

EUROPEAN INVESTMENT PERFORMANCE COMMITTEE

**Guidance on
Performance Attribution Presentation**

Section 1 – Introduction

Performance attribution has become an increasingly valuable tool not only for assessing asset managers' skills and for identifying the sources of value added but also for facilitating a meaningful dialogue between investment managers and their clients.

Like any other performance presentation, a presentation of performance attribution results provides meaningful information to the user only to the extent the user understands the assumptions and concepts underlying this presentation. That's why it is crucially important that the presentation of attribution results is provided in a way that does not mislead the users and contains all necessary disclosures to explain the underlying assumptions and concepts.

Given the aforementioned, the European Investment Performance Committee (EIPC) has decided to take the initiative and to address the demand of the investment management industry for specific guidance with respect to presentation of return and risk attribution analysis. The first step was the issue of the EIPC Working Paper „Guidance for Users of Attribution Analysis“ in early 2002. The following Guidance on Performance Attribution Presentation represents the next milestone in this process and establishes a reporting framework, which provides for a fair presentation of return and risk attribution results with full disclosure. EIPC acknowledges that this Guidance is not the final step in this process and will have to be developed further to address any new matters arising in future.

Except for definition of some general terminology, the Guidance does not address methodological issues with respect to calculation of attribution results, nor attempts to present any prescriptive definitions. EIPC believes that setting any standard on performance attribution should primarily contribute to increasing the understanding of attribution through the necessary disclosures and transparency of the methodology and investment process. For details on various performance attribution methods and concepts, users should refer to the dedicated performance literature available. Being a “disclosure guidance”, the Guidance can be generally applied to all types of investment portfolios (equity, fixed income or balanced).

The Guidance does not require investment managers to present return and risk attribution results. However, if investment managers do present attribution analysis, they are encouraged to provide full disclosure and to apply the provisions of the Guidance. As the importance of a particular piece of information may vary depending on the situation, EIPC believes that differentiation in the disclosures between required and recommended may be too subjective.

EIPC regards it as the responsibility of users of performance attribution to duly inform themselves about performance attribution concepts and, when presented with performance attribution results, to ask relevant questions to understand the underlying assumptions and methods. Not doing this may lead to misinterpretations and misjudgment of the quality of investment managers presenting the attribution results.

The Guidance was approved by EIPC in January 2004. EIPC proposes that this Guidance be adopted by the Investment Performance Council (IPC) as a guidance for the investment management industry.

Section 2 – Definitions

The purpose of the following definitions is to provide the user with an explanation on the terminology as it is used in this Guidance. The Guidance does not attempt to establish any absolute or dogmatic definitions and recognises that there may be various views and interpretations of these matters within the investment management industry.

Performance Attribution:

1) Performance attribution techniques are generally understood as a process of decomposition of return and risk into the investment management decisions in order to measure the value added by active investment management and to communicate the risk components of the investment strategy.

2) For the purposes of this Guidance term “Performance Attribution” refers both to attribution of historic returns and to risk attribution (ex-ante and ex-post). The Guidance emphasises the distinction between return and risk and encourages the view of performance as a combination of risk and return. As a rule, terms “*Return attribution*” and “*Risk attribution*” are explicitly used in this Guidance.

Excess / Active Return:

The difference between a periodic portfolio return and its benchmark return. This value may be calculated either as an arithmetic or a geometric difference. Also called *relative* return.

Return Attribution:

1) Return attribution techniques are generally understood as a process of decomposition of active (historic) returns into the investment management decisions in order to identify the sources of return.

2) Return attribution can be applied to absolute returns (absolute attribution) or to relative / excess returns, being the difference between the portfolio and benchmark return (relative attribution).

Return Contribution:

Return contribution techniques are generally understood as a process of decomposition of returns in order to measure the contribution of each particular segment of the portfolio to the portfolio overall return.

Risk Attribution:

For the purpose of this Guidance, the following elements of risk attribution analysis are defined:

Risk measurement:

The process of measurement of a portfolio’s risk in absolute (e.g. volatility, value-at-risk) or relative (e.g. tracking error) terms, both ex-post (historic) and ex-ante (predicted).

Risk attribution:

The first step of risk attribution is the risk decomposition, i.e. identifying the sources of a portfolio’s risk, both ex-post (historic) and ex-ante (predicted), both in absolute terms and relative to the selected benchmark. This process may include decomposition into sources of systematic and specific risk or into various factors (e.g. industry, style, country, currency, credit quality, etc.) affecting a portfolio’s risk; as well as determination of contribution of individual securities to the overall portfolio risk.

The further step of risk attribution is the process of measurement of contribution of investment management decisions to the active portfolio risk (e.g. to the portfolio tracking error).

Risk attribution for the purposes of this Guidance only refers to the analysis of investment risk and not to operational or other types of business risks.

Section 3 – Guiding principles

Investment managers are required to apply the following principles when calculating and presenting return and risk attribution results:

- Return and risk attribution analysis must follow the investment decision process of the investment manager and measure the impact of active management decisions. It is essential that the attribution analysis reflects the actual decisions made by the investment manager. Return and risk attribution analysis must mirror the investment style of the investment manager.
- For the attribution of relative return and risk, a benchmark appropriate to the investment strategy must be used. The employed benchmark should be specified in advance and meet such criteria as investability, transparency and measurability.
- If investment managers are not able to produce return and risk attribution results that comply with the above guiding principles, they still may use these results for internal purposes but should refrain from presenting attribution to external users or use it for the purposes of soliciting potential clients.

Section 4 – Disclosures

A. Return Attribution

The following disclosures are required to be provided, as long as they are applicable, when presenting return attribution results.

A.1. Investment Process

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| A.1.1 | Object of a return attribution analysis | Firms must disclose the object of a return attribution analysis, e.g. a particular portfolio, a representative portfolio, a model portfolio, a group of portfolios (composite), etc., and the reasons for selecting this particular object. |
| A.1.2 | Investment management process and investment style | Firms must disclose the main elements of their investment management process, including the key investment decision factors employed. |
| A.1.3 | Benchmark | <p>Firms must disclose the composition of the benchmark used for the return attribution purposes. Benchmark rebalancing rules must also be disclosed. If there has been any change in benchmark, the old benchmark(s) and date(s) of change(s) are to be disclosed.</p> <p>In case of investments outside of the scope of the benchmark, firms must disclose the treatment of the impact of these investments, e.g. allocated to another attribution effect, presented separately, etc.</p> <p>If the attribution is not based on a benchmark, firms must disclose the rationale for this.</p> |

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A.2. Return Attribution Model

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| A.2.1 | Return attribution model and attribution effects | Firms must disclose a description of the return attribution model ¹ . Attribution effects derived (e.g. depending on the portfolio type: timing, security selection, currency effects, or income, duration, spread effects, etc.) must be clearly identified. If the attribution model has changed during the period of analysis, these changes and the rationale for them must be disclosed. In addition, the implications for the attribution history, if any, as a result of this change must be disclosed. |
| A.2.2 | Excess / active returns | Firms must disclose whether periodic excess returns are derived using an arithmetic or a geometric method. |
| A.2.3 | Presentation period | Firms must disclose what time period the attribution analysis covers and why this period has been chosen. |
| A.2.4 | Frequency of return attribution analysis | Firms must disclose the frequency of calculation of attribution effects (e.g. daily, monthly basis, etc.). |
| A.2.5 | Linking methodology | If the attribution report provides effects which were calculated for subperiods (e.g., days) and linked to present results for longer periods (e.g., a month), then the details of the linking methodology must be made available upon request. If a smoothing algorithm has been employed to allocate in a systematic way residual effects over time, the type of this algorithm is to be disclosed. |
| A.2.6 | Buy-and-hold vs. transaction based approach | Firms must disclose whether the return attribution approach is buy-and-hold or transaction based. |
| A.2.7 | Interaction effect and/or unexplained residuals | Some attribution models generate interaction effects or even unexplained residuals. Unexplained residuals may impair the quality of analysis and conclusions that may be drawn from it. If the model has an interaction term or an unexplained residual, details of its treatment must be disclosed, e.g. presented separately, ignored, allocated to other attribution effects, etc. |
| A.2.8 | Derivatives | Firms must disclose to what extent derivatives are included and how they are treated in the return attribution analysis. |
| A.2.9 | Effect of leverage | If leverage is employed, firms must disclose how leverage effects are attributed according to investment decision process. |
| A.2.10 | Foreign currency effects | If investments in currencies other than the base currency of the portfolio are employed, treatment of foreign currency effects in terms of the currency management strategy must be disclosed. |
| A.2.11 | Inclusion of cash | Firms must disclose whether cash is specifically included in the attribution analysis and whether a cash benchmark is determined. Firms also must disclose any difference in treatment of strategic cash allocation positions vs. temporary cash from realised income. |

¹ *If the model is one which has been documented in an industry publication, its name and source reference must be disclosed. If the model is a variation of a published model, the original name and source reference must be disclosed, as well as an explanation of the revisions which have been made. If the model is unpublished or proprietary, then a broad description of its details must be disclosed.*

A.2.12 Transaction costs, fees Firms must disclose the treatment of the impact of transaction costs, fees, etc. - e.g. allocated to a particular attribution effect, presented separately, etc.

A.3. Underlying input data

A.3.1 Portfolio returns Firms must disclose:

- methodology and frequency of calculation of portfolio and portfolio segment returns,
- treatment of single performance components, such as management fees, custodian fees, taxes and transaction costs (gross vs. net treatment).

A.3.2 Benchmark returns Firms must disclose:

- methodology of calculation of benchmark returns,
- any adjustments with respect to management fees, realised income positions, taxes etc.,
- source of data.

Firms are encouraged to disclose any other specific details that may be important.

A.3.3 Leveraged portfolios If the underlying portfolio includes discretionary leverage, the firm must disclose whether calculation of portfolio returns is performed on an actual or “all-cash” basis².

A.3.4 Underlying valuation data Firms must disclose if there are any differences with respect to sources and timing of prices of underlying securities between the portfolio and the benchmark.

A.3.5 Foreign exchange rates Firms must disclose if the sources or timing of foreign exchange rates are different between the portfolio and the benchmark.

A.3.6 Income positions Firms must disclose if realised income from dividends and coupons is considered after or before deduction of applicable withholding taxes both for the portfolio and the benchmark.

Firms are encouraged to disclose any additional matters they find useful or relevant for the users of attribution analysis.

² For details regarding „all-cash“ basis calculations refer, for example, to AIMR-PPS Handbook, 1997, App. B, p. 117

B. Risk Attribution

The following disclosures are required to be provided when presenting risk attribution analysis results.

B.1. Investment Process

- B.1.1 Object of risk attribution Firms must disclose the object of risk analysis, e.g. a particular portfolio, a representative portfolio, a model portfolio, a group of portfolios (composite), and the reasons for selecting this particular object.
- B.1.2 Investment management process and investment style Firms must disclose the main elements of their investment management process, including the key investment decision factors employed.
- B.1.3 Benchmark Firms must disclose the composition of the benchmarks used for the risk attribution purposes. Benchmark rebalancing rules must also be disclosed. If there has been any change in benchmark, the old benchmark(s) and date(s) of change(s) are to be disclosed.
- In case of investments outside of the scope or profile of the benchmark, firms must disclose the treatment of the impact of these investments.
- If the attribution is not based on a benchmark, firms must disclose the rationale for this.
- In case risk attribution is presented together with return attribution, the same benchmark as for return attribution should be used. If a different benchmark is used, the rationale for this must be disclosed.

B.2. Risk Attribution Model

- B.2.1 Risk attribution model and attribution factors. Firms must disclose a general description of the risk attribution model, including description of the presented risk measures³ and risk decomposition factors.
- If the risk attribution model has changed during the period of analysis, these changes and the rationale for them are to be disclosed. In addition, the implications for the analysis history, if any, as a result of this change must be disclosed.
- The risk attribution should, where possible, involve both ex-post and ex-ante analysis. This should also involve a reconciliation of the ex-post and ex-ante measures in order to assess the validity of the model.
- B.2.2 Ex-ante risk measures When presenting forward-looking risk measures, firms must provide a broad description with respect to the methods used to estimate portfolio holdings and/or likely magnitudes of relative returns for individual securities, sectors or markets and their correlation with each other.

³ *If the model is one which has been documented in an industry publication, its name and source reference must be disclosed. If the model is a variation of a published model, the original name and source reference must be disclosed, as well as an explanation of the revisions which have been made. If the model is unpublished or proprietary, then a broad description of its details must be disclosed.*

Firms must also disclose the impact of the portfolio turnover and how this would influence their assumption regarding stability of the future portfolio asset structure.

B.2.3 Analysis period

When presenting risk measures, firms must disclose the reporting date of the analysis.

When presenting backward-looking risk measures, firms must disclose what time period the analysis covers and why this period has been chosen. In case ex-post risk attribution is presented together with return attribution, the analysis period should be the same as for the return attribution.

B.3. Underlying input data

B.3.1 Portfolio returns

Firms must disclose:

- methodology and frequency of calculation of portfolio and segment returns,
- treatment of single performance components, such as management fees, custodian fees, taxes, external cash flows and transaction costs (gross vs. net treatment).

B.3.2 Benchmark returns

Firms must disclose:

- methodology of calculation of benchmark returns,
- any adjustments with respect to management fees, realised income positions, taxes, etc.,
- source of data.

Firms are encouraged to disclose any other specific details that may be important.

B.3.3 Leveraged portfolios

If the underlying portfolio includes discretionary leverage, the firm must disclose whether calculation of portfolio returns is performed on an actual or “all-cash” basis⁴.

B.3.4 Underlying valuation data

Firms must disclose if there are any differences with respect to sources and timing of prices of underlying securities and foreign exchange rates between the portfolio and the benchmark.

B.3.5 Foreign exchange rates

Firms must disclose if the sources or timing of foreign exchange rates are different between the portfolio and the benchmark.

B.3.6 Income positions

Firms must disclose if realised income from dividends and coupons is considered after or before deduction of applicable withholding taxes.

Firms are encouraged to disclose any additional matters they find useful or relevant for the users of attribution analysis.

⁴ For details regarding „all-cash“ basis calculations refer, for example, to AIMR-PPS Handbook, 1997, App. B, p. 117

Section 5 – Relation to the Global Investment Performance Standards (GIPS™)

EIPC does not currently view this Guidance as a part of the Global Investment Performance Standards (GIPS™) compliance framework. However, the Guidance can obviously be considered as a part of a broader ethical code of conduct for investment managers. Firms claiming GIPS compliance and presenting performance attribution analysis are encouraged to follow this Guidance. However, users should be aware that some GIPS requirements may not always be applicable for attribution analysis purposes, e.g. return calculation methods for individual client reporting.

Attribution analysis results may also be presented as a supplemental information to a GIPS compliant performance presentation. If attribution analysis is presented as a part of a GIPS compliant performance presentation, users should also refer to the GIPS Guidance Statement on the Use of Supplemental Information for guidance.

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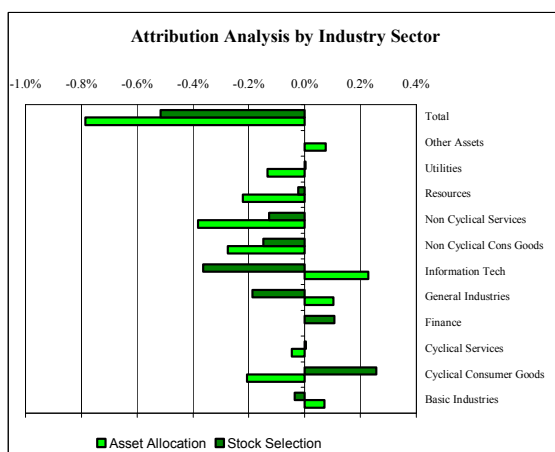
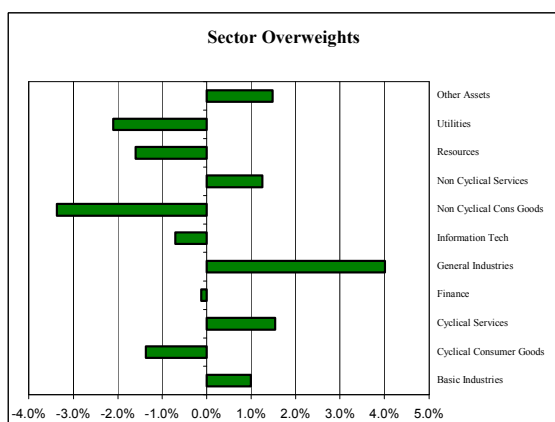
Appendix 1 – Example of return and risk attribution report in compliance with this Guidance

The following sample attribution analysis report refers to an equity portfolio and is *an example* of how a performance attribution presentation in compliance with this Guidance could look like. This sample report is absolutely not intended to serve as a “best practice” benchmark to present performance attribution in terms of methodology or layout.

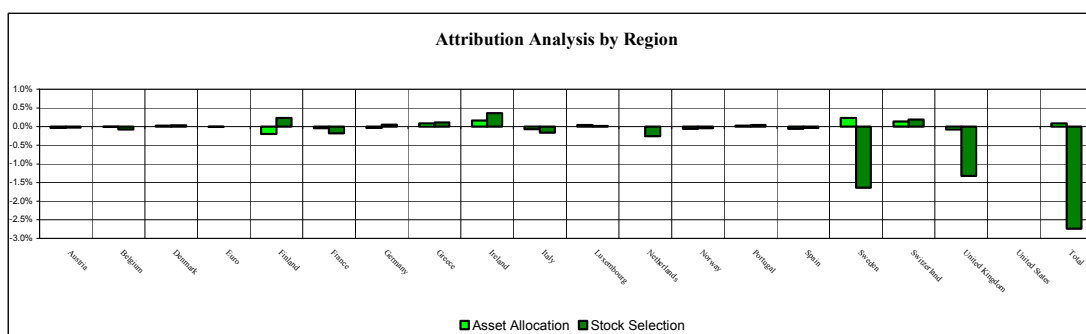
Investment Manager ABC

Return Attribution and Risk Attribution Report for Equity Portfolio XYZ as of 31.03.2001

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|---|--|
| Return and Risk Attribution Report for: | PORTFOLIO XYZ |
| Period: | 1.1.2000 - 30.03.2001 |
| Reference Currency: | EUR |
| Benchmark: | Customised (refer to Disclosures) |



| Return | | |
|--|------------|---------------|
| Portfolio | | -4.45% |
| Benchmark | | -2.89% |
| Active (Relative) Return | | -1.56% |
| Return Attribution Analysis by Industry Sector | | |
| Asset Allocation | | -0.79% |
| Stock Selection | | -0.52% |
| Other Effect | | -0.25% |
| Total | | -1.56% |
| Return Attribution Analysis by Region | | |
| Asset Allocation | | 0.09% |
| Stock Selection | | -2.74% |
| Other Effect | | 1.09% |
| Total | | -1.56% |
| Risk Analysis (end of period) | | |
| | Portfolio | Benchmark |
| Number of Securities | 99 | 576 |
| Number of Currencies | 2 | 2 |
| Portfolio Value | 227447728 | |
| Total Risk (ex-ante) | 15.76% | 15.31% |
| - Factor Specific Risk | 15.53% | 15.20% |
| - Style | 4.91% | 4.29% |
| - Industry | 11.95% | 11.80% |
| - Stock Selection Risk | 2.72% | 1.83% |
| Tracking Error (ex-post) | 2.29% | |
| Tracking Error (ex-ante) | 2.35% | |
| Value at Risk (at 97.7%) | 10'878'425 | |
| R-squared | 0.98 | |
| Beta-adjusted Risk | 15.59% | 15.31% |
| Predicted Beta | 1.02 | |
| Predicted Dividend Yield | 2.22 | 2.37 |



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Disclosures

Investment Process

Object of the attribution analysis: The return and risk attribution analysis is performed for Portfolio XYZ as an integral part of the periodic client reporting to company XYZ.

Investment management process and investment style: Portfolio XYZ is a discretionary equity mandate with reference currency EUR managed in an active way against the customised benchmark specified by company XYZ as described below. In addition, the following specific client guidelines apply: outperform the defined benchmark (basis EUR) by 2% p.a. over a rolling 2-year period with a tracking error of max. 3% p.a.

Investment Manager ABC applies a top-down investment approach by actively modifying the portfolio asset allocation and taking active decisions with respect to stock selection. Foreign currency positions are not actively hedged. The inception date of portfolio XYZ is 1.1.2000.

Benchmark: The benchmark for portfolio XYZ is given as follows:

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|---------------------|-----|
| EUR Cash Index Z: | 5% |
| EUR Stock Index X | 60% |
| World Stock Index Y | 35% |

A monthly rebalancing is applied.

Results from investments in single stocks outside of the scope of the benchmark are allocated to the stock selection effect.

There were no changes in the benchmark since inception of the mandate.

Attribution Model

Return attribution model: Return attribution is performed under the *Brinson-Fachler* method. Details and explanations to this model are available upon request. Returns are attributed to asset allocation (timing) and stock selection effects and presented according to the industry sector and region. Please refer also to disclosure “Interaction effect and/or unexplained residuals”.

There has been no change in the model since inception of the portfolio.

Excess / active returns: Periodic excess returns are derived using an arithmetic method.

Presentation Period: The return attribution and risk attribution analyses cover the period from 1.1.2000 to 31.03.2001 and is performed within the regular quarterly since-inception reporting.

Frequency of return attribution analysis: The attribution effects are calculated on a monthly basis

Linking methodology: The monthly attribution effects are multiplicatively linked to show the attribution results for the whole presentation period. No smoothing algorithms are employed to systematically allocate the residual effects over time. Details on the methodology are available upon request.

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| Treatment of transactions: | The return attribution model is based on a “buy-and-hold” approach. However, as transactions in the portfolio usually occur at the beginning of the month and the attribution effects are calculated on a monthly basis, portfolio manager ABC believes that potential distortions should be minimal. |
| Interaction effect and/or unexplained residuals: | <p>The model generates a residual effect due to multiplicative linking of arithmetically derived attribution effects over time. This effect is presented separately as “Other effect”.</p> <p>The model does not generate any other unexplained residuals.</p> |
| Derivatives: | Derivatives are not employed in this portfolio. |
| Use of leverage: | Leverage is not employed in this portfolio. |
| Inclusion of cash: | According to the defined portfolio benchmark, cash represents a strategic position and is specifically included in the attribution analysis against a specified cash benchmark index. There is no difference in treatment of the strategic cash allocation position comparing to temporary cash from realised income as the realised income cash is deemed to be immaterial. |
| Foreign currency positions: | Foreign currency positions are not hedged into the portfolio reference currency. Foreign exchange effects of these positions are included in the return attribution analysis within the stock selection effect. |
| Transaction costs and fees: | Returns are calculated net of transaction costs and gross of fees. The impact of transaction costs vis-à-vis the benchmark return is not calculated specifically as the model is not transaction based. The model implicitly includes transaction costs on a cash level. |
| Risk attribution analysis | <p>The presented risk attribution analysis includes both ex-post and ex-ante risk measurement and risk decomposition.</p> <p>Ex-post analysis includes calculation of the historical annualised tracking error. Ex-ante analysis includes calculation of the predicted total risk of the portfolio (annualised volatility) and its decomposition into factor-specific (style and industry) and stock selection components. In addition ex-ante annualised tracking error and value-at-risk (VaR) measures are presented. The predicted VaR measure is calculated on the basis of the parametric (variance/covariance) method.</p> <p>The methodology and assumptions used for calculation of ex-ante (predicted) risk measures are developed and implemented in the proprietary model of company WWW, broad details of which are available upon request. For the purposes of the ex-ante risk analysis, an assumption is taken that the portfolio strategic asset structure remains stable (with monthly rebalancing) over time.</p> <p>While reasonable care is exercised when predicting risk parameters, users of this report should be aware of inherent limitations of such forecast methods as well as of the assumptions underlying the calculation of risk measures (such as normality of return distributions, etc.).</p> <p>A periodic reconciliation of the ex-post and ex-ante measures is performed on a quarterly basis to assess the model risk. The historic reconciliation results (since portfolio inception) show that an average model error lies within the bandwidth of 200-300 b.p.</p> |

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Underlying input data

Underlying portfolio returns:

The underlying portfolio returns are calculated in EUR on a monthly basis according to the true time-weighted rate of return method and under application of the total-return concept. Returns are calculated net of transaction costs and withholding taxes on interest and dividend income and gross of management and custodian fees.

The underlying portfolio data are derived from the accounting records of Investment Manager ABC. The source of securities prices and foreign exchange rates is data provider ZZZ.

Benchmark returns:

The underlying benchmark returns are calculated on a monthly basis under application of the total-return concept and monthly rebalancing. The benchmark returns are calculated on the basis of EUR as reference currency. The source of the benchmark data is data provider ZZZ.