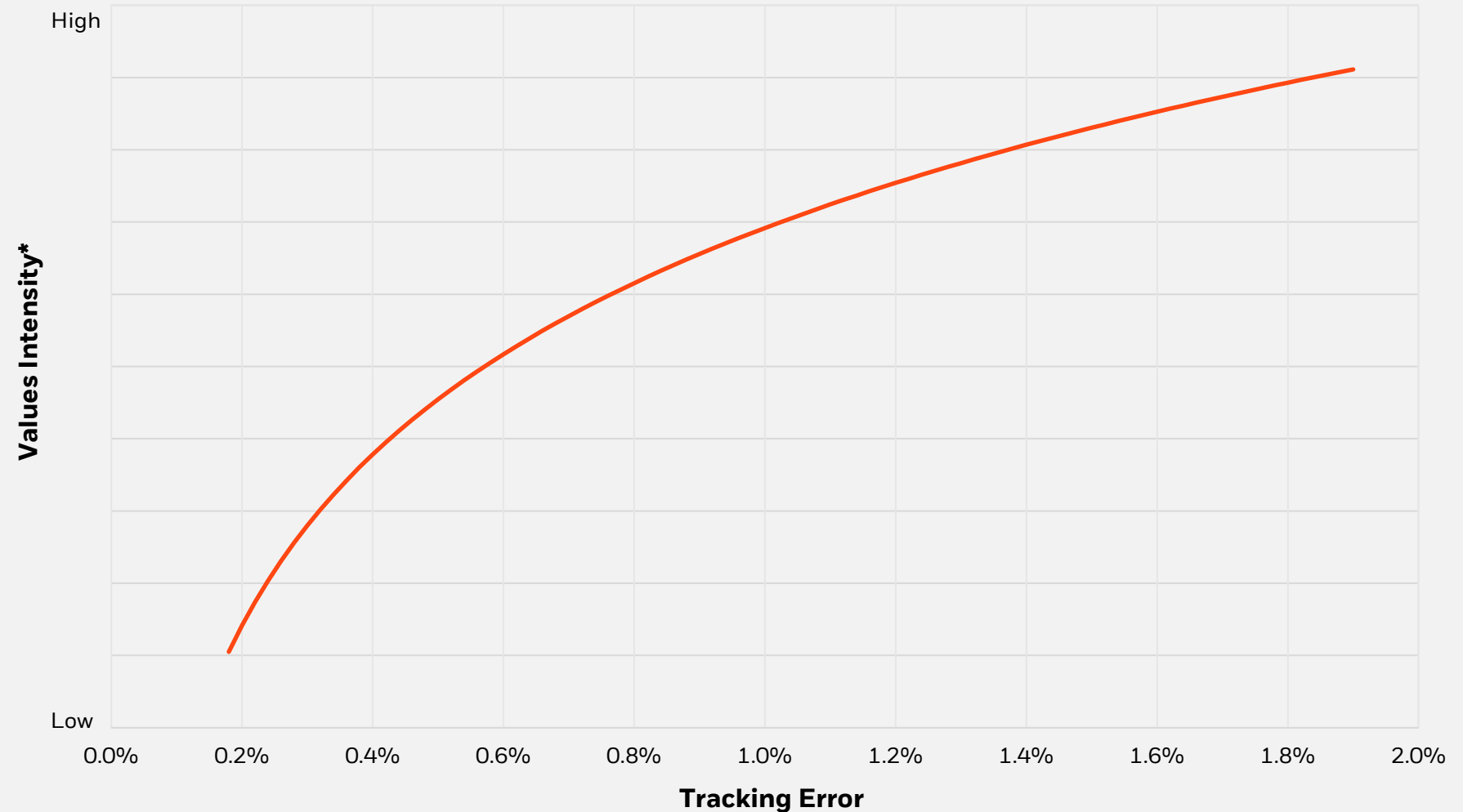
The above chart reflects 611,707 data points covering every Aperio account, filtered for forecast tracking error between 0.10% and 10.00%, for every month between 10/31/2004 and 03/31/2023 from Aperio’s historical database. Aperio calculated each account’s one-month return (before fees and net of transaction costs) minus each account’s associated client-specified reporting benchmark’s one-month return (using the benchmark associated with that account for that month), then divided that result by the deannualized forecast tracking error at the beginning of each month. Please note that the data point percentages may not sum to 100% due to rounding. Indexes are unmanaged groups of securities. You cannot invest directly in an index. Past performance is not indicative of future results.

Sources: Internal data and MSCI.

# The Social Efficient Frontier

The Social Efficient Frontier represents the trade-off between risk and values. For each increase in values intensity, the corresponding tracking error also increases. If we plot these incremental increases on a graph, a curve much like the one at right can be traced. This curve represents the Social Efficient Frontier.

This graph is a stylized representation of the concept and is not based on actual data for any particular set of issues (values) or holdings. Its intent is to demonstrate that in most instances, the addition of values (or an increased intensity of values) will increase at some level the tracking error associated for a portfolio. The actual Social Efficient Frontier will be different for each client's combination of values criteria, benchmark, tax situation, additional factor considerations, and timing of running the analysis.



\*Values intensity refers to the number and level of exclusions and tilts added to a portfolio strategy. Added tilts and exclusions result in higher values intensity.

Reference: James Picerno, "[The Final Frontier: Social Investing](#)," June 2008.

# Portfolio trade-offs—an illustration of forecast tracking error

<sup>1</sup>Includes Fracking, Tar Sands, Carbon Reserves, Fossil Fuel-Focused Utilities, 1st \$ of Coal Extraction, Oil & Gas Production, Oil & Gas Pipelines & Equipment, Oil & Gas Distribution exclusions.

<sup>2</sup>Includes Fracking; Tar Sands; Carbon Reserves; Nuclear Power; Oil, Gas & Consumable Fuels; Coal Companies; Energy Equipment & Services; Factory Farming; GMOs; Animal Testing; Pharma Only; Animal Testing: Non-Pharma; Fur; Civilian Firearms: Production; Civilian Firearms: Distribution; Military Weapons; Anti-LGBTQ Policies; Predatory Lending; Private Prisons; Sudan; Iran; No Women on Company Board; No Racial or Ethnic Minorities on US Company Board; Alcohol at first dollar; Gambling at first dollar; Life Choice at first dollar; Pornography at first dollar; and Tobacco at first dollar.

\*Forecast tracking error is the forecast annualized standard deviation of benchmark-relative returns. It is a point-in-time risk measure and not intended to provide assurance as to performance/limit on losses. **See “Important notes” for details.**

In this illustration, the benchmark is the MSCI ACWI, a global benchmark that reflects the range upon which Aperio is able to construct a values-aligned portfolio and is representative of the broad scope of equity securities from which a potential investor may choose.

	Sample Forecast Tracking Error (%)*
MSCI ACWI®	0.00
Aperio Global Tax-Loss Harvesting (No SRI)	0.38
<b>Aperio Strategies</b>	
<b>Gambling: Exclude at 5% of Revenue*</b>	0.38
<b>Gambling: Exclude at First \$1</b>	0.40
<b>Clean Technology Solutions: 150% Tilt**</b>	0.57
<b>Fossil Fuel Divestment<sup>1</sup></b>	0.82
<b>All Menu Exclusions<sup>2</sup></b>	<b>1.30</b>

\*Revenue figures for all values-aligned exclusions are provided by third-party data providers and are based on publicly reported information via sources such as company annual reports and regulatory filings. When available, company-reported revenue figures are used; revenue is estimated if exact figures have not been disclosed.

\*\*Tilts may deviate, potentially significantly, from target levels based on account-specific circumstances (e.g., tax management, factors, and diversification) and are subject to change.

**For illustrative purposes only to demonstrate how different exclusions and tilts might affect tracking error. The data do not reflect any actual accounts. Actual accounts will vary.**

Source: Internal data.

As of 04/28/2023 for a sample \$10 million all-cash portfolio with asset-based pricing.

# Aperio SRI Strategy sample portfolio characteristics

<sup>1</sup>Scores are weighted averages based on individual company scores and their corresponding weights in an index or portfolio. Aperio is dependent upon data that may be incomplete, inaccurate, or unavailable, which could adversely affect the assessment of companies based on these values-aligned factors. Aperio cannot guarantee the accuracy of the data disclosed by companies or the estimates made by third-party vendors when data are missing.

<sup>2</sup>Tilts may deviate, potentially significantly, from target levels based on account-specific circumstances (e.g., tax management, factors, and diversification) and are subject to change.

\*Forecast data are not intended to provide any assurance as to performance or limit on losses. These are measures of potential risk based on sample portfolio and benchmark holdings, and risk model calculations as of the date of this document. Any changes in underlying assumptions, such as volatility, will alter these numbers, potentially significantly.

**See “Important notes” for information about Aperio Social Scores and Social Score Tilts and the limitations of data used.**

	Russell 3000 <sup>®</sup>	Sample Aperio Total US Mkt SMA: All Cash	Sample Aperio SRI Strategy Portfolio
Forecast Tracking Error (%)*	0.00	0.22	0.57
Forecast Beta*	1.00	1.00	1.00
Forecast Volatility (%)*	19.45	19.46	19.48
Number of Stocks	2,922	597	435
Dividend Yield (%)	1.60	1.62	1.68
<b>Aperio SRI Score<sup>1</sup></b>	<b>54</b>	<b>54</b>	<b>64</b>
<b>Aperio SRI Score Tilt<sup>2</sup></b>		<b>+1%</b>	<b>+20%</b>

For illustrative purposes only.

The information in this table is shown as of 04/28/2023. The “sample portfolios” are not based on actual Aperio portfolios. It should not be assumed that clients who apply the Aperio SRI Strategy to their portfolio will have the same characteristics reflected here. Indexes represent unmanaged groups of securities. Investing directly in an index is not possible.

Sources: Internal data and MSCI.

# Tax transition analysis

(hypothetical example)

A prospective client has \$1.0 million in securities and cash held in two portfolios and wants to transition to a single US account, either a US exchange-traded fund (ETF) or an Aperio US portfolio.

The prospect is a California resident who pays the highest combined federal and state tax rates, or 54.1% for short-term gains and 37.1% for long-term gains.

The prospect's financial advisor sends the underlying tax lots to Aperio to analyze. In this case, the existing portfolio had \$334,000 in unrealized gains and \$28,000 in unrealized losses. Buying an ETF would require full liquidation with a tax cost of \$114,000.

Meanwhile, Aperio proposes three transition scenarios with lower tax costs, including one with a 3.00% forecast tracking error net tax cost of \$0 (Scenario 1 at right).

## Transition Analysis | Taxes

Client: **Aperio Client**  
Benchmark: **S&P 500**

Pricing Date:  
Short-Term Tax Rate: **53.3%**  
Long-Term Tax Rate: **32.8%**

### Existing Portfolio (\$ in 000s)

	Other			Total	Risk Summary <sup>2</sup> (Stocks Only)	
	Stocks	Holdings <sup>1</sup>	Cash		Forecast Tracking Error %	Forecast Beta
<b>Market Value</b>	<b>1,704</b>	<b>—</b>	<b>500</b>	<b>2,204</b>	7.40	
Unrealized Gains	1,390	—		1,390	1.07	
Unrealized Losses	(3)	—		(3)	14	
<b>Liquidation Tax Cost (\$)</b>	<b>405</b>	<b>—</b>		<b>405</b>		
Liquidation Tax Cost (%)	23.8%	0.0%		23.8%		
<i>Cost Basis to Market Value</i>	<i>19%</i>			<i>19%</i>		

### Transition Scenarios (\$ in 000s)

	Risk Summary <sup>2</sup>			Trading			Net Gains		Tax Cost/(Benefit) <sup>3</sup>		
	Tracking Error %	Beta	Number of Stocks	Sell Value	Buy Value	Turnover	Short Term	Long Term	Other Stocks Hold.	Total (\$)	(%)
<b>No Trade (Stocks Only)</b>	<b>7.40</b>	<b>1.07</b>	<b>14</b>								
Scenario 1	<b>5.00</b>	1.01	94	33	521	1.5%	—	(3)	<b>(1)</b>	<b>(1)</b>	<b>-0.04%</b>
Scenario 2	<b>4.00</b>	1.01	135	213	701	9.6%	0	152	<b>44</b>	<b>44</b>	<b>2.02%</b>
Scenario 3	<b>3.00</b>	1.00	200	434	922	19.7%	1	346	<b>101</b>	<b>101</b>	<b>4.60%</b>
Scenario 4	<b>2.00</b>	1.00	317	684	1,176	31.0%	1	565	<b>165</b>	<b>165</b>	<b>7.50%</b>
Scenario 5	<b>1.00</b>	1.00	352	990	1,480	44.9%	1	817	<b>239</b>	<b>239</b>	<b>10.84%</b>

<sup>1</sup> Other Holdings are any positions whose risk we cannot model, e.g. mutual funds. For analysis purposes, our calculations assume they are sold and the proceeds used to construct the portfolio presented in each Scenario.

<sup>2</sup> Risk statistics do not include Other Holdings and Cash positions.

<sup>3</sup> The tax benefit of any net short-term realized loss is calculated using the short-term tax rate.

This analysis is for illustrative purposes only and should not be considered representative of an actual portfolio. Forecast data are risk calculations as of a given date. Any changes in underlying assumptions, such as volatility, will alter these numbers, potentially significantly. See Important Notes.

Source: Aperio.

# Engage in active ownership

## Proxy voting

Proxy voting offers an opportunity for shareholders to vote in stockholder meetings on resolutions, such as the election of directors, executive compensation, and shareholder proposals.

Defaults and available choices may differ for certain clients, including those in certain wrap programs or clients subject to ERISA. Above guidelines are current as of March 31, 2023, and subject to change.

\*SRI generally refers to “socially responsible investing.”

For more information, please see the [Active Ownership](#) info sheet.

## Proxy Voting Guideline Choices

- **ISS SRI:** This option uses the Institutional Shareholder Services (ISS) *SRI\* Proxy Voting Guidelines*. These guidelines seek to generally reflect the broad consensus of the socially responsible investing community. It is the default choice for all values-aligned strategies except for the Catholic Values Strategy.
- **ISS Catholic Faith-Based:** This option is developed by ISS to align with the teachings of the Catholic Church, including its position on abortion and contraception issues. On other issues, it is similar to the SRI guidelines. It is the default choice for the Catholic Values strategy.
- **Aperio’s Governance:** This option uses Broadridge’s Shareholder Value Guidelines as a starting point, with additional guidelines developed by Aperio. It generally supports shareholder resolutions that call for disclosure but not requests to change company policy. It is the default choice for accounts that do not use Aperio’s values-alignment service.
- **Aperio’s Management-aligned:** This option votes based on the recommendations of company management when such data are available to ISS, the service provider.

# Shareholder advocacy program

If clients opt in to the shareholder advocacy program, Aperio is able to connect them with certain unaffiliated third-party shareholder advocacy groups that submit shareholder proposals.

## Enrollment

Clients wishing to participate in the shareholder advocacy program can sponsor or endorse shareholder proposals (also known as resolutions). Aperio solely acts as an intermediary and takes no view on shareholder resolutions or the shareholder advocacy groups that participate in this program. Aperio facilitates clients' work with various shareholder advocacy organizations, but has no contractual relationship with them and is not a party to any agreement between a client and any such organization.



## Process

The participating shareholder advocacy groups share general information with Aperio about the resolutions available for shareholders to file with selected companies. Aperio determines which clients in the program are eligible to sponsor shareholder resolutions under SEC criteria and notifies those clients' advisors of the opportunity for consideration, typically two to three times per year.

Notification includes a description of the shareholder advocacy group's proposed resolution and a link to a recent example of a resolution on that subject. Aperio relies on participating shareholder advocacy groups to provide this information about resolution opportunities and makes the details available to advisors when available. Additional information about the program is available upon request.

## Engagement

Clients that sponsor shareholder resolutions will need to make themselves available for those companies, although the companies often only engage with the shareholder advocacy group. Note that a company that has received a shareholder resolution could choose to address the client in a public forum, such as on social media or on a website.

Unless the client requests otherwise, Aperio will place a "Do Not Sell" trading restriction on any security that is the subject of a client sponsorship of a shareholder resolution. **See "Important notes" for details.**



# Report progress

# Client values-aligned statement

Aperio's client values-aligned report presents a comparison of a client's portfolio to the benchmark index based on the criteria selected to reflect the client's values-based preferences.

By comparing the chosen benchmark index against a values-aligned portfolio, Aperio intends to demonstrate how values-aligned investing customized to client values differs from a traditional indexing strategy.

## Values-Aligned Statement

### Sample Client

Current Benchmark : **MSCI AC World**

Current Strategy: **Standard Loss Harvesting | Aperio Environment I**

Statement Date: [DATE]

ESG Data Date : [DATE]

Market Value: **\$5,063,217**

Forecast Tracking Error<sup>1</sup>: **1.50%**

Tax Preference: **Standard - Balance Values-Aligned and Tax**

SRI Proxy Voting:

Shareholder Advocacy:

Tilts <sup>2</sup>		Portfolio	Benchmark	% Difference
Environment	Aperio Environment (Score)	65.1	54.2	<b>+20%</b>
Environment	Carbon Emission (metric tons CO <sub>2</sub> e/\$mm mkt cap)	14.4	72.7	<b>-80%</b>
Environment	Carbon Intensity (metric tons CO <sub>2</sub> e/\$mm revenue)	24.0	121.2	<b>-80%</b>
Environment	Clean Technology Solutions (wgt avg % of revenue)	8.7	5.8	<b>+50%</b>

Exclusions <sup>3</sup>	Portfolio (%)	Benchmark (%)
Carbon Reserves	0.0	6.5
Coal & Consumable Fuels	0.0	0.0
Energy Equipment & Services	0.0	0.3
Fracking	0.0	3.7
Oil Gas & Consumable Fuels	0.0	3.8
Tar Sands	0.0	2.5
Civilian Firearms: Production	0.0	0.4
Predatory Lending	0.0	0.2
Private Prison Operations	0.0	0.1
Tobacco >= 5% Revenue	0.0	0.6

<sup>1</sup> Forecast tracking error is risk calculation as of a specific date, not intended to provide assurance as to performance/limit on losses. See Important Notes.

<sup>2</sup> See Glossary for scale/measure details and inherent data limitations, as well as potentially significant tilt and score level variation within portfolios.

<sup>3</sup> Summary of current portfolio exclusions as of report date. Weighted averages shown for portfolio and benchmark.

See Important Notes for values-aligned data sources, data limitations and update frequency, and scoring methodology, benchmark indexes, and forecast data.

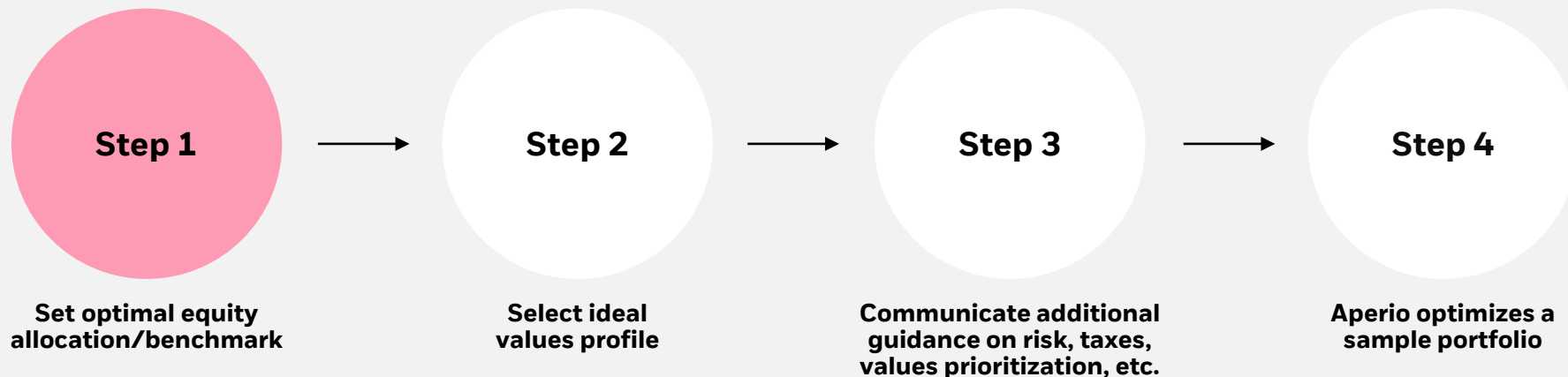
*For illustrative purposes only.*

This report is provided as an example and should not be considered representative of an actual portfolio.

Client values-aligned reports are available upon request. A sample of this report is also available.

# Research & resources

# Values-alignment strategy selection guide



## Step 1

### Equity allocation/benchmark

Aperio recommends beginning the portfolio consideration process with the client’s long equity-allocation goals. In general, the portfolio benchmark selection is driven by the client’s optimal equity allocation. Having a better understanding of the client’s allocation objectives helps Aperio determine the most appropriate benchmark.

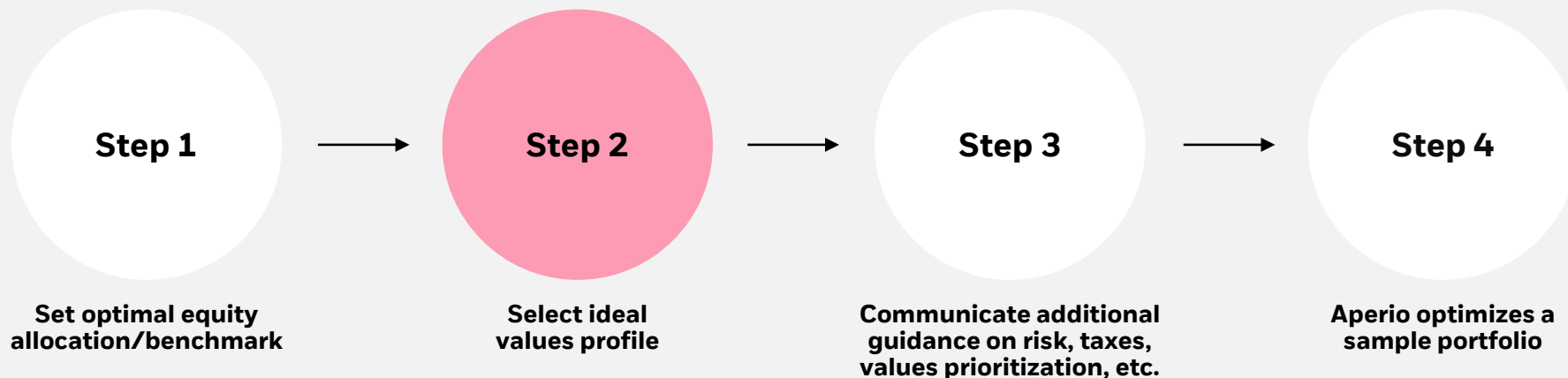
Aperio Product	Region	Capitalization
Aperio Total US Market	US	All Cap
Aperio US Large Cap	US	Large
Aperio US Large & Mid Cap	US	Large/Mid
Aperio US Mid Cap	US	Mid
Aperio US Small Cap	US	Small
Aperio US Small & Mid Cap	US	Small/Mid
Aperio Global ex US	Foreign	Large/Mid
Aperio Developed World ex US	Foreign	Large/Mid
Aperio Foreign Developed ex Canada	Foreign	Large/Mid
Aperio Global	Global	Large/Mid
Aperio Developed World	Global	Large/Mid

Blended benchmarks: Individual, custom, market-exposure weights to reflect allocations that differ from standard market-cap-weighted benchmarks. Select up to five indexes.

*For illustrative purposes only. Strategy selection process subject to change.*

Indexes represent unmanaged groups of securities. Investing directly in an index is not possible.

# Values- alignment strategy selection guide



## Step 2

### Values-based options

Next, Aperio recommends starting by selecting the client's personalized values-aligned strategy for the portfolio analysis. Values-based options on our menu range from those that are more likely to result in higher forecast tracking error and tax cost to those that are less so. Often, the additional forecast tracking error and tax cost generated from selecting additional values-based options is minimal. Given that these analyses can yield similar results, the ideal selections would be those that best align with your client's values-based preferences.

Prioritizing the issues that your client wishes to emphasize most is recommended—including must-haves and leaving out issues that may not be additive to the client's expression of values. Overselecting can lead to taking on unnecessary risk and taxes in the portfolio. Conversely, underselecting because of concerns around tracking error may create unnecessary misalignment.

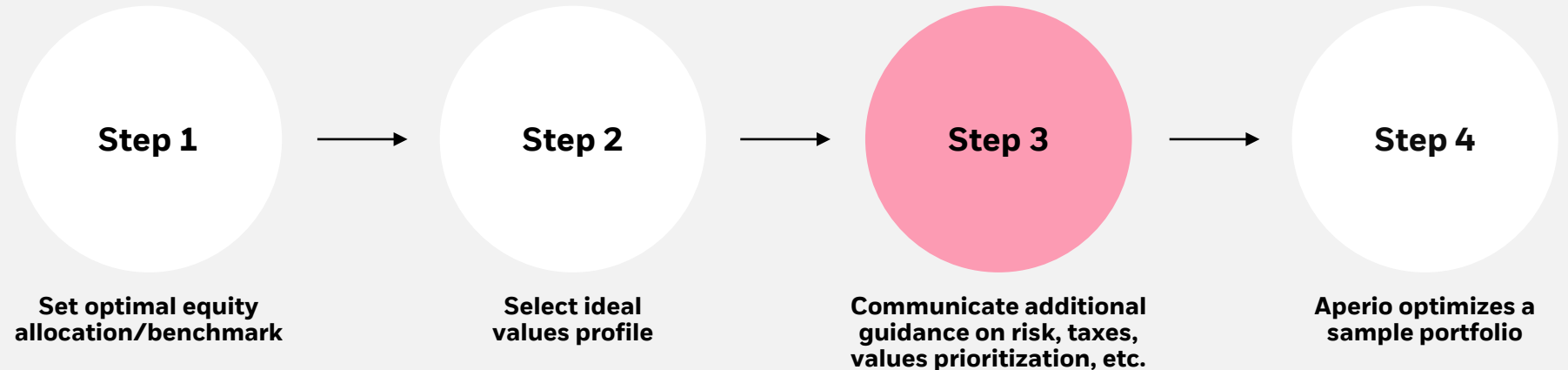
We encourage you to carefully read the notes and descriptions provided in the menu and in the strategy presentations as they were designed to point out ways to combine parameters to reflect preferences in particular issue areas, avoid unintended consequences and surprises, and answer common questions.

Forecast tracking error is a risk measure as of a given date. Any changes in underlying assumptions, such as volatility, will alter these numbers, potentially significantly. **See "Important notes."**

Blended benchmarks: Individual, custom, market-exposure weights to reflect allocations that differ from standard market-cap-weighted benchmarks. Select up to five indexes.

*For illustrative purposes only. Strategy selection process subject to change.*

# Values- alignment strategy selection guide



## Step 3

### Additional guidance

In addition to providing the personalized values-based parameters, any guidance on the following helps Aperio to provide the relevant transition option(s) for your client:

- Forecast tracking error budget—Does the client have a tracking error threshold?
- Tax budget—Does the client have a tax budget?
- Values-alignment prioritization—Which screens are highest priority? Which screens are lowest priority?
- Factor tilts
- Gifting plans

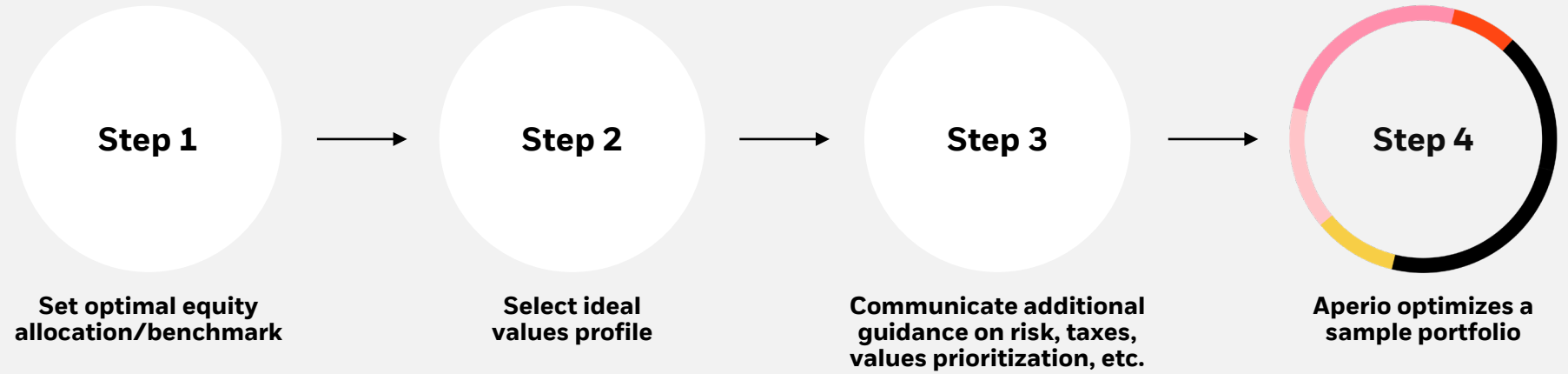
With this information, we will begin with the client’s personalized parameters, and if the chosen parameters are infeasible given your guidance, we will be able to more quickly and efficiently work with you to determine what trade-offs will provide the optimally personalized portfolio for your client.

Forecast tracking error is a risk measure as of a given date. Any changes in underlying assumptions, such as volatility, will alter these numbers, potentially significantly. See “Important notes.”

Blended benchmarks: Individual, custom, market-exposure weights to reflect allocations that differ from standard market-cap-weighted benchmarks. Select up to five indexes.

*For illustrative purposes only. Strategy selection process subject to change.*

# Values- alignment strategy selection guide



## Step 4

### Portfolio optimization

Based on your benchmark and values-based selections, Aperio will optimize a sample portfolio and provide an analysis for your review. Aperio's portfolio construction approach allows for customization and flexibility in selecting your preferred strategy.

Aperio's values-aligned strategies generally are not benchmark specific. In cases where a specified combination is not feasible or exceeds the client's threshold for risk or tax costs, our team will work with you to evaluate options and find a suitable solution for your client's needs.

Blended benchmarks: Individual, custom, market-exposure weights to reflect allocations that differ from standard market-cap-weighted benchmarks. Select up to five indexes.

*For illustrative purposes only. Strategy selection process subject to change.*

# Additional Values-Aligned Investing resources

<b>General</b>	<a href="#">Aperio Social Scores</a>	<a href="#">Aperio SRI</a>
<b>Environment</b>	<a href="#">Clean Technology Solutions Tilt</a> <a href="#">Climate Change</a> <a href="#">Environment</a>	<a href="#">Green REIT</a> <a href="#">Low-Carbon Footprint Tilt</a>
<b>Social</b>	<a href="#">Animal-Friendly</a> <a href="#">Disability Inclusion Tilt</a> <a href="#">Diversity, Equity, and Inclusion</a> <a href="#">Pro-LGBTQ Tilt &amp; Anti-LGBTQ Exclusion</a>	<a href="#">Political Spending Transparency</a> <a href="#">Racial Justice</a> <a href="#">Reproductive Rights Tilt</a> <a href="#">Women’s Inclusion</a>
<b>Governance</b>	<a href="#">Governance Tilt</a>	<a href="#">No Racial or Ethnic Minorities on US Company Board</a>
<b>Faith-based</b>	<a href="#">Catholic Values</a> • Exclusions & Scoring • Exclusions	<a href="#">Islamic Values</a> <a href="#">Jewish Values</a>
<b>Geography</b>	<a href="#">Israel Exposure Tilt</a>	<a href="#">Place-Based Strategies</a>
<b>Active ownership</b>	<a href="#">Creating Impact with an Equities Portfolio</a>	<a href="#">SRI Proxy Voting Review</a>

Offerings subject to change.



# Appendix

# Important notes

Aperio Group, LLC, provides this material for informational purposes only and for the sole use of the recipient. The information used is compiled from sources Aperio believes to be reliable, but we cannot guarantee accuracy. The information contained herein is provided with the understanding that we are not engaged in rendering legal, accounting, or tax services. We recommend that all investors seek out the services of competent professionals in these areas. The strategies and/or investments referenced may not be suitable for all investors, because the appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. None of the examples should be considered advice tailored to the needs of any specific investor or a recommendation to buy or sell any securities. The fees and expenses Aperio charges may be higher than the fees and expenses of other investment advisors and may offset profits. Additional information about the firm, and our fees and expenses, is included in our Form ADV.

**Investing involves risk, including possible loss of principal. Asset allocation and diversification may not protect against market risk, loss of principal, or volatility of returns.** There is no guarantee that any investment strategy discussed herein will work under all market conditions. Many factors affect performance, including changes in market conditions and interest rates, as well as other economic, political, or financial developments.

You should not assume that investment decisions we make in the future will be profitable or will equal the investment performance of the past. With respect to the description of any investment strategies, simulations, or investment recommendations, we cannot provide any assurances that they will perform as expected and as described in our materials. Past performance is not indicative of future results.

Opinions and estimates offered herein constitute the research of Aperio and are subject to change. All opinions and estimates are based on assumptions and limitations, all of which are difficult to predict and many of which are beyond the control of Aperio.

## Aperio Methodology & Scoring

Aperio uses both proprietary internal "social scores" as well as scores or ratings from third-party data providers depending on the values-aligned strategy. For those strategies where an Aperio social score is used, Aperio assembles data from ESG (environmental, social, and governance) data vendors and other organizations, generally on an annual basis. This data is used to score companies on a wide range of topics and is the basis for creating values-aligned portfolios. Data Elements are combined into preconfigured, standard Aperio Strategy and Tilt options and are also used to create customized, client-specific scoring profiles). The output from these profiles is generally referred to as "Social Scores."

To calculate Aperio Social Scores, Data Elements are evaluated (and quantified if needed), z-scored (statistically compared to the average value of other companies) and combined based on assigned weights into issue area "Component Scores." Companies generally have multiple scores that feed into a Social Score, with a different score for each component. Component Scores are aggregated at profile-assigned weights and are used to calculate Company Social Scores. Company scores are calculated across the entire Aperio universe and range from 0 to 100. Higher Company Social Scores reflect a company more aligned with the specific values in the strategy, and lower scores represent a company less aligned with the selected values. When used as a tilt in the construction of portfolios, higher scores can result in an overweighting of companies and lower scores can result in an underweighting of companies in a portfolio.

Social Scores for each strategy consist of the weighted average of the relevant Component Scores for each company. Each strategy—whether a standard strategy or client-specific option—generates a different set of company scores. These strategy-specific scores are usually referred to by their strategy name, such as "DEI Score," "Aperio SRI Score," etc.

We are happy to provide further details on how third-party and Aperio Social Scores are compiled and used.

In some cases, Aperio uses scores or ratings from third-party data providers. Aperio cannot guarantee the processes or methodologies for rating evaluations conducted by external providers.

## Sources of Data

Aperio sources of data include MSCI ESG Research and ISS ESG, and other data providers as relevant, as well as industry classifications (usually GICS® classifications). In addition, for certain Data Elements, Aperio may source information from other sources, including advocacy organizations. Each of these data sources relies on a number of original sources for its data gathering. Three primary sources for data gathering are:

**Mandatory company disclosures:** In certain cases, companies must comply with regulatory requirements for the disclosure of information. This kind of information can range from financial information to information the US Environmental Protection Agency requires company facilities to disclose. The advantage of this information is that it is comprehensive across the universe of companies. Unfortunately, in many issue areas, no mandatory disclosure applies.

**Voluntary company disclosures:** Much of the information available is voluntarily disclosed by companies, often in corporate sustainability reports or in sustainability or responsibility sections of their websites. This information can be more difficult to incorporate into evaluations and ratings because all companies do not disclose all information, and even when they disclose similar issues, companies are not consistent in how they do so.

**Third-party information:** In certain instances, third parties may have information about a company that does not rely on the information disclosed by the company. For instance, a regulatory agency that fines a company has that information independent of any disclosures by the company.

Data that Aperio receives from its vendors and other information sources may include metrics constructed as a combination of these concepts. For instance, there is mandatory disclosure of certain kinds of international operations, including registered subsidiaries. When this information is combined with evaluations of countries' political and civil liberties provided by a nongovernmental organization (NGO), we have a hybrid Data Element. In another example, we use ratings by the Human Rights Campaign (HRC) as an indication of a company's approach to sexual-orientation issues. HRC gathers information from companies, including by conducting surveys (voluntary disclosure), and then scores the companies. So, this is a combination of voluntary disclosure and evaluation.

# Important notes

NOTE: When assembling data into a Social Score, Aperio determines how to score missing data based on the reason and context for the missing Data Element value. When the Data Element is based on voluntary disclosure and the data vendor sought to gather the Data Element from the company, but the element is null, the company will receive the lowest available score. When the Data Element was not researched by the vendor because it is not relevant to the company's industry, and Aperio agrees it is not relevant, then the company is assigned the highest possible score. When the vendor did not research the Data Element for the company based on its not being relevant, but Aperio disagrees with this assessment, the company is assigned an average score for the sector.

## Data Frequency, Updates & Limitations

Aperio updates its ESG data for the Values-Alignment Menu annually. Data Elements may be updated during the year as our data providers receive new data from either the company or publicly available sources, and this will not be captured in our processes until Aperio's next annual data update. Aperio updates all exclusions and scoring profiles annually, usually during the first calendar quarter. As accounts are rebalanced, the updated data will be incorporated, usually during the second calendar quarter.

Because the data sets are not updated in real time, there may be a lag between a change at the company and when the change flows into the data set, and again when it flows into the portfolio during a rebalance. Aperio handles all updates consistently and does not override the approved, vendor-/source-provided data sets.

Aperio's standard strategies may evolve over time, including changes in scoring and exclusionary screening criteria. Clients will generally be consulted if these changes cause significant changes to their portfolios resulting in significant tax consequences or altered risk profiles.

**Aperio is dependent upon data and information that may be incomplete, inaccurate, or unavailable, which could adversely affect the assessment of companies based on ESG factors. Aperio cannot guarantee the accuracy of the data disclosed by companies or the estimates made by third-party vendors when data are missing. As a result, Aperio's Social Scores and third-party scores are based on information with inherent limitations. All scores should be viewed solely as directional, and their accuracy is not guaranteed.**

## Portfolio Management Process

Client-selected values-aligned strategies, tilts, and/or exclusions are incorporated into portfolio optimization. These selections may alter Aperio's ability to track a portfolio's benchmark. The estimated deviation from the benchmark is measured using forecast tracking error as calculated by the Barra Risk Model. This deviation can be significant.

## Data Licensing

Data from MSCI ESG Research LLC, or its affiliates are used under license. MSCI ESG Research does not warrant or guarantee the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. None of the MSCI information is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such, nor should it be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

## Optimizer

The optimization process Aperio uses in tax-loss harvesting and generating sample portfolios relies upon optimization software developed by MSCI. The software utilizes a mathematical objective function that seeks to minimize the combination of active risk (i.e., forecast tracking error) and, when applicable, the tax liability on realized gains, while also meeting the conditions presented by a series of simultaneous equations, the values of which are, in part, populated by data based upon the securities being analyzed. With respect to measuring potential equity risk in the process of tax-loss harvesting and portfolio analysis, Aperio also uses and relies upon MSCI Barra risk models. You should note that such use and reliance of the MSCI Barra risk models in the optimization and equity risk analysis presents model risk, which is defined as the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports. Model risk can lead to financial loss.

The mathematical calculation and quantification exercise underlying any model generally involves application of theory, choice of sample design and numerical routines, selection of inputs and estimation, and implementation in information systems. Errors can occur at any point from design through implementation. In addition, shortcuts, simplifications, or approximations used to manage complicated problems could compromise the integrity and reliability of outputs from those calculations. Finally, the quality of model outputs depends on the quality of input data and assumptions, and errors in inputs or incorrect assumptions will lead to inaccurate outputs. The model may be used incorrectly or inappropriately. Even a fundamentally sound model producing accurate outputs consistent with the design objective of the model may exhibit high model risk if it is misapplied or misused. Models by their nature are simplifications of reality, and real-world events may prove those simplifications inappropriate.

# Important notes

## Shareholder Advocacy

Unless the client directs otherwise, Aperio will place a "Do Not Sell" trading restriction on any security that is the subject of a client sponsorship of a shareholder resolution. This restriction is placed on the security in the portfolio as of the date the client signs an agreement with a shareholder advocacy organization to file or co-file a shareholder resolution. The restriction may remain in place until the next annual meeting of the company; it may be removed earlier for several reasons, such as if the resolution is not filed, voluntarily withdrawn, or omitted. Such restriction could affect tracking error to the portfolio benchmark and affect performance and other risk characteristics.

## Forecast Tracking Error, Forecast Beta, Forecast Volatility

Forecast Tracking Error is a point-in-time risk measure derived from a risk model using portfolio holdings and benchmark holdings. Tracking Error is the annualized standard deviation of portfolio active returns.

Forecast Beta is a point-in-time risk measure of Beta derived from a risk model using portfolio holdings and benchmark holdings. Beta is the slope coefficient of portfolio total returns regressed against benchmark total returns.

Forecast Volatility is a point-in-time risk measure derived from a risk model using portfolio holdings or benchmark holdings. Volatility is the standard deviation of portfolio total returns or benchmark total returns.

Forecast risk measures are not a forecast of future investment performance. Forecast risk measure calculations are based on portfolio holdings, benchmark holdings, and a risk model (which takes into account the volatility and correlation of the risk factors in the marketplace) as of a specific date. For different dates, the portfolio and benchmark holdings, and the risk model will differ. Therefore, the risk measure on one date will differ, potentially significantly, from a risk measure on another date. Aperio makes no adjustments to the risk-model derived Forecast Tracking Error, Forecast Volatility or Forecast Beta.

## Benchmarks & Indexes

Any indexes referenced herein are used under license by Aperio. Indexes represent unmanaged groups of securities. Investing directly in an index is not possible. Reference to an index does not imply that the portfolio would achieve returns, volatility, or other results similar to that index. Further, an index's composition may not reflect the manner in which a client portfolio is constructed in relation to expected or achieved returns, investment holdings, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility, or tracking error targets, all of which are subject to change over time. Any index referenced would necessarily be materially different in strategy and volatility from the client account.

The Russell 3000<sup>®</sup> Index is an equity benchmark for US stock performance. It is a capitalization-weighted index covering the largest 3,000 publicly traded US stocks. The index represents approximately 98% of the total market capitalization of the US stock market. FTSE Russell is a trading name of certain of the LSE Group companies. The Russell 3000 Index referenced herein is a trademark of the relevant LSE Group companies and are used by any other LSE Group company under license. All rights in the FTSE Russell index or data vest in the relevant LSE Group company, which owns the index or the data. Neither LSE Group nor its licensors accept any liability for any errors or omissions in the indexes or data and no party may rely on any indexes or data contained in this communication. No further distribution of data from the LSE Group is permitted without the relevant LSE Group company's express written consent. The LSE Group does not promote, sponsor, or endorse the content of this report.

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The MSCI ACWI<sup>®</sup> Index is an equity benchmark for global stock performance. It is a capitalization-weighted index covering large and midsize companies. The index includes approximately 3,000 stocks from 23 developed-market countries and 27 emerging-market countries. The MSCI Index referenced herein is the registered trademark of MSCI or its subsidiaries in the United States and other jurisdictions. The index is used by Aperio under license from MSCI. The strategy referenced herein is not sponsored, endorsed, or promoted by MSCI, and MSCI bears no liability with respect to any such strategies, or any MSCI index upon which such strategies are based. Aperio's license agreement with MSCI contains a more detailed description of the limited relationship MSCI has with Aperio and any related strategies. No further distribution of data from any MSCI index is permitted without the MSCI's express written consent.

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415.339.4300

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