



FUNDS-AXIS

FUNDWARE INDEX RULES
FUND-AXIS PROCEDURE

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1. Introduction

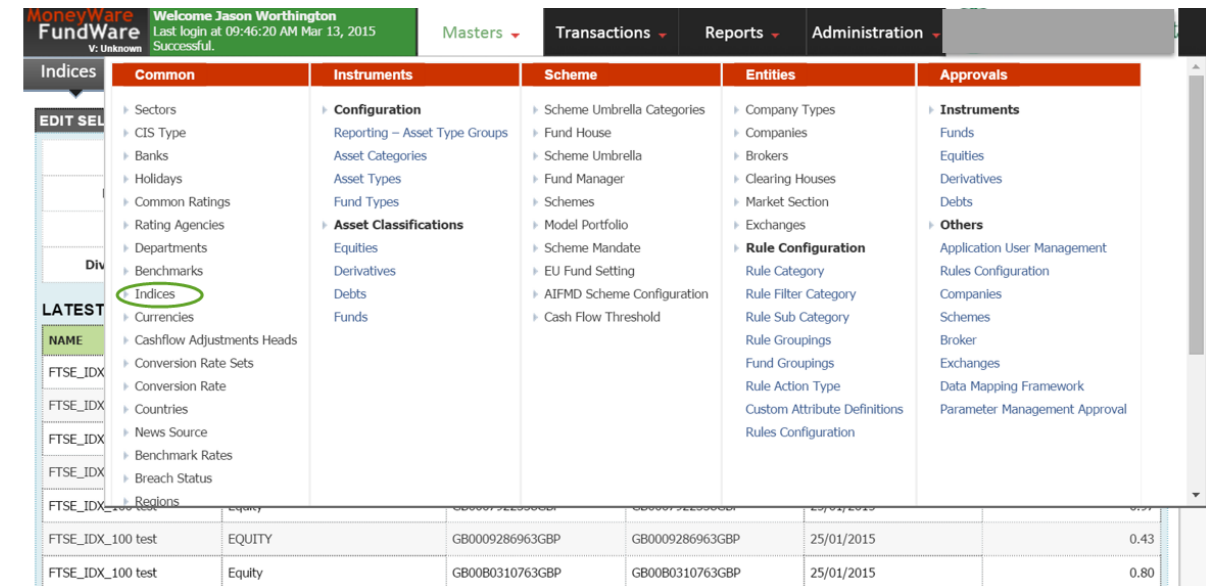
There are a number of Index Rules available including:

- Identify if stock is in fund but not in Index
- Identify if stock is in index but not in Fund
- Compare instrument weighting in fund to weighting in Index – percentage difference – $((a\% - b\%)/a\%)$
- Compare instrument weighting in fund to weighting in Index – absolute percentage difference – $((a\% - b\%))$ - **outstanding**

2. System Set-up

The following steps should be followed

2.1 Set up in the Index in the Index Master



| Common | Instruments | Scheme | Entities | Approvals | |
|--|---|---|---|--|------|
| <ul style="list-style-type: none"> Sectors CIS Type Banks Holidays Common Ratings Rating Agencies Departments Benchmarks Indices Currencies Cashflow Adjustments Heads Conversion Rate Sets Conversion Rate Countries News Source Benchmark Rates Breach Status Regions | <ul style="list-style-type: none"> Configuration <ul style="list-style-type: none"> Reporting – Asset Type Groups Asset Categories Asset Types Fund Types Asset Classifications <ul style="list-style-type: none"> Equities Derivatives Debts Funds | <ul style="list-style-type: none"> Scheme Umbrella Categories Fund House Scheme Umbrella Fund Manager Schemes Model Portfolio Scheme Mandate EU Fund Setting AIFMD Scheme Configuration Cash Flow Threshold | <ul style="list-style-type: none"> Company Types Companies Brokers Clearing Houses Market Section Exchanges Rule Configuration <ul style="list-style-type: none"> Rule Category Rule Filter Category Rule Sub Category Rule Groupings Fund Groupings Rule Action Type Custom Attribute Definitions Rules Configuration | <ul style="list-style-type: none"> Instruments <ul style="list-style-type: none"> Funds Equities Derivatives Debts Others <ul style="list-style-type: none"> Application User Management Rules Configuration Companies Schemes Broker Exchanges Data Mapping Framework Parameter Management Approval | |
| FTSE_IDX_100 test | EQUITY | GB0009286963GBP | GB0009286963GBP | 25/01/2015 | 0.43 |
| FTSE_IDX_100 test | Equity | GB00B0310763GBP | GB00B0310763GBP | 25/01/2015 | 0.80 |


MoneyWare FundWare Welcome Jason Worthington Last login at 09:46:20 AM Mar 13, 2015 Successful. V: Unknown

Masters Transactions Reports Administration

Indices Tuesday, March 24, 2015 [All] [All] [All] Active

LIST OF INDICES

SEARCH [All] [All] [All] Active

| NAME | SHORT NAME | EXCHANGE | DIVERSIFIED | COMPONENT TYPE | ACTIVE |
|-------------------|------------|-------------|-------------|----------------|--|
| FTSE_IDX_100 test | FTSE100 | London XLON | Yes | UCITS Eligible |  Edit |

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2.2 Map in Index Data.

Note: Index constituents must also be set up already as securities in FundWare

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Data Mapping Framework Tuesday, March 24, 2015 [All] [All] [All] Active

EDIT FILE TYPE * Mandatory Fields
[Copy this record](#)

| | | | |
|---------------------------|--|--------------------------|--|
| File Type Name * | Sector | File Type Display Name * | Index Security Upload |
| Migration Table * | Indexes | Account Type * | <input type="radio"/> In <input type="radio"/> Out <input checked="" type="radio"/> NA |
| Skip File On Error Type * | <input checked="" type="radio"/> Skip only invalid rows <input type="radio"/> Skip entire file | Header Row Number * | 1 |
| Sequence * | 1 | Active | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Maker Comment * | | | |

| FILE TYPE COLUMN NAME | FILE TYPE COLUMN DISPLAY NAME | MIGRATION TABLE COLUMN DISPLAY NAME | MIGRATION TABLE COLUMN NAME | DEFAULT VALUE | DELETE | EDIT ALL |
|-----------------------|-------------------------------|-------------------------------------|---|---------------|--------|----------|
| Index Name | Index Name | Index Name | RawIndexWeightageIndexName | | Delete | Edit |
| ISIN | ISIN | ISIN Number | RawIndexWeightageISINNumber | | Delete | Edit |
| ISIN | ISIN | Scrip Code | RawIndexWeightageScripCode | | Delete | Edit |
| Weighting | Weighting | Weightage | RawIndexWeightageValue | | Delete | Edit |
| Component Value | Component Value | Free Float Market Capital | RawIndexWeightageFreeFloatMarketCapital | | Delete | Edit |
| Name | Name | Scrip Name | RawIndexWeightageScripName | | Delete | Edit |

ADD

2.3 Upload the Indices file

2.4 See The Index Constituents

Go to Index Master and now you can see the Index Constituents.

Indices Tuesday, March 24, 2015

LIST OF INDICES

Name [SEARCH] [All] [All] [All] Active

| NAME | SHORT NAME | EXCHANGE | DIVERSIFIED | COMPONENT TYPE | ACTIVE |
|-------------------|------------|-------------|-------------|----------------|----------------|
| FTSE_IDX_100 test | FTSE100 | London XLON | Yes | UCITS Eligible | Lightbulb icon |

Page 1 of 1

30 Set as default



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Indices Tuesday, March 24, 2015

EDIT SELECTED INDEX * Mandatory Fields

Name * FTSE_IDX_100 test Short Name * FTSE100

FA Code ftse100 Exchange * London XLON

Active Yes No Component Type UCITS Eligible Non Eligible

Diversified Yes No

LATEST INDEX WEIGHTAGES

| NAME | ASSET CLASSIFICATION NAME | INSTRUMENT SHORT NAME | INSTRUMENT ISIN CODE | INDEX WEIGHTAGE DATE | INDEX WEIGHTAGE VALUE |
|-------------------|---------------------------|-----------------------|----------------------|----------------------|-----------------------|
| FTSE_IDX_100 test | Equity | GB0000055888GBP | GB0000055888GBP | 25/01/2015 | 0.30 |
| FTSE_IDX_100 test | EQUITY | GB0001765816GBP | GB0001765816GBP | 25/01/2015 | 0.19 |
| FTSE_IDX_100 test | Equity | GB0007655037GBP | GB0007655037GBP | 25/01/2015 | 0.24 |
| FTSE_IDX_100 test | EQUITY | GB0007655474GBP | GB0007655474GBP | 25/01/2015 | 0.17 |
| FTSE_IDX_100 test | Equity | GB0007922338GBP | GB0007922338GBP | 25/01/2015 | 0.97 |
| FTSE_IDX_100 test | EQUITY | GB0009286963GBP | GB0009286963GBP | 25/01/2015 | 0.43 |
| FTSE_IDX_100 test | Equity | GB00B0310763GBP | GB00B0310763GBP | 25/01/2015 | 0.80 |
| FTSE_IDX_100 test | EQUITY | GB00B0CL3P62GBP | GB00B0CL3P62GBP | 25/01/2015 | 1.04 |
| FTSE_IDX_100 test | Equity | GB00B0KWHQ09GBP | GB00B0KWHQ09GBP | 25/01/2015 | 2.48 |
| FTSE_IDX_100 test | EQUITY | GB00B104RS51GBP | GB00B104RS51GBP | 25/01/2015 | 0.70 |

2.5 In the Scheme Master, apply the specific Index to the Scheme

MoneyWare FundWare Welcome Jason Worthington Last login at 01:05:21 PM Apr 01, 2015 Successful.

Schemes Wednesday, April 01, 2015

Entry Load * 0.0000 Exit Load * 0.0000

NFO Start Date * 01/01/2014 NFO End Date *

Primary Bank * DEFAULT Face Value * 1

Issuer Value * 1 Scheme Capital * 1.00

Account Number * 28X2 Suspended Yes No

PortFolio Manager * Darren Burrows PortFolio Co-manager Amy Johnston

Currency * Pound Sterling Index FTSE_IDX_100 test

2.6 The Rules can now be run – see Part 3.

3. RULES

3.1 Securities in the fund must be in the index

FundWare v: 14.3.0.104 Last login at 09:46:20 AM Mar 13, 2015 Successful

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Rules Configuration Tuesday, March 24, 2015 13:30:25 New Save Cancel

EDIT RULE APPROVAL

Rule Name * (Max 100 Chars) stock is in the fund but not in index **Rule Category** TEST

Rule Reference No * (Max 50 Chars) index 02 **Rule Type *** System Test

Rule Short Name * (Max 100 Chars) stock is in the fund but not in index **Rule Action Type *** Others

Rule Commentary * (Max 5000 Chars) Breach if stock is in the fund but not in index

Resolution / Tips * (Max 255 Chars) .Breach if stock is in the fund but not in index

Resource (Max 1000 Chars)

Rule Validation Level *

- Asset Type
- Company / Issuer
- Instrument / Security
- Counterparty
- Immediate Parent Issuer
- Sector
- Country
- Instrument Location
- UL Issuer
- UL Issuer Group
- Currency
- UL Instrument / Security
- None

Asset Category

Warrants
Securities
Real Estate Related
Property Related
Property
Preference shares
Open Ended Funds

be careful which assets you choose as cash, derivatives, ffx etc wont be in the index

LIST OF RULE CONDITIONS Create New Rule Condition

| RULE CONDITION | ACTIVE | |
|---|--------|------|
| If holding for "Security not in Index" (considering "Market Value") (considering "Contractual" holding) is > 0.0000 of "No. of Securities in Scheme" THEN Breach. | | Edit |
| If holding for "Security not in Index" (considering "Market Value") (considering "Contractual" holding) is <= 0.0000 of "No. of Securities in Scheme" THEN approval of(Pass) is required. | | Edit |

3.2 Identify is security is in Index but not in Scheme

| LIST OF RULE CONDITIONS | | Create New Rule Condition | |
|--|--------|---------------------------|--------|
| RULE CONDITION | ACTIVE | | |
| If holding for "Security in Index" (considering "Market Value") (considering "Contractual" holding) is > 0.0000 of "No. of Securities in Scheme" THEN Breach. | | Edit | Delete |

3.3 Holdings must be within x% of Index weighting

MoneyWare FundWare v: 14.3.0.104 | Welcome Jason Worthington | Last login at 09:46:20 AM Mar 13, 2015 | Successful

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Rules Configuration | Tuesday, March 24, 2015 | 1:10:36 | New | Save | Cancel

| | | | |
|---|--|---------------------------|-------------|
| Rule Name * (Max 100 Chars) | Stock holding percentage must be within x prc of index weight | Rule Category | TEST |
| Rule Reference No * (Max 50 Chars) | Index 02 | Rule Type * | System Test |
| Rule Short Name * (Max 100 Chars) | Stock holding percentage must be within x prc of index weight | Rule Action Type * | Others |
| Rule Commentary * (Max 5000 Chars) | Stock holding percentage must be within x prc of index weighting | | |
| Resolution / Tips * (Max 255 Chars) | Stock holding percentage must be within x prc of index weighting | | |
| Resource (Max 1000 Chars) | www.funds-axis.com | | |
| Rule Validation Level * | <input type="radio"/> Asset Type <input type="radio"/> Company / Issuer <input checked="" type="radio"/> Instrument / Security <input type="radio"/> Counterparty <input type="radio"/> Immediate Parent Issuer <input type="radio"/> Sector <input type="radio"/> Country <input type="radio"/> Instrument Location <input type="radio"/> UL Issuer <input type="radio"/> UL Issuer Group <input type="radio"/> Currency <input type="radio"/> UL Instrument / Security <input type="radio"/> None | | |
| Asset Category | <input type="checkbox"/> Warrants <input type="checkbox"/> Securities <input type="checkbox"/> Real Estate Related <input type="checkbox"/> Property Related <input type="checkbox"/> Property | | |

| LIST OF RULE CONDITIONS | | Create New Rule Condition | |
|--|--------|---------------------------|--|
| RULE CONDITION | ACTIVE | | |
| If holding for "Instrument" (considering "Market Value") (considering "Contractual" holding) is > 2.0000 of "Index Tolerance Limit" THEN Breach. | | Edit | |
| If holding for "Instrument" (considering "Market Value") (considering "Contractual" holding) is <= 2.0000 of "Index Tolerance Limit" THEN approval of (Pass) is required. | | Edit | |

4. CASE STUDIES

4.1 Case Study 1: Stocks in Index not in Fund

We ran a rule of Stocks in Fund not in Index, but before any stocks were added to the Index.

We got the following results:

| Rule ID | Rule Name | Status | Count | Percentage | Instrument |
|----------|---|--------|-------|------------|---|
| 279629-C | Rule : Instrument in Fund & not in Index | Failed | 1 | 11.1233 % | IE00B5L65R35GBP - ISHARES GBP CORP BND 1-5YR UCITS GB |
| 279629 C | IE00B5L65R35GBP - ISHARES GBP CORP BND 1-5YR UCITS GB | | | 11.1233 % | |
| | IE00B1FZS830GBP - ISHARES II PLC CORE UK GILTS UCITS ETF | | | 10.1715 % | |
| | IE00B00FV011GBP - ISHARES CORE CORP BOND UCITSETF GB | | | 9.7933 % | |
| | IE00B74DQ490USD - ISHARES GBL HIGH YD BOND(USD) UCITS | | | 9.0157 % | |
| | IE00B1TXLS18GBP - ISHARES II PLC UK PROPERTY UCITS ETF | | | 8.8473 % | |
| | IE00B1FZSD53GBP - ISHARES II PLC GBP INDEX-LINKED GILTS UCIT | | | 7.0797 % | |
| | IE00B810Q511GBP - VANGUARD INV SER FTSE 100 ETF INC UCITS | | | 6.7925 % | |
| | LU0641007264GBP - DB PLATINUM ADVISOIBOXX GBL INFL-LKD TR IDX H | | | 4.7875 % | |
| | GB0033280339GBP - UK(GOVT OF) 4.75% STK 07/9/2015 GBP0.01 | | | 3.5809 % | |
| | XS0434040167GBP - EURO INV BANK 4.125% MTN 07/12/2017 GBP | | | 3.4986 % | |
| | FR0010713727GBP - AMUNDI INV SOLUTIOETF MSCI INDIA EUR | | | 3.1294 % | |
| | IE00B0M63060GBP - ISHARES UK DIVIDEND UCITS ETF | | | 3.0015 % | |
| | IE00B1FZS350GBP - ISHARES II PLC DM PROPERTY YLD UCITS GBP | | | 2.3448 % | |
| | XS0433107041GBP - KREDITANST FUR WIE3.75% GTD MTN 07/09/16 GBP | | | 2.3409 % | |
| | GB00B0V3WX43GBP - UK(GOVT OF) 4% GILT 07/09/2016 GBP0.01 | | | 2.3240 % | |
| | GB00B4LFR36GBP - UK(GOVT OF) 2.75% GILT 22/01/15 GBP | | | 2.1846 % | |

We then added some of the stocks to the index:

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Indices | Thursday, April 02, 2015 09:25:16 | New | Save | Cancel

EDIT SELECTED INDEX * Mandatory Fields

Name * darren Index | Short Name * darrenidx

FA Code darrenidx | Exchange * BERMUDA STOCK EXCHANGE LTD -01

Active Yes No | Component Type UCITS Eligible Non Eligible

Diversified Yes No

LATEST INDEX WEIGHTAGES

| NAME | ASSET CLASSIFICATION NAME | INSTRUMENT SHORT NAME | INSTRUMENT ISIN CODE | INDEX WEIGHTAGE DATE | INDEX WEIGHTAGE VALUE |
|--------------|---------------------------|-----------------------|----------------------|----------------------|-----------------------|
| darren Index | Funds | IE00B00FV011GBP | IE00B00FV011GBP | 21/01/2015 | 20.00 |
| darren Index | MUTUALFUND | IE00B0M63060GBP | IE00B0M63060GBP | 21/01/2015 | 20.00 |
| darren Index | Funds | IE00B5L65R35GBP | IE00B5L65R35GBP | 21/01/2015 | 20.00 |
| darren Index | MUTUALFUND | IE00B74DQ490USD | IE00B74DQ490USD | 21/01/2015 | 20.00 |
| darren Index | Funds | IE00B1FZS350GBP | IE00B1FZS350GBP | 21/01/2015 | 20.00 |

We then re-processed the rules and got the below amended results

| | | | | | | |
|---|-----------------|---|--------|---|-----------|--|
| ☐ | 279659-C | stock is in the fund but not in index | Failed | 1 | 10.1715 % | IE00B1FZSB30GBP - ISHARES II PLC CORE UK GILTS UCITS ETF |
| | 279659 C | IE00B1FZSB30GBP - ISHARES II PLC CORE UK GILTS UCITS ETF | | | 10.1715 % | |
| | | IE00B1TXLS18GBP - ISHARES II PLC UK PROPERTY UCITS ETF | | | 8.8473 % | |
| | | IE00B1FZSD53GBP - ISHARES II PLC GBP INDEX-LINKED GILTS UCIT | | | 7.0797 % | |
| | | IE00B810Q511GBP - VANGUARD INV SER FTSE 100 ETF INC UCITS | | | 6.7925 % | |
| | | LU0641007264GBP - DB PLATINUM ADVISOIBOXX GBL INFL-LKD TR IDX H | | | 4.7875 % | |
| | | Investment Bank Account - Income GBP NTSSBT - Investment Bank Account - Income GBP NT | | | 3.9743 % | |
| | | GB0033280339GBP - UK(GOVT OF) 4.75% STK 07/9/2015 GBP0.01 | | | 3.5809 % | |
| | | XS0434040167GBP - EURO INV BANK 4.125% MTN 07/12/2017 GBP | | | 3.4986 % | |
| | | FR0010713727GBP - AMUNDI INV SOLUTIOETF MSCI INDIA EUR | | | 3.1294 % | |
| | | XS0433107041GBP - KREDITANST FUR WIE3.75% GTD MTN 07/09/16 GBP | | | 2.3409 % | |
| | | GB00B0V3WX43GBP - UK(GOVT OF) 4% GILT 07/09/2016 GBP0.01 | | | 2.3240 % | |
| | | GB00B4LFZR36GBP - UK(GOVT OF) 2.75% GILT 22/01/15 GBP | | | 2.1846 % | |
| | | IE00B95PGT31GBP - VANGUARD FUNDS PLCFTSE JAPAN EQUITY UCITS GBP | | | 2.0787 % | |
| | | LU0380865021GBP - DB X-TRACKERS EURO STOXX 50 UCITS ETF (DR | | | 1.9429 % | |
| | | IE00B8FHGS14GBP - ISHARES VI PLC MSCI WLD MIN VLTG GBP UCITS | | | 1.7349 % | |
| | | IE00B6YX5D40GBP - SSGA SPDR ETFS EURSPDR S&P US DIV ARISTOCRATS | | | 1.7065 % | |
| | | GB00B1VWPC84GBP - UK(GOVT OF) 5% GILT 07/03/18 GBP0.01 | | | 1.7024 % | |

The stocks which had been added to the index no longer appeared as exceptions.