

## Overview

We provide a performance and attribution system delivered through the cloud, hosted on Microsoft's Azure platform. We use a holdings and transaction based approach to provide daily returns. These form the core of our equity, multi-asset and fixed income attribution models. Here we describe the different parts of the system and show its output:

## Web Reporting

Interactive at the desk web reporting gives portfolio managers and the client team the information they need to be able to tell their story to the client. It enables a fast feedback of what is working in portfolios by providing fund comparisons and detailed reporting. However, it is presented in an accessible way that only provides the data as needed to avoid overwhelming the user. We have found that more detail available, more widely quickly leads to improvements in data quality across the organisation as more people focus on it. It also empowers portfolio management teams to ask questions of each other and to discuss strategy more widely, raising investment performance across the board.

## Performance

Using holdings and transactions allows us to check the consistency of the data. After quality checks our performance calculation is capable of handling any type of asset including derivatives such as CDS or options. We provide two output screens specifically to review portfolio performance: the first shows performance through time in limited detail. The other shows contributions to return over a period down to security level. This second screen provides a lot of aggregated detail to allow the user to dig in to understand exactly what happened to the portfolio by security.

Generally we use a traditional sector approach to group assets, however, we also offer [strategy tagging](#) at a transaction level to allow portfolios managers to group the stocks exactly as they manage them.

Intuitive models and a focus on the quality of the results make the system easy to use and a trusted information source.

## Performance Analysts' Interface

The analysts' interface allows the user to add and manage portfolios and benchmarks; linking the two through time. Sector schemas can also be defined from the underlying portfolio and benchmark descriptive data using an intuitive drag-and-drop approach. Data quality checks are provided to compare holdings and transactions so that the performance team can quickly home in on data problems, correcting them immediately or providing the corrective information to operations.

03-Apr-2012 To 30-Apr-2012 Refresh

Summary Details

#	Fund Name	Benchmark	Structure	Begin Dt.	End Dt.	Client Ccy	Model	Holding	Benchmark	Performance
1	West Lake Short Duration Bond Fund	GLDD	GLS	03-Apr-12	28-Feb-11	XDR	Fixed Income	●	●	●
2	Snowy Mountain Balanced Portfolio	AUSP	EQFI	03-Apr-12	30-Apr-12	AUD	Multi Asset	●	●	●
3	Snowy Mountain Equity Portfolio	SPAX300	SPAX	03-Apr-12	30-Apr-12					
4	Toggenburger Bank Balanced Fund	USD3MLibor	GLS	03-Apr-12	30-Apr-12					
5	Bastler Handelsbank Balanced Fund	USD3MLibor	GLS	03-Apr-12	30-Apr-12					

Consistency Check Performance Attribution Submit

00864700-Balanced - (USD3MLibor) - (GLS) Refresh

Return Date	Prev. Hold	Holdings	Performance	Benchmark	Consistency	Cash Rates	Missing Cal
02-Apr-2012	●	●	●	●	●	●	●
03-Apr-2012	●	●	●	●	●	●	AUD,CAD,C
04-Apr-2012	●	●	●	●	●	●	AUD,CAD,C
05-Apr-2012	●	●	●	●	●	●	AUD,CAD,C

## Performance

Absolute performance contributions are shown using predefined grouping structures. Interactivity allows the user to see down to security level where we provide detail on holdings and transactions over the user defined period.

TOGGENBURGER BANK BALANCED FUND  
Performance Only - No benchmark / / USD

Portfolio Total Return 1 May 2012 - 31 May 2012 Show

Classification: [Model] • Currency • Country • Subordination • Rating • Duration

Column View: [Client] • Local • Custom

Category	Ccy	Total P&L (client)	Base MV (local)	Base MV (client)	Weight	Weight (expos)	Total Return (local)	Total Return (fx)	Total Return (client)	CTR (local)	CTR (fx)	CTR (client)																																																																																
Total Attribution		-5,671,882	6,345,185,695	271,116,375	100.00	100.00	-2.53	0.43	-2.10	-2.53	0.43	-2.10																																																																																
US Treasury		1,346	5,896,035	5,896,035	2.22	2.22	0.02	0.00	0.02	0.00	0.00	0.00																																																																																
Government Bond		-20,495	2,066,491	2,735,107	0.27	0.27	3.14	-5.91	-2.77	0.01	-0.02	-0.01																																																																																
FR0011196856	EUR	-20,495	2,066,491	2,735,107	0.27	0.27	0.95	-1.83	-0.88	0.01	-0.02	-0.01																																																																																
<p>FRANCE (GOVT OF) 3.00000 25 Apr 2022 Aaa/AA+</p> <p>ISIN: FR0011196856 / Ticker: / Coupon: - / Maturity: -</p> <p>Local Values (EUR)</p> <table border="1"> <tr> <td>Begin Par:</td> <td>2,060,000</td> <td>End Par:</td> <td>0</td> <td>Txn MV:</td> <td>2,081,096</td> <td>Price P&amp;L:</td> <td>21,806</td> </tr> <tr> <td>Begin MV:</td> <td>2,065,644</td> <td>End MV:</td> <td>0</td> <td>Txn AI:</td> <td>3,020</td> <td>AI P&amp;L:</td> <td>2,173</td> </tr> <tr> <td>Begin AI:</td> <td>847</td> <td>End AI:</td> <td>0</td> <td>Txn MV Non-Cash:</td> <td>0</td> <td>Trade P&amp;L:</td> <td>-6,354</td> </tr> <tr> <td>Begin R/P:</td> <td>0</td> <td>End R/P:</td> <td>0</td> <td>Txn AI Non-Cash:</td> <td>0</td> <td>Fee P&amp;L:</td> <td>0</td> </tr> <tr> <td>Begin Price:</td> <td>100.27</td> <td>End Price:</td> <td>0.00</td> <td>Txn Fees:</td> <td>0</td> <td>Base MV:</td> <td>2,066,491</td> </tr> </table> <p>Client Values (USD)</p> <table border="1"> <tr> <td>Begin Par:</td> <td>0</td> <td>End Par:</td> <td>0</td> <td>Txn MV:</td> <td>0</td> <td>Begin MV:</td> <td>0</td> </tr> <tr> <td>Begin MV:</td> <td>2,735,107</td> <td>End MV:</td> <td>0</td> <td>Txn AI:</td> <td>0</td> <td>End MV:</td> <td>0</td> </tr> <tr> <td>Begin AI:</td> <td>0</td> <td>End AI:</td> <td>0</td> <td>Txn MV Non-Cash:</td> <td>0</td> <td>:</td> <td>0</td> </tr> <tr> <td>Begin R/P:</td> <td>0</td> <td>End R/P:</td> <td>0</td> <td>Txn AI Non-Cash:</td> <td>0</td> <td>Total P&amp;L:</td> <td>-20,495</td> </tr> <tr> <td>Begin Price:</td> <td>0</td> <td>End Price:</td> <td>0</td> <td>Txn Fees:</td> <td>0</td> <td>Base MV:</td> <td>2,735,107</td> </tr> </table>													Begin Par:	2,060,000	End Par:	0	Txn MV:	2,081,096	Price P&L:	21,806	Begin MV:	2,065,644	End MV:	0	Txn AI:	3,020	AI P&L:	2,173	Begin AI:	847	End AI:	0	Txn MV Non-Cash:	0	Trade P&L:	-6,354	Begin R/P:	0	End R/P:	0	Txn AI Non-Cash:	0	Fee P&L:	0	Begin Price:	100.27	End Price:	0.00	Txn Fees:	0	Base MV:	2,066,491	Begin Par:	0	End Par:	0	Txn MV:	0	Begin MV:	0	Begin MV:	2,735,107	End MV:	0	Txn AI:	0	End MV:	0	Begin AI:	0	End AI:	0	Txn MV Non-Cash:	0	:	0	Begin R/P:	0	End R/P:	0	Txn AI Non-Cash:	0	Total P&L:	-20,495	Begin Price:	0	End Price:	0	Txn Fees:	0	Base MV:	2,735,107
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Agency		48,980	145,234,136	1,818,951	0.69	0.69	0.83	1.82	2.64	0.01	0.01	0.02																																																																																
Corporate Bond		-2,143,330	202,063,778	222,287,043	66.80	66.80	0.64	-1.84	-1.20	0.43	-1.23	-0.80																																																																																
Credit Default Swap		-2,510,177	431,236	557,063	-0.47	-0.47	191.25	8.08	199.34	-0.89	-0.04	-0.93																																																																																



## Equity / Multi-Asset

Our equity / multi-asset model uses a traditional Brinson approach to provide attribution to sectors designed by the user. Sectors themselves are simple to build using a drag and drop process and can be as simple or complex as you require.

Currency is allocated for equities and fixed income using the Karnosky-Singer approach, grouping cash management with FX and splitting FX into an invested portion and a forward FX overlay.

## Fixed Income

Our fixed income model is based on returns rather than yield changes. At the performance calculation stage we split the return into price and interest accrual elements. This change significantly simplifies the data gathering process and derivative handling. However, the model still provides a by market split of duration along the curve and a sector breakdown (using the same sector creation process outlined above). This approach no longer requires a beginning and end of period yield for each security. We do, however, still require a duration and spread duration, although these can be provided periodically rather than daily since as long as the security and curve data are consistent.

Our fixed income model cuts down on the data requirements, speeding up implementation.

## Derivatives

Derivatives are handled without fuss. For fixed income the only extra data that we require is a duration and spread duration, these are also required for derivatives. We handle credit derivatives with other credit assets so that you see the results side-by-side. Other derivatives are similarly treated with their invested equivalents to give clear exposures and performance contributions.

## Contact Us

We'd be very happy to hear from you if you have any questions about our system or simply want to discuss something with us:

Website: [www.cloudattribution.com](http://www.cloudattribution.com)

E-mail: [info@cloudattribution.com](mailto:info@cloudattribution.com)

## History Screen

Daily or monthly data can be viewed over time. We provide the individual periods and also aggregates for longer periods over 1 year. This quickly highlights trends over time, indicating strengths or problems in the process.

History / Client (Equity Model)

official client local

monthly daily Management • Sector • [Client] • Periods: 12

Description	31 Jan	30 Jan	27 Jan	26 Jan	25 Jan	24 Jan	23 Jan	20 Jan	19 Jan	18 Jan	17 Jan	16 Jan	Period
Portfolio	-32	-46	35	0	102	-2	-9	93	1	13	161	-103	211
Benchmark	-22	-36	41	0	110	-2	-35	58	-6	5	165	-115	161
Active	-10	-10	-6	0	-8	0	26	34	7	7	-4	11	50
Equity Management	-10	-10	-6	0	-8	0	24	35	7	8	-2	10	50
Financials	0	-6	-2	0	0	-3	5	5	-1	-2	7	11	15
Industrials	-3	0	-5	0	-3	11	13	8	-5	10	0	0	27
Materials	1	-4	-8	0	-2	-4	1	12	3	-3	-8	5	-4
Equity Allocation	2	-1	-5	0	3	1	1	-1	-4	-5	-2	3	-10
Equity Selection	-1	-3	-3	0	-5	-5	1	13	8	3	-5	3	5
Consumer Discretionary	-2	-3	2	0	-3	3	3	4	-2	1	-4	-3	-4
Consumer Staples	-4	1	3	0	2	2	0	4	4	1	2	-1	14

## Detail Screen

The interactivity on this screen aims to allow the user to quickly identify what has happened in the portfolio. We provide contributions to active return and weights or duration contributions so that the whole story can be told. Initially displayed with the sectors used for the attribution, the data can also be regrouped to show duration buckets, sectors, countries or currencies. The lowest level security data once again provides full information on the period, showing all data used to calculate the attribution.

funds summary details history returns

WEST LAKE SHORT DURATION BOND FUND  
U.K. Gilts, 1-3 Yrs / GLS / XDR

Performance Attribution - Details (Fixed Income Model)  
/ From 1-Mar-2011 until 31-Mar-2011 /

Classification: Model Schema Periods: 1  
Column View: Model • Client • Local • Custom

Category	WDD	Active Duration	Market Allocation	Curve Position	Total Duration	Sector Allocation	Sector Selection	Total Sector	Yield	Other Local	Base Cash	FX Invested	FX Overlay	Total Cash/PX	Total Active
Total Attribution	0.24	-3	6	5	8	-1	0	23	22	-23	-21	-1	218	0	217
EUR	0.55	-8	-4	1	-11	-2	-1	15	11	8	-19	3	73	0	75
Government	0.49	-7	-4	1	-10	-2	-1	12	10	7	-16	2	62	0	64
Austria	0.03	0	0	0	-1	0	0	1	1	0	-1	0	2	0	2
Portfolio-Benchmark	0.03	0	0	0	-1	0	0	1	1	0	-1	0	2	0	2
RAGB	0.03	0	0	0	-1	0	0	1	1	0	-1	0	2	0	2
>REPUBLIC OF AUSTRI	0.03	0	0	0	-1	0	0	1	1	0	-1	0	2	0	2

**REPUBLIC OF AUSTRIA**  
AT0000384748 / AAA / Senior / EUR / EUR Government Austria Portfolio-Benchmark RAGB

Portfolio / Benchmark Weights

P Weight %	B Weight %	WDD	WSDD	Market P/B %	Sector P/B %
1.04	0.00	0.0278	0.0278	37.36/0.00	1.04/0.00