Socially Responsible Personal Strategy
What is socially responsible investing?

This is a very broad and somewhat subjective concept. What one investor deems socially responsible could be completely different from another. As such, up until recently it has fallen on each investor to decide what companies, industries or sectors they should exclude from their portfolio—with the goal of aligning their investments with their personal beliefs. Of course this is still possible, and it’s a service Personal Capital has offered to all our clients since inception. But the industry has evolved, and a new style of investing has emerged called ESG.
ESG stands for Environmental, Social and Governance, which represent the three main pillars used to evaluate a company’s “social responsibility.”

Environmental
- Climate Change
- Renewable Energy
- Sustainability

Social
- Diversity
- Labor Relations
- Conflict Minerals

Governance
- Management Structure
- Board Independence
- Executive Compensation

ESG can encompass issues like carbon emissions and renewable energy projects, as well as policies surrounding employee discrimination, board independence, and bribery and corruption, among others.

There is no global standard for evaluating these metrics, but a handful of third-party firms have established robust research and ranking methodologies. Out of these firms, Personal Capital has chosen to partner with Sustainalytics, a global leader in ESG and Corporate Governance research and ratings with a history spanning more than 25 years. Today, Sustainalytics supports hundreds of the world’s foremost investors who incorporate ESG and corporate governance insights into their investment processes.
Research Methodology

Sustainalytics scoring methodology is referred to as the ESG Risk Ratings, and it takes their industry leading research to an incredibly deep level. One of the core tenets of this methodology is its focus on ESG issues that are financially materially to each company. This means the ESG Risk Ratings evaluate ESG risks by taking sub-industry and company specific context into account.

Many third party research firms assign a broad ESG score to all companies in the universe. So regardless of the specific sub-industry, every company receives an environmental score (E), a social score (S), and a governance score (G). The problem, however, is that not all companies are materially exposed to each of these categories.

Sustainalytics methodology is different. A small regional bank, for example, has very little exposure to material environmental issues. So even if it implemented a robust environmental policy, the actual impact on the environment and the company would be negligible. As such, it doesn’t make sense to evaluate and score the firm on such metrics. Instead, the focus should be social and governance issues, like human capital, data privacy and business ethics. And when it comes to environmental issues, they should apply to companies with material exposure, such as utilities and industrial conglomerates, among others.

The new rating measures & assesses two dimensions of ESG:

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**Exposure**

Measures a company’s exposure to different ESG issues driven by sub-industry and company-specific factors.

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**Management**

Measures a company’s preparedness and track record in managing its exposure to material ESG issues. The rating also distinguishes manageable from unmanageable risks.

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**ESG Risk Rating** (*a.k.a. Unmanaged Risk*)

Measuring the companies’ exposure to and management of material ESG issues. A lower value indicates less ESG Risk.
The end result is a deeper analysis that is more accurate and relevant to each company in the universe. To summarize, here are a few key takeaways in the words of Sustainalytics:

Our new rating measures and adds up the unmanaged risks of a company vis-à-vis a set of ESG issues that are considered financially material. A comprehensive Corporate Governance analysis has been fully integrated into the rating.

It introduces a second dimension into the rating equation besides management: exposure. Exposure is evaluated at the subindustry level, enhancing the granularity of the rating compared to other systems, and adjusted at the individual company level to take the specific context into account.

Controversies play a significant role in the new rating, making it more responsive to new information between disclosure-driven rating updates. The rating is able to take unexpected developments into account in a rigorous manner. Controversies are defined below.

Controversy Assessments

Sustainalytics’ assesses companies for their level of involvement in major controversies or incidents that have an impact on the environment or society and the associated business from such involvement. Involvement in controversies may indicate that a company’s management systems are not sufficient to protect it from its ESG risk exposure. Controversies may also highlight an ongoing incident that is creating risk for the company. Some of the topics include: business ethics, society and community, environmental operations, environmental supply chain, product and service, employee, social supply chain, customer, governance, and public policy.
The portfolios continue to incorporate each of the six major liquid asset classes of Domestic Equities, International Equities, Domestic Bonds, International Bonds, Alternatives and Cash. We apply Modern Portfolio Theory combined with mean-variance optimization to produce optimal asset class mixes that attempt to maximize return for each level of risk. All high level asset allocation mixes are identical to those used in our core Personal Strategies, which all fall on or near the efficient frontier. These are determined through our personalized strategy selection process that combines real-time financial aggregation, deep investor profile data, Monte Carlo projections, and the expertise of financial professionals.

Socially Responsible Personal Strategies also retain our Smart Weighting™ methodology within US Equities (more detail provided in subsequent sections), tax management, and disciplined rebalancing.
We apply Modern Portfolio Theory combined with mean-variance optimization to produce optimal asset class mixes that maximize return for each level of risk. All high-level asset allocation mixes are identical to those used in our core Personal Strategy portfolios, which all fall on or near the efficient frontier. These are determined through our personalized strategy selection process that combines real-time financial aggregation, deep investor profile data, Monte Carlo projections, and the expertise of financial professionals.

Socially Responsible Personal Strategy portfolios also retain our Smart Weighting™ methodology within U.S. Equities (more detail provided in subsequent sections), tax management, and disciplined rebalancing.

Application of ESG Metrics within the Portfolio

While demand is growing, ESG investing remains a relatively new industry and has yet to produce a diverse mix of low-cost “ESG-optimized” ETFs. More are coming to market, but currently the list of candidates lacks either attractive pricing or sufficient liquidity to be considered in portfolios. As such, the incorporation of ESG metrics primarily applies to the U.S. and International Equity asset classes. This could change over time as new ESG funds are created and existing funds grow in volume.

U.S. Equities
Basket of individual ESG-optimized stocks used for exposure to the mega-cap, large-cap, and mid-cap segments of the market. Due to more limited scoring data, small-cap stocks are represented by a mix of traditional diversified low-cost ETFs.

International Equities
A set of diversified ESG-optimized ETFs are used for exposure to foreign developed and emerging market stocks. Due to a lack of viable investment options, a traditional (non-ESG) ETF is used for international small-cap equities.

Bonds
Diversified blend of traditional ETFs used for exposure.

Alternatives
Utilizes a diversified commodities fund with reduced oil and gas exposure. Traditional ETFs used for remaining categories of real estate and gold.

Cash
Not applicable
We employ a best-in-class approach to the U.S. equity component of our Socially Responsible Personal Strategy.

Our process starts with the aggregate US equity universe as defined by the Russell 3000. Using Sustainalytics’ ESG scores and categorizations, we rank companies against their domestic sub-industries (more than 130 in total). And if a sub-industry is too small, which we define as less than 10 total companies, we rank them against their domestic peer groups (42 groups in total).

All stocks with ESG percentiles below their sub-industry average, or in some cases peer group average, are immediately excluded from consideration. Out of the remaining US equities, we then apply our Smart Weighting™ methodology. This is our proprietary investment approach that more evenly weights the factors of size, style and sector when compared to traditional cap weighted indices.

However, there are two exceptions with respect to sector exposure. Due to its heavy concentration in fossil fuels, we fully removed the energy sector from consideration. There is still a small amount of exposure from the ETFs, but at less than 1% of the aggregate US equity piece, we deem this amount immaterial. The utilities sector also has exposure to fossil fuels, but this is mostly in the form of electricity generation and distribution. Moreover, the vast majority of renewable energy projects, such as wind and solar farms, are initiated and built by utilities firms. This sector should play a primary role in the transition to greater renewable energy sources over time. As such, we felt it was still appropriate to include these firms in the US equity piece.
Another sector with reduced weight is communication services. This was not a function of any ESG-related issue, but simply a reflection of the sector’s structure within the US. Domestic telecom firms have slowly consolidated, putting most of the power in only a handful of companies. Given the investable universe has become so small, we reduced our target exposure by about half. In an acknowledgement of this trend, and challenges it presents, we anticipate the major sector classification providers to modify their structure and add media and some other sub-sectors to communications. This will include some popular stocks currently classified as Technology. When these changes occur, we expect to return to a fully equal weight approach.

The final portfolio consists of approximately 75-85 stocks diversified across the nine major economic sectors (ex-energy), with a reduced weight in communications. This leaves a target range of around 10% to 13% for all eight remaining sectors. Similar to our core Personal Strategies, we also more evenly diversify over size and style, with roughly 60% of the portfolio split between mega cap and large cap, and the remaining 40% split between mid cap and small cap. The small cap exposure is the only segment of the US equity asset class not ESG optimized.

Once we’ve identified companies that meet our objectives and Smart Weighting™ targets, we attempt to choose firms with higher overall ESG percentiles, where possible. The final set of stocks possess ESG metrics that, on average, rank above the 90th percentile relative to their domestic sub-industries (as of 10/31/18). This compares to roughly ~50% for the broader US universe.
Once we’ve identified companies that meet our objectives and Smart Weighting™ targets, we attempt to choose firms with higher overall ESG scores, where possible. The final set of stocks possess ESG scores that, on average, rank above the 90th percentile relative to their domestic peer groups (as of 12/31/2018). This compares to 50% for the broader U.S. universe.

Lastly, we filter out companies with material exposure to the following industries:

- Adult entertainment
- Gambling
- Tobacco
- Controversial weapons
- Military contracting (weapons related)
- Small arms

We define material exposure as anything representing more than 5% of total revenue.

The end result is an investment strategy more heavily focused on social responsibility as defined through the three ESG pillars of Environmental, Social, and Governance. And of course, if a client ever objects to a particular stock, they retain the ability to restrict and exclude it from their personal portfolio.
There is a multitude of third party research on the topic, but currently there is no standard method for tracking ESG metrics, and most studies differ in assumptions and methodology. This is why Deutsche Bank teamed up with the University of Hamburg in 2015 to produce their meta-study: *ESG and financial performance: aggregated evidence from more than 2000 empirical studies*. The goal was make sense of all existing research and attempt to draw high level conclusions.

When it came to portfolio studies, they found approximately 73.5% of them produced neutral/mixed results, 15.5% produced positive results and 11.0% produced negative results. In other words, it was inconclusive whether ESG investing resulted in any outperformance. However, based on these findings, a primary conclusion was that at worst case, an investor in ESG funds “...can expect to lose nothing compared to conventional fund investments”. This is important since it helps debunk one of the most common fears: that investors need to sacrifice returns in order to invest more responsibly.

Moreover, the study found a positive link between stronger ESG management and better corporate financial performance. This was true across all regions, as well as each of the environmental, social, and governance factors within ESG.
Clearly, companies that placed more focus on material (i.e. relevant) ESG issues, and less focus on immaterial issues performed the best. In fact, they generated stronger alpha than those who performed well on all ESG issues, regardless of relevance. This potentially suggests these firms are more efficiently utilizing resources, meaning they aren’t wasting time and money focusing on irrelevant issues.

The study’s primary conclusion is simple: focusing on material sustainability issues can be value-enhancing for shareholders. If true, this would certainly be a welcome benefit. But of course this is just one study, and it only covers a 20 year period. Time will tell whether its results hold true moving forward.

Another separate study, more specifically related to Sustainalytics’ scoring methodology, came out of Harvard Business School in 2015. It looked to identify the impact of focusing on material sustainability issues versus immaterial sustainability issues. It did this using the SASB’s framework to compare portfolios of U.S. companies that performed well on both material and immaterial ESG issues, as well as those that performed poorly.

How do you interpret this?

Harvard Business School Study
Corporate Sustainability: First Evidence on Materiality

![Annualized Return Alpha Over Market](chart)

<table>
<thead>
<tr>
<th>Performance on Material Sustainability Factors</th>
<th>Alpha: Excess return of an investment above the return of a benchmark index</th>
</tr>
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<tbody>
<tr>
<td>Strong</td>
<td>1.96%</td>
</tr>
<tr>
<td>Weak</td>
<td>6.01%</td>
</tr>
<tr>
<td>Weak</td>
<td>-2.90%</td>
</tr>
<tr>
<td>Strong</td>
<td>0.60%</td>
</tr>
</tbody>
</table>

Alpha: Excess return of an investment above the return of a benchmark index.
Smart Weighting Back Test – Revised Sector Weights

Another question to consider is whether portfolio performance is expected to suffer after fully excluding the energy sector. As such, we adjusted our Smart Weighting™ back test to reflect this change. As depicted in the figure below, the exclusion of energy had very little impact on annualized return of our Smart Weighting™ strategy (+0.05% increase), but led to a larger increase in volatility. Over the period tested (1990 to 2018), the annualized standard deviation increased by approximately 0.2%.

### Hypothetical Back-Test of Sector & Style Weighting vs. S&P 500

**Growth of $500,000 (12/31/90 – 12/31/18)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Smart Weighting (ex Energy)</th>
<th>S&amp;P 500 Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>$2M</td>
<td>$2M</td>
</tr>
<tr>
<td>1991</td>
<td>$4M</td>
<td>$4M</td>
</tr>
<tr>
<td>1992</td>
<td>$6M</td>
<td>$6M</td>
</tr>
<tr>
<td>1993</td>
<td>$8M</td>
<td>$8M</td>
</tr>
<tr>
<td>1994</td>
<td>$10M</td>
<td>$10M</td>
</tr>
</tbody>
</table>

*Sharpe ratio assumes a risk-free rate of 2.5%.*
Conclusion

While past performance is never a guarantee of future performance, based on available third party studies and our own back test, we do not expect any material performance deviations between our Socially Responsible Personal Strategies and core Personal Strategies over full market cycles. However, the lack of energy stocks in the former increases concentration and reduces the investable universe, which in turn could increase volatility.

At the end of the day socially responsible investing is a personal choice. If it is something you feel strongly about, a reduced set of companies to choose from could be a small price to pay. The opportunity is an industry leading ESG-optimized portfolio that retains the benefits of Smart Weighting™, as well as the other benefits offered with our core Personal Strategies, such as tax management, disciplined rebalancing, and the aid of a personal financial advisor.
Smart Weighting™ Back Test: The S&P 500 is a market-weighted index; each stock’s weight in the index is proportionate to its market value. The S&P 500 is designed to be a leading indicator of U.S. equities and is commonly used as a proxy for the overall market. The Smart Weighting strategy shows hypothetical index results, and does not reflect an actual account or trading. Based on available data, the hypothetical results are time-linked equal returns of size, style and sector indexes. From 1991 to 1995, the data represents an average of equal weighted S&P sectors (ex-energy) and an equal weight of the S&P 500 and Russell 2000. From 1996 to present, it is an average of equal weighted S&P sectors (ex-energy) and the nine Russell style indexes. Standard deviation is only inclusive of full year return figures. Results assume the reinvestment of dividends. These retroactive results do not include the effects of cash flows, fees or securities transactions, all of which would have reduced the returns shown. It is not possible to invest directly in an index, and it is not possible to invest in a strategy without fees and expenses. Investments in securities include the risk of loss. Past returns are no guarantee of future performance. There can be no assurance that any strategy will be profitable, or that the Smart Weighting strategy will perform better than the S&P 500 or other market-weighted index. Due to limited scoring data and a lack of low cost/liquid ETFS, all asset categories outside of mega cap, large cap and mid cap US equities are not ESG-optimized in the Socially Responsible Personal Strategy. Full customization and individual stocks are only available to those with $200,000 or more to invest.
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