



# **HFRI FOF (Synthetic) Indices**

## **Defined Formulaic Methodology**

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## Methodology

The HFRI Fund of Fund (Synthetic) Indices (“HFRI FOF (S)”) consist of constituents of the HFRI 500 Fund Weighted Composite Index (“HFRI 500”) that satisfy the eligibility criteria. The Indices are equal-weighted at rebalance time, which is performed on an annual basis.

### Eligibility Criteria

Constituents of the HFRI Fund of Fund (Synthetic) Indices must be included in the HFRI 500 Indices.

#### Constituents included in the HFRI 500 Hedge Fund Indices must:

- Report performance net of all fees in USD
- Report performance directly, or through a third party such as a fund administrator, to HFR every month on or before the 3<sup>rd</sup> to last business day of each month
- Report the fund AUM to HFR
- Be open to new investments
- Provide quarterly liquidity or better
- Have a redemption notice period of 90 days or less
- Allow for Monthly subscriptions
- Have a subscription notice period of 30 days or less
- Have a redemption settlement period of 30 days or less
- Have no Investor-Level gates or have agreed to waive them
- Have no lock-ups or have agreed to waive them
- Accept both US tax-exempt and non-US capital
- Be managed by an investment company registered with the SEC or similar regulatory body
- Agree to the Submitter Code of Conduct (SCOC)
- Offer commercial terms consistent with market standards

The following formula is used to define the representative Hedge Fund Strategy Universe (“Strategy Universe”) derived from the Global Hedge Fund Universe. The Global Hedge Fund Universe is expressed as:

$$HFU = \bigcup HFS$$

where  $HFS$  is the set of funds classified by strategy according to the strategy structure of the HFR Hedge Fund Database.

The funds comprising the HFS are filtered using the following formula to create the Strategy Universe.

$$\delta(freq - 12) \cdot \delta(fees) \cdot \delta(open) \cdot \delta(liq) \cdot H(90 - red) \cdot H(30 - subs) \cdot H(30 - settle) \cdot \delta(l\&g) \cdot \delta(ISO - USD) \cdot \delta(reg - 1) \cdot \delta(SCOC - 1) \neq 0$$

where  $H(x)$  is the step function defined as

$$H(x) = \begin{cases} 1 & x \geq 0 \\ 0 & x < 0 \end{cases}$$

$\delta(x)$  is the delta function defined as

$$\delta(x) = \begin{cases} 1 & x = 0 \\ 0 & x \neq 0 \end{cases}$$

and

- $freq$  is the reporting frequency (12=monthly, 4=quarterly)
- $fees$  is the returns net of all fees (0=yes, 1=no)
- $open$  corresponds to the fund being open to new investments (0=yes, 1=no)
- $liq$  is the liquidity offered by the fund (0=quarterly or better, 1=otherwise)
- $red$  is the redemption notice of the fund in days
- $subs$  is the subscription notice of the fund in days
- $settle$  is the redemption settlement period of the fund in days
- $l\&g$  is the lock-up or gates imposed by the fund (0=none, 1=otherwise)
- $ISO$  is the reporting currency
- $reg$  is the fund registration with the SEC or similar regulatory body (0=no, 1=yes)
- $SCOC$  is the agreement to the Submitter Code of Conduct (0=no, 1=yes)

In cases where a manager lists multiple funds with the same or similar investment profile, only one may be included in the HFRI 500 Index.

## Definitions

For the clarity of the rebalance process we define:

- Index Manager: HFR, responsible for the calculation of the Index.
- Rebalance Date: the first business date of the calendar year.
- Evaluation Date: the month starting 1 quarter prior to the Rebalance Date.
- Eligibility Criteria: performance and assets under management reported monthly in USD, net of all fees, and with the required liquidity.
- Estimated Index Values: the index will first be published on the fifth US business day of the month with a value for the prior month based on the index constituents initial reporting. An updated estimate of index values for the prior month will be published again on the 15<sup>th</sup> of the month (or nearest US business day afterwards) as additional constituent funds report their performance to HFR.
- Final Index Value: the index value for a given month will become final on the third to last US business day of the month of its initial publication, after which it will not be subject to change. For example, December performance is finalized on the third to last US business day of the following January.

## Annual Index Rebalance

The following rebalance methodology is applied on HFRI FOF (S) Indices:

- The eligible universe of constituents is determined at the Evaluation Date.

## FOF Low/Mid/High Vol (S) Indices

The HFRI FOF: Low/Mid/High Vol (S) Indices (“HFRI FOF Vol”) are designed to synthetically (S) represent the performance of low/mid/high volatility fund of funds. The indices emulate the standard fund of fund fee structure by equal weighting the monthly performance of single manager funds less 100 basis points per annum.

The constituent funds of the HFRI FOF Vol Indices correspond to the historical constituents of the HFRI 500 Fund Weighted Composite Index (“HFRI 500”). The annualized volatility of the constituents of the HFRI 500 is computed based on a lookback period of 24 months ending 4 months prior to the rebalance date. For example, if the rebalance is Jan 2021, the evaluation period would start in Sep 2018 and end in Aug 2020.

The annualized volatility of fund  $i$  is defined as

$$vol^i = \sqrt{12} \cdot \sigma(ROR_t^i)$$

where  $\sigma$  is the standard deviation of the fund monthly returns between  $t-5$  and  $t-28$ .

The funds are ranked according to their volatility:

$$rank^i = rank(vol^i) \text{ where } rank^i < rank^j \text{ for } i < j.$$

The constituent selection process is as follows:

- HFRI FOF: Low Vol (S) Index:

At the time of rebalance, from the total number  $N$  of constituents of the HFRI 500, select as constituents the bottom 40% of funds with the lowest volatility rank having

$$rank^i \leq 50\% N$$

- HFRI FOF: Mid Vol (S) Index:

At the time of rebalance, from the total number  $N$  of constituents of the HFRI 500, select as constituents the middle 60% of funds having a volatility ranking within the range

$$10\% N < rank^i \leq 90\% N$$

- HFRI FOF: High Vol (S) Index:

At the time of rebalance, from the total number  $N$  of constituents of the HFRI 500, select as constituents the top 40% of funds with the highest volatility rank having

$$50\% N < rank^i$$

Compute the equal weighted return of the portfolio for the holding period based on the selected funds as described below.

The Index NAV is 1000 at inception where “ $t=0$ ”. The NAV changes are driven by the Index performance, which is defined as the percentage change in the value of the Index from a previous date “ $t-1$ ” to current date “ $t$ ”.

At rebalance time “ $t_0$ ”, constituents are equal weighted so the NAV of the HFRI FOF Vol Indices is defined as

$$NAV_{t_0} = NAV_{t_0-1} \times (1 + ROR_{t_0})$$

where  $ROR_{t_0}$  is the percentage change in the total value of the Index from “ $t_0-1$ ” to “ $t_0$ ” computed as:

$$ROR_{t_0} = \frac{1}{n} \sum_{i=1}^n ROR_{t_0}^i - F$$

where  $ROR_{t_0}^i$  is the rate of return of constituent  $i$  at time “ $t_0$ ”,  $F$  corresponds to an index adjustment of 6 bps/month plus an additional fund of funds index adjustment of 8.33 bps/month (100 bps/year) and  $n$  is the number of constituents in the Index.

The NAV of the HFRI FOF Vol Indices at any other times “ $t$ ” is computed as

$$NAV_t = NAV_{t-1} \times (1 + ROR_t)$$

where  $ROR_t$  is the percentage change in the total value of the Index from “ $t-1$ ” to “ $t$ ” as follows:

$$ROR_t = \sum_{i=1}^n w_t^i \times ROR_t^i - F$$

where  $ROR_t^i$  is the total return of constituent  $i$  at time “ $t$ ”,  $n$  is the number of constituents in the Index and  $w_t^i$  is the weight of constituent  $i$  at the beginning of month “ $t$ ” computed as

$$w_t^i = \frac{(1 + R_{t-1}^i)}{\sum_{j=1}^n (1 + R_{t-1}^j)}$$

where  $R_{t-1}^i$  is the cumulative total return of constituent  $i$  between the rebalance date “ $t_0$ ” and time “ $t-1$ ”:

$$1 + R_{t-1}^i = \prod_{t=t_0}^{t-1} (1 + ROR_t^i).$$

Constituents that liquidate or stop reporting are replaced by other qualifying funds as follows:

- HFRI FOF: Low Vol (S) Index

1. Annual:

- a) Determine the number of index constituents  $n_0$  from prior period that are still active

$$n_0 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \notin \{\text{liquidated}, \text{stopped reporting}\}$$

- b) Rank by volatility all remaining existing constituent funds and potential replacements from the HFRI 500 monthly constituent list that have enough performance reported for the lookback period (24 months)

- c) Determine the number of active funds,  $n_1$ , that are within the ranking threshold of being in the lowest 50% of ranking funds

$$n_1 = \text{count}(\text{rank}^i \leq 50\% N)$$

- d) Determine the number of constituent funds,  $n_2$ , that were liquidated or stopped reporting

$$n_2 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \in \{\text{liquidated}, \text{stopped reporting}\}$$

- e) Add together  $n_1 + n_2$  to determine the total number of funds,  $n$ , needed for replacements

$$n = n_1 + n_2$$

- f) Choose the  $n$  highest-ranking volatility funds from the pool of 50% lowest-ranking volatility funds for replacements

$$n = 40\% N - n_0, \quad \text{such that } i \in (\text{rank}^i \leq 50\% N)$$

2. Intra-year:

- a) Determine the number of index constituents  $n_0$  from prior month that are still active

$$n_0 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \notin \{\text{liquidated}, \text{stopped reporting}\}$$

- b) Rank by volatility, all remaining existing funds and potential replacements from the HFRI 500 Index monthly constituent list that have enough performance reported for the lookback period (24 months)

- c) Determine the total number of funds,  $n_2$ , that are liquidated or stopped reporting



$$n_2 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \in \{\text{liquidated}, \text{stopped reporting}\}$$

- d) Choose the  $n_2$  highest-ranking volatility funds from the pool of 50% lowest-ranking volatility funds for replacements

$$n_2 = 40\% N - n_0, \quad \text{such that } i \in (\text{rank}^i \leq 50\% N)$$

- HFRI FOF: Mid Vol (S) Index

1. Annual:

- a) Determine the number of index constituents  $n_0$  from prior period that are still active

$$n_0 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \notin \{\text{liquidated}, \text{stopped reporting}\}$$

- b) Rank by volatility, all remaining existing funds and potential replacements from the HFRI 500 monthly constituent list that have enough performance reported for the lookback period (24 months)
- c) Determine the number of active funds,  $n_1$ , that are within the ranking threshold of being between the 15% and 85% ranking funds

$$n_1 = \text{count}(15\% N \leq \text{rank}^i \leq 85\% N)$$

- d) Determine the total number of funds,  $n_2$ , that are liquidated or stopped reporting

$$n_2 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \in \{\text{liquidated}, \text{stopped reporting}\}$$

- e) Add together  $n_1 + n_2$  to determine the total number of funds,  $n$ , needed for replacements

$$n = n_1 + n_2$$

- f) Choose the  $n$  highest-ranking volatility funds from the middle-ranking volatility band, ranked between 15% – 85%, for replacements

$$n = 60\% N - n_0, \quad \text{such that } i \in (15\% N \leq \text{rank}^i \leq 85\% N)$$

2. Intra-year:

- a) Rank by volatility, all remaining existing funds and potential replacements from the HFRI 500 monthly constituent list that have enough performance reported for the lookback period, (24 months)

- b) Determine the total number of funds,  $n_2$ , that are liquidated or stopped reporting

$$n_2 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \in \{\text{liquidated}, \text{stopped reporting}\}$$

- c) Choose the  $n_2$  highest-ranking volatility funds from the middle-ranking volatility band, ranked between 15% – 85%, for replacements

$$n_2 = 60\% N - n_0, \quad \text{such that } i \in (15\% N \leq \text{rank}^i \leq 85\% N)$$

- HFRI FOF: High Vol (S) Index:

1. Annual:

- a) Determine the number of index constituents  $n_0$  from prior period that are still active

$$n_0 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \notin \{\text{liquidated}, \text{stopped reporting}\}$$

- b) Rank by volatility, all remaining existing funds and potential replacements from the HFRI 500 monthly constituent list that have enough performance reported for the lookback period (24 months)

- c) Determine the number of active funds,  $n_1$ , that are within the ranking threshold of being in the highest 50% ranking funds

$$n_1 = \text{count}(\text{rank}^i \geq 50\% N)$$

- d) Determine the total number of funds,  $n_2$ , that are liquidated or stopped reporting

$$n_2 = \text{count}(\text{fund}^i) \text{ where } \text{fund}^i \in \{\text{liquidated}, \text{stopped reporting}\}$$

- e) Add together  $n_1 + n_2$  to determine the total number of funds,  $n$ , needed for replacements

$$n = n_1 + n_2$$

- f) Choose the  $n$  highest-ranking volatility funds from the pool of 50% highest-ranking volatility funds for replacements

$$n = 40\% N - n_0, \quad \text{such that } i \in (\text{rank}^i \geq 50\% N)$$

2. Intra-year:

- a) Determine the number of index constituents  $n_0$  from prior month that are still active

$n_0 = \text{count}(\text{fund}^i)$  where  $\text{fund}^i \notin \{\text{liquidated}, \text{stopped reporting}\}$

- b) Rank by volatility, all remaining existing funds and potential replacements from the HFRI 500 monthly constituent list that have enough performance reported for the lookback period (24 months)
- c) Determine the total number of funds,  $n_2$ , that are liquidated or stopped reporting

$n_2 = \text{count}(\text{fund}^i)$  where  $\text{fund}^i \in \{\text{liquidated}, \text{stopped reporting}\}$

- d) Choose the  $n_2$  highest-ranking volatility funds from the pool of 50% highest-ranking volatility funds for replacements

$$n_2 = 40\% N - n_0, \quad \text{such that } i \in (\text{rank}^i \geq 50\% N)$$

## FOF Risk Mitigation (S) Index

The HFRI FOF: Risk Mitigation (S) Index (“HFRI FOF Risk Mitigation”) is designed to synthetically (S) represent the performance of fund of funds with the lowest beta to equity benchmarks (e.g., S&P 500 Index). The index equal weights the funds at the time of rebalance. The index is rebalanced on January every two years. Performance is net of 100 basis points per annum which emulates the standard fund of funds fee structure.

The constituent funds of the HFRI FOF Risk Mitigation Index correspond to funds that historically qualified for the HFRI 500 Fund Weighted Composite Index (“HFRI 500”) and whose strategy classification is either Macro or Relative Value. Funds are required to have a minimum of \$50 mm in assets under management and excludes funds whose primary exposure is to Emerging Markets, Commodities or Yield Alternatives.

The beta of the qualifying constituents of the HFRI 500 to the equity benchmark is computed based on a lookback period of 12 months ending 4 months prior to the rebalance date. For example, if the rebalance is Jan 2021, the evaluation period would start in Sep 2019 and end in Aug 2020.

The beta of fund  $i$  to benchmark  $B$  is defined as

$$\beta_{i/B} = \rho_{i/B} \cdot \sigma_i / \sigma_B$$

where  $\sigma_i$  and  $\sigma_B$  are the standard deviation of fund  $i$  and the benchmark  $B$ , respectively, and  $\rho_{i/B}$  is the Pearson correlation of fund  $i$  with the benchmark  $B$  defined as

$$\rho_{i/B} = \frac{\text{cov}(R_i, B)}{\sigma_i \sigma_B}$$

where  $R_i$  represents the returns of the fund and  $B$  the returns of the benchmark between  $t-5$  and  $t-16$ .

The funds are ranked according to their beta:

$$\text{rank}^i = \text{rank}(\beta^{i/B}) \text{ where } \text{rank}^i < \text{rank}^j \text{ for } i < j.$$

At the time of rebalance, from the total number of qualifying constituents of the HFRI 500, the 50 funds with the lowest beta to the benchmark having

$$\text{rank}^i \leq 50$$

are select as constituents.

The Index  $NAV$  is 1000 at inception where “ $t=0$ ”. The  $NAV$  changes are driven by the Index performance, which is defined as the percentage change in the value of the Index from a previous date “ $t-1$ ” to current date “ $t$ ”.

At rebalance time “ $t_0$ ”, constituents are equal weighted so the  $NAV$  of the HFRI FOF Risk Mitigation Index is defined as

$$NAV_{t_0} = NAV_{t_0-1} \times (1 + ROR_{t_0})$$

where  $ROR_{t_0}$  is the percentage change in the total value of the Index from “ $t_0-1$ ” to “ $t_0$ ” computed as:

$$ROR_{t_0} = \frac{1}{n} \sum_{i=1}^n ROR_{t_0}^i - F$$

where  $ROR_{t_0}^i$  is the rate of return of constituent  $i$  at time “ $t_0$ ”,  $F$  corresponds to an index adjustment of 6 bps/month plus an additional fund of funds index adjustment of 8.33 bps/month (100 bps/year) and  $n$  is the number of constituents in the Index.

The  $NAV$  of the HFRI FOF Risk Mitigation Index at any other times “ $t$ ” is computed as

$$NAV_t = NAV_{t-1} \times (1 + ROR_t)$$

where  $ROR_t$  is the percentage change in the total value of the Index from “ $t-1$ ” to “ $t$ ” as follows:

$$ROR_t = \sum_{i=1}^n w_t^i \times ROR_t^i - F$$

where  $ROR_t^i$  is the total return of constituent  $i$  at time " $t$ ",  $n$  is the number of constituents in the Index and  $w_t^i$  is the weight of constituent  $i$  at the beginning of month " $t$ " computed as

$$w_t^i = \frac{(1 + R_{t-1}^i)}{\sum_{j=1}^n (1 + R_{t-1}^j)}$$

where  $R_{t-1}^i$  is the cumulative total return of constituent  $i$  between the rebalance date " $t_0$ " and time " $t-1$ ":

$$1 + R_{t-1}^i = \prod_{t=t_0}^{t-1} (1 + ROR_t^i).$$

Constituents that liquidate or stop reporting are replaced by other qualifying funds following the same ranking process as described above.

## Additional Rebalance Considerations

- Additional changes to the pool of funds or their weights may be taken on a more frequent basis to address specific concerns of any fund such as risk, liquidity, due diligence, minimum investment size, subscription or redemption fees, non-market commercial terms, concentration or other issues which materially affect the Index, including regulatory issues. If a fund ceases to satisfy any of the Eligibility Criteria required for inclusion into the Index between rebalancing dates, HFR will remove the fund from the Index in a commercially reasonable time. If a fund is removed, HFR may replace it with another fund within the same strategy provided it satisfies the criteria for inclusion, or may re-weight the remaining funds in the same strategy.
- An Index constituent may be removed from the Index if it fails to meet the Eligibility Criteria on or before the Rebalance Date. In such a case, the NAV of the constituent will be allocated to the remaining constituents of the Index or allocated to a replacement prospective constituent. An Index constituent may be replaced or removed with another qualifying prospective constituent between rebalance dates as required under specific circumstances. Such events include without limitation, due diligence concerns, inability to maintain a constituent weight due to lockups, gates or other circumstances.
- If an Index constituent's weight cannot be maintained between Rebalance Dates, the constituent may remain in the Index at a reduced weight, its NAV may be reallocated equally to the remaining constituents or may be replaced with a similar qualifying prospective constituent as available.

- Under certain special circumstances certain constituents may remain in the Index on a limited or temporary basis. Examples of these include, but are not limited to, constituents subject to liquidation, closure to new investments, regulatory matters, or suspension of redemptions. The specific treatment of constituents under special circumstances includes:

- Index Constituent enters liquidation process.

Index Constituents subject to liquidation are kept in the Index until liquidation is completed. The weighting of the constituents is adjusted in the Index to reflect its liquidity and redemption schedule. The NAV of the constituent that becomes available through this process is then allocated to the remaining constituents of the Index within the same strategy or replaced by a qualifying fund.

- Index Constituent becomes closed to new investments.

Index Constituents that become closed to new investment before the Rebalance Date may remain in the Index with a weight that can only increase due to the performance of the constituent and does not increase during the Index rebalance.

If the Index Administrator receives notification of, and can verify that, an Index Constituent significant adverse circumstances or due diligence concerns such as: large investor redemptions, critical personnel loss, an audit holdback, a side pocket implemented, redemptions suspended / gate activated, reduced liquidity of liquidating constituent, money laundering charges, cyber security breach / damaging client info leaked or stolen, fraud, breach of any law, regulation or rule, major reputation damaging story or any similar intervening circumstance, may be subject to removal from the Index before the Rebalance Date. The removal from the Index will follow the liquidity and redemption terms of the constituent whereby the constituent weight will be reduced until its full Index removal. The weight of the constituent that becomes available through this process is then allocated to the remaining constituents of the Index within the same strategy.

## Index NAV Calculation

HFRI FOF (S) Indices (the “Index” and collectively, “Indices”) are total return indices and are published by HFR at [www.hfr.com](http://www.hfr.com) and on Bloomberg. Computation of the Index NAV uses the performance of constituent funds as reported to HFR. HFR will seek to use the most timely and accurate performance information provided.

The Index  $NAV$  is 1000 at inception where “ $t=0$ ”. The  $NAV$  changes are driven by the Index performance, which is defined as the percentage change in the value of the Index from a previous date “ $t-1$ ” to current date “ $t$ ”.

At rebalance time “ $t_0$ ”, constituents are equal weighted so the  $NAV$  of the HFRI FOF (S) Index is defined as

$$NAV_{t_0} = NAV_{t_0-1} \times (1 + ROR_{t_0})$$

where  $ROR_{t_0}$  is the percentage change in the total value of the Index from “ $t_0-1$ ” to “ $t_0$ ” computed as:

$$ROR_{t_0} = \frac{1}{n} \sum_{i=1}^n ROR_{t_0}^i - F$$

where  $ROR_{t_0}^i$  is the rate of return of constituent  $i$  at time “ $t_0$ ”,  $F$  corresponds to an index adjustment of 6 bps/month and  $n$  is the number of constituents in the Index.

The  $NAV$  of the HFRI FOF (S) Index at any other times “ $t$ ” is computed as

$$NAV_t = NAV_{t-1} \times (1 + ROR_t)$$

where  $ROR_t$  is the percentage change in the total value of the Index from “ $t-1$ ” to “ $t$ ” as follows:

$$ROR_t = \sum_{i=1}^n w_t^i \times ROR_t^i - F$$

where  $ROR_t^i$  is the total return of constituent  $i$  at time “ $t$ ”,  $n$  is the number of constituents in the Index and  $w_t^i$  is the weight of constituent  $i$  at the beginning of month “ $t$ ” computed as

$$w_t^i = \frac{(1 + R_{t-1}^i)}{\sum_{j=1}^n (1 + R_{t-1}^j)}$$

where  $R_{t-1}^i$  is the cumulative total return of constituent  $i$  between the rebalance date “ $t_0$ ” and time “ $t-1$ ”:

$$1 + R_{t-1}^i = \prod_{t'=t_0}^{t-1} (1 + ROR_{t'}^i).$$

If a constituent  $k$  ceases to be a constituent of the Index at given time  $t'$  before the rebalance date, its weight is then equally distributed to the remaining constituents in the Index; the new constituent weights are given by

$$w_{t'}^i = w_{t'}^j + \frac{1}{n-1} \cdot w_{t'}^k, \quad \text{with } i \neq k.$$

## Index Disruption Event

“Index Disruption Event” means:

- (1) where, in the determination of HFR, it is not possible, or it is not reasonably practicable for it to determine the price or value of a constituent; or
- (2) a value for a constituent is not announced or is otherwise unavailable when such announcement or availability would normally be scheduled; or
- (3) the occurrence of an event or circumstance (including, without limitation, a major market disruption, a systems failure, natural or man-made disaster, act of God, armed conflict, act of terrorism, riot or labor disruption or any similar intervening circumstance) that HFR determines affects the Index.
- (4) the occurrence of other event or circumstance (including, without limitation, a personnel loss, a significant client(s) redemption, an audit holdback, a side pocket implemented, redemptions suspended / Gate activated, reduced liquidity of liquidating constituent, money laundering charges, Cyber security breach / Client info leaked or stolen, Fraud, breach of any law, regulation or rule, Market specific short bans or suspensions, Major reputation hurting story or any similar intervening circumstance) that HFR determines affects the Index.

If, in the determination of HFR, any of the foregoing is material.

Upon the occurrence of an Index Disruption Event on any day on which the official closing level of the Index is scheduled to be published, HFR (i) shall not calculate and publish the Index Level and/or (ii) if relevant, may make such adjustments to the provisions of the Index to





account for such Index Disruption Event as it determines appropriate, including, without limitation, delaying the application of any procedures or requirements of the Index.

# Appendix 1.

## Strategy Descriptions

HFR seeks to maintain a representative, relevant, robust and contemporaneous Strategy Classification System for all investment funds in the HFR Database. The classifications reflect the evolution of strategic trends in the hedge fund industry, cognizant of the reality that over market cycles the classification system is likely to continue to evolve, as new opportunities attract investor capital.

### Primary Strategy Descriptions

**Strategy:** In completing a fund profile for inclusion in HFR subscriber database, an investment manager qualitatively chooses one of four primary strategies, as defined below:

**Equity Hedge:** Equity Hedge strategies maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50%, and may in some cases be substantially entirely invested in equities, both long and short.

**Event-Driven:** Investment Managers who maintain positions in securities of companies currently or prospectively involved in corporate transactions of a wide variety, including but not limited to: mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. ED exposure contains a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

**Macro:** Investment Managers which execute a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the

impact these have on equity, fixed income, currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposes to EH, in which the fundamental characteristics on the company are the most significant and integral to investment thesis.

**Relative Value:** Investment Managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities Manager employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. RVA position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

## Accompanying Notes

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**Addendum – Revisions to the Methodology**

Date	Revision	Process
<b>3/17/2022</b>	Some language in the introduction and eligibility criteria sections has been updated for clarification purposes	No historical performance has been affected.
<b>8/27/2022</b>	Clarifying language has been added to the introduction, eligibility criteria, rebalance considerations, Index NAV Considerations and Appendix 1.	No historical performance has been affected.