Nutmeg.
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Socially responsible investing at Nutmeg

Whitepaper

Foreword

Investments can be among the largest financial decisions and commitments we make in our lifetime. And yet, many investors struggle to find investment portfolios that reflect their personal values or moral convictions, or that give them clarity about exactly what they are investing in.

As we discuss in this whitepaper, the rationale for socially responsible investing (also known as SRI) is well founded, but the sheer volume of labels attached to these types of investments can be confusing. For instance, why does a so-called 'social' fund hold stocks in tobacco companies? Or why does a 'climate change' fund continue to hold major oil companies?

At Nutmeg, we seek to offer our clients a transparent and clear approach to understanding how their portfolios are invested, and how our socially responsible portfolios operate. We use industry-leading environmental, social and governance (ESG) research and analytics to score every one of our portfolios in the same way, giving you the accessible insight necessary to stay informed about your investment portfolios.

Using this data, together with our own investment expertise, we've constructed ten portfolios with social responsibility at their heart, offering a route to responsible investment without the need to trade-off against any of our core investment principles. In addition, all of our Nutmeg portfolios styles are ESG integrated – meaning no matter what approach you choose, you can be confident that it is being managed in a way that incorporates environmental, social and governance considerations.

Bottom line? With Nutmeg, you don't need to sacrifice diversification, low-costs and liquidity to invest in a responsible manner.

Socially responsible investments are at the tipping point of widespread adoption. We truly believe our portfolios offer you the best possible current access to ESG themes, while ensuring you remain on track to reach your investment goals.

We're aware that actions speak louder than words but this whitepaper gives you the chance to delve into the detail behind our approach and the portfolios we've built.

Thanks, and if you have any questions or feedback, don't hesitate to contact us at support@nutmeg.com.

James McManus
Chief investment officer

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What's in a name?

Over the past decade, responsible investment has become a major theme in global investment markets.

There's lots of different labels that come with this theme without any standardised framework for what they mean: ethical, sustainable, green, values-based, community, mission-based, impact – the list goes on.

So, what are we really talking about here?

It's a complicated topic, but a simple underlying premise.

At Nutmeg, we're using the term socially responsible investing (SRI). We believe this term fairly reflects our clients' interests in limiting exposure to companies that engage in controversial activities while increasing exposure to companies that lead their peers in social responsibility.

We know that talking about values has the potential to trigger a broad spectrum of emotions for investors, because values are personal. And having such a broad range of over-simplified labels can also trigger confusion, simply because of the sheer volume of different terms used to describe the different investment approaches.

To us, investing with a socially responsible focus means investing in companies that do business in a fair and progressive way: over-weighting towards companies with strong sustainability profiles, while avoiding those that engage in controversial activities.

However, unlike many other providers, we don't stop at descriptions. We believe all investors should be able to understand how their money is working to serve more than just profit.

Rather than use an over-simplified label and leave things to interpretation, we've used industry leading ESG analytics to offer insights beyond investment returns.

The E, the S, and the G

The term 'ESG' refers to three core categories of non-financial factors that investors typically seek to define, especially in relation to SRI: environmental, social, governance. ESG encompasses a broad range of considerations within these three key pillars, seeking to recognise the factors that have the potential to present material risks and opportunities.

Environmental
which includes topics such as: pollution, deforestation, waste of resources, water stress and climate change.

Social
which includes topics such as: working conditions, health and safety, community engagement, diversity and child labour.

Governance
which includes topics such as: bribery, corruption, executive pay, leadership diversity, data security and tax strategy.

Why is this way of investing growing?

The origins of socially responsible investing

The origins of socially responsible investing were philanthropic, and largely focused solely on moral considerations without significant focus on investor reward (or in other words, return). In particular, there was typically little consideration for how ESG factors could improve the rewards offered to investors. Instead, investors were focused on avoiding controversies or seeking a social gain.

Over the past two decades, investors have increasingly begun to consider non-financial factors in their analysis of companies. The emphasis on ESG integration has moved from the either/or of purely social versus purely financial, to recognise that ESG integration can improve the long-term performance of portfolios while aligning them with long-term societal objectives.

Some of this effect is due to stakeholder pressure, with industry being asked to consider its role in society following a multitude of bribery scandals, environmental issues, customer data leaks or tax evasion issues. The outcome of this is clear: businesses are being held to higher operational standards, rather than just better financial metrics.

Much of this new scrutiny has been enabled by more advanced data sets, that give investors greater accuracy in gauging a business, its competitiveness, and its future ability to operate stably and successfully. This quantitative foundation means ESG analysis goes beyond simply making a business more ethical: it's about using new data sets to complement traditional financial analysis and improve investment decision making.

Most investors have long had a framework to incorporate non-financial factors into their investment analysis and the benefits of doing so are well understood. For example, we can all understand that a company that rewards staff fairly, invest s in training, and has a management team aligned with the success of the business, should be positioned to perform better than one that doesn't have these attributes.

The application of this concept isn't new, but the detail and accuracy of the insights that are now available in non-financial data are.

New data means new insights

The rationale behind these new insights is relatively simple. The world is changing and we now have better access to data and information which simply didn't exist before. We can now better understand topics such as nutrition, climate change, working practices, health and social impact.

We're now measuring many things we previously didn't, meaning we're able to manage the effects of these factors. For example, five years ago, many of us didn't know how many steps we took a day. Our phones or watches now tell us and this has brought about changes in many people's behaviour. The same is true of information required from companies – for example, they may not have been willing or able to provide accurate data on their gender pay gap several years ago, but now they can and they are.

Socially responsible investing incorporates social change and how this will affect future demand. For example: it's widely acknowledged that the tobacco industry is in decline due to a change in social attitudes towards tobacco products, supported by a body of evidence as to the detrimental effects of tobacco on health. By removing those companies heavily reliant on the industry from your portfolio, the (limited) future viability – or sustainability – of the industry itself is being acknowledged.

It's also no longer just about avoiding controversy. It's about using new data and insights to understand how society will view and solve its future problems, and how this will influence the investment landscape. By using these insights, combined with traditional investment metrics, we can deliver an investment portfolio that better aligns with the interests and values of our clients.

Socially responsible investing has momentum

Responsible investment themes have gained significant momentum over the past ten years, and in its most recent annual study **the Global Sustainable Investment Alliance (GSIA) estimates that global assets invested in responsible investment strategies totalled $35.3trillion in 2020, up 15% from two years before.** Of this, Europe accounts for $12 trillion, with 35.9% of total assets under management globally being sustainable investments.

The scale of industry growth and the normalisation of ESG integration is clear: **PWC describe investors' wider adoption of ESG considerations as 'nothing less than an all-encompassing shift in the investment landscape'** and predict that funds managed with ESG considerations would exceed those without such considerations as soon as 2025 in Europe.

Alongside investors recognising the importance of ESG factors, policymakers too are taking action when it comes to highlighting the importance of fiduciary duty.

In March 2020, **the European Commission announced its Action Plan for Financing Sustainable Growth** which included clarifying institutional investors' and asset managers' duties, incorporating sustainability into the suitability assessment of financial instruments and **increasing transparency of sustainability** benchmarks. In addition to this, in early 2021, the European Commission brought into effect a new set of rules on sustainability related financial disclosure.

While the UK has not adopted the new EU regulation, the FCA is working on its own set of guiding principles for ESG disclosure, further developing standards in this area. In late 2021, the UK regulator, the Financial Conduct Authority, launched its own industry wide consultation on the approach to UK markets.

Nutmeg's approach to socially responsible investment

In 2012, frustrated with the industry status quo, we set out to build an investment service that was fair, transparent and inclusive. We believed that high quality financial advice and professional investment management shouldn't just be available to the wealthiest in society.

At Nutmeg, we've always believed in holding ourselves to higher standards. We've now grown to a team of 175 people, managing around £4.5 billion on behalf of over 165,000 investors across the UK. We've continued to build a values-based organisation that is focused on reforming the investment industry. We put our clients at the heart of every decision we make.

Over the past decade, we've continued to develop our award-winning investment proposition. Our expert team has been actively engaged in socially responsible investment topics and product development for a number of years. This led to Nutmeg being among the first UK wealth managers to integrate ESG considerations in the management of all of their investment portfolios and to deliver ESG insights no matter how clients choose to invest.

However, at the heart of our decision to launch socially responsible portfolios in 2018 was the feedback from our clients. We understand that many of our clients know how to align their values in other areas of their life. For example: they gauge how sustainable their energy provider is, or make purchase decisions in the supermarket based on whether a product is free range or organic. However, they didn't feel they had this same clarity when it came to their investment choices.

Our clients told us that investing can often feel like a blind spot compared to other areas of their lives. We set out to change that.

What you should expect from Nutmeg's socially responsible portfolios

No portfolio can be designed to avoid every controversy. However, we believe investors should have the choice to invest in a way that represents their personal values, with a fair and transparent understanding of how their investments make that alignment.

We don't believe that our clients should have to trade higher returns to be more socially responsible. We set out to offer a solution that encompasses everything we believe an investment proposition should offer our clients, yet with an explicit socially responsible focus.

So, we combine leading ESG research and analytics platforms with Nutmeg's investment expertise to construct socially responsible portfolios that remain true to the core investment principles that underpin Nutmeg's investment philosophy.

These portfolios do the following:

- Maintain a global focus, to maximise the opportunity set and investment universe
- Focus on diversification, to balance the medium-term rewards and risks
- Regularly rebalance, to keep portfolios aligned with their long-term objectives
- Explicitly focus on keeping costs proportionate, to maximise your returns
- Recognise environmental, social and governance (ESG) considerations to deliver sustainable, long-term results
- Offer transparency in performance and holdings to provide clarity throughout the investment journey
- Allow you access to your money whenever you want and with no hidden fees.

As always, we're transparent about how we construct and manage our portfolios, their holdings and their performance. In addition, for each portfolio our clients can see:

- How the portfolio measures against a range of ESG criteria, including the portfolio's overall weighted ESG score, and how this compares to a similar portfolio without a socially responsible focus.
- The portfolio's current overall carbon impact and how this compares to a similar portfolio without a socially responsible focus.
- We'll also provide regular updates about changes within the portfolio and, if you consent to receive our emails, major stories within investment markets and the sustainability sector.

What we expect the future to hold

It's always important to remember that these investment portfolios are still built to generate the returns required to meet client goals. These portfolios aren't intended as social impact investments or charitable causes. However, we believe our socially responsible portfolios offer our clients an ability to invest in portfolios with ESG considerations, whilst ensuring they remain best placed to reach their long-term investment goals. Alongside this, our ESG portfolio metrics give clients an understanding of how their investments stand in terms of environmental, social and governance principles.

We believe we're at a tipping point for the widespread adoption of socially responsible investment portfolios, and we believe our portfolios currently offer our clients the best possible access to environmental, social and governance themes, while ensuring they stay on track to achieve their investment goals.

We're excited by the continued development and growth of this area, and as the available universe of investment opportunities and funds expands, so too will the breadth of the investments held within our portfolios. ESG data disclosure is improving and the growing emphasis on ESG inclusion is driving product development and innovation.

Our commitment to responsible investment goes beyond our socially responsible portfolios. In 2018, we authored our responsible investment policy, committing us to recognising the importance of ESG factors in the delivery of sustainable long-term returns for clients. We are proud that every one of our investment portfolios offers our clients an ESG integrated approach, integrating ESG considerations in the management of our portfolios.

We believe social responsibility focused strategies are the future of the investment management industry and we'll continue to invest in and expand our approach. We believe that the core portfolio of choice in the future will be one where ESG characteristics are considered alongside traditional investment metrics.

Nutmeg's approach to socially responsible investing

How we construct our socially responsible portfolios:

We understand that values are personal. Just as everyone is unique, so too are the values that matter to them, whether they're a matter of ethics, the environment and/or society. Many existing investment solutions focus on just one of these areas, but we believe that by blending multiple strategies together we can maximise the impact our clients' money can have, while minimising risk.

Our team of investment experts build our socially responsible portfolios using a range of different strategies. By blending different approaches our investment team maximises the socially responsible focus of the portfolio while keeping this exposure subject to a brief that maintains diversification, liquidity and low costs. This is crucial because, no matter our personal values, we all have investment goals to reach.

Our socially responsible portfolios follow the same actively managed approach as our fully managed portfolios. This means our investment team will actively change the mix of assets within the portfolio over time, based on their analysis of the prevailing economic environment.

What investments do these portfolios exclude?

We use a range of sustainability-focused strategies when constructing our socially responsible portfolios and the types of companies excluded will differ between funds.

At a minimum you can expect the following securities to be excluded from funds held in Nutmeg's socially responsible portfolios:

- Businesses with significant exposure to the tobacco industry, either as a producer or distributor
- Companies involved in the production of nuclear weapons
- Companies involved in the production of controversial weapons such as landmines, cluster bombs or chemical and biological weapons

You should note that many of the exclusions employed by the funds utilised are typically much wider in remit and also prohibit:

- Companies that produce alcohol
- Companies that produce adult entertainment
- Companies with significant involvement in the gambling industry
- Companies with significant exposure to the civilian firearms industry, either as a producer or through distribution
- Companies that derive significant revenue from activities involving genetic modification
- Companies with significant involvement in the Nuclear Power industry
- Companies with revenue derived from fossil fuel related activities, including through reserve ownership, power generation, and production and extraction of thermal coal and unconventional and conventional oil and gas.

Details on the full exclusion criteria for funds currently used within our socially responsible portfolios can be found in Appendix A.

How socially responsible are these portfolios and what do the scores mean?

Our challenge to the wealth management industry:

One widely held criticism of many so-called 'ethical' or 'sustainable' investment portfolios is the lack of qualification for their credentials. They typically do little to qualify how they compare against traditional portfolios, meaning investors have little knowledge as to the true difference or what trade-offs have been made along the way.

This lack of transparency can give rise to 'greenwashing', a term coined in the 1980s to describe efforts to emphasise the sustainability credentials of a product without qualification. Greenwashing can make products or companies appear more sustainably focused than they truly are. This can range from merely renaming a product to appear more environmentally friendly, to spending large sums of money on advertising that highlights only a small focus of the business.

We believe our clients deserve to know where their investment portfolios stand when it comes to ESG factors. That's why we're scoring all of our portfolios, SRI and non-SRI, against a range of ESG factors, using industry leading insight to empower our clients' decision making.

Who are MSCI and what do they provide?

In order to do this, we use ESG ratings and data from one of the world's largest investment research and financial index businesses: Morgan Stanley Capital International, now known as MSCI.

MSCI is an acknowledged expert in the field of sustainable investment and ESG research. MSCI ESG Research and Analytics is powered by over 250 experts globally and they are recognised as a Gold-Standard Data provider.

Additionally, MSCI is one of three companies to meet the deep data delivery standard and have been voted the 'Best Firm for Socially Responsible Research' in the Extel SRI-Connect Independent Research in Responsible Investments survey for four consecutive years through to 2019.

MSCI provide one of the largest standardised frameworks for assessment of ESG factors available globally, **covering over 14,000 security issuers (including subsidiaries) and more than 680,000 equity and fixed income securities (as of October 2020).**

As leaders in their field, we believe they're amongst the pre-eminent global voices when it comes to gauging company performance against ESG factors.

How are different assets treated from a scoring perspective?

When analysing a portfolio, it's important to recognise how different assets are treated from an ESG perspective.

For example, some ESG factors are only relevant for corporations rather than governments, such as the percentage of the board of directors that are female. Where this is the case, portfolio holdings are re-weighted in order to calculate a score for only the corporate entities within the portfolio. This means the data isn't biased by large holdings in securities with no score.

Similarly, there are some companies that have not yet been analysed for their ESG credentials. These are limited and typically smaller companies where the holding is a small proportion of the overall portfolio. The number of companies held within our fully managed portfolios that we're able to analyse for ESG principles differs with investment style – as of December 2021, we're able to analyse an average of 99% of securities in socially responsible portfolios and 97% of securities in our fixed allocation and fully managed portfolios[vi]. While we expect the remaining companies to be assessed in the future, where a portfolio holding is currently not analysed, we score this company 0 against each of the criteria.

It's also important to note that MSCI's analysis is tailored to the industry the company operates in. This ensures a fair comparison between companies with similar operating models and means that the most relevant ESG factors can be considered with a higher importance for a given industry.

Therefore, issues which are deemed most critical to an operating model are treated with more importance: for example, privacy and data security are likely to be more relevant to a technology company than a company within the oil and gas sector and vice versa.

The portfolio scores and what they mean

We believe our clients should feel empowered to make the best possible decisions when it comes to investing for their future. That's why we offer our clients insight into how each of our investment portfolios measures against a range of environmental, social and governance factors.

Each of these scores provides you with a better perspective for how your capital is invested in line with ESG considerations.

Overall ESG Score

This is the portfolio's (or "pot's") overall environmental, social and governance (ESG) score, measuring the aggregate ability of the underlying companies to manage key risks and opportunities arising from environmental, social, and governance factors. The individual scores for each of those categories are represented below.

Environmental Score

This score measures how companies in the pot are exposed to and manage key environmental risks and opportunities, such as climate change, pollution and use of natural resources.

Water Stress

This score measures the pot's exposure to companies that proactively employ water efficient processes, water recycling and alternative water sources. Companies employing these practices will score higher.

Carbon Intensity

This score measures the pot's exposure to carbon intensive companies. We'll also show you what this means in terms that are easy to understand – i.e. the equivalent miles driven by an average petrol passenger car.

Social Score

This score measures how companies in the pot are exposed to and manage key social risks and opportunities, such as labour management, health and safety and data security.

Labour Management

This score accounts for exposure to labour unrest and poor job satisfaction. Companies providing strong employment benefits, performance incentives, employee engagement and professional development programs score higher.

Privacy and Data Security

This score accounts for how companies in the portfolio manage privacy and data security. Those with comprehensive privacy policies and data security management systems and business models not reliant on trafficking in personal data score higher.

Governance Score

A fund's governance score measures the holding's management of, and exposure to, key governance risks and opportunities.

Women Represent 30% of Directors (%)

The proportion of this pot invested in companies where women comprise at least 30% of the board of directors. Board diversity is important in itself and has been shown to contribute to a business's financial success.

Business Ethics and Fraud

This score evaluates industry-specific business ethics issues for the companies in the portfolio. Companies which have faced controversies with respect to anti-competitive practices, pricing fraud, insider trading and controversial customer practices score lower.

How to compare Nutmeg's portfolios for social responsibility

For over three years Nutmeg has led our peers in the wealth management industry by providing transparency on the sustainability of every single one of our investment portfolios. By doing this, we're empowering clients to make better-informed decisions when it comes to their investments.

Here's a guide to how this information should be interpreted and how our portfolios can be compared.

Asset allocation

Our socially responsible portfolios will follow the same investment strategy as our fully managed portfolios, guided by the analysis of our expert in-house investment team. The track record of our fully managed portfolios can be found here, while we show how our socially responsible portfolios have performed here.

However, the range of funds in which we can currently invest our socially responsible portfolios is fewer than for fully managed portfolios, and so over time there will be differences in the number of holdings in portfolios. Additionally, there are still some assets for which an ESG investment offering isn't currently a reality and therefore these won't be found in our socially responsible portfolios either.

Because of this difference in the available investment universe, it's often not appropriate to compare the sustainability of socially responsible portfolios against that of the fixed allocation and fully managed portfolios, as the mix of investment assets may be different at any point in time.

It's for this reason that we compare the ESG scores of our SRI portfolios against a simulated 'equivalent non-SRI portfolio': where the type of assets held (for example large company US equities) and the respective amounts and ratios invested (for example 30%) match our socially responsible portfolios, providing the fairest means for comparison.

It's also important to note that our socially responsible portfolios don't have an explicit objective to maximise their ESG scores. We don't build these portfolios by attempting to get the highest possible score. Rather, we aim to deliver a good improvement in ESG scoring while still ensuring that the portfolio is well diversified and holds the mix of assets that we believe will deliver the best returns adjusted for risk.

Costs and charges

We feel strongly that our clients should be able to make the choice to invest in our socially responsible portfolios without the bias of cost. That's why our management fee structure for these portfolios is the same as our fully managed portfolios, so whatever an investor's personal choice, the Nutmeg fee for any of our managed portfolios will remain the same.

However, we do expect the average fund costs in these portfolios to be slightly higher than the funds used in our fully managed and fixed allocation portfolios. This is primarily due to two reasons:

- Sustainable investment strategies rely on high quality data, much of which can be qualitative as well as quantitative. Qualitative research typically requires specialist analysis which can incur greater cost. It's for this reason that the underlying indices on which the funds are based are typically costlier than market capitalisation (size) weighted indices. For example, MSCI employ more than 250 analysts globally to power their ESG research capabilities.
- There are currently fewer funds available incorporating sustainable investment themes and these funds tend to be newer, meaning there has been less historical price competition. However, our investment team works hard to lower the cost of investing for our clients and will continue to seek to do so for all of our client portfolios. In fact, since launch the fund costs for our socially responsible portfolios have fallen significantly.

You can find our current average costs and charges on **our website**.

Performance and risk

Do socially responsible investments underperform the broader market?

As we previously discussed, the origins of socially responsible investing were philanthropic and largely focused solely on excluding certain investments based on moral considerations without focus on investor reward; these were commonly termed 'ethical' investments. In this framing, there was often little consideration for how environmental, social and governance – or 'ESG' – factors could improve the rewards on offer to investors.

Many investments labelled 'sustainable' or 'ethical' can come with significant risk. For example, the financing of small-scale clean energy projects is typically long-term in horizon, often with significant risk of capital loss. This means that these investments may not be suitable for a wide range of investors.

However, investors in traditional equity and bond markets now recognise that to ignore ESG criteria is to ignore opportunities and risks in these areas. This doesn't recognise the fact that these criteria have the potential to h ave a material effect on investor outcomes or, in other words, investor returns.

Most investors have long had a framework to incorporate non-financial datasets and factors into their investment analysis and the benefits of doing so are well understood. But the quality and scope of non-financial data is improving, allowing us to better understand topics such as climate change, working practices, health and social impact. Rather than assume that incorporating these factors into an investment process will lead to lower returns, there is in fact a significant body of evidence showing that socially responsible investing can lead to higher return s. The premise is simple: the companies that are best placed to operate successfully in the future are those with strong sustainability profiles, that do business in a fair and progressive way, with a management team that addresses short-term risks while ensuring the company is positioned to adapt to long-term transformational changes (such as climate change).

This premise is supported by academics and practitioners alike. A 2016 study by academics at the University of Minnesota, Harvard Business School and Northwestern university found 'that firms with good ratings on material sustainability issues significantly outperformed firms with poor ratings on these issues'. Similarly, a 2017 State Street Global Advisors survey of 475 institutional investors found that **'More than two-thirds (68%) say that integration of ESG into decision-making has significantly improved returns'.**

A review of the historical performance of socially responsible investing

Our investment team has conducted extensive studies to quantify the performance impact of a socially responsible investment (SRI) focus.

Our analysis has shown that there are no meaningful (statistically reliable) differences in the performance of strategies incorporating an SRI focus and those that don't. Our studies used the same established SRI investment strategies that underpin many of the SRI-focused exchange-traded funds in our portfolios. These returns can be seen below, from the date of inception for the socially responsible indices.

Equity Market Performance and Risk, Local Currency: Oct 2007 to Nov 2021*

	Annualised Returns (%)		Annualised Volatility (%)		Return/Risk Ratio	
Country/Region	**Market Index**	**SRI Index**	**Market Index**	**SRI Index**	**Market Index**	**SRI Index**
United States	9.77%	11.06%	11.24%	11.01%	0.87	1.00
Canada	4.93%	5.89%	10.48%	10.39%	0.47	0.57
Japan	2.94%	3.96%	13.26%	13.78%	0.22	0.29
Pacific ex Japan	3.20%	4.05%	11.33%	11.44%	0.28	0.35
UK	4.80%	5.59%	10.74%	10.35%	0.45	0.54
Europe ex UK	2.98%	4.87%	12.92%	12.76%	0.23	0.38
Emerging markets (in US$)	2.41%	4.15%	14.88%	14.96%	0.16	0.28
Global (in US$)	6.22%	7.25%	11.66%	11.61%	0.53	0.62

*Source: Nutmeg calculations using data from Macrobond. Indices used are MSCI Mid & Large Cap Net Total Return. *UK index used is UK ESG Leaders index up to 04/09/14, UK SRI IMI 5% capped thereafter. For Emerging Markets the indices used are MSCI EM ex-controversial weapon index up to 24/03/2014, MSCI EM SRI thereafter. For Global indices used are MSCI ACWI Mid & Large Cap ex-controversial weapon index up to 05/06/2013, ACWI ESG Leaders Index up to 24/03/2014 and MSCI ACWI SRI thereafter. Annualised Volatility is based on monthly return data.*

Interestingly, since the launch of the SRI indices studied, most of the SRI indices have outperformed their non-SRI equivalents on a risk-adjusted basis. Most notably, when we study the risk characteristics of the indices, we observe that the volatility of the SRI indices has been comparable or lower than a non-socially responsible equivalent since inception.

A lack of meaningful long-term differences in return doesn't mean that we always expect the returns of SRI indices and their nonSRI focused equivalents to be the same in the short term. In fact, we expect there to be short-term deviations in performance depending on market conditions or the stage within an economic cycle. For example, the SRI emerging markets index has a structurally lower allocation to China than its non-SRI equivalent. This may cause performance to deviate between the two when the Chinese equity market experiences strong gains or losses.

It is also worth acknowledging that most indices incorporating an SRI focus don't have the same history as equivalent non-SRI market indices (many have only existed since around 2008), so our studies of performance have some limitation in time. However, we believe this timeframe is long enough to be reliable given that it incorporates over 10 years' of history.

Overall, we expect our SRI portfolios to deliver performance over the long-term that is similar to that of an equivalent portfolio without an SRI focus. That is, by incorporating a social responsibility focus we don't expect there to be a performance trade-off for investors. Of course, the marginally higher cost of funds fees for socially responsible portfolios will slightly reduce this return.

Performance of Nutmeg's portfolio styles

When it comes to the difference in performance between Nutmeg portfolio styles, we expect any divergence to come from the difference in asset allocation.

Despite following the same investment strategy and process, the range of available asset classes that embed an SRI focus is currently more limited than that available to our fully managed portfolios. With a different investment universe available to each portfolio type, the portfolios won't carry an exact like for like exposure, but they will remain close and the divergence should reduce over time as new SRI strategies are launched, broadening our ability to run like for like portfolios.

Much like in the example of China exposure in emerging markets, this means we expect there to be deviations in performance between portfolio types over time, and our historical simulations have demonstrated a divergence in calendar year performance.

A review of performance between Nutmeg SRI portfolios and their corresponding benchmarks (wealth management peer groups provided by ARC consultants) highlights that **the Nutmeg SRI portfolios have largely outperformed their benchmarks since launch**, and despite higher volatility have offered better risk adjusted returns. While three years is a relatively short time frame to derive relevant long-term conclusions, our SRI portfolios have, so far, achieved their goal in consistently outperforming the average wealth manager. **A full performance history for the portfolios can be found here**.

Comparison of ARC indices and Nutmeg SRI Portfolios Performance and Risk, Oct 2018- Nov 2021*						
	Annualised Returns (%)		Annualised Volatility (%)		Return/Risk Ratio	
Country/Region	ARC	Nutmeg SRI	ARC	Nutmeg SRI	ARC	Nutmeg SRI
ARC Cautious/ Nutmeg Risk Level 4	3.82%	5.88%	3.54%	6.14%	1.08	0.96
ARC Balanced/ Nutmeg Risk Level 6	5.17%	8.09%	6.10%	9.01%	0.85	0.90
ARC St Growth/ Nutmeg Risk Level 8	6.37%	10.44%	8.19%	11.67%	0.78	0.89
ARC Equity/ Nutmeg Risk Level 10	7.71%	12.29%	10.25%	14.04%	0.75	0.88

Source: Nutmeg calculations using data from Macrobond. ARC Indices areprovided by Asset Risk Consultant and Nutmeg SRI portfolio returns is internal calculation based on composite returns of Nutmeg's clients.

Projected performance

We use the same methodology to calculate projected returns for all our portfolios. However, each projection is adapted to account for the difference in asset allocation and underlying investment style (in this case, a social responsibility focus).

Our projection calculations show that over the long-term, we expect the socially responsible portfolios to deliver very slightly lower returns when compared to our fully managed portfolios, due to difference in asset allocation. On an annualised basis, the impact of the lower returns is limited, with the maximum difference in any projected return and its non-SRI equivalent being just 0.05% lower per annum.

Critically, despite the slightly lower returns projected for the SRI portfolios, they do this with a lower level of volatility. This means there is no expected long-term trade-off in the risk-adjusted returns for socially responsible portfolios i.e. the return generated per the unit of risk taken isn't lower.

You can explore the projected returns for all of our portfolios when **signing up with Nutmeg here**.

Risk management

The socially responsible portfolios will benefit from the same level of risk management expertise as every Nutmeg portfolio. Each portfolio has a set of internal limits that are monitored continuously by dedicated risk managers within our investment team. Daily risk reports covering every aspect and risk of each portfolio are delivered to and reviewed by the investment team each morning, as well as being subject to oversight from independent risk teams.

Risk warning

As with all investing, your capital is at risk. The value of your portfolio with Nutmeg can go down as well as up and you may get back less than you invest. Past performance and forecasts are not reliable indicators of future performance.

Appendix A

Here we detail the exclusions and screening applied to the exchange traded funds (ETFs) we intend to use within our socially responsible portfolios.

Please note that because we intend to use a range of strategies within our portfolios, this list will be subject to change and is not exhaustive. In addition, the criteria detailed apply to the relevant underlying ETFs and not the overall Nutmeg portfolio.

'Any production' denotes where a security will be excluded from the portfolio if deemed a producer of any products precluded by our ESG ratings. Revenue thresholds denote the percentage of revenue from such products which, once exceeded, will result in a securities exclusion.

Index Name	Low Carbon SRI Leader	SRI Low Carbon Select 5% Cap	SRI Select Reduced Fossil Fuels	SRI Filtered ex Fossil Fuels
Index Provider	MSCI	MSCI	MSCI	MSCI
ETF Provider utilising Index	xTrackers	UBS	iShares	Amundi
Exclusion Criteria Applied				
Controversial Weapons (any tie)	0%	0%	0%	0%
Nuclear Weapons (any tie)	0%	0%	0%	0%
Civilian Firearms (any production/total revenue threshold for exclusion)	0% / 5%	0% / 5%	0% / 5%	0% / 5%
Tobacco (any production/total revenue threshold for exclusion)	0% / 5%	0% / 5%	0% / 5%	0% / 5%
Alcohol (production revenue/ total revenue threshold for exclusion)	5% / 15%	5% / 15%	5% / 15%	5% / 15%
Conventional Weapons (production revenre/ total revenue threshold for exclusion)	5% / 15%	5% / 15%	5% / 15%	5% / 15%
Nuclear Power (production revenue/ total revenue threshold for exclusion)	5% / 15%	0% / 0%	5% / 15%	5% / 15%
Adult Entertainment (production revenue/ total revenue threshold for exclusion)	5% / 15%	5% / 15%	5% / 15%	5% / 15%
Gambling (production revenue/ total revenue threshold for exclusion)	5% / 15%	5% / 15%	5% / 15%	5% / 15%
Genetically Modified Organisms (revenue threshold for exclusion)	5%	5%	5%	5%
Fossil Fuel Reserves Ownership (for energy purposes)	None	None	None (Includes Oil Sands Reserves)	None
Fossil Fuel Extraction -Thermal Coal Mining (revenue threshold)	0%	0%	5%	0%
Fossil Fuel Extraction -Unconventional Oil and Gas Extraction (revenue threshold)	0%	0%	5%	0%
Fossil Fuel Extraction - Conventional Oil and Gas Extraction (revenue threshold)	NA	0% (unless over 40% of revenue from renewables)	0% (unless over 40% of revenue from renewables)	0%
Fossil Fuel Extraction - Oil Sands Extraction (revenue threshold)	NA	NA	5%	NA
Thermal Coal Power Generation (revenue/electricity generation)	5% / NA	0% / 0%	5% / 10%	5% / 10%
Oil & Gas-based Power Generation (revenue/ electricity generation)	30% / 30%	0% / 0%	NA / 30%	30% / 30%
Excludes top emitters by carbon intensity (unless 30% of that region- sectors weight removed)	20%	10%	No	No
Excludes top potential emitters by potential carbon emissions, such that potential carbon emissions are reduced by 50%	Yes	Yes	No	No

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To learn more go to **nutmeg.com**

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