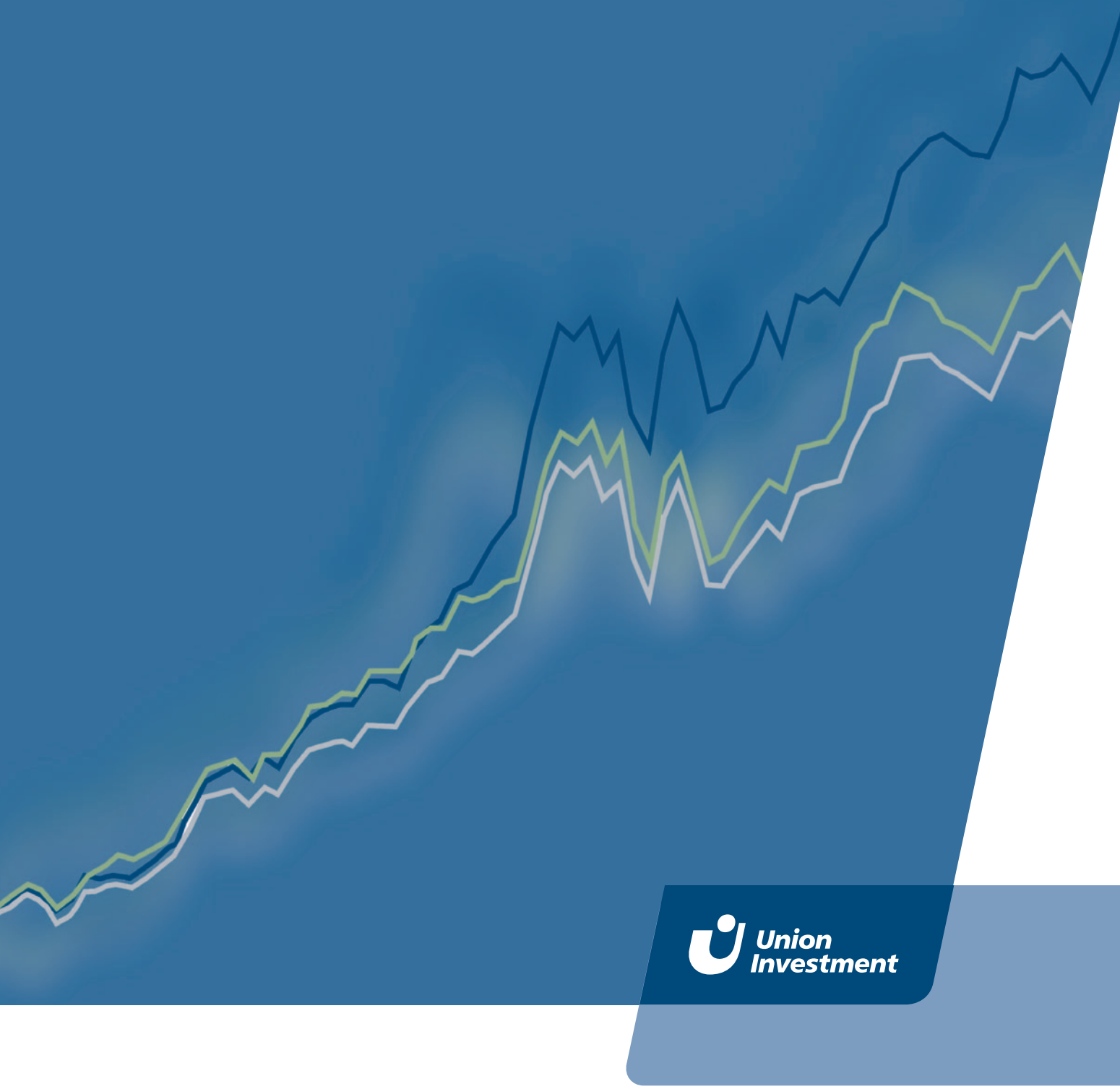



# Performance characteristics of ESG scores

November 2019

# Contents


**Summary** **3**

**1 Introduction** **4**

**2 The influence of ESG scores on performance** **5**

2.1 Findings – ESG score as a performance characteristic 5

2.2 Findings – Subcomponents 7

**3 Construction of a global ESG index** **9**

**4 Conclusion** **11**

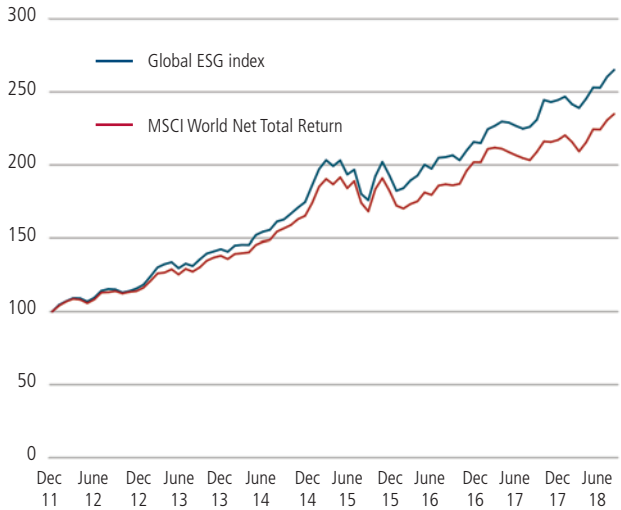
**Sustainability is becoming an increasingly important issue in investment. But can ESG criteria also deliver genuine performance gains by looking at factors outside the 'traditional' investment analysis?**


### Summary

- ☑ The greater availability of ESG scores means their impact on performance can be determined more precisely
- ☑ Our study for MSCI World shows that companies with a high Union Investment ESG score deliver above-average performance
- ☑ In particular, it is clear that a research and investment focus on anticipating controversial issues creates significant added value
- ☑ Application of the findings to a global portfolio shows that stocks picked on the basis of ESG scores outperformed the MSCI World index over the period under review


### Global ESG index beats MSCI World

Current return




Relative performance

# 1 Introduction

Does ESG detract from performance?

Sustainability factors are becoming increasingly important in investment. Institutional investors in particular, but also private investors, are increasingly turning to investment products that focus on environmental, social, and governance criteria. This growing interest among the wider public can also be seen from Google, where the frequency of searches for 'ESG' or combinations of the individual elements (environmental, social and corporate governance) has increased significantly, especially since 2015. Regardless of an investor's reasons for choosing an ESG investment, however, the question of returns remains. The instinctive assumption would be that the systematic application of ESG criteria as part of a best-in-class approach shrinks the investment universe, limits diversification and may mean having to forgo individual securities that are delivering high returns. The reason for our analysis is to show that these disadvantages are outweighed by the positive effects in the selection process. Consequently, the focus on sustainability does not mean a loss of performance – in fact, our findings show the opposite is true.

Positive effects outweigh the drawbacks

In any analysis of this kind, it is essential to know how sustainability factors are measured and integrated into the investment process.

The analysis underlying this paper used Union Investment's proprietary ESG score, which combines external data and inhouse research. The study is divided into two parts. Firstly – independently of an active allocation decision – it examines whether companies with a higher ESG score have achieved above-average performance in the past. This analysis is carried out both at the level of the total ESG score and for its subcomponents. In the second stage, the results are applied to the portfolio context. By constructing an ESG index that pursues a (largely sector-neutral) best-in-class approach, it is possible to examine the extent to which superior returns are possible under real investment conditions.

Study: High ESG scores lead to superior returns

The findings are promising. According to the analysis, the inclusion of ESG criteria produces clear added value, although not all sustainability factors are equal in this regard. One criterion that does have a clearly positive effect is whether companies are embroiled in controversy. The findings can also be transferred to a portfolio, and the results of this show that stocks picked on the basis of sustainability criteria outperform the MSCI World index.

For portfolio managers this means:

- The analysis of controversial issues in particular should be given greater weight in the research
- ESG integration is diversifiable and does not necessarily go hand-in-hand with greater deviation from the benchmark (for example in relation to sectors)
- Selection is also the key to outperformance when it comes to ESG investments

# 2 The influence of ESG scores on performance

Proprietary ESG scores and aspects

The analysis looks at the 1,600-plus individual securities of the MSCI World index using the Union Investment ESG score. This is calculated using external data from MSCI and RepRisk as well as Union Investment's own research. While MSCI provides traditional sustainability ratings that are based on the three elements of ESG, RepRisk's contribution focuses on the screening of (social) media data on reputational aspects. Union Investment then adds two further elements – 'controversial issues' and 'sustainable business areas' – to these two external sources and the three classic 'ESG components'. 'Sustainable business areas' involves looking at the extent to which a company has already implemented ESG aspects as part of its business model. The total score, which is calculated as the arithmetic mean of the five individual components (environment, social, governance, controversial issues, sustainable business areas), has a range of 0 to 100 points, where 100 is the maximum.

Virtually every stock in the MSCI World index can now be analysed

The availability of ESG scores for the companies included in the MSCI World index has increased significantly in previous years. In 2007, only around half of all companies recorded the data necessary to produce an ESG score, whereas now it is close to 100 per cent. The period from 1 January 2012 to 31 July 2018 was selected for the analysis. From 2012, an ESG score could be produced for more than 70 per cent of companies, so our analysis has a solid data basis. Spot checks with even more up-to-date information also confirm the results presented here.

In addition to the Union Investment ESG score as a whole, the study also looked at the influence of the subcomponents.

For the analysis, the companies from the MSCI World index were divided into quintiles based on their ESG score. Securities with exactly the same score were placed in the same quintile, so there may be minor deviations with regard to the group sizes. The quintiles were recalculated each month. In order to avoid the results from being distorted by companies with a high market capitalisation, both the MSCI World and the companies within the quintiles were equally weighted. Securities without an ESG score, of which there were still a few at the beginning of the period under review(see above), were not assigned to any quintile for that particular period.

## 2.1 Results – ESG score as a performance characteristic

For the assessment that follows, it is important to note that the purpose of the first stage of the analysis (section 2) is to develop a general understanding of the relationship between the factors 'ESG score' and 'performance'. Allocation aspects have not been included here. They are factored into the analysis in the portfolio context (section 3).

Top 20 per cent perform significantly better

With regard to the total ESG score, the top quintile performs substantially better than the – equally weighted – MSCI World index (+329 basis points per year) and also substantially better than the bottom quintile of companies with the weakest ESG score (+286 basis points). The average ESG score – throughout the whole period under review – was almost twice as high in the top quintile as in the bottom quintile. It is thus an important differentiator. This result means two things: Proprietary ESG scores and aspects Virtually every stock in the MSCI World index can now be analysed Top

20 per cent perform significantly better It is clear that taking ESG factors into account can contribute to above-average performance. However, the reverse is not necessarily true – a poor ESG score does not translate directly into a below-average performance compared to MSCI World.

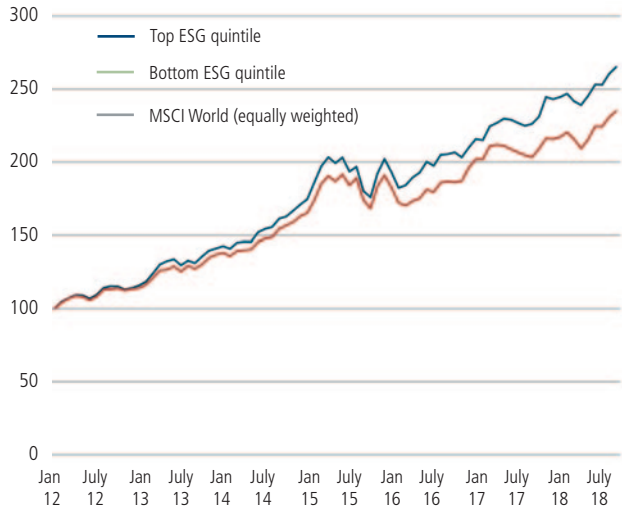
| | Top quintile | Bottom quintile | MSCI World |
|---|---|---|---|
| Return p.a. (%) | 15.66 | 12.80 | 12.37 |
| Average ESG score | 61.46 | 31.92 | 46.34 |
| Volatility (%) | 9.53 | 9.82 | 9.53 |

**Small difference in volatility**

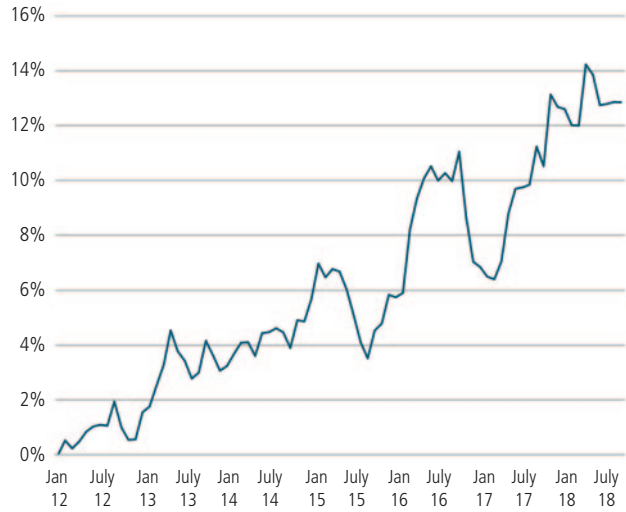
Volatility in the top quintile is lower than in the bottom quintile, but there is no indication of a substantial reduction in the volatility range. As is clear from a further investigation with regard to the monthly returns, however, it appears that when share prices fall, the companies with a high ESG score generally suffer smaller losses than those in the bottom quintile.

## Since 2012, equities with a better ESG score have performed well

Nominal performance of the ESG quintiles




Relative performance of top quintile vs. bottom quintile




| | Top | Bottom | MSCI World (equally weighted) |
|---|---|---|---|
| Return p.a. (%) | 15.66 | 12.80 | 12.37 |
| Average ESG score | 61.46 | 31.92 | 48.34 |
| Success rate compared to MSCI World (%) | 51.30 | 49.56 | – |
| Volatility (%) | 9.53 | 9.82 | 9.53 |
| Risk/return profiles | 1.64 | 1.30 | 1.30 |

Sources: SIRIS, Factset, own calculations, period: 31 January 2012 to 31 July 2018; formation of quintiles with equally weighted equities, adjusted monthly; not including costs

Examination of the sectoral composition of the top quintile does not produce any surprises. The healthcare, information technology (which includes more small companies and fewer of the well-known heavyweights such as the often-cited F[A]ANGs) and industrial sectors dominate, partly because of the 'sustainable business area' criterion. Utilities and non-cyclical consumer-goods stocks are under-represented in the top quintile. The sectoral distribution also explains the results of the analysis of dividend yields and pricing. Since 2013, the dividend yield of the top quintile has remained within a narrow range of between 2 and 2.5 per cent – and is thus slightly below the average for global equities. The price-to-book ratio has grown from around 3.5x at the start of the period under review to over 6x at the end – a relatively high figure.

IT, healthcare and industrial companies dominate the top quintile

## 2.2 Findings – Subcomponents

The results of the analysis of subcomponents for the six-and-a-half-year period under review are less clear than those of the analysis of the total ESG score. For environmental, social and governance aspects, the study design chosen does not deliver any unambiguous or interpretable results with regard to the relationship between score and performance – at least in respect of the period as a whole.

| | Top quintile | Bottom quintile | MSCI World |
|---|---|---|---|
| Return p.a. (%) | 15.28 | 12.24 | 12.37 |
| Average C score | 98.22 | 28.77 | 63.04 |
| Volatility (%) | 9.57 | 9.84 | 9.53 |

According to the analysis, one factor that significantly influences the contribution to performance of ESG characteristics is whether companies are caught up in controversy (C-score), i.e. accounting fraud, environmental scandal, corruption, human rights abuses or similar. The top quintile in the analysis generated an annual performance gap of around 300 basis points, compared both to the bottom quintile and to MSCI World. And the volatility of securities in the top quintile is almost 30 basis points below that of the group with the lowest C-scores. Finally, among the top companies, the drawdown in months with negative returns is in most cases lower than among those at the bottom. So the C-score not only helps with the management of opportunities, but also with the management of risk.

Unambiguous results particularly for the factor 'Controversial issues'

Any controversy affecting a company may entail substantial risk and may endanger the business model as a whole. In its analysis, Union Investment differentiates between event risks (e.g. the VW diesel scandal), regulatory risks (e.g. emissions targets for cars), litigation risks (e.g. legal action against the US tobacco industry), reputational risks (e.g. human rights abuses in the mining industry) and technology risks (e.g. electric motors instead of internal combustion engines). These risks frequently build up over time and do not always affect the price of shares or corporate bonds significantly in the early phase. At the same time, such risks – once they have materialised – tend to have a lasting effect, lingering in the minds of customers or dragging on in the form of lengthy court cases and can adversely affect the performance of a company's shares for several months or even years.

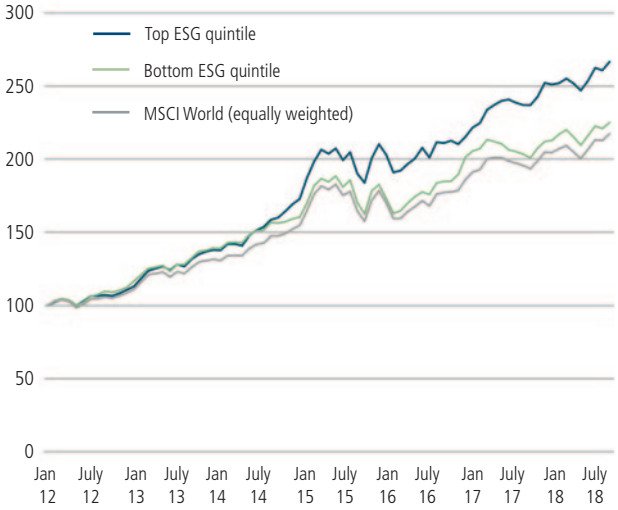
This long-lasting effect is also reflected in the C-score. Looking at companies with a good C-score, it is noticeable that the changes in the composition of the top quintile were only around 6 per cent per month– a smaller value than for the other sub-scores.

**Engagement is particularly effective with regard to controversial issues**

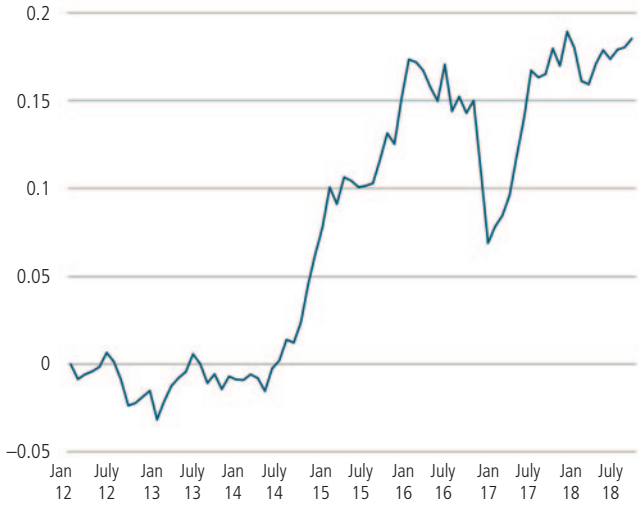
In addition to research (based on external data), the engagement activities of an investor are particularly important for the aspect of 'controversy'. A close relationship with the company, built on trust, is helpful for anticipating possible controversial issues. And because of the particular relevance of such issues and the strong influence they can have on a company's business performance and share price, active engagement can also be particularly effective when a controversy arises, in order to ensure rapid and transparent communication about the problem and to reach a quick solution. A close relationship between portfolio managers and the ESG team by thoroughly embedding ESG within the investment process is thus imperative.

### The C-score for controversial issues has proven to be decisive for performance

Nominal performance




Relative performance: top-quintile vs. bottom-quantile




| | Top | Bottom | MSCI World (equally weighted) |
|---|---|---|---|
| Return p.a. (%) | 15.28 | 12.24 | 12.37 |
| Average ESG score | 98.22 | 28.77 | 63.04 |
| Success rate compared to MSCI World (%) | 50.33 | 49.47 | – |
| Volatility (%) | 9.57 | 9.84 | 9.53 |
| Risk/return profiles | 1.60 | 1.24 | 1.30 |

Sources: SIRIS, Factset, own calculations, period: 31 January 2012 to 31 July 2018; formation of quintiles with equally weighted equities, adjusted monthly; not including costs

# 3 Construction of a global ESG index

Having gained an understanding of the performance of ESG-rated companies on the basis of the above analysis, the findings can now be transferred to the portfolio context. The objective is to create a diversified portfolio with a maximum ESG score. Various assumptions have been made, based on Union Investment investment practice:

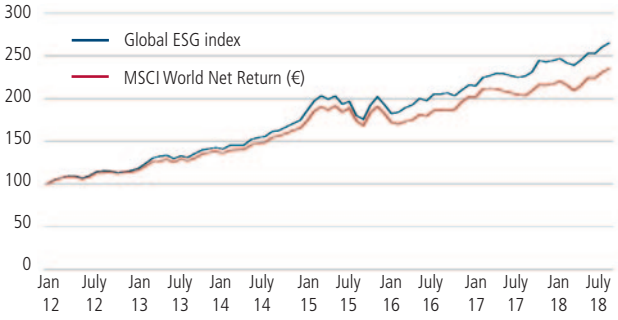
- In contrast to section 2, the reference here is the MSCI World Net Return in the usual form i.e. based on market capitalisation
- Investment can only be made in companies from MSCI World that have been given a minimum rating of 'Buy' by Union Investment analysts in the month concerned
- The tracking error is 2 per cent 'ex-ante'
- There is a maximum permitted weighting in terms of sectors and countries
- Individual securities cannot account for more than 10 per cent of the portfolio; positions exceeding 5 per cent cannot together mae up more than 40 per cent of the portfolio ('5-10-40 rule')
- The portfolio is adjusted monthly on the basis of the ESG scores

ESG portfolio beats MSCI World

The global ESG portfolio modelled on these assumptions can outperform the benchmark – even after costs incurred through the monthly adjustment. The amount by which the portfolio outperformed the MSCI World Net Return in euros is 210 basis points per year with an ex-post tracking error of 2.7 per cent.

## Global ESG index v. MSCI World: sector weightings virtually unchanged

Nominal performance




| | ESG index | ESG index (after transaction costs) | MSCI World |
|---|---|---|---|
| Index on 30 Dec 2011 | 100 | 100 | 100 |
| Index on 31 Aug 2018 | 266.03 | 265.14 | 234.96 |
| Return (p.a.) | 15.06% | 15.5% | 13.5% |
| Ex-post tracking volatility | 9.7% | 9.7% | 9.4% |
| Active return (p.a.) | 2.1% | 2.15 | |
| EX-post tacking error | 2.7% | 2.7% | |
| Total turnover (p.a.) | 143.1% | 143.1% | |
| Transaction costs | | 0.04% | |
| Information ratio | 0.78 | 0.76 | |
| t-value | 2.02 | 1.96 | |
| Hit ratio | 56.3% | 56.3% | |

| Sector | Portfolio weighting | Benchmark weighting | Active weighting |
|---|---|---|---|
| Information technology | 21.27 | 18.15 | 3.12 |
| Real estate | 5.95 | 3.08 | 2.87 |
| Materials | 6.97 | 4.60 | 2.37 |
| Industrials | 13.23 | 10.97 | 2.26 |
| Healthcare | 15.50 | 13.40 | 2.10 |
| Utilities | 4.00 | 3.19 | 0.81 |
| Consumer discretionary | 10.55 | 12.41 | –1.86 |
| Telecommunication services | 0.23 | 2.69 | –2.47 |
| Consumer staples | 5.69 | 8.69 | –3.00 |
| Financials | 13.55 | 16.57 | –3.02 |
| Energy | 3.07 | 6.25 | –3.18 |

| Sector | Portfolio weighting | Benchmark weighting | Active weighting |
|---|---|---|---|
| Europe | 27.89 | 21.44 | 6.45 |
| Asia/Pacific ex Japan | 8.91 | 4.14 | 4.77 |
| Africa/Middle East | – | 0.20 | –0.20 |
| Japan | 7.03 | 8.45 | –1.42 |
| North America | 56.17 | 65.77 | –9.60 |

Source: FactSet, own calculation

The active sector weightings of the model portfolio are contained in a range that goes from 3 per cent below the benchmark to 3 per cent above it. The outperformance is thus not achieved as a result of one particularly strong or poorly performing sector being massively under or overweighted.

**Selection makes the difference**

Of the total additional return of around 22 per cent, just 4 per cent was due to the sector allocation and more than 18 per cent to the stock-picking – which underlines the importance of the company-specific ESG scores.

In the modelled portfolio for the period under review (31 December 2011 to 28 September 2018), this is illustrated by the overweighting of healthcare, materials and IT and the underweighting of energy.

Interesting side note: the underweighting of the consumer-discretionary sector under the ESG score analysis did cost performance, but this was easily offset by the other positive selection effects (for details see attribution analysis).

### Globaler ESG index – attribution analyse

| | Port. average weight | Port. total return | Port. contrib. to return | Benchm. average weight | Benchm. total return | Benchm. contrib. to return | Top-down allocation effect | Top-down selection effect | Top-down total effect |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | 100.00 | 175.27 | 175.27 | 100.00 | 145.56 | 145.56 | 4.95 | 24.75 | 29.71 |
| **Healthcare** | 13.53 | 305.28 | 29.62 | 11.90 | 193.88 | 20.29 | –0.32 | 12.75 | 12.44 |
| **Materials** | 7.88 | 169.04 | 14.66 | 5.51 | 63.99 | 4.45 | –2.35 | 11.64 | 9.29 |
| **Energy** | 4.43 | 73.01 | 5.35 | 8.09 | 38.11 | 5.26 | 5.31 | 3.01 | 8.32 |
| **Information technology** | 15.32 | 305.93 | 34.38 | 12.85 | 264.79 | 24.53 | 3.64 | 3.22 | 6.86 |
| **Utilities** | 4.57 | 179.54 | 8.79 | 3.34 | 79.37 | 3.21 | –1.61 | 5.16 | 3.55 |
| **Consumer staples** | 6.81 | 137.61 | 11.12 | 9.94 | 110.53 | 13.08 | 0.86 | 2.18 | 3.04 |
| **Real estate** | 0.60 | 43.68 | 0.92 | 0.13 | 15.29 | 0.00 | –0.43 | 0.81 | 0.39 |
| **Financials** | 21.01 | 145.80 | 33.98 | 19.82 | 144.09 | 30.10 | –0.77 | 0.99 | 0.22 |
| **[Unassigned]** | 0.05 | –42.21 | –0.07 | 0.65 | 85.28 | 0.46 | 0.41 | –0.24 | 0.17 |
| **Communication services** | 0.66 | 16.91 | 0.12 | 4.69 | 125.45 | 5.87 | 0.29 | –0.90 | –0.61 |
| **Industrials** | 14.47 | 129.27 | 21.88 | 11.07 | 154.54 | 16.90 | 0.24 | –3.49 | –3.25 |
| **Consumer discretionary** | 10.68 | 106.29 | 14.51 | 12.02 | 210.84 | 21.43 | –0.32 | –10.38 | –10.70 |

Source: FactSet, own calculation

# 4 Summary

"Quality has a price – investing sustainably inevitably means sacrificing performance." Many investors probably still make this assumption with regard to ESG-focused investments, but there is plenty of evidence to suggest that it is a misconception. Like many other studies, including the meta-analysis carried out by the Steinbeis Institute and the analysis by Professor Bassen at the University of Hamburg, our study comes to the opposite conclusion. Looking at the period from 2012 to mid-2018, we found a clearly positive correlation between high Union Investment ESG scores and the performance of the relevant companies' shares. This also applies to the construction of portfolios. In our analysis, a portfolio where a high ESG score was a central criterion in the stock selection would have significantly outperformed the MSCI World index over the period under review.

'Strong result'

The results of such studies are never universally applicable for a variety of reasons. Despite this, our findings qualify as a 'strong result' because the top quintile, i.e. companies with an especially good ESG score, are quantitatively clearly ahead of the rest of the field. The focus on ESG in an investment strategy is therefore more likely to produce superior returns than diminished performance.

Significance increases sharply from the middle of the decade

It is noticeable in some of our analyses that the above-average performance of companies with a high ESG score clearly gains in significance from mid-2014 onwards. There are a number of possible reasons for this, including general trends in the capital markets and specific developments in the area of sustainable investment. One hypothesis may be that from the middle of this decade, public attention and thus also the attention paid by investors to ESG issues has grown to such an extent that it has increasingly been reflected in share price movements. We have not systematically investigated this question but we have carried out a few additional selective analyses in which we have made use of the possibilities afforded by the (quantities of) data now available ('big data'). In fact, the findings of these analyses provide the first indications that the hypothesis formulated above may be correct.

The prime driver in our study is the 'controversial issues' aspect. The obvious interpretation is that focusing on high ESG scores when picking stocks constitutes an effective form of risk management. Companies that may potentially become embroiled in lengthy and expensive lawsuits that also attract a great deal of public attention, for example, are frequently given a lower weighting or avoided altogether. For portfolio management, this also means that more emphasis should be put on controversial issues both in research and in the investment strategy. Ultimately, the key is to identify potential controversy at an early stage and to correctly assess controversial issues as they begin to unfold – are they being under- or over-estimated? Drawing the correct conclusion at this point requires close cooperation between ESG experts and the company specialists in portfolio management.

The study shows that in the research process, fundamental factors are being ever more closely linked with sustainability. Scientific methods help us to identify suitable parameters in company analysis. This is a first study on this topic – our work continues.

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## Disclaimer



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