IHFA – Methodology

ANBIMA Hedge Funds Index

December Version – 2023

ANBIMA

Versions:

Previous version: October-2021

Current version: December-2023

Changes: Only textual and layout changes. Inclusion of items 11 and 12, on page 9. On page 11, executive board updated. And adjustments according to CVM Instruction number 175. No changes in calculation methodology.

Summary

1 – What is IHFA – ANBIMA Hedge Funds Index ANBIMA

IHFA is a Brazilian hedge funds industry representative index built with the main goal of serving as a parameter for the following-up of this segment´s evolution. Its value reflects, in legal tender, the evolution of a hypothetical financial application on shares of a portfolio of funds, selected by predefined specific criteria, as described below. The index base-date is March 31st 2008 e has index-number equal to 1000. In order to preserve the index representativity, its theoretical portfolio composition is periodically reviewed as per describes procedures.

2 – Dataset

IHFA – ANBIMA Hedge Funds Index is calculated from a dataset provided by ANBIMA.

3 – Theoretical portfolio

IHFA theoretical portfolio is quarterly reviewed and has as validity the following periods: january to march, april to june, july to september and october to december.

Here follows the adopted procedures for selecting its components and defining respective theoretical amounts within the index portfolio:

a) Components selection
The selection criteria for the theoretical portfolio components follows the procedures below, restricted to a the period of 3 previous months to the rebalancing date (average or end-of-period position, accordingly to each criteria):
   1. From all Mutual fund series registered on ANBIMA and ruled by CVM Instruction number 175, only those that belong to a class denominated “multimercado” (multimarket) are selected;
   2. Tenure register, on the referred class at ANBIMA, higher than one year, from the assembly date of each IHFA theoretical portfolio on;
   3. Those Mutual fund series established as “closed-end funds”, whose shares can only be redeemed after the end of it’s validity are excluded;
   4. Exclusive Mutual fund series are excluded; it also applies to their subcategories
   5. Mutual fund series that do not charge performance fee are excluded; it also applies to their subcategories that also do not charge performance fee.
   6. Mutual fund series or the total of their subcategories with an average number of shares holders lower than 10 during the quarter prior to the rebalancing date are excluded;
   7. Mutual fund series or their subcategories that do not disclose updated daily share values are excluded;

8. Mutual fund series that do not hold at least 95% of their net worth invested on one only investment fund are excluded (this criteria is checked by analyzing the last composition of elegible Mutual fund series portfolio, by assets, available at ANBIMA's website, at the rebalancing date);
9. In order to avoid "double counting" of Feeder Funds selected by item 8, those which invested master funds are elegible by item 7 are excluded. This criteria is checked by analyzing the last composition of elegible Mutual fund series portfolio, by assets, available at ANBIMA's website, at the rebalancing date.
10. Multimarket funds classified accordingly to ANBIMA as "balanceados" (balanced), "capital protegido" (protected funds),"multigestores" (multimanagers) or similar subcategories are excluded;
11. Funds that up to this point fulfilled the elegibility criteria are excluded whenever the Mutual fund series average net worth throughout the quarter prior to the index rebalancing date are inferior to the sample´s median net worth;
12. Funds that up to this point fulfilled the elegibility criteria are excluded whenever the Mutual fund series yearly volatility on the quarter prior to the index rebalancing date is inferior to the sample´s 1st quartile yearly volatility (using observed daily returns variability).

b) Defining the theoretical amounts of shares from components of the index portfolio

After selecting the Mutual fund series that will be part of IHFA theoretical portfolio, it is necessary to define the amount of shares that each Mutual fund series will detain on the index portfolio once its validity period begins.

Firstly, with each Mutual fund series closing net worth on the business day prior to its portfolio rebalancing date, the individual share of each component on the index portfolio is obtained.

Following, the index-number from the business day prior to the index portfolio rebalancing date (the index base value is 1,000 points) is multiplied by each Mutual fund series observed individual share, defining, therefore, the new number of points each fund detains on the index.

Then each Mutual fund series number of points on the index is divided by its respective share value of the business day prior to the portfolio rebalancing date, obtaining, therefore, the theoretical amount of quotas each Mutual fund series will hold throughout the index theoretical portfolio validity.

4 – Index daily calculation

IHFA is entailed by the Laspeyres method (components share prices are weighted by their theoretical amounts, on the base period). Therefore changes on the portfolio composition do not raise impacts on the index results.

In order to obtain IHFA results, shares theoretical amounts (on the base period) of each Mutual fund series are multiplied by their respective values (on the reference date), incurring, therefore, on each Mutual fund series number of points within the index. The result of the sum of each index component´s number of points corresponds to the index-number.

5 – Sources of information

All used information for theoretical portfolio assembly and index daily calculation arise from capture at the ANBIMA's Web Service. According to CVM Instruction number 175, investment funds managers must send to ANBIMA such information.

6 – Events that can interfere at the index theoretical portfolio – funds removal

Even though IHFA theoretical portfolio is valid quarterly, it might suffer changes throughout its validity period. The withdrawal of a component can be due to:

a) A Mutual fund series termination;
b) A change at one of the criteria described at the notional portfolio selection process – items 3 a, 1 to 5 – meaning that a Mutual fund series is no longer eligible;
c) The non-disclosure of shares daily values for 4 days in a row;

At the same date one of events above is observed, necessary exclusions are taken. And, in order to obtain the new theoretical portfolio, adjustments at the theoretical amounts of the index components are made. Therefore, the excluded Mutual fund series portion held at the index-number on the date prior to theoretical portfolio revaluation is weighted distributed.

The new portfolio keeps its validity until the end of the original portfolio validity period or until the incidence of a new event that calls for further adjustments.

7 - Events that could interfer at the index daily calculation

The index is not submitted to any kind of recalculation, exceptionally those related to operational errors of human failures.

The absence of daily information regarding shares of Mutual fund series or their subcategories that compose the index theoretical portfolio is tolerated for 3 days, repeating, during this period, the last available share value. After restoring the daily information flow, the index results for those days when repeated quota values where assumed will not be reviewed.

8 – Index dissemination

IHFA is daily disclosured with a 3 business days discrepancy.

9 - Disclaimer / Liability Exemption

IHFA´s disclosure has a merely informative purpose and its use by economic agents is optional. ANBIMA does not take responsibility for eventual damages or losses that might arise to users employing this index with any purpose and, in such case, the latter assumes entire and exclusive responsibility.

10 – Appendix

1 – Index number calculation

1.1 – Mutual Fund Series daily returns

$$Var\%_i = \left[\left(\frac{Cota_i^{D-0}}{Cota_i^{D-1}}\right) - 1\right] x\ 100$$

Where:

$Var\%_i$ is Mutual fund series i daily return;

$Cota_i^{D-0}$ is Mutual fund series i share in $D-0$;

$Cota_i^{D-1}$ is Mutual fund series i share in $D-1$;

1.2 – Mutual fund series yearly volatility

$$Vol.Anualiz_i = \sqrt{\frac{\sum(Var\%_i - \overline{Var\%_\imath})^2}{(n-1)}}\ x\ \sqrt{252}$$

Where:

$Vol.Anualiz_i$ is Mutual fund series i yearly volatility;

$Var\%_i$ is Mutual fund series i daily return;

$\overline{Var\%_\imath}$ is Mutual fund series i daily returns average;

n is the number of business days during the last 3 months;

1.3 – Mutual fund series number of points on the index

$$NºPontos.Índice_i = \left(\frac{PL_i}{PL_{total}}\right)^{T-1}\ x\ NI^{T-1}$$

Where:

$N^oPontos.Índice_i$ is Mutual fund series i number of points on the index;

PL_i is Mutual fund series i net worth on the business day prior to the theoretical portfolio rebalancing date;

PL_{total} is the total net worth on the business day prior to the theoretical portfolio rebalancing date;

NI^{T-1} is IHFA index-number on the business day prior to the theoretical portfolio rebalancing date;

1.4 – Mutual fund series index shares theoretical amount

$$Quant.Teórica_i = \frac{NºPontos.Índice_i}{Cota_i^{T-1}}$$

Where:

$Quant.Teórica_i$ is Mutual fund series i index shares theoretical amount;

$N^oPontos.Índice_i$ is Mutual fund series i number of points on the index;

$Cota_i^{T-1}$ is Mutual fund series i share on the business day prior to the theoretical portfolio rebalancing date;

2 – Formulae for IHFA daily calculation

2.1 – IHFA index number

$$NºÍndiceIHFA^{D-0} = \sum QuantidadeTeórica_i \; x \; Cota_i^{D-0}$$

Where:

$N^oÍndiceIHFA^{D-0}$ is IHFA index number on $D-0$;

$QuantidadeTeórica_i$ is Mutual fund series i index shares theoretical amount;

$Cota_i^{D-0}$ is Mutual fund series i share in $D-0$;

2.2 – IHFA daily variation

$$Var\%IHFA^{D-0} = \left[\left(\frac{NºÍndiceIHFA^{D-0}}{NºÍndiceIHFA^{D-1}}\right) - 1\right] x \; 100$$

Where:

$Var\%IHFA^{D-0}$ is IHFA daily variation on $D-0$;

$N^oÍndiceIHFA^{D-0}$ is IHFA index number on $D-0$;

$N^oÍndiceIHFA^{D-1}$ is IHFA index number on $D-1$;

11. Periodic Review

The composition of the theoretical portfolios is reviewed monthly, capturing on such occasions the changes that occurred in stocks of securities on the market, in order to preserve the representativeness of the indicator. In addition, ANBIMA relies on the Benchmark Subcommittee to carry out extraordinary revisions, in case market movements that directly affect the indices are allowed, or changes in the methodology are suggested. Any changes made to the indices and methodologies are published on ANBIMA's institutional website and announced at least 120 days in advance, as provided for in the methodology.

12. Final Considerations

Unforeseen cases in the methodology will be evaluated by the responsible bodies.

On occasions when changes to preserve the index require immediate action, the procedures to be adopted can be evaluated and approved by restricted groups of members of the responsible bodies. In such cases, the assessment must be made by at least five representatives of the Benchmarks Subcommittee and approved by at least three representatives of the Pricing Committee (preferably including the president and vice president of the forum).

All decisions are disclosed through the Association's communication channels.

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IHFA (ANBIMA Hedge Funds Index)

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