

# ISFA

## Analyst Performance

Objective and Methodology

2011



## ISFA

### What is ISFA?

#### **Information Standard for Analysts (ISFA Standard)**

ISFA is a standard that was developed in 2003 and offers a quantitative and objective methodology to calculate analyst performance. The standard is widely accepted among analyst organizations worldwide.

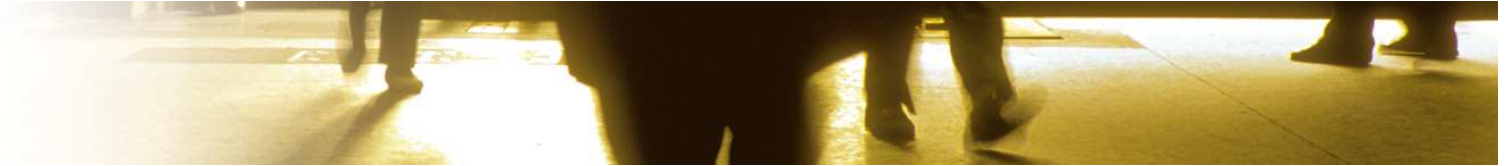
#### **Information System for Analysts**

ISFA is also the name of an application that allows calculations based on the ISFA Standard.

#### **ISFA**

Finally ISFA is a Swiss company that offers performance analysis for institutional clients.

**This document** explains the objective of the ISFA Standard and gives an idea of the methodology that is used to calculate the performance. The last section contains a few examples of reports based on these performance calculations.



## The ISFA Standard

**Developed by an independent committee of experts**

Prof. Rajna Gibson (Chair)

University of Zurich

Prof. Elroy Dimson

London Business School

Prof. Philippe Jorion

University of California at Irvine

plus representatives of banks, insurances, pension funds

Endorsed by the European Federation of Financial Analysts Societies („EFFAS“)



## Objectives of the ISFA Standard

ISFA has been developed to establish a **fair and transparent way of measurement** for analyst performance based on recommendations.

This implies

- Definition of parameters that match the analyst's mandate
- Measuring return **and** risk to obtain meaningful and comparable figures
- Complete performance attribution

### **Basic Idea**

Analyze the positive / negative value added by recommendations in the context of portfolio management



## Measuring analyst performance I

### Analyst's mandates can differ

There is no general way, how to interpret an analyst's recommendation, since the mandates of different research institutes may differ. Here are a few examples of issues that may influence the results of a performance analysis:

Suppose an analyst issues a buy recommendation on a stock.

–**Absolute/relative:** Does this recommendation mean that the title will show a positive absolute performance or does it mean that it will outperform its sector benchmark?

–**FX effects:** If the security is in a different currency than its benchmark does the recommendation include an expectation on the currency development, or is the buy signal independent of the base currency?

–**Weighting/rebalancing:** If the analyst has issued other recommendations before, how should we weight this stock within the analyst's portfolio, compared to the other titles? Should we rebalance the portfolio with every new recommendation, or on a regular basis?

These - and many more - are the questions we have to ask, before implementing a meaningful performance analysis.



## Measuring analyst performance II

### Robust and comparable results

ISFA aims to consider all the issues of different mandates and still provide comparable and robust results that give an objective idea of the performance of an analyst, a sector team or a complete research institute. Here are a few issues and the respective solutions:

#### Issue

#### Solution

Interpretation



Different benchmarks or Cash

Development over time



Aggregation logic

FX effects



Different FX handling

Weighting



Equally/capitally weighted, fixed weights, rebalancing options

Different recommendation scales



Information ratio

Different sectors/time periods imply different risks



Information ratio



## ISFA – Basic concept

The ISFA methodology assumes a passive portfolio (Benchmark) that is either fully invested in stocks or in cash.

By issuing a sell or buy recommendation, the analyst deviates from the passive strategy and takes an active position (short or long) in the respective security.

Considering all recommendations and the calculation parameters, the daily portfolio value is obtained, consisting of the active part (the investment based on the recommendations) and the passive part (invested in the passive strategy).

The difference between the portfolio value and the benchmark (stock index or cash) is referred to as the value added (VA). Based on the daily VA, the risk (i.e. the ex post tracking error (TE)) is derived and the quotient between VA and TE is called the information ratio (IR).

The IR is the risk adjusted performance and is comparable between different analysts, sectors and institutes.



## ISFA methodology – Active strategy I

Interpretation = Absolute (Cash)

Analyst issues “Strong Buy” on Title 1 ( $w_1=20\%$ )

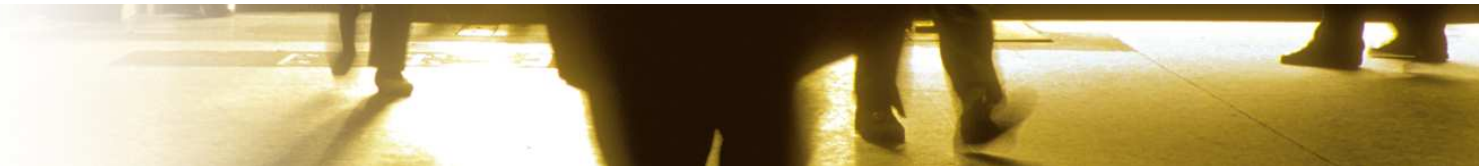
### Passive Strategy

Benchmark

	Stock Index	Cash	Total
Investment	0	100	100

### Active Strategy

	Title 1	Stock Index	Cash	Total
Investment	20	0	80	100



## ISFA methodology – Active strategy II

Interpretation = Relative

Analyst issues “Strong Buy” on Title 1 ( $w_1=20\%$ )

### Passive Strategy

Benchmark

	Stock Index	Cash	Total
Investment	100	0	100

### Active Strategy

	Title 1	Stock Index	Cash	Total
Investment	20	80	0	100



## ISFA methodology – daily Value Added I

Interpretation = Relative

Analyst issues “Strong Buy” on Title 1 (all titles equally-weighted;  $w_i=20\%$ ).  
The following returns are observed:

	Title 1	Benchmark
Return from t=0 to t=1	5%	10%

$$\Rightarrow R_1 = 20\% \cdot 5\% + 80\% \cdot 10\% = 9\%$$

$$\Rightarrow \text{daily VA (Value Added)} = 9\% - 10\% = -1\%$$



## ISFA methodology – daily Value Added II

Interpretation = Absolute (Cash)

Analyst issues “Strong Buy” on Title 1 (all titles equally-weighted;  $w_i=20\%$ ).  
The following returns are observed:

	Title 1	Cash
Return from t=0 to t=1	5%	3%

$$\Rightarrow R_1 = 20\% \cdot 5\% + 80\% \cdot 3\% = 3.4\%$$

$$\Rightarrow \text{daily VA (Value Added)} = 3.4\% - 3\% = 0.4\%$$

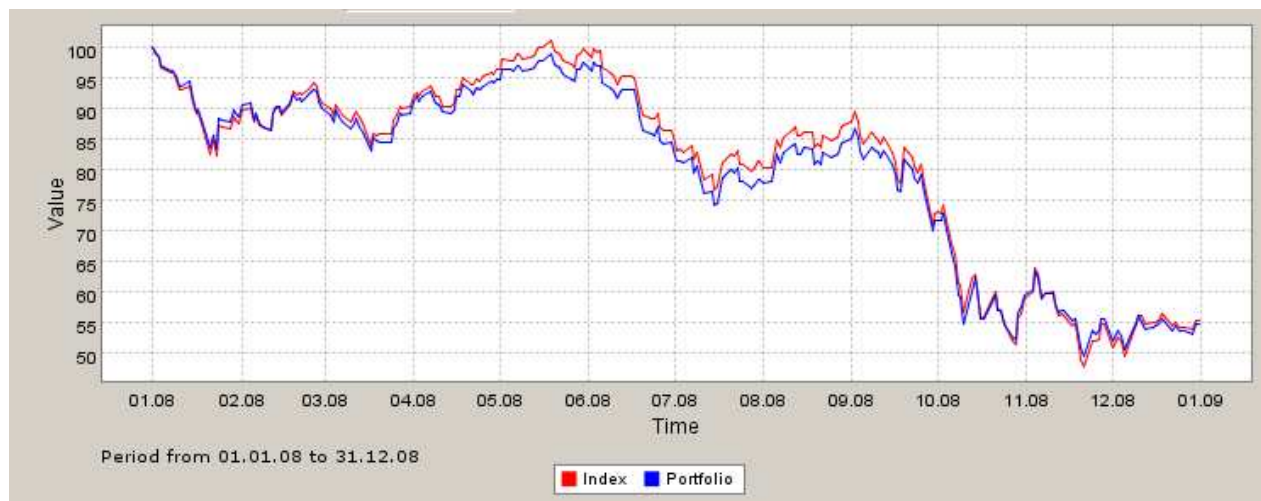


## VA of the portfolio

Based on the daily return, the portfolio value can be calculated. This is done by simply applying the daily return of the portfolio to the portfolio value of the previous day ( $PV_t =$  Portfolio value at  $t$ ):

$$PV_t = PV_{t-1} \cdot (1 + r_{pt})$$

Now we can compare the Index value and the portfolio value. The Active Return (Value added, VA) is the difference between the portfolio value and the index value.





## Adjusting for risk – Tracking Error and Information Ratio

### Tracking Error:

Equals the standard deviation of the difference between the returns of the benchmark and the analyst portfolio.

First, a daily standard deviation is calculated the common way. Then this daily standard deviation is transformed into a  $(t_f - t_i)$  standard deviation using the formula  $\hat{\sigma} = \sigma \cdot \sqrt{(t_f - t_i)}$ , so that it can be compared to the value added. (*i...initial, f...final*)

### Information Ratio:

Indicates how much alpha was gained compared to the risk taken. Defined as:

$$IR_{t_i, t_f} = \frac{VA_{t_i, t_f}}{TE_{t_i, t_f}}$$



## Calculation of the Tracking Error

Example:

Time Period	Benchmark	Portfolio	$r_{Bmk}$	$r_{Portfolio}$	Difference
0	100	100			
1	100	110	0.00%	9.53%	9.53%
2	105	115	4.88%	4.45%	-0.43%
3	110	105	4.65%	-9.10%	-13.75%
4	95	95	-14.66%	-10.01%	4.65%
5	90	95	-5.41%	0.00%	5.41%

$$\hat{\sigma} = \sigma \cdot \sqrt{(t_f - t_i)}$$

Daily TE	9.02%
Adjusted TE	20.16%



## The Information Ratio as risk-adjusted performance figure

### Issue 1: Comparing different recommendation scales

Each security comes with a certain maximum weight  $w$  by which it can be over/underweight in the analyst portfolio.

The level of over- resp. underweight depends on the level of the recommendation:

+ 100 % * $w$	Strong Buy
+ 50 % * $w$	Buy
- 50 % * $w$	Reduce
- 100 % * $w$	Sell

Strong Buy and Buy over the same period compared to the same benchmark give the same information ratio:

Value added of the Buy recommendation reduced by 50% - Standard deviation also reduced by 50%.



## The Information Ratio as risk-adjusted performance figure

### Issue 2: Comparing different risk scenarios

Indicates significance

Careful: It does not mean that the same recommendations, relatively interpreted against different benchmarks, give the same IR.



## ISFA Reporting

### Detailed and comprehensive reporting

The performance can be aggregated at different levels (e.g. Institute, Region Sector, Analyst). This allows a comprehensive view of the whole research department. A few examples are presented below and on the following pages:

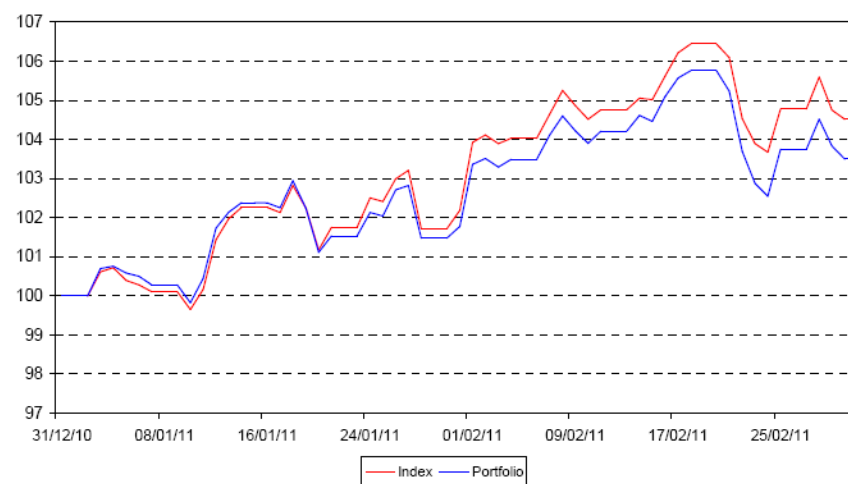
### Performance Summary Institute Performance

Start date: Saturday 01 January 2011  
End date: Monday 28 February 2011

Benchmark indices: MSCI

	Last Month Value Added	QTD Value Added	YTD Value Added
INSTITUTE	-0.64%	-1.07%	-1.07%
Region			
USA	-0.29%	-0.80%	-0.80%
EUROPE	-0.34%	-0.53%	-0.53%
ASIA	-1.06%	-0.97%	-0.97%
Sector			
Information Technology	0.44%	-0.02%	-0.02%
Utilities	-0.14%	-0.04%	-0.04%
Industrials	-0.41%	-1.86%	-1.86%
Consumer Staples	-0.58%	-0.90%	-0.90%
Telecommunication Serv	-0.58%	-0.06%	-0.06%
Consumer Discretionary	-0.88%	-1.72%	-1.72%
Energy	-0.91%	-1.71%	-1.71%
Health Care	-0.91%	-0.98%	-0.98%
Financials	-1.13%	-1.24%	-1.24%
Materials	-1.34%	-0.34%	-0.34%

INSITUTE





# ISFA Reporting

Example: Sector level:

## Sector Performance

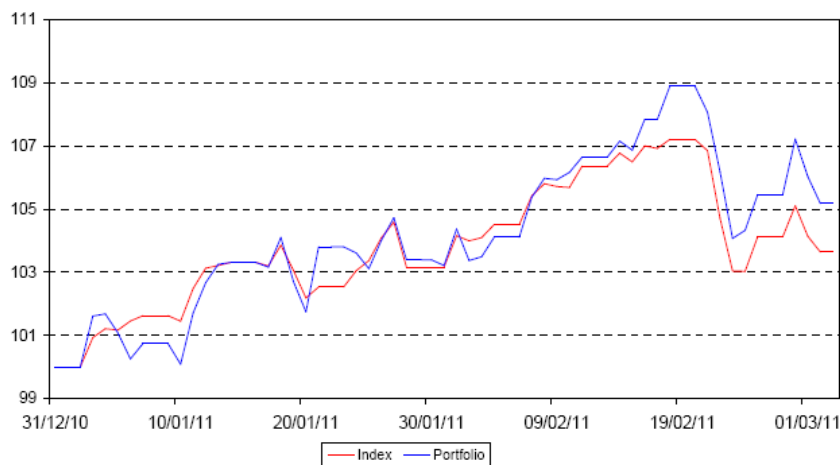
### Industrials

Benchmark: MSCI Daily TR World Gross INDUSTRIAL local

Start Date 01-Jan-11  
End Date 28-Feb-11

Summary	Last Month	Quarter to Date	Year to Date
Portfolio Value Added	2.00%	2.11%	2.11%
Tracking Error	1.61%	3.22%	3.22%
Information Ratio	1.242	0.655	0.655

Covered Universe	Last Month		Quarter to Date		Year to Date	
	Value Added	Excess Return	Value Added	Excess Return	Value Added	Excess Return
JOY GLOBAL	1.12%	9.82%	1.08%	9.36%	1.08%	9.36%
SCHNEIDER ELECTRIC	0.43%	3.37%	0.25%	1.98%	0.25%	1.98%
GENERAL ELECTRIC CO	0.39%	2.70%	1.26%	10.05%	1.26%	10.05%
SIEMENS	0.31%	2.34%	0.40%	3.21%	0.40%	3.21%
PHILIPS ELECTRS (KON.)	0.24%	2.01%	-0.25%	-1.96%	-0.25%	-1.96%
UNITED TECHNOLOGIES CORP	0.18%	1.39%	0.19%	1.55%	0.19%	1.55%
ALFA LAVAL	0.02%	0.15%	0.02%	0.15%	0.02%	0.15%
GRAINGER (WW)	-0.04%	-0.15%	-1.03%	-8.27%	-1.03%	-8.27%
DEUTSCHE POST	-0.35%	-2.68%	-0.06%	-0.51%	-0.06%	-0.51%
ABB LTD	-0.40%	-3.12%	0.09%	0.68%	0.09%	0.68%





# ISFA Reporting

Example:

## Analyst Performance

Analyst level

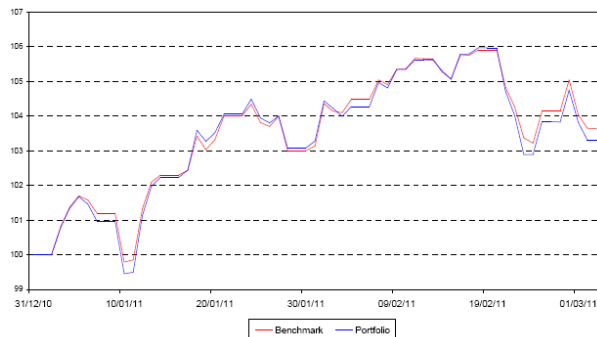
Benchmark: Analyst's own universe

**SAMPLE ANALYST**

Start Date: Saturday 01 January 2011  
End Date: Monday 28 February 2011

Summary	Value Added	TE	IR
One Month	-0.43%	0.23%	-1.880
Quarter to Date	-0.30%	0.32%	-0.946
YTD	-0.30%	0.32%	-0.946

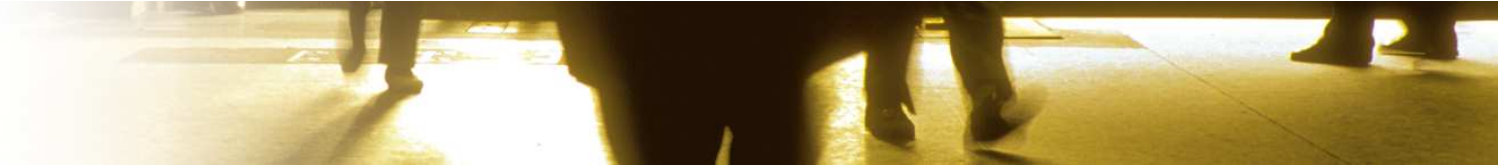
Active Recommendations	Value Added		
	1M	QTD	YTD
RWE STAMM	0.27%	0.20%	0.20%
SUEZ ENVIRONNEMENT	0.06%	-0.10%	-0.10%
AT&T	0.03%	-0.20%	-0.20%
DUKE ENERGY CORP	0.00%	0.08%	0.08%
GDF-SUEZ	-0.01%	0.13%	0.13%
FRANCE TELECOM	-0.04%	-0.07%	-0.07%
TELEFONICA	-0.05%	0.10%	0.10%
EDP RENOVAVEIS	-0.05%	-0.13%	-0.13%
VODAFONE GROUP	-0.07%	0.00%	0.00%
BELGACOM	-0.08%	-0.12%	-0.12%
IBERDROLA RENOVABLES	-0.10%	-0.07%	-0.07%
FREENET AG	-0.12%	0.02%	0.02%
E.ON	-0.13%	-0.04%	-0.04%
EDF	-0.15%	-0.10%	-0.10%



**Covered**

**Excess Return**

	1M	QTD	YTD
TELECOM ITALIA ORD	7.22%	11.98%	11.98%
DEUTSCHE BANK NAMEN	8.01%	14.08%	14.08%
CENTRICA	4.44%	-2.56%	-2.56%
DOMINION RESOURCES	2.95%	1.77%	1.77%
ENEL	2.78%	10.48%	10.48%
EDF ENERGIES NOUVELLES SA	2.55%	-0.79%	-0.79%
VEOLIA ENVIRONNEMENT	2.52%	3.92%	3.92%
SUEZ ENVIRONNEMENT	2.20%	-3.38%	-3.38%
BT GROUP	1.95%	-4.33%	-4.33%
NEXTERA ENERGY	1.91%	1.65%	1.65%
VERIZON COMMUNICATIONS	1.80%	-0.47%	-0.47%
BELGACOM	1.67%	3.07%	3.07%
UNITED INTERNET	1.65%	-1.96%	-1.96%
NATIONAL GRID	1.47%	-1.87%	-1.87%
AT&T	1.28%	-7.02%	-7.02%
GAS NATURAL SDG	0.76%	6.50%	6.50%
SOUTHERN CO	0.68%	-4.15%	-4.15%
DUKE ENERGY CORP	0.15%	-2.85%	-2.85%
GDF-SUEZ	-0.48%	4.38%	4.38%
IBERDROLA	-0.84%	4.75%	4.75%
TELIASONERA	-1.18%	-4.81%	-4.81%
FRANCE TELECOM	-1.41%	-2.28%	-2.28%
EDF	-1.54%	0.17%	0.17%
TELEFONICA	-1.58%	3.51%	3.51%
EDP RENOVAVEIS	-1.58%	-4.72%	-4.72%
DEUTSCHE TELEKOM	-1.80%	-4.16%	-4.16%
FORTUM CORP	-2.04%	-5.42%	-5.42%
EXELON CORP	-2.38%	-3.50%	-3.50%
VODAFONE GROUP	-2.47%	0.02%	0.02%
IBERDROLA RENOVABLES	-3.22%	-2.55%	-2.55%
SWISSCOM	-3.40%	-5.30%	-5.30%
FREENET AG	-4.12%	0.74%	0.74%
E.ON	-4.24%	-1.36%	-1.36%
SPRINT NEXTEL CORP	-5.18%	-1.74%	-1.74%
RWE STAMM	-8.94%	-7.04%	-7.04%



## Contact

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