DECOMPOSING THE RETURN OF ABSOLUTE PERFORMANCE ORIENTED MULTI ASSET CLASS PORTFOLIOS

Stefan Illmer
CREDIT SUISSE ASSET MANAGEMENT

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- KEY ASSUMPTIONS OF THE ANALYSIS
- APPLYING CLASSICCAL RETURN DECOMPOSITION
- PROBLEMS OF DECOMPOSING THE RETURN
- PROBLEMS OF USING A LONG-TERM TARGET RETURN AS A BENCHMARK
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- DECSION ORIENTED RETURN DECOMPOSITION - AN EXAMPLE
- CONCLUSIONS

INTRODUCTION

- **Relative performance oriented balanced portfolios**
  are portfolios which are managed against a pre-defined (long-term) benchmark which may replicate the liabilities of a client and may have a long-term investment horizon
- **Absolute performance oriented balanced portfolios**
  are portfolios which are **not** managed against a pre-defined (long-term) benchmark but against a target return which may replicate the liabilities of a client and may have a **short-term** investment horizon

KEY ASSUMPTIONS OF THE ANALYSIS
OF ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (1/2)

- Short-term market expectations are more central than long-term market expectations
- Short-term risk aversion is more crucial than the long-term risk profile
- Leaving the market expectations (on returns and risk) only up to the portfolio manager and not incorporate the client's expectations is not realistic and perhaps even irrational
- Client still has market expectations which have to be considered by the portfolio manager
  a) through the short-term expected market returns and / or at least
  b) through the client's short-term risk aversion
- Client mirrors the risk aversion not into long-term benchmark weights but often into short-term or tactical investment guidelines

KEY ASSUMPTIONS OF THE ANALYSIS
OF ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (2/2)

- Basic principles of the risk/return trade-off still have their validity and the portfolio manager acts accordingly - at least intuitively
- Portfolio manager takes the market expectations, the investment guidelines as well as the client's risk aversion as input to decide on the (short-term down to daily) optimized reference portfolio
- The reference portfolio can be pre-defined and used as a (short-term) benchmark with a much higher rebalancing and/or adjustment frequency than the classical (long-term) benchmark

APPLYING CLASSICAL RETURN DECOMPOSITION
TO RELATIVE PERFORMANCE ORIENTED PORTFOLIOS

Asset Class	Benchmark Weight	Portfolio Weight	Benchmark Return	Portfolio Return	Excess Return
Bonds EUR	30.0%	25.0%	2.00%	1.80%	-0.20%
Bonds USD	10.0%	10.0%	-0.60%	0.50%	1.10%
Bonds JPY	10.0%	0.0%	-1.50%	0.00%	1.50%
Total Bonds	50.0%	35.0%	0.78%	1.43%	0.65%
Equities EUR	20.0%	30.0%	2.00%	2.30%	0.30%
Equities USD	20.0%	30.0%	-0.60%	0.10%	0.70%
Equities JPY	10.0%	5.0%	-1.50%	-2.50%	-1.00%
Total Equities	50.0%	65.0%	0.26%	0.92%	0.66%
Total Portfolio	100.0%	100.0%	0.52%	1.10%	0.58%

=> asset allocation effect = 0.27%; stock picking effect plus interaction effect = 0.31%

=> total excess return = 0.58%

APPLYING CLASSICAL RETURN DECOMPOSITION
TO ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS

Asset Class	Benchmark Weight	Portfolio Weight	Benchmark Return	Portfolio Return	Excess Return
Bonds EUR	0.0%	25.0%	2.00%	1.80%	-0.20%
Bonds USD	0.0%	10.0%	-0.60%	0.50%	1.10%
Bonds JPY	0.0%	0.0%	-1.50%	0.00%	1.50%
Total Bonds	0.0%	35.0%	0.00%	1.43%	1.43%
Equities EUR	0.0%	30.0%	2.00%	2.30%	0.30%
Equities USD	0.0%	30.0%	-0.60%	0.10%	0.70%
Equities JPY	0.0%	5.0%	-1.50%	-2.50%	-1.00%
Total Equities	0.0%	65.0%	0.00%	0.92%	0.92%
Total Portfolio	0.0%	100.0%	0.00%	1.10%	1.10%

=> asset allocation effect = 0.79%; interaction respectively stock picking effect = 0.31%

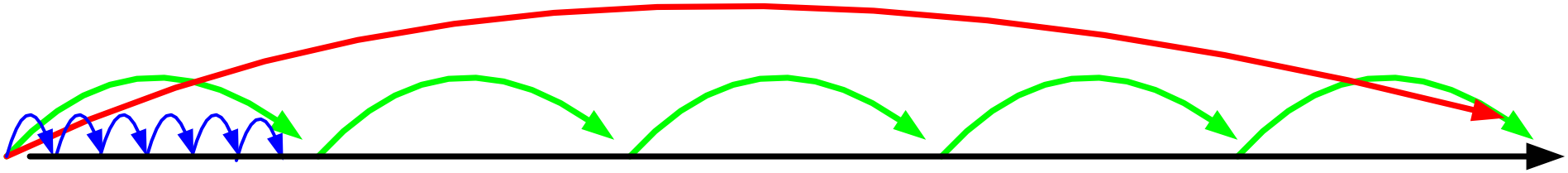
=> total excess return = 1.10%

PROBLEMS OF DECOMPOSING THE RETURN
OF ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS

- Stock picking effect can be measured by the interaction effect and is identical to the case for relative performance oriented portfolios
  => well performing stock pickers can be identified
- Asset allocation effect belongs 100% to the portfolio manager
  => missing benchmark weights prevent from measuring the value added by the asset allocation decisions
  => a well performing portfolio manager can not be identified in up-markets

=> evaluating the quality of a portfolio manager is not possible using the classical decomposition approach

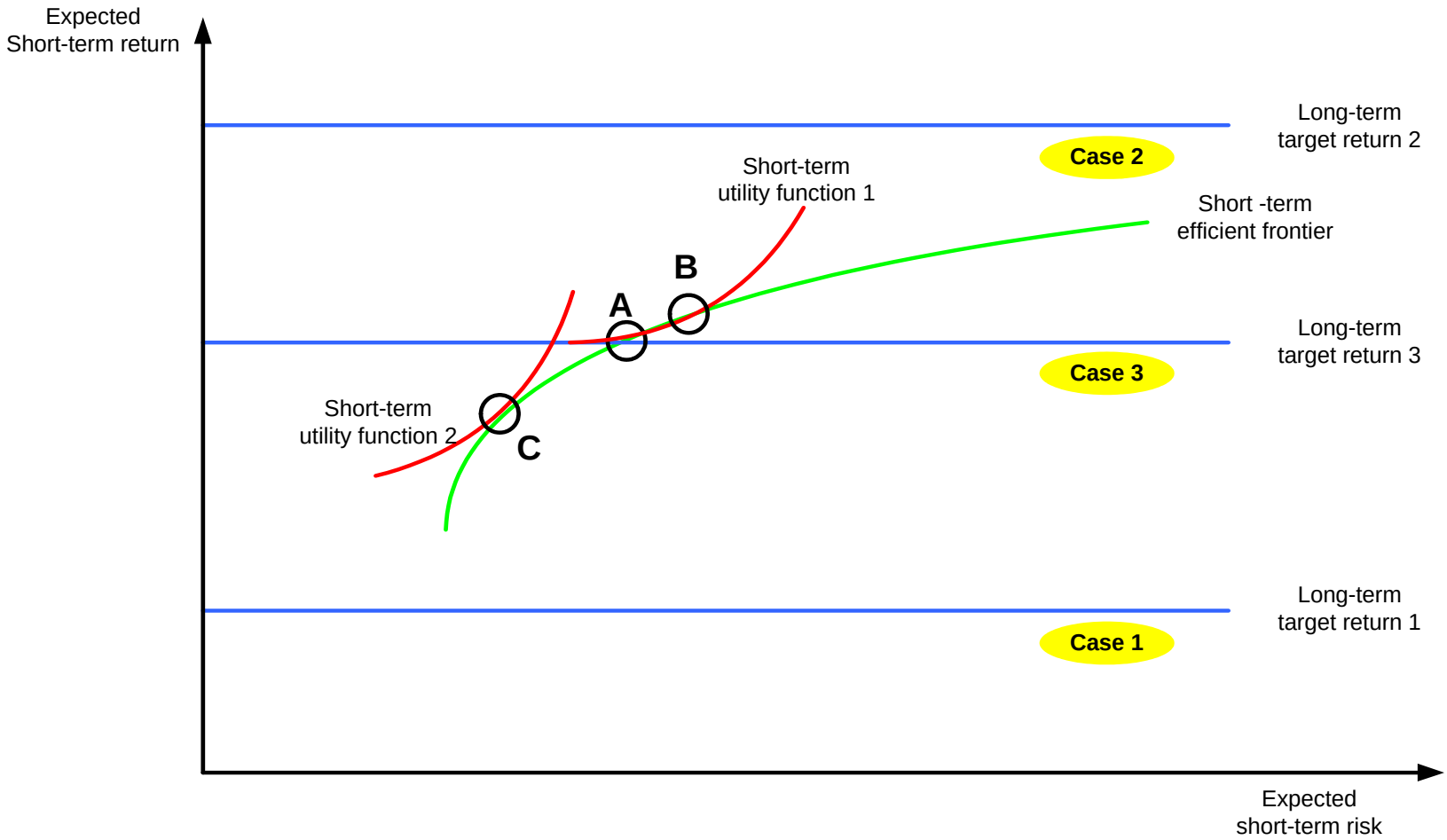
PROBLEMS OF USING A LONG-TERM TARGET RETURN AS A BENCHMARK FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (1/4)



=> inherent problem with the mismatch of the different investment horizons and investment targets:

- long-term => driven by liabilities
- short-term => driven by short-term expectations
- daily => driven by daily expectations

PROBLEMS OF USING A LONG-TERM TARGET RETURN AS A BENCHMARK FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (2/4)



PROBLEMS OF USING A LONG-TERM TARGET RETURN AS A BENCHMARK FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (3/4)

- A target return used as a benchmark is not necessarily linked to the long-term client's attitude towards risk as well as to the long-term client specific utility function
- A (long-term) target return which may be identical to the annual interest on the liabilities is not necessarily linked to client's (short-term) risk profile or risk appetite and the (short-term) market expectations with respect to returns and risk
- Setting an unrealistic (short-term) target return from an ex-ante perspective may not be very motivating for the portfolio manager and may lead to unintended (short-term) risk

=> continued

PROBLEMS OF USING A LONG-TERM TARGET RETURN AS A BENCHMARK FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (4/4)

- Using an unrealistic (short-term) target return to evaluate the quality of a portfolio manager on an ex-post basis may lead to misinterpretations and wrong appraisals and consequently to wrong feedback into the investment process

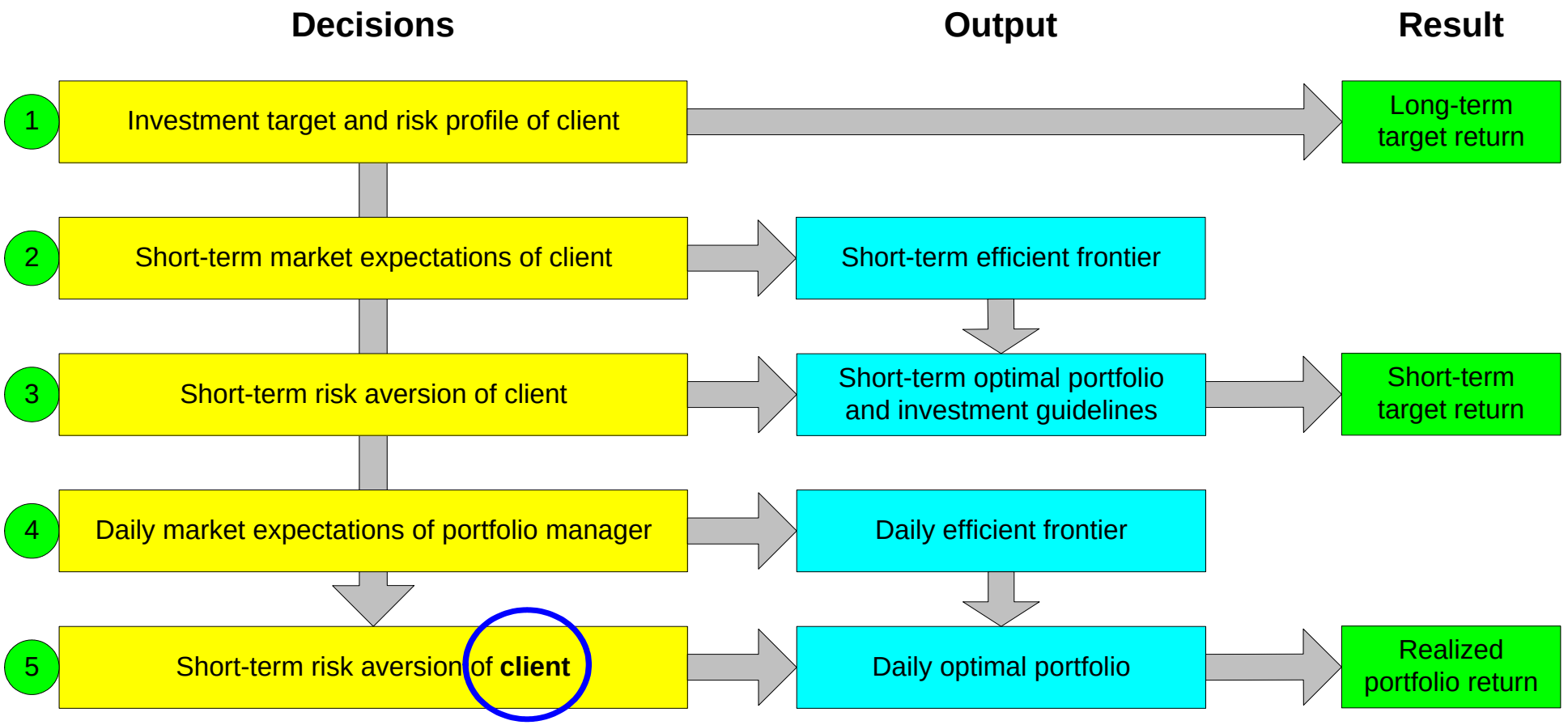
=> evaluating the quality of a portfolio manager is not possible using a (long-term) target return as a benchmark

SIMPLE APPROACH TO DECOMPOSE THE RETURN OF ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS

The decision oriented decomposition of the return allows to quantify the value added of the individual decision makers and is based on the following steps:

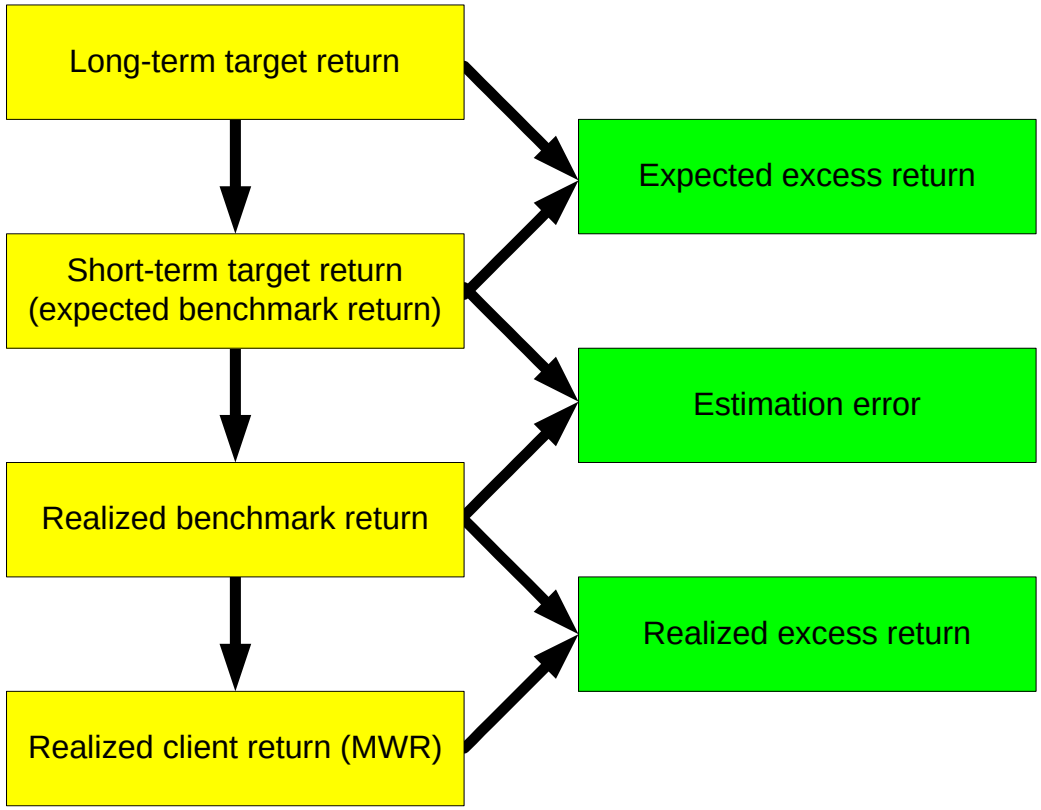
- **Step 1:** to mirror the specific investment decisions into (absolute) asset allocations
- **Step 2:** to calculate the corresponding returns
- **Step 3:** to assign the returns as well as the return differences to the investment decisions as well as to the relevant decision makers

DECISION ORIENTED RETURN DECOMPOSITION
FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (1/2)



DECISION ORIENTED RETURN DECOMPOSITION

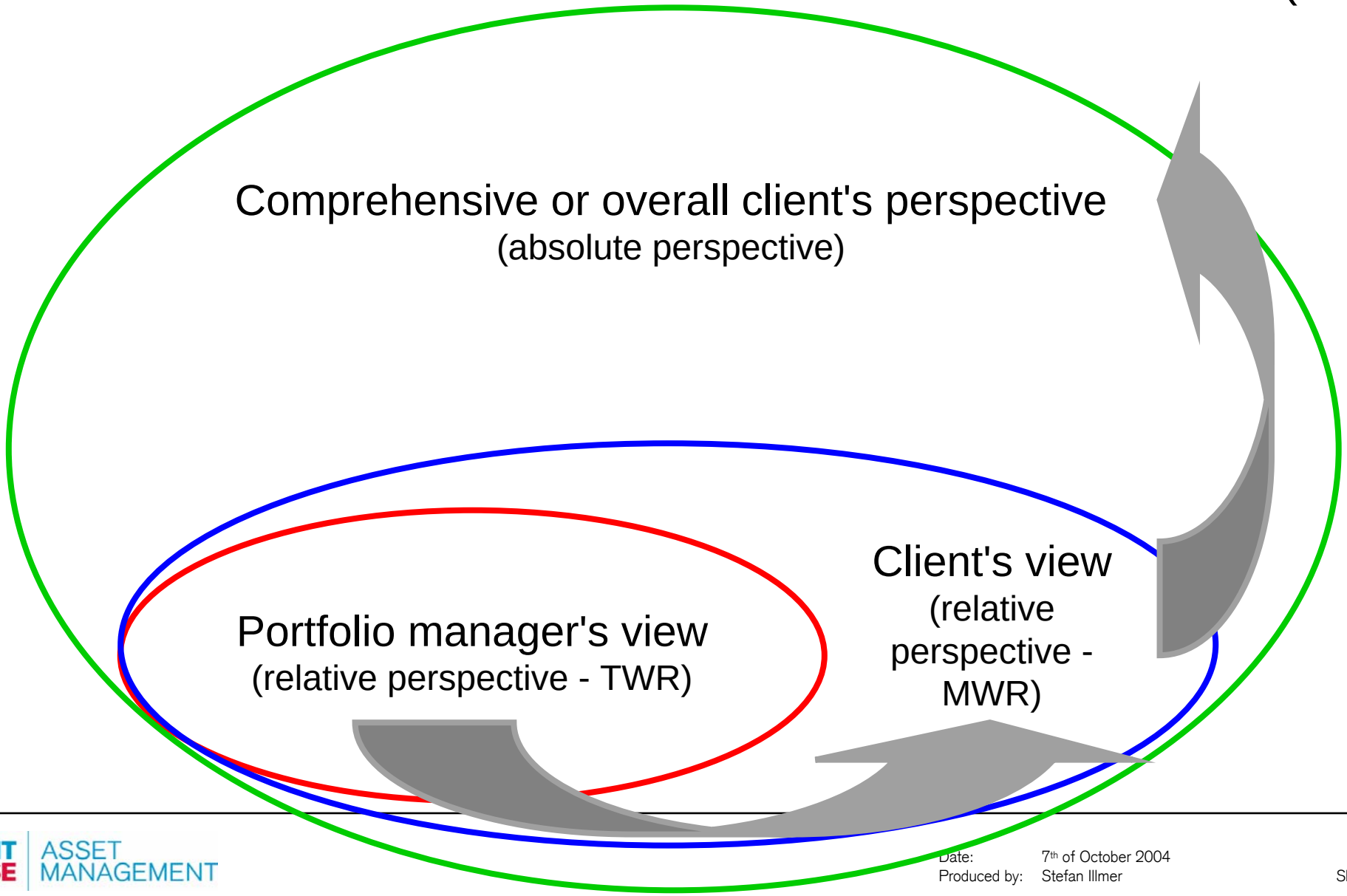
FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (2/2)



=> Re-integration of the benchmark concept by using the short-term optimal portfolio as a short-term benchmark with a high frequency of rebalancing and adjustments

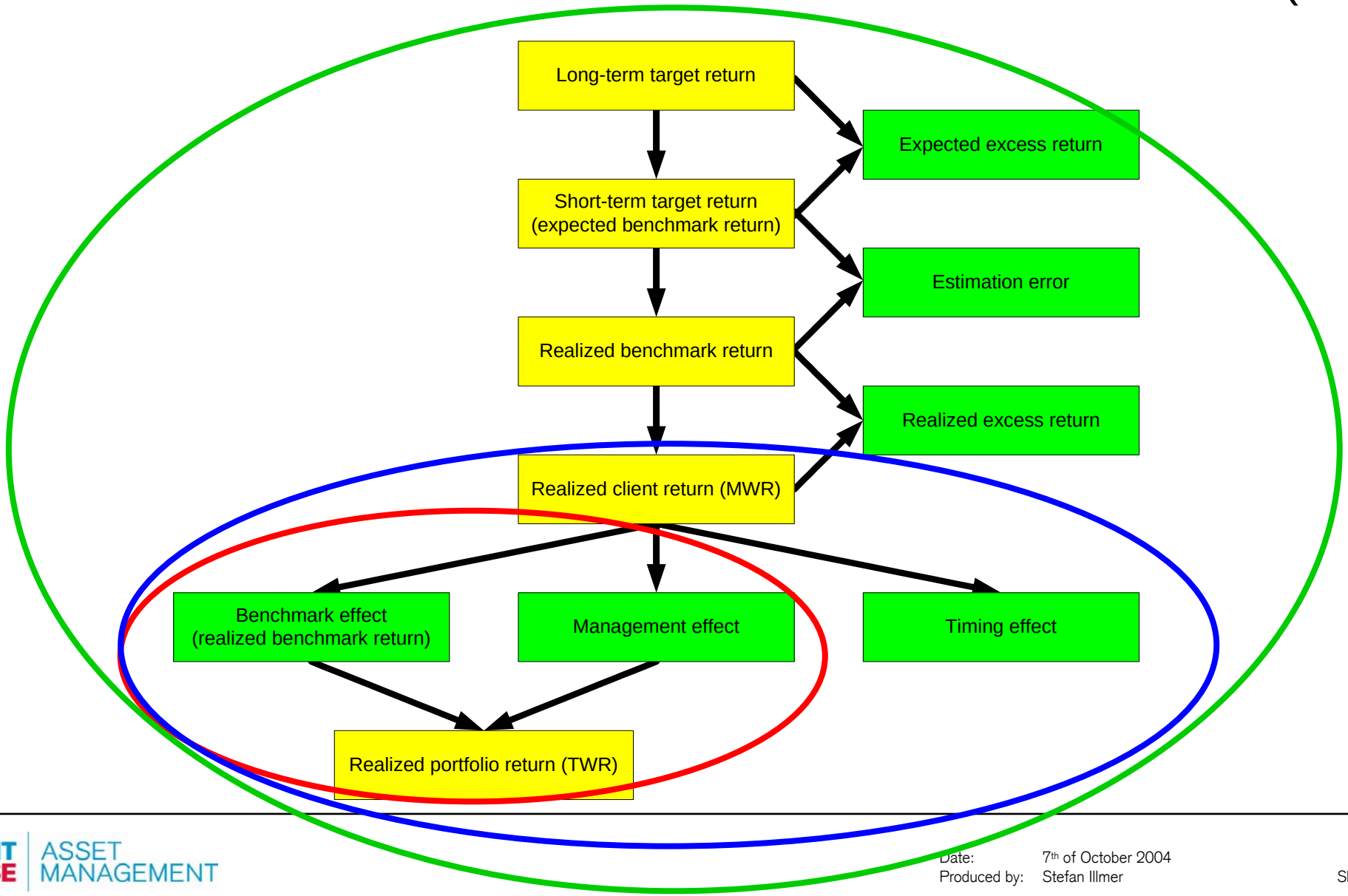
INTEGRATED RETURN DECOMPOSITION FRAMEWORK

FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (1/3)



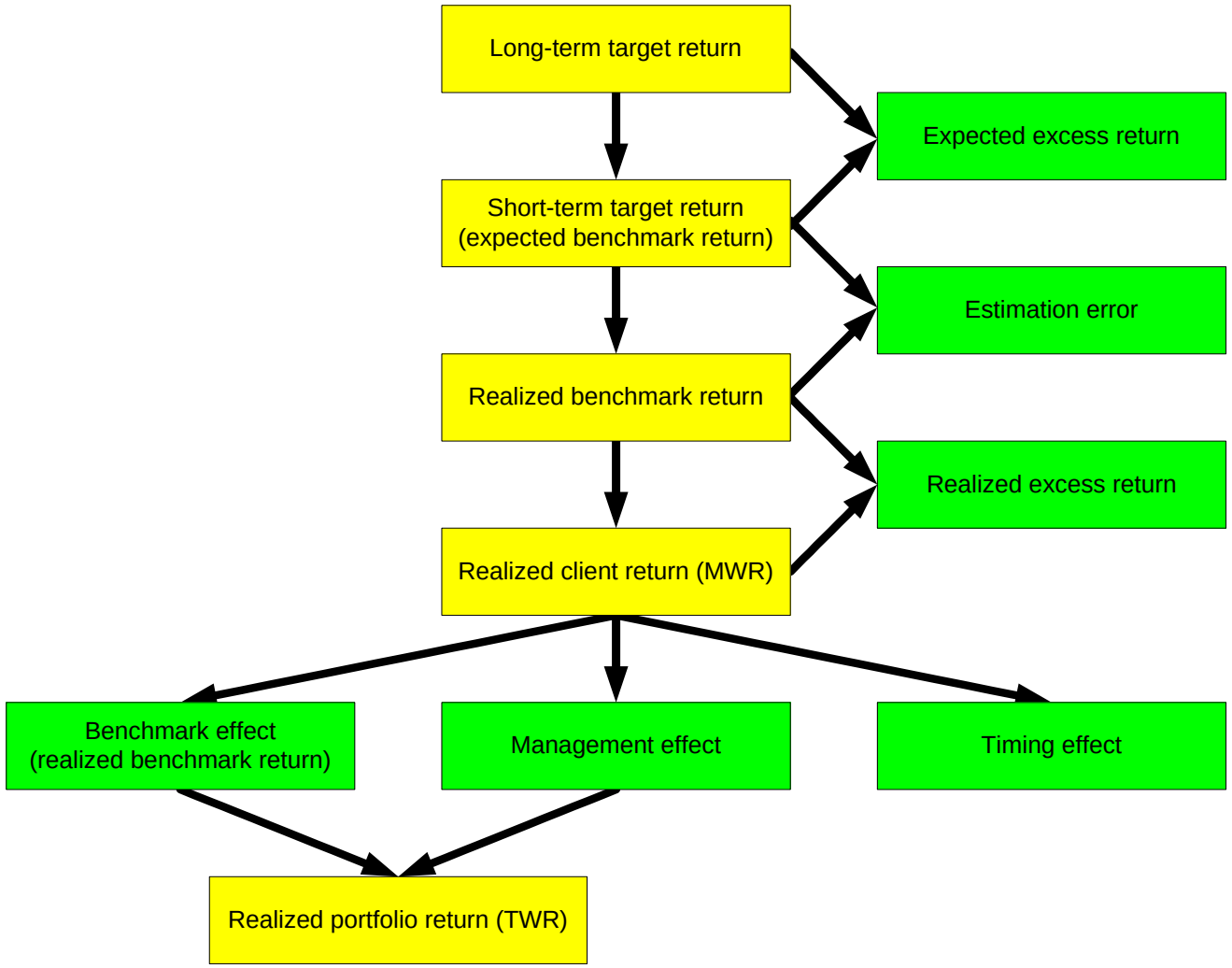
INTEGRATED RETURN DECOMPOSITION FRAMEWORK

FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (2/3)



INTEGRATED RETURN DECOMPOSITION FRAMEWORK

FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS (3/3)



DECISION ORIENTED RETURN DECOMPOSITION

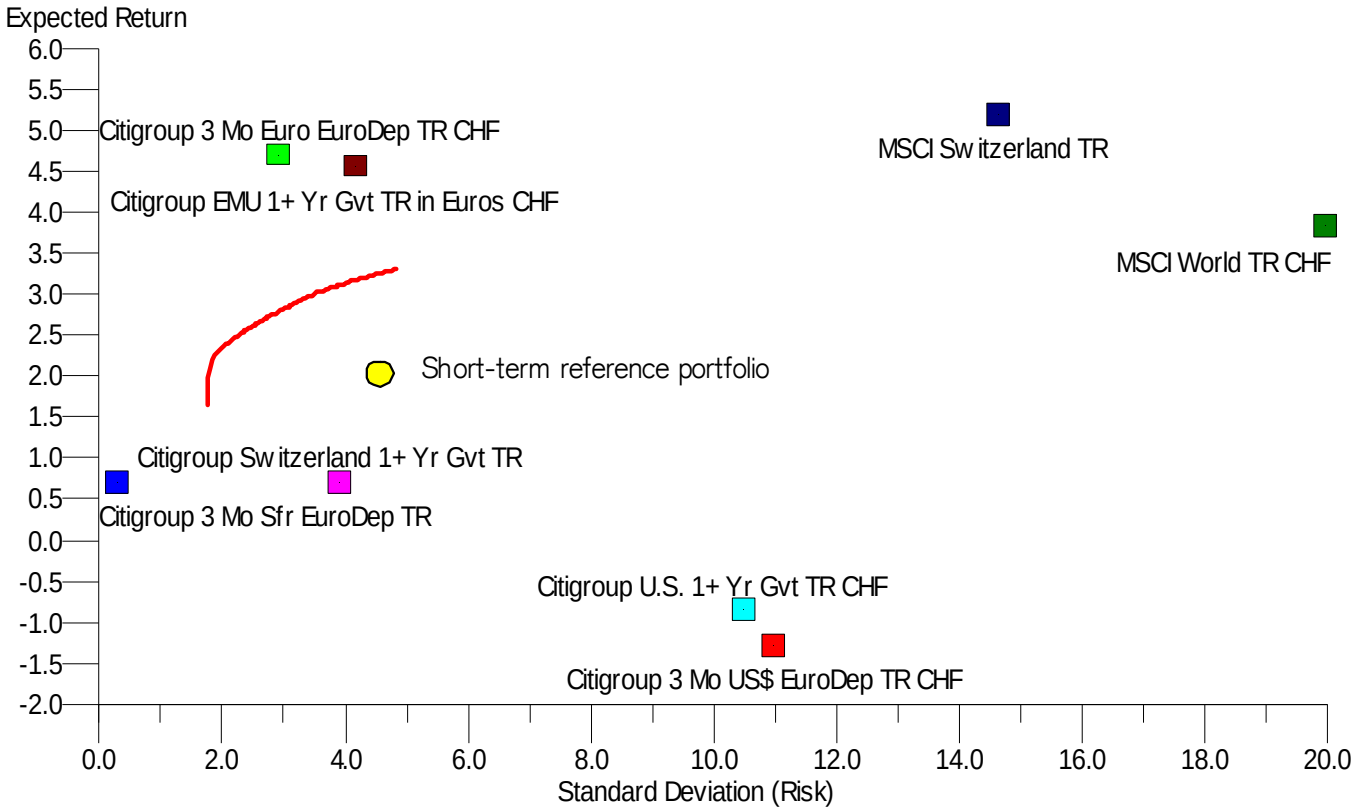
AN EXAMPLE (1/3)

Asset Class	Minimum	Maximum	12 months expected returns in CHF on 31.12.2002	12 months actual returns in CHF for 2003
Cash Total	**0.0**	**41.0**		
CHF	0.0	29.0	0.70%	0.32%
non CHF	0.0	14.5	Euro 4.70% and USD -1.30%	Euro 10.13% and USD -9.48%
Bonds Total	**35.0**	**70.5**		
CHF	35.0	70.5	0.70%	0.91%
non CHF	0.0	17.5	Euro 4.55% and USD -0.86%	Euro 11.79% and USD -8.53%
Equities Total	**0.0**	**47.0**		
CHF	0.0	23.5	5.20%	19.94%
non CHF	0.0	23.5	3.81%	19.77%

Remark: - expected currency return 2003 for CHF/EUR 1.6% and for CHF/USD -2.8%
- actual currency return 2003 for CHF/EUR 7.5% and for CHF/USD -10.5%

DECISION ORIENTED RETURN DECOMPOSITION

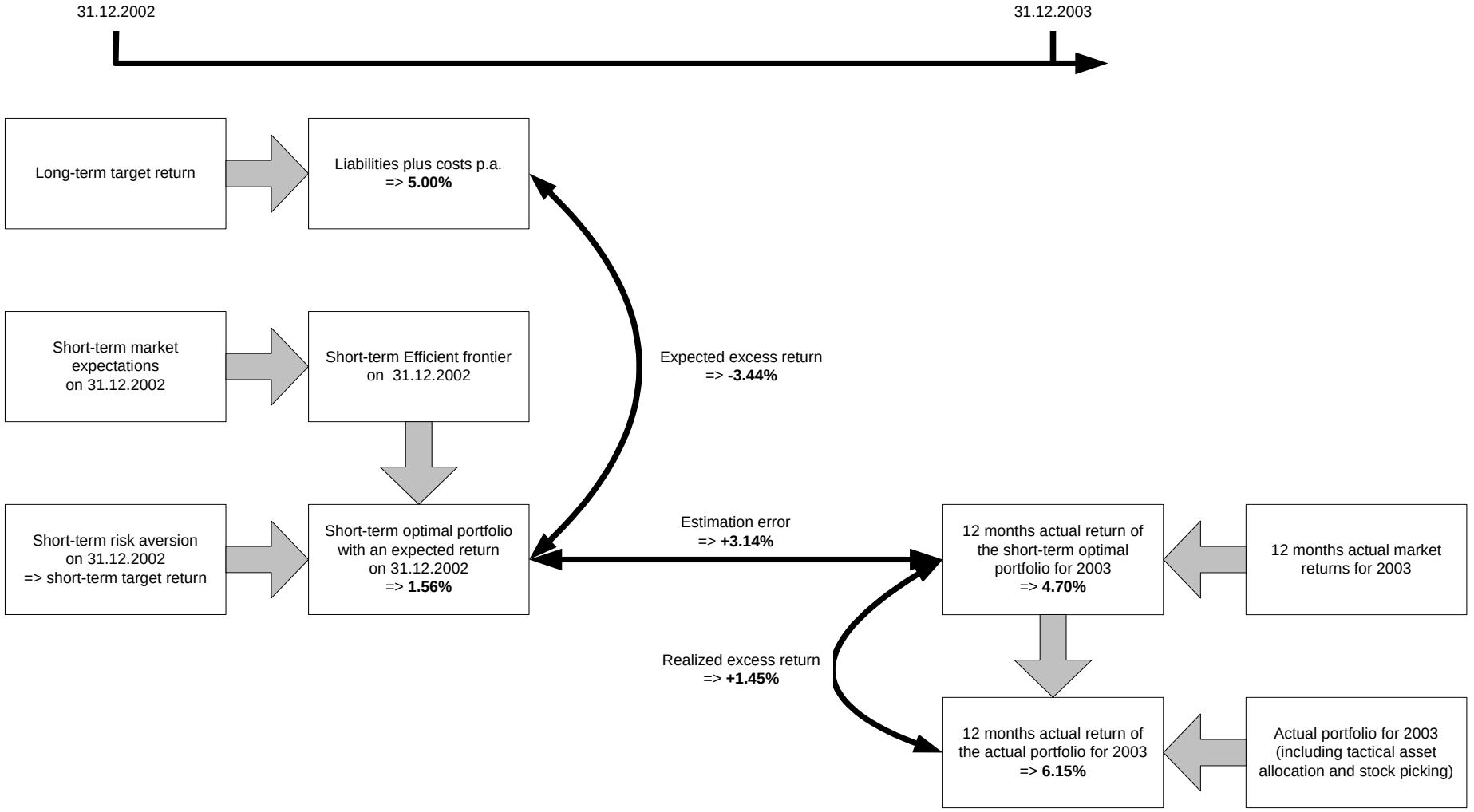
AN EXAMPLE (2/3)



Remark: - all returns are expected 12 months returns in CHF on 31.12.2002
- expected 12 months return for the reference portfolio is +1.56%

DECISION ORIENTED RETURN DECOMPOSITION

AN EXAMPLE (3/3)



CONCLUSIONS
FOR ABSOLUTE PERFORMANCE ORIENTED PORTFOLIOS

- Evaluating the quality of a portfolio manager using the classical decomposition approach and using a (long-term) target return as a benchmark are not sensible
- Client's market expectations with respect to returns as well as to risk have to be considered by the portfolio manager not only on a long-term but also on a short-term basis
- Decision oriented decomposition of the performance is crucial and helps the client to be protected against taking unintended risks
- Re-integration of the (short-term) benchmark concept allows to decompose the return of absolute performance oriented multi asset class portfolios

REFERENCES

- “Decision-Based Evaluation of the Performance of a Hierarchically Structured Investment Process”; in: Journal of Performance Measurement; Fall 2001; by Jeroen Geenen, Marc Heemskerk and Michiel Heerema
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