

Freedom Index Construction Methodology

1.0 Introduction

The Freedom Index aims to provide free, open and independent indexes for the asset management community.

The Freedom Index provides index information for the UK, US, Australian and South African markets as well as custom indices (with other markets currently under consideration to follow), initially supplying the local return, with returns in GBP and the hedged to GBP return to follow. The indexes will be based on market capitalization and there will be no automatic removal of securities based on their liquidity or size.

This document will describe the methodologies used for security selection and rebalancing periods. It will also provide the methodology for calculating the index return and the value of the index.

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2.0 The Freedom Index Security Universe

There are no securities automatically removed due to size or liquidity factors, if we receive data for a security, it will be used. A company's use in an index will be based upon the country of the exchange it trades on. All securities at a minimum will be included in the Freedom Index All-Share of its constituent country.

3.0 The Freedom Indexes

The Freedom Index offers the following indexes for use by the asset management community:

3.1 UK Indexes

Index Name	Index Code	Index Type
The Freedom® UK 50	GB0050MW	Market Weighted
The Freedom® UK 100	GB0100MW	Market Weighted
The Freedom® UK 250	GB0250MW	Market Weighted
The Freedom® UK 500	GB0500MW	Market Weighted
The Freedom® UK 1000	GB1000MW	Market Weighted
The Freedom® UK All Stock	GB00ASMW	Market Weighted
The Freedom® UK Small Cap	GB00SCMW	Market Weighted
The Freedom® UK Mid Cap	GB00MCMW	Market Weighted
The Freedom® UK 50 Equal Weighted	GB0050EW	Equal Weighted
The Freedom® UK 100 Equal Weighted	GB0100EW	Equal Weighted
The Freedom® UK 250 Equal Weighted	GB0250EW	Equal Weighted
The Freedom® UK 500 Equal Weighted	GB0500EW	Equal Weighted
The Freedom® UK 500 Financial	GB0500MW0100	Sector Index
The Freedom® UK 500 Medical & Health Care	GB0500MW0200	Sector Index
The Freedom® UK 500 Fuel	GB0500MW0300	Sector Index
The Freedom® UK 500 Manufacturing	GB0500MW0400	Sector Index
The Freedom® UK 500 Technology	GB0500MW0500	Sector Index
The Freedom® UK 500 Consumer products	GB0500MW0600	Sector Index
The Freedom® UK 500 Utilities	GB0500MW0700	Sector Index
The Freedom® UK 500 Services	GB0500MW0800	Sector Index
The Freedom® UK 500 Materials	GB0500MW0900	Sector Index
The Freedom® UK 500 Telecommunications	GB0500MW1000	Sector Index
The Freedom® UK 500 Ex-Investment	GB0500MWX106	Sector Index

3.2 US Indexes

Index Name	Index Code	Index Type
The Freedom® US 50	US0050MW	Market Weighted
The Freedom® US 100	US0100MW	Market Weighted
The Freedom® US 250	US0250MW	Market Weighted
The Freedom® US 500	US0500MW	Market Weighted
The Freedom® US 1000	US1000MW	Market Weighted
The Freedom® US All Stock	US00ASMW	Market Weighted
The Freedom® US Small Cap	US00SCMW	Market Weighted
The Freedom® US Mid Cap	US00MCMW	Market Weighted
The Freedom® US 50 Equal Weighted	US0050EW	Equal Weighted
The Freedom® US 100 Equal Weighted	US0100EW	Equal Weighted
The Freedom® US 250 Equal Weighted	US0250EW	Equal Weighted
The Freedom® US 500 Equal Weighted	US0500EW	Equal Weighted
The Freedom® US 500 Financial	US0500MW0100	Sector Index
The Freedom® US 500 Medical & Health Care	US0500MW0200	Sector Index
The Freedom® US 500 Fuel	US0500MW0300	Sector Index
The Freedom® US 500 Manufacturing	US0500MW0400	Sector Index
The Freedom® US 500 Technology	US0500MW0500	Sector Index
The Freedom® US 500 Consumer products	US0500MW0600	Sector Index
The Freedom® US 500 Utilities	US0500MW0700	Sector Index
The Freedom® US 500 Services	US0500MW0800	Sector Index
The Freedom® US 500 Materials	US0500MW0900	Sector Index
The Freedom® US 500 Telecommunications	US0500MW1000	Sector Index
The Freedom® US 500 Ex-Investment	US0500MWX106	Sector Index

3.3 Australian Indexes

Index Name	Index Code	Index Type
The Freedom® AU 50	AU0050MW	Market Weighted
The Freedom® AU 100	AU0100MW	Market Weighted
The Freedom® AU 250	UAU0250MW	Market Weighted
The Freedom® AU 500	UAU0500MW	Market Weighted
The Freedom® AU 1000	AU1000MW	Market Weighted
The Freedom® AU All Stock	AU00ASMW	Market Weighted
The Freedom® AU 50 Equal Weighted	AU0050EW	Equal Weighted
The Freedom® AU 100 Equal Weighted	AU0100EW	Equal Weighted
The Freedom® AU 250 Equal Weighted	AU0250EW	Equal Weighted
The Freedom® AU 500 Equal Weighted	AU0500EW	Equal Weighted

3.4 South African Indexes

Index Name	Index Code	Index Type
The Freedom® ZA 50	ZA0050MW	Market Weighted
The Freedom® ZA 100	ZA0100MW	Market Weighted
The Freedom® ZA All Stock	ZA00ASMW	Market Weighted
The Freedom® ZA 50 Equal Weighted	ZA0050EW	Equal Weighted
The Freedom® ZA 100 Equal Weighted	ZA0100EW	Equal Weighted

3.5 Custom Indexes

Index Name	Index Code	Index Type
The Freedom® Smart-Beta UK Dividend	GB00SBDW	Custom Weighted

For the index methodology for our custom indexes, go to:

<http://thefreedomindex.com/indexes/the-freedom-smart-beta-uk-dividend/>

4.0 Index Membership Methodology

Securities are allocated to indexes using the following rules.

4.1 UK Indexes

For all UK indexes, the Freedom Index universe of securities is filtered down to contain just those that are traded on the UK markets. This can include securities that are dual listed on other markets outside of the UK, but will only be included if the primary listing is in the UK. Any secondary listings will be removed from the UK universe.

There will be no companies removed based on their size or liquidity, all securities will be included.

4.2 US Indexes

For all US indexes, the Freedom Index universe of securities is filtered down to contain just those that are traded on the US markets. This can include securities that are dual listed on other markets outside of the US, but will only be included if the primary listing is in the US. Any secondary listings will be removed from the US universe.

There will be no companies removed based on their size or liquidity, all securities will be included.

4.3 Australian Indexes

For all Australian indexes, the Freedom Index universe of securities is filtered down to contain just those that are traded on the Australian markets. This can include securities that are dual listed on other markets outside of Australia, but will only be included if the primary listing is in Australia. Any secondary listings will be removed from the Australian universe.

There will be no companies removed based on their size or liquidity, all securities will be included.

4.4 South African Indexes

For all South African indexes, the Freedom Index universe of securities is filtered down to contain just those that are traded on the South African markets. This can include securities that are dual listed on other markets outside of South Africa, but will only be included if the primary listing is in South Africa. Any secondary listings will be removed from the South African universe.

There will be no companies removed based on their size or liquidity, all securities will be included.

4.5 Custom Indexes

The methodologies for custom indexes may vary individually. Please refer to their own methodologies which can be found at <http://thefreedomindex.com/indexes/the-freedom-smart-beta-uk-dividend/smart-beta-uk-dividend/>.

4.6 Index Types

Once the securities have been sorted into their respective countries they will then be used in the following types of indexes:

- Market Weighted
- Equal Weighted
- Sector Indexes

Refer to the list in Section 3 for each published index's type.

4.6.1 Market Weighted Indexes

Once the securities have been separated by country, they will be ranked according to market capitalization. Then depending on the size of the index, the top ranked securities will be chosen to be in the index. For example, for the Freedom Index UK 50, the top 50 securities by market capitalization will be used.

4.6.1.1 Small, Mid and Large Cap Indexes

After having been ranked by market capitalization, the securities are then also separated into small, mid, and large market capitalization brackets. Each bracket of securities is then used to create an index.

The brackets for the UK are:

Index Name	Max. Rank	Min. Rank
The Freedom® UK Large Cap	1	100
The Freedom® UK Mid Cap	101	250
The Freedom® UK Small Cap	251	1000

And the brackets for the US are:

Index Name	Max. Rank	Min. Rank
The Freedom® US Large Cap	1	250
The Freedom® US Mid Cap	251	1000
The Freedom® US Small Cap	1001	2000

As there are already indexes with the same constituents as the Large Cap indexes, they will be synonymous with the existing counterparts. So for the UK, the Freedom UK 100 will be our Large Cap index, and for the US, the Freedom US 250 will be used.

4.6.2 Equal Weight Indexes

For Equal Weighted indexes, the selection criteria will be the same as for the Market Weighted indexes.

4.6.3 Sector Indexes

The Sector indexes for the UK and US are based on the top 500 securities in each country. The securities are then separated into their sectors as defined by the FIGS hierarchy and then used to create the respective indexes.

4.7 Reconstitution

In order to effectively represent the markets, the securities constituting the indexes are updated quarterly. This is done to handle situations such as IPO's and takeovers.

4.7.1 The process

When a new quarter starts on the first working day of January, April, July, or October, the indexes undergo reconstitution. (For custom indexes, refer to the individual methodologies for their rebalancing frequency).

The whole universe of available securities is filtered by country and then ranked by their market capitalization. The new highest ranking securities are then chosen to represent in the index for the next quarter, the number of securities of which is defined by the size of the index.

Securities cannot move between indexes during this quarter period. For example, if a security's market capitalization reduces to lower than a security outside of the index, it will not leave the index. Also if a company outside of the index has a market capitalization higher than that of one inside the index, it will not replace it.

Only on the reconstitution date do securities move between indexes. If on this date a security is large enough, only then will it become a member of the index.

A security that has an IPO that creates a market capitalization larger than a security in the index does not automatically qualify it to become a member. It will have to wait till a quarter reconstitution date and only then, if it is still large enough, will it be put into the index.

All index constituent changes will be in effect for the first working day of the new quarter.

4.7.2 Securities leaving the index

Often securities will leave the Index due to delisting, mergers, takeovers, etc. When this happens the security will leave the index and make no contributions to the index for the rest of the quarter. There will be no additions to the index if this happens.

If a security disappears for whatever reason and then re-joins the market within the quarter period, the security will not make any more contributions to the index from the time it first left.

If at the beginning of a new quarter a company has re-joined the market and is of a big enough size to reappear in the index then it shall do so. If it is not big enough then it shall not contribute to the index under the rules of reconstitution (see section 4.3).

4.7.3 Suspended securities

Suspended securities will be removed from the index if in the judgement of the Freedom Index Company there is little prospect of the security re-joining. There will be no replacement securities added within the quarter if this happens.

5.0 Index Return

The returns calculated for the indexes include:

- Local return
- Return in GBP
- Return hedged to GBP

They are calculated using the Laspeyres method of indexing. They are all calculated by aggregating the contribution of each company in the index, where the contribution is calculated by multiplying the return of the company by its weight within the index. The formula for a Laspeyres Index is as follows:

$$b = \sum_{i=1}^{i=n} W_i \times r_i$$

Where:

b = the return of the index.

W_i = the percentage weight of security i in the index.

r_i = the return of security i over the measurable period.
This includes any corporate action factors applied.

For the calculation methodology of the local return, return in GBP and the return hedged to GBP please read the Freedom Index Return Calculation Methodology document available at www.thefreedomindex.com.

5.1 Weighting

The weight of each company in the indexes is different for each index. All weights are given as percentages.

5.1.1 Market Capitalization Weighted

Due to all returns being calculated with Corporate Action Factors, the weight of each security in the index has to reflect this.

Therefore at the start of a new month a security's weight will be the proportion of market capitalization it contributes to the index on this day. Then, subsequent daily weights will be calculated by adding the daily net return of the security to the weight of the previous day and rebalanced to the rest of the securities.

The weight at the beginning of the month is calculated in the following way:

$$W_i = \frac{\text{Market capitalization of } i}{\text{Total market capitalization of index}}$$

Where:

W_i = Weight of security i .

And then the weight of each consecutive day is calculated as follows:

$$W_{i,t} = \frac{W_{i,t-1} \times (1 + r_i)}{\sum_{i=1}^{i=n} [W_{i,t-1} \times (1 + r_i)]}$$

Where:

$W_{i,t}$ = Weight of security i at time t .

$W_{i,t-1}$ = Weight of security i at time $t - 1$.

r_i = Return of security over period $(t - 1) \rightarrow t$.

5.1.2 Equal Weighted

For equal weighted indexes, the weights of each company in the index are all equal to each other.

The weight is the inverse of the amount of securities in the index at any time. It is calculated as follows:

$$W_i = \frac{1}{\text{Number of companies in the index}}$$

6.0 Index Value

All the Freedom Index indexes will be instigated on the 31st of December 2012 and will all start with a base value of 1000.

The index will be calculated retrospectively for the years 2008 to 2012. The on-going value will be calculated by compounding the returns of the index from the start date, where the time period is a day, and is produced with the following method:

$V_t = V_{t-1} \times (1 + b_t)$ where:

V_t = value of index at time t .

V_{t-1} = value of index at time $t - 1$.

b_t = return of index at time t .

Index values will be given for each calculated return, that is, the local return value, return in GBP value and the hedged to GBP return value, all calculated using above method.

7.0 Index Governance

7.1 Frequency of the index methodology review

The Freedom Index methodology is subject to periodic review to ensure that it remains representative of the relevant market it was created to evaluate and continues to meet the current and future requirements of index stakeholders. Such a review will take place at a frequency determined by a number of factors outlined below in 7.2, but will be undertaken at least annually.

7.2 Revisions to the index methodology

Revisions to the methodology may originate as a result of recommendations from internal review, modifications to the regulatory regime, feedback from clients or in response to changes in the financial markets structure.

In the case of material alterations, for example, those with the potential to change the composition of an index, such as index eligibility criteria, frequency of index reconstitution or index construction rules, a wider consultation with relevant stakeholders may also be undertaken.

7.3 Approval of index methodology revisions

The final approval of an index methodology revision is made by The Index Governance Committee. Following the approval of a revision to the methodology, index users and other stakeholders are notified through the publication of a notice.

Such notices can be found on Confluence website at: <https://www.confluence.com/index-governance/>

Any feedback received from stakeholders following the implementation of a revised methodology may be considered by The Index Governance Committee as part of the ongoing management and development of future index methodologies.

7.4 Potential limitations of the methodology

Given the straightforward and robust methodology of The Freedom Index, any limitations are most likely to arise due to external factors. Such factors could include an inadequate availability of market data, poor quality data or an insufficient number of eligible constituents available for inclusion in the index. In the unlikely event that such periods of stress were prolonged, then it is probable that The Index Governance Committee would consider decommissioning the index or index series. This would be essential if the index was unable to continue to adequately measure the market or economic reality it was intended to evaluate.

7.5 Decommissioning an index

The Freedom Index has a documented procedure which is followed when considering decommissioning an index or index series. Any decommissioning proposal must be approved by The Index Governance Committee. The reasons for decommissioning an index may include those mentioned in 7.4 above, and additionally an absence of clients using the index or that it was uneconomic to continue to produce the index.

In the event that an index or index series is decommissioned the following process will occur to facilitate the stakeholder's transitions to alternative indices:

- Identification of stakeholders of the index
- Publish notice to stakeholders of the index decommission at least three months prior to the decommissioning date
- Remind stakeholders one month prior to the decommission
- Publish a notice confirming decommission of the index on The Freedom Index website