What the heart already knew

Triodos Impact Alternatives add value to your portfolio

Triodos Investment Management

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Including Triodos Impact Alternatives in a well-diversified investment portfolio adds value in terms of risk and return for different types of investors. This is the main conclusion of Ortec Finance in its research study 'The investment rationale of adding Private Impact Strategies to a broader portfolio'.

What the heart already knew, the head can now also be fully convinced of: adding Triodos impact funds to an investment portfolio adds value, not only in terms of real impact, but also in terms of financial return.

Jacco Minnaar
Chair of the Management Board of Triodos Investment Management

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1 Summary: Positive effects

Based on Markowitz' Modern Portfolio Theory, Ortec Finance has analysed what effects Triodos Investment Management (Triodos IM) Private Impact Strategies have on the risk-return characteristics of a well-diversified investment portfolio. This research was done on request of Triodos IM.

In general, adding the Triodos IM funds results in an improvement of the risk-return characteristics of both an asset-only and a portfolio with known liabilities (ALM). In the case of an asset-only portfolio, the improvement is significant. For an ALM portfolio the improvement is less pronounced, because in this case the development of interest rates is dominant.

Adding value

The analysis focuses on the added value of three individual investment funds, managed by Triodos IM, as well as a combination of the funds for asset-only investors, such as family offices, and investors with predefined liabilities, such as pension funds, on their balance sheet. The study also includes an analysis of the macroeconomic conditions in which the Triodos funds tend to out- or underperform.

Ortec investigated the following funds:
1. Triodos Microfinance Fund
2. Triodos Renewables Europe Fund
3. Triodos Groenfonds

Based on historical data of the three funds provided by Triodos IM, Ortec has diligently tested the behaviour of the funds in many different scenarios. The main conclusion is that the funds can add value to a well-diversified portfolio. There are two main reasons for this:
1. Historically, the funds have *favourable risk-return characteristics* compared to other standard possible investments.
2. Overall, the funds have shown a *relatively low correlation* with common risk drivers since their inception, yielding *high diversification benefits*.

Compared to equity and fixed income products, the investigated Triodos IM funds have relatively steady returns with low volatility in the medium and longer term. All three funds have a favourable risk-return ratio (i.e. a high Sharpe ratio). In addition, the Triodos funds have a low or even negative correlation to important risk drivers. Both qualities – a high Sharpe ratio and low correlation to risk drivers – enhance the desirability of the funds in the optimisation of an investment portfolio. The Triodos funds add the most value for risk-averse to risk-neutral investors.

Contra cyclical

Based on analysis of their behaviour in different scenarios, the Triodos IM funds deliver the largest positive contributions in times of financial stress. The contra cyclical behaviour of the Triodos IM funds generally mitigates decreased or negative returns in times of a financial crisis, for example during a crash on the stock markets. To a lesser extent, this contra cyclical behaviour also shows in other negative scenarios: prolonged low or even negative long interest rates and prolonged low inflation or even deflationary scenarios.

Ortec Finance's main conclusion is that Triodos Impact Alternatives add value to a well-diversified portfolio.

2 Research set-up

In its analysis Ortec Finance (Ortec) focuses on the question whether and how Triodos IM's alternative investment funds improve the risk-return characteristics of a broad investment portfolio.

From this main question Ortec derives three sub-questions to analyse:

1. What is the impact of Triodos alternatives for an institutional investor without liabilities (asset-only)?
2. What is the impact of Triodos alternatives on the long-term risk and return goals for an institutional investor with liabilities (ALM)?
3. In which macro-economic scenarios do these alternative investment funds provide the most value added?

2.1 Portfolio

The basis of Ortec's analysis is a portfolio that consists of relatively straightforward asset classes. It is divided into three different parts: the matching part, the liquid part and the illiquid part.

Matching

The matching part of the portfolio aims to generate reasonable returns at low volatility. In an ALM context, this part of the portfolio also acts as a natural interest rate hedge for the liabilities: these assets are sensitive to changes in the interest rate, just as the liabilities of a pension fund, for example. The matching portfolio consists of European government bonds with a tilt towards the Dutch market, investment-grade credits, index-linked bonds and Dutch mortgages. European governments bonds consist of approximately 32% Dutch, 32% German, 11% France, 10% Austrian, and 10% Belgium and 5% Finnish government bonds.

Liquid

The liquid part of the portfolio is intended to generate high returns in liquid investments. From the perspective of an asset-only investor, this subset is needed to achieve ambitious future goals. In ALM context, this subset is in place to achieve long-term goals of an institutional investor, for example to maintain purchasing power for pension fund beneficiaries. The liquid return portfolio consists of equity mature markets, equity emerging markets, equity small cap US and high-yielding fixed income products. The equity mature markets contain approximately 54% US, 30% European, 8% Japanese, 6% UK and 3% Swiss equity. The high yielding fixed income products consist approximately of 27% emerging market debt hard currency, 41% emerging market debt local currency and 32% high yield credits US.

Illiquid

Generating high returns and harvesting the illiquidity premium of certain asset classes is the goal of the illiquid part of the investment portfolio. The Triodos IM products are grouped here, since they have similar characteristics as other illiquid asset classes. The illiquid return portfolio consists of real estate with a tilt towards the Dutch market (75% Dutch, 25% US), Triodos Microfinance Fund and Triodos Renewables Europe Fund, Triodos Groenfonds (see Appendix 1 for more detailed information on the funds).

Modern Portfolio Theory

Modern portfolio theory (MPT) is a theory on how risk-averse investors can construct portfolios to optimise or maximise expected return based on a given level of risk, emphasising that risk is an inherent part of higher reward. According to the theory it is possible to set the efficient frontier for optimal portfolios, which offer the maximum possible expected return at a given risk level.

The efficient frontier is the set of optimal portfolios that offer the highest expected return for a defined level of risk or the lowest risk for a given level of expected return. Portfolios that lie below the efficient frontier are sub-optimal because they do not provide enough return for the level of risk. Portfolios that cluster to the right of the efficient frontier are sub-optimal because they have a higher level of risk for the defined rate of return (definition Investopedia).

MPT was pioneered by Harry Markowitz in his paper "Portfolio Selection," published in 1952 by the Journal of Finance. In 1990, this theory won him the Nobel prize for Economics.

2.2 Fund statistics and correlations

Based on the established portfolio and investment universe, Ortec analysed the correlation of the Triodos IM funds with other assets and/or the broader market. On a scale between -1 and +1, a positive correlation means that assets move in the same direction, whereas a negative correlation means that they move in opposite directions. A correlation of 0 means that there is no relationship in their movements, i.e. they move independently from each other.

The tables below show the scenario statistics and correlations of the model, based on the individual fund data. Table 1 displays the annual scenario characteristics and compares them to their historical counterparts. Panel A shows the historical characteristics and panel B shows the scenario characteristics.

Tables 2-4 show the historical and scenario correlations of the three funds with the most important return drivers.

Panel A shows correlations based on the historical fund data as delivered by Triodos IM. Panel B shows the correlations based on statistics that are the result of replication of the historical statistics in Ortec's scenario model.

Table 1
See appendix III for an explanation of the statistics

Panel A: Yearly historical statistics

	Triodos Groenfonds	Triodos Microfinance Fund	Triodos Renewables Europe Fund
Geometric mean	2.4%	4.7%	3.5%
Volatility	2.7%	2.5%	4.5%
Skewness	0.5	0.5	0.4
Kurtosis	-3.0	-3.6	-2.2
5% VaR	-2.0%	1.1%	-4.0%

Panel B: Yearly scenario statistics 32 - 40 year

	Triodos Groenfonds	Triodos Microfinance Fund	Triodos Renewables Europe Fund
Geometric mean	2.3%	4.7%	3.7%
Volatility	2.7%	2.5%	4.6%
Skewness	0.1	0.2	-0.3
Kurtosis	3.1	3.5	3.5
5% VaR	-2.0%	0.7%	-4.2%

Table 2 The historical versus scenario correlations for Triodos Microfinance Fund*

	Equity EM	EM debt	Short rate US	Corporate spread US	GSCI Energy
Panel A Historical correlations	-0.40	-0.32	-0.53	0.12	-0.20
Panel B Scenario correlations 24 - 32 year, 2000 scenarios	-0.34	-0.33	-0.88	0.28	-0.17

Table 3 The historical versus scenario correlations for Triodos Renewables Europe Fund*

	Equity EUR	Long rate Germany	Infra EUR	Corporate spread EUR	GSCI Energy
Panel A Historical correlations	-0.29	-0.38	-0.27	0.23	0.00
Panel B Scenario correlations 24 - 32 year, 2000 scenarios	-0.21	-0.36	-0.14	0.05	0.01

Table 4 The historical versus scenario correlations for Triodos Groenfonds*

	Short rate Germany	GSCI Energy	GSCI Agriculture	Corporate spread EUR
Panel A Historical correlations	-0.49	-0.07	-0.28	0.15
Panel B Scenario correlations 24 - 32 year, 2000 scenarios	-0.49	-0.09	-0.20	0.13

* see Appendix III for the benchmark names.

With respect to the historical data, the following relevant statistics can be observed:

Triodos Microfinance Fund invests in debt and equity in developing and emerging markets with a somewhat medium risk profile.

- The fund has a negative correlation with the broad Equity Emerging Markets and Emerging Market Debt benchmarks, where a positive correlation would be more in line with general expectations. This indicates that the fund has contra cyclical returns compared to the broad emerging market indices.
- The fund also has a strong negative correlation with the US short rate change, which is to be expected. A lower US interest rate leads to a more accommodating economic environment, especially for emerging markets.
- The somewhat negative correlation with the energy sector indicates that the performance might be hurt by increasing energy prices. This is to be expected given emerging markets' greater sensitivity to this factor.

Triodos Renewables Europe Fund belongs to the infrastructure asset class with a low risk profile. The fund invests in renewable energy projects in European countries.

- The fund has a moderate positive correlation with the long German interest rate, and a moderate negative correlation with the MSCI Europe Infrastructure. Both are atypical for traditional infrastructure investments: Rising rates put pressure on financing infrastructure projects.
- Furthermore, traditional infrastructure shows correlation with other infrastructure vehicles.
- No correlation is found with the GSCI Energy. This is to be expected, as the fund invests in renewable energy, instead of the traditional fossil fuel-based energy sector.

Triodos Groenfonds is a private debt asset with a sustainable character and has a low risk profile.

- The fund has a negative correlation with the short rate Germany change (this is a proxy for the European interest rate), indicating that Triodos Groenfonds benefits from an accommodating economic environment.
- The fund has a negative correlation with the GSCI Agriculture Index. This is to be expected, as the fund focuses on non-traditional, sustainable agriculture, in contrast to traditional agriculture. When, for example, regulations tighten on traditional agriculture, Triodos Groenfonds may be expected to outperform the index.
- Finally, there is no strong correlation with the GSCI Energy historically, indicating that the sustainable investments of Triodos Groenfonds hardly depend on developments in the fossil energy sector.

2.3 Outlook and forward-looking risk and return expectations

Ortec Finance expects that the business cycle remains below trend for the coming years fuelled by relatively weak globe trade, low unemployment and a gradual tightening of financial conditions. This means that growth and equity return are expected to underperform somewhat compared to the long-term average. At the same time, interest rates and inflation are likely to remain low for a sustained period of time.

The uncertainties around the development of the business cycle are captured in the 2,000 Ortec scenarios. Table 5 shows the following risk- and return statistics for the investment universe:

Compared to equity and fixed income products, the Triodos IM funds and real estate have relatively steady returns with low volatility in the medium and longer term. Real estate and the Triodos IM funds have favourable risk-to-return ratios, i.e. a high Sharpe ratio. In combination with their low or even negative correlation to important risk drivers, this enhances the desirability of these funds in a portfolio.

Table 5 Risk- and return statistics

	2020 - 2024			2020 - 2034		
Risk and return statistics	Geometric mean	Volatility	5% Shortfall	Geometric mean	Volatility	5% Shortfall
Government Bonds EUR (dur 17.9)	-4.2%	13.2%	-29.2%	-0.7%	11.6%	-24.5%
Credit Bonds IG	-0.7%	6.0%	-13.1%	1.7%	6.4%	-11.3%
Index Linked Bonds	-0.6%	4.6%	-9.4%	1.1%	4.8%	-8.3%
Mortgages	0.6%	4.0%	-7.3%	1.8%	3.9%	-6.2%
Mature Markets Equity	5.0%	17.2%	-28.4%	6.3%	17.8%	-28.4%
Developing Markets Equity	6.6%	27.6%	-39.2%	7.0%	28.9%	-40.3%
Equity Other	4.5%	25.6%	-38.4%	5.9%	26.5%	-38.6%
- High Yield	1.3%	14.5%	-26.5%	3.5%	16.5%	-25.9%
- EMD	3.5%	12.7%	-19.5%	4.4%	13.2%	-19.3%
Return Portfolio Illiquid						
Real Estate	5.1%	7.2%	-8.7%	5.9%	7.3%	-8.3%
Cash						
Cash EUR	-0.1%	0.9%	-1.6%	1.2%	1.6%	-1.4%
Triodos IM Funds						
Triodos Groenfonds	2.0%	2.6%	-3.3%	2.2%	2.7%	-3.2%
Triodos Microfinance Fund	4.9%	2.2%	0.4%	4.7%	2.4%	-0.2%
Triodos Renewables Europe Fund	4.5%	4.6%	-5.9%	4.0%	4.6%	-6.4%

3 Portfolio optimisation

3.1 Moving the efficient frontier

Portfolio optimisation according to the MPT-method for the asset-only and the ALM portfolios is expressed as the efficient frontier, a graphic reproduction of the risk/return-characteristics in different scenarios.

The optimisation starts with the entire investment universe excluding the Triodos IM funds, to construct a baseline comparison. Thus the optimal allocations and corresponding returns and volatilities can be identified. The resulting optimal portfolios (the green circles in the graph) build the efficient frontier.

The optimisation is performed for an asset-only investor and an institutional investor with known liabilities (i.e. a small- to medium-sized Dutch pension fund). The following restrictions are implemented to ensure relatively realistic optimal portfolios:

- The allocation to cash is capped at 5%.
- Mortgages are capped at 10%.
- Index linked bonds are capped at 10%.
- The Illiquid part of the return portfolio is capped at 20% of total assets.
- The underlying weights are kept constant of the listed asset classes.
- No short positions are allowed (i.e. no negative allocations).

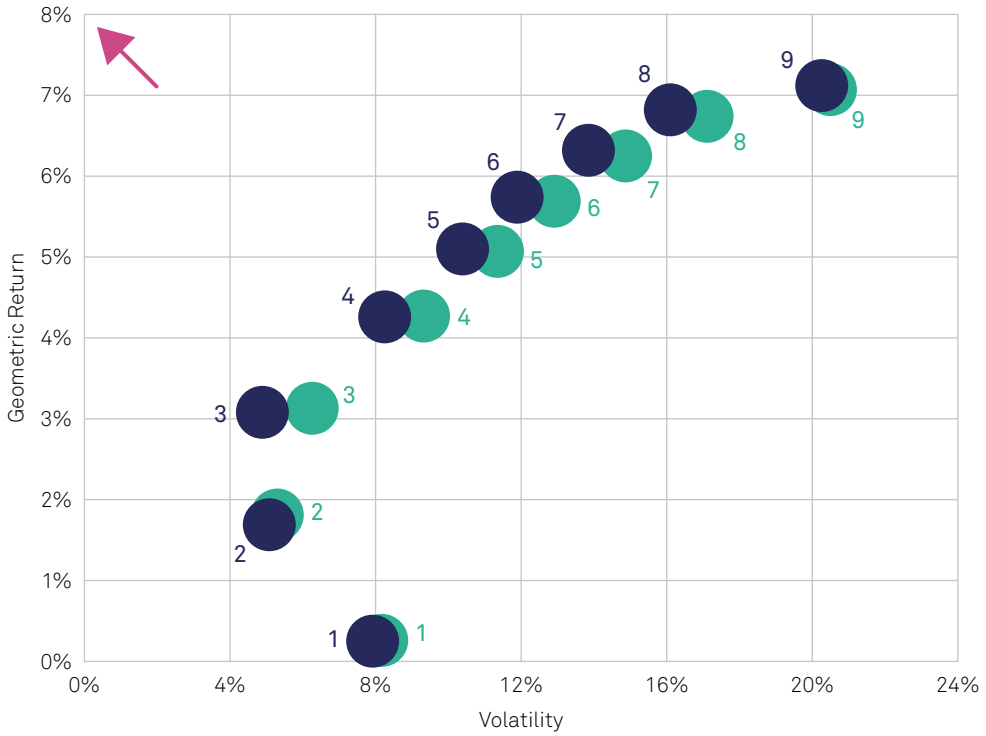
3.2 Asset-only portfolio

The graphs show that adding Triodos Impact Strategies to portfolios results in a significant shift of the efficient frontier. The efficient frontier shifts towards the upper-left corner, as shown by the blue circles. This indicates an improvement of the efficient frontier: higher returns at the same volatility, or lower volatility for the same returns.

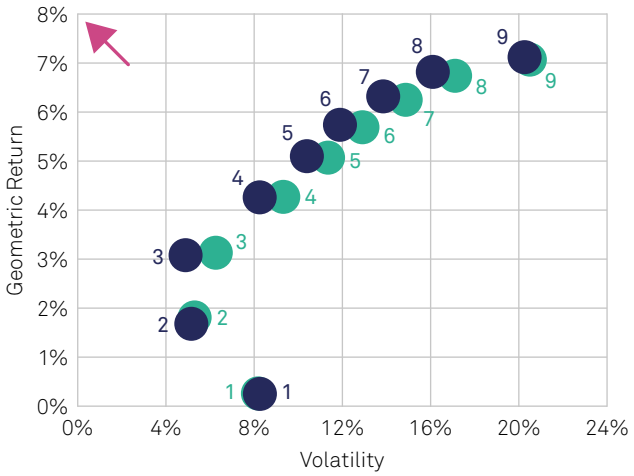
Based on underlying allocations in the optimal portfolios, Ortec concludes:

- The funds show up in every optimal solution.
- The funds are more attractive when constructing portfolios with lower/medium volatility.
- Triodos Microfinance Fund is the best candidate for inclusion in most of the optimal solutions. This is mainly due to favourable risk-return trade-offs (high Sharpe ratio), compared to the other illiquid investments.

Risk and return 2020 - 2034

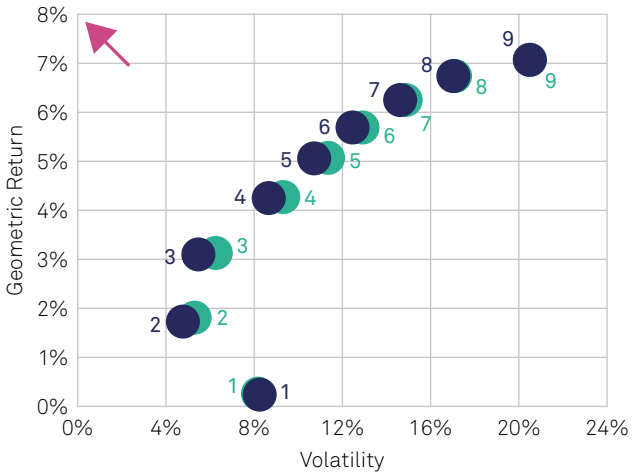


Risk and return 2020 - 2034



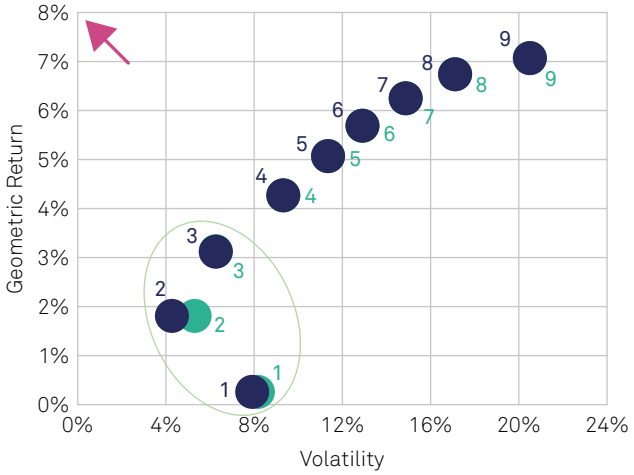
Adding **Triodos Microfinance Fund** results in a significant positive shift of the efficient frontier. This is not surprising, given the fund's very favourable statistics compared to real estate, Triodos Renewables Europe Fund and Triodos Groenfonds.

Risk and return 2020 - 2034



Adding **Triodos Renewables Europe Fund** also leads to a positive shift of the efficient frontier in all but the most risk seeking portfolios, albeit to a lesser extent than Triodos Microfinance Fund.

Risk and return 2020 - 2034



Triodos Groenfonds is an attractive investment only in very low-risk optimal portfolios 2 and 3 (see graph; optimal portfolio 1 is on the suboptimal part of the efficient frontier). This indicates that real estate has more attractive risk-reward ratio compared to Triodos Groenfonds, and that the diversification benefits of Triodos Groenfonds are not enough to offset this for most portfolios.

However, it is important to note that these statistics are computed without taking the tax benefits (see appendix I) for Triodos Groenfonds into account. When they are taken into account, the efficient frontier shows significant improvement for an asset-only investor.

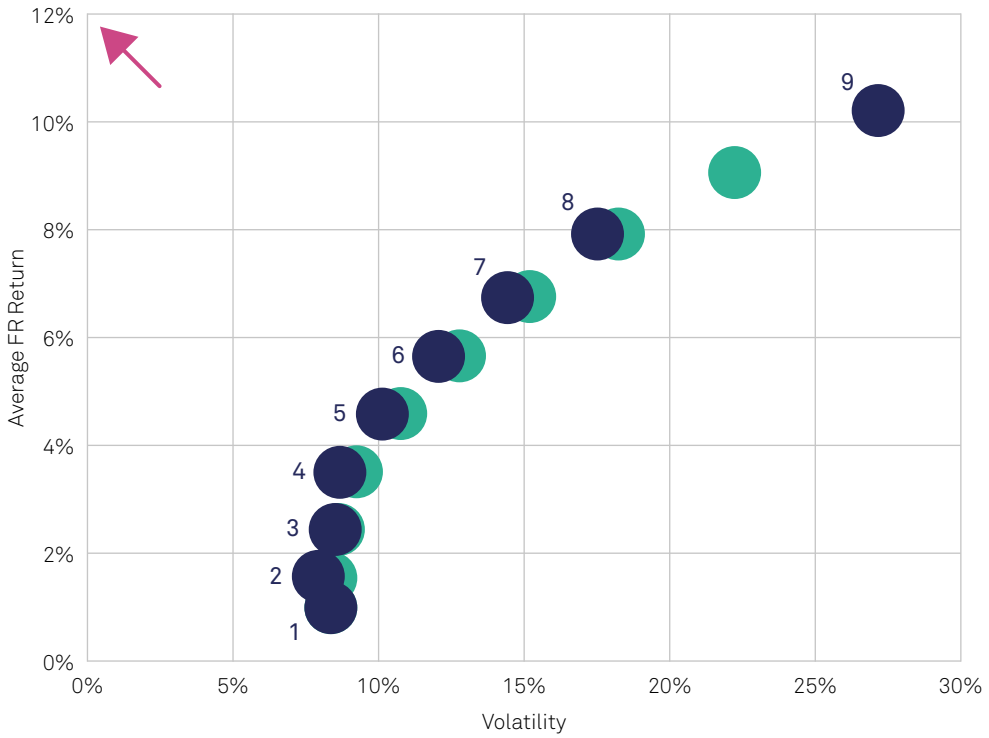
3.3 ALM portfolio

As for the asset-only portfolio, adding the Triodos IM funds results in a positive shift of the efficient frontier, although the gains are less pronounced than for an asset-only portfolio. The main reason for this is the addition of liabilities to the analyses, which makes the optimisation much more sensitive to changes in the interest rate. As interest rate movements are now a much bigger component of the optimisation, the gains from a shift in non-interest rate sensitive assets are mitigated.

Based on underlying allocations in the optimal portfolios, Ortec concludes that:

- Adding Triodos IM funds leads to positive allocations for these products in almost all optimal solutions.
- Triodos Microfinance Fund is the best candidate for inclusion in most of the optimal solutions.
- Adding Triodos Renewables Europe Fund and Triodos Groenfonds moves the efficient frontier in lower-risk portfolios.

Risk & return 2020 - 2034



4 Scenario analysis

Triodos IM funds add value to a well-diversified portfolio in terms of risk and return, especially in times of financial stress. Ortec therefore also investigated in which scenarios the Triodos IM funds add more or less value to an investor, based on six stress scenarios over the entire investment horizon.

Using filters allows for a comparison of the relative returns of the Triodos IM funds and the aggregated remaining assets without Triodos IM funds, as shown in the table.

The results show that due to the low or even negative correlation with dominant risk drivers, the Triodos IM funds display mild contra-cyclical behavior. The funds deliver the largest positive contributions in times of financial stress. The scenario filtering shows that the contra-cyclical behaviour of the funds generally mitigates decreased or negative returns in times of a financial crisis, i.e. a strong decline of stock markets.

The contra-cyclical behaviour of the funds also shows in other negative scenarios, albeit to a lesser extent: prolonged low or even negative long interest rates, and prolonged low inflation, or even deflation.

Table 6 Relative performance compared to base case (all 2,000 scenarios)

Filters	All assets (excl. Triodos IM funds)	Triodos Microfinance Fund	Triodos Renewables Europe Fund	Triodos Groenfonds
5% highest stock returns	1.7%	-0.2%	-0.3%	-0.1%
5% lowest stock returns	-1.6%	0.2%	0.5%	0.1%
5% highest inflation	0.6%	-0.2%	0.0%	-0.1%
5% lowest inflation	-0.4%	0.1%	0.1%	0.1%
5% highest interest rate	0.8%	-0.3%	0.2%	-0.2%
5% lowest interest rate	-0.4%	0.2%	-0.2%	0.1%

In the stress scenario with the 5% lowest stock returns, for example, the aggregated returns of all assets (excluding the Triodos IM funds) have underperformed with a -1.6% return per annum, compared to the average of Ortec's 2000 scenarios. The Triodos IM funds, on the other hand, have a neutral to slightly positive performance in this filter.

5 Conclusions

5.1 General conclusions

The Triodos IM funds can add value to a well-diversified portfolio, for two main reasons:

1. Historically, they have favourable risk-return characteristics compared to other standard possible investments.
2. They have shown relatively low correlation with common risk drivers since their inception, yielding high diversification benefits.

This general conclusion holds for both asset-only and ALM-portfolios. Adding the funds to an asset-only portfolio results in a significant improvement in its risk-return characteristics. For an ALM-portfolio this positive effect, leading to better returns and/or less risk for the beneficiaries, is less pronounced. Here, the development of interest rates plays a far greater role, compared to the asset-only case.

For the individual funds, the following conclusions can be drawn:

1. The characteristics for Triodos Microfinance Fund and Triodos Renewables Europe Fund are favourable enough that they significantly improve the efficient frontier of a well-diversified portfolio, especially for an asset-only investor.
2. Triodos Groenfonds without tax benefits shows only a marginal improvement of the efficient frontier. When the tax benefits are taken into account, however, the efficient frontier does show significant improvement. This is only relevant for an asset-only investor, however, as pension funds do not qualify for tax benefits under current Dutch law.

The funds add the most value to risk-averse and risk-neutral portfolios. This is shown by the fact that the efficient frontier improves the most for the low to moderate risk profiles.

5.2 Scenario conclusions

Based on the six scenarios, the results show that due to their low or even negative correlation with dominant risk drivers, the Triodos IM funds display mild contra-cyclical behavior. The Triodos IM funds deliver the largest positive contributions during times of financial stress. The scenario filtering shows us that the contra cyclical behaviour of the Triodos IM asset classes generally mitigates decreased or negative returns in times of a financial crisis i.e. a downward shock on the stock market.

To a lesser extent we've also encountered contra cyclical behaviour of the Triodos IM funds in other negative scenarios: prolonged low or even negative long interest rates and prolonged low inflation or even deflation.

Appendix I – Triodos IM funds

Triodos Microfinance Fund contributes to building a robust, transparent and inclusive financial sector, providing both debt and equity to financial institutions that demonstrate a sustainable approach toward providing financial services to the unbanked, including small and medium-sized enterprises.

Triodos Renewables Europe Fund offers a well-diversified portfolio of infrastructure investments in renewable energy power plants in Europe. Through equity and mezzanine, the fund invests directly in projects in their development, construction or early operational stage.

Triodos Groenfonds invests in senior debt loans to projects in the Netherlands that have obtained a green certificate by the Dutch government. Sectors include renewable energy, organic farming, nature and landscape and sustainable real estate. Since 2014, the fund may also invest up to 20% of its net assets in renewable energy projects in 46 designated emerging economies.
The tax benefits for Triodos Groenfonds are not included in the analysis for two main reasons:

1. The tax benefits depend on regulations. These rules may change over time or disappear altogether. This makes it difficult to assess what their precise impact could be over a 15-year horizon.
2. The precise effect of the tax benefit differs per investor, and can therefore nog be included in an optimisation module.

Visit our **website** for more information about our funds.

Appendix II - Background explanation Ortec Finance

There are some considerations investors have to take into account about the data and modelling assumptions used for the scenario analysis:

First, the input data used to model the Triodos funds, comes directly from Triodos Investment Management. Ortec could not verify this data with publicly available market data.

Secondly, there is limited information available for the construction of long-term expected returns for the Triodos funds. This leads to a higher degree of uncertainty about the assumptions for risk and return. For many of the standard return series we have several decades' worth of data. For the Triodos funds this means more uncertainty around the estimated risk and return characteristics.

Thirdly, a significant amount of underlying assets for the Triodos funds are not listed on any stock exchange, making valuation of those assets more difficult. The use of valuation techniques other than market value (for example appraisal-based valuation), could lead to artificial "smoothing" of the return data. This smoothing of the data causes the observed volatility to be underestimated.

Special consideration goes to Triodos Microfinance Fund, which is active since 2009. It is important to note that this data series excludes the global crisis year 2008. The omission of this data point could negatively impact the estimated returns, volatilities and correlations of this product going forward.

Ortec Finance has carried out this investigation on request of Triodos Investment Management.

Read the full analysis in the Ortec's research study 'The investment rationale of adding Impact Alternatives to a broader portfolio'.

Ortec Finance is the leading provider of technology and solutions for risk and return management.

Headquartered in Rotterdam, Ortec Finance has offices Amsterdam, London, Toronto, Hong Kong and in Zurich.

Appendix III – Glossary

Alternative investments are usually considered to be financial assets that do not fall into one of the conventional investment categories: stocks, bonds, and cash. Alternative investments include private equity or venture capital, hedge funds, managed futures, real estate, commodities, and derivatives. Art and antiques are also often classified as alternative investments. Common features include a potentially lower liquidity and a lower correlation with conventional assets.

Correlation coefficient is used in statistics to describe a pattern or relationship between two variables. Positive correlation describes the relationship between two variables which change together, while a negative correlation describes the relationship between two variables which change in opposing directions.

Kurtosis is a statistical measure that is used to describe the distribution. Whereas skewness differentiates extreme values in one versus the other tail, kurtosis measures extreme values in either tail. Distributions with large kurtosis exhibit tail data exceeding the tails of the normal distribution. Distributions with low kurtosis exhibit tail data that are generally less extreme than the tails of the normal distribution.

Mean return, in securities analysis, is the expected value, or mean, of all the likely returns of investments comprising a portfolio. A mean return is also known as an expected return or how much a stock returns on an annual basis.

Skewness refers to distortion or asymmetry in a symmetrical bell curve, or normal distribution, in a set of data. If the curve is shifted to the left or to the right, it is said to be skewed. Skewness can be quantified as a representation of the extent to which a given distribution varies from a normal distribution. A normal distribution has a skew of zero, while a lognormal distribution, for example, would exhibit some degree of right-skew.

Standard deviation measures the dispersion of data from its expected value. The standard deviation is used in making an investment decision to measure the amount of historical volatility associated with an investment relative to its annual rate of return. It indicates how much the current return is deviating from its expected historical normal returns.

R-squared is a statistical measure that represents the proportion of the variance for a dependent variable that's explained by independent variables in a regression model. For example: if R-squared is equal to 0.4, then 40% of the observed variation can be explained by the input variables.

Value at Risk (VaR)/Conditional Value at Risk (CVaR) are statistical measures used to assess tail risk. The VaR measures the maximum potential loss with a degree of confidence for a specified period. For example: the 1 year, 5% VaR measures the 5% lowest observation of a statistic over one year. CVaR is the weighted average of the "extreme" losses in the tail of the distribution of possible returns, beyond the value at risk (VaR) cut-off point. For example: the 1 year, 5% CVaR measures the average of the 5% lowest observations of a statistic over one year.

Benchmarks used in Ortec Finance Scenario set

Corporate Spread US/EUR
Investment-grade series, corresponding to a rating of AAA up to and including BBB, based on Bloomberg Barclays indices data, obtained via Bloomberg.

EM debt
JPMorgan GBI-EM Global Diversified Composite Unhedged USD

Equity EM
MSCI Daily TR Gross Emerging Markets USD

Equity Europe
MSCI Daily TR Gross Europe EUR

GSCI Agriculture
S&P GSCI Agriculture TR index

GSCI Energy
S&P GSCI Energy TR index

Infra EUR
Dow Jones Brookfield Europe Infrastructure TR Index

Long rate Germany
EUR German Sovereign Zero Coupon Yield

Short rate Germany
EUR German Sovereign Zero Coupon Yield

Short rate US
USD United States Sovereign Par Coupon Yield

Investing in positive change

About Triodos Investment Management

With over 25 years of experience as a globally active impact investor, Triodos Investment Management has developed deep sector-specific insights across Energy & Climate, Financial Inclusion, Sustainable Food & Agriculture, and Impact Equities and Bonds. Offering impact solutions through private equity, debt, and listed equities and bonds, our assets under management amounted to EUR 4.6 billion as per 30 June 2019. Triodos IM is a wholly-owned subsidiary of Triodos Bank.

Contact

For more information about Triodos IM Impact Alternatives, and other sustainable investment opportunities, please contact our Investor Relations team at:

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