



# BNP PARIBAS

The bank  
for a changing  
world

## BNP Paribas Global H-Factor Index

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### HUMAN BEHAVIOR - THE HIDDEN RISK

In a changing world, we strive to apply a rational approach to building global equities exposure that delivers excess return. For decades we have wondered:

Where is there potential to lose money? Human behavior sometimes leads to the hidden risk of interpreting vague and ambiguous **information in a systematically incorrect way**.

### THE BNP PARIBAS GLOBAL H-FACTOR INDEX

BNP Paribas has collaborated with New Age Alpha, an asset management innovator which utilizes an actuarial-based approach to mitigate human behavior's impact on stock price, to introduce the BNP Paribas Global H-Factor Index ("BNPP Global H-Factor Index").

This rules-based index aims to provide a balance between **growth potential** and **asset protection** by seeking to **systematically avoid the human behavior risk**, or the **H-Factor**.

The index aims to create consumer value by:

1. Including only the stocks with the lowest Human Factor score,
2. Providing a diversified exposure to both equity and fixed income,
3. and employing a strategic risk reduction mechanism.

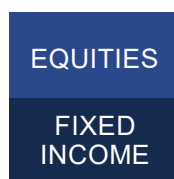
### WHAT MAKES THE INDEX UNIQUE?

New Age Alpha's H-Factor methodology drives stock selection, using **technology, actuarial science** and 20 years' research to score and seek avoidance of human behavior risk that **it believes causes stocks to be mispriced**.

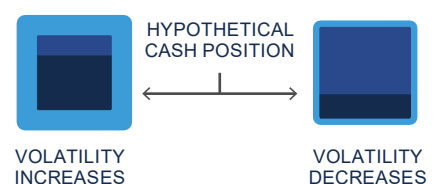
**New Age Alpha uses the stock price** and **publicly available information to calculate** the revenue growth required to support the current stock price, and then compares it to historical rates. The H-Factor score is the **probability that the company** will fail to deliver this growth. The lower the score, the better.



225 global stocks with the **lowest Human Factor** scores form the New Age Alpha Global Leading Index, which is the equity portion of the BNPP Global H-factor index.



In addition to equities, the BNPP Global H-factor Index also utilizes exposure to **US Treasury 2Y or 10Y futures** for diversification.



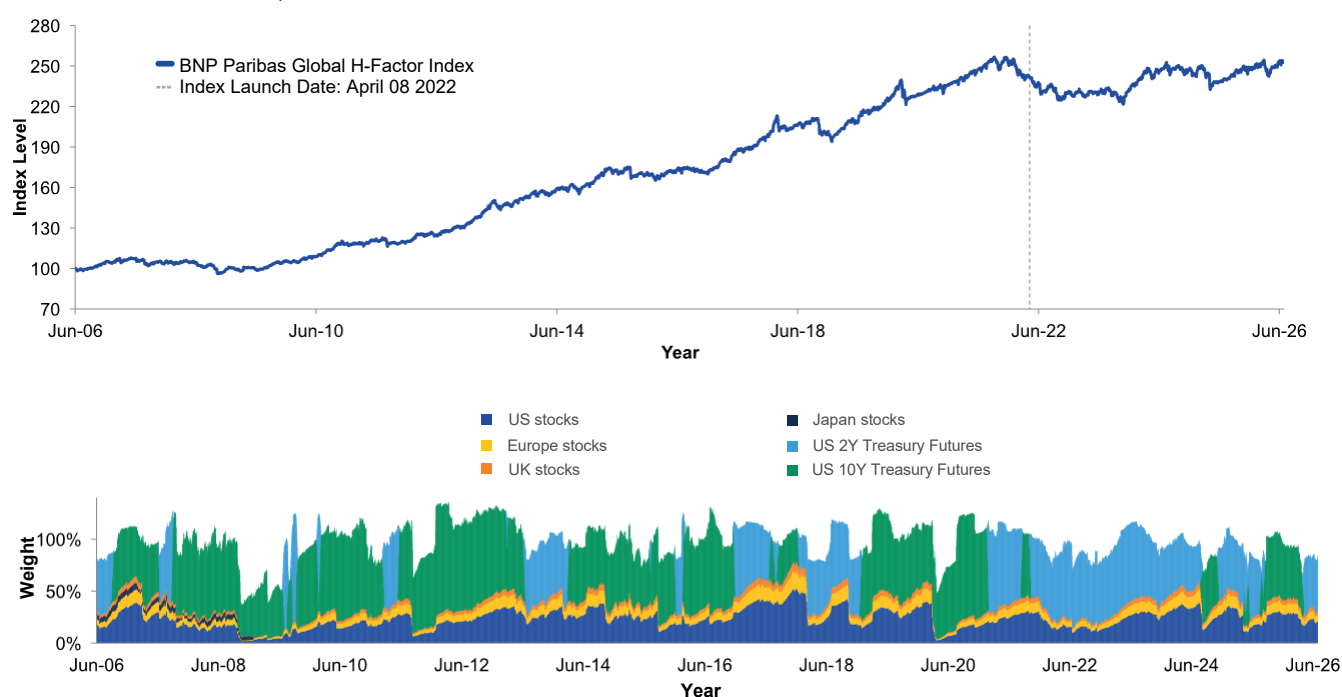
In an effort to hedge large market movements, we employ a risk control mechanism. **On a daily basis, the Index methodology adjusts exposure among the stocks, Treasury futures, and a hypothetical cash position** to maintain the index's **annualized volatility of 5%**.

## INDEX INFORMATION

|                          |                               |
|--------------------------|-------------------------------|
| <b>Bloomberg Ticker</b>  | BNPIHFAC Index                |
| <b>Calculation Agent</b> | BNP Paribas Arbitrage SNC     |
| <b>Index Sponsor</b>     | BNP Paribas                   |
| <b>Index Type</b>        | Excess Return                 |
| <b>Weighting</b>         | Daily Rebalancing             |
| <b>Annual Fee</b>        | 0.50%, Charged On Daily Basis |
| <b>Index Launch Date</b> | April 8 <sup>th</sup> , 2022  |
| <b>Index Start Date</b>  | June 1 <sup>st</sup> , 2006   |

The BNP Paribas Global H-Factor Index is an excess return<sup>1</sup> index. Performance is net of rebalancing, replication fees and a maintenance fee of 0.50% per annum that is deducted on a daily basis.

## INDEX STATISTICS, LEVEL AND WEIGHTINGS - ACTUAL AND HYPOTHETICALLY SIMULATED



|                 | YTD   | 1Y    | 2Y     | 3Y    | 5Y    | 10Y   | Since Start Date |
|-----------------|-------|-------|--------|-------|-------|-------|------------------|
| Return p.a.     | 2.32% | 5.49% | -3.90% | 3.07% | 0.38% | 3.89% | 4.74%            |
| Volatility p.a. | 5.41% | 4.93% | 5.29%  | 5.13% | 5.04% | 4.99% | 5.02%            |
| Sharpe Ratio    | 0.43  | 1.11  | 0.22   | 0.60  | 0.07  | 0.78  | 0.95             |

Source: Bloomberg, BNP Paribas from June 1<sup>st</sup>, 2006. Past performance is not an indicator of future performance. The BNP Paribas Global H-Factor Index <BNPIHFAC Index> is based on Hypothetical Past Performance Data ("PPD") prior to the live date of 08 April 2022, actual/historical performance begins after Launch Date. Because the BNP Paribas Global H-Factor Index did not exist prior to the launch date, all retrospective levels provided in the graph and table above are simulated and must be considered illustrative only. The presentation of hypothetical data reflects the deduction of fees and charges. These simulations are the result of estimates made by BNP Paribas at a given moment on the basis of the parameters selected by BNP Paribas, certain assumptions that may or may not hold in future periods, of market conditions at this given moment and of historical data, which should not be used as guidance, in any way, of the future results of the BNP Paribas Global H-Factor Index. <sup>1</sup>The BNP Paribas Global H-Factor Index is an "Excess Return Index" meaning its returns are derived from changes in level of its components (known as "price return") and profit or loss gained from rolling from one futures contract to another (known as "roll return"). Unlike Total Return Indices, it does not derive returns based on interest earned on cash or other collateral deposited in connection with the purchase of futures contracts (known as "collateral return")



# Selected Risks and Considerations Associated with the Index

## **The BNP Paribas Global H-Factor Index levels are based on the values of notional assets and liabilities.**

The BNP Paribas Global H-Factor Index only calculates the exposure to a dynamic, hypothetical portfolio that tracks the excess returns of the underlying components and is purely notional. There is no actual portfolio of assets to which any person makes any investment or has any ownership interest.

## **No recommendation.**

BNP Paribas makes no recommendation as to the suitability for investment of the BNP Paribas Global H-Factor Index or any products or strategies based partly or wholly on BNP Paribas Global H-Factor Index. You should reach a decision after careful consideration with your advisors.

## **Strategies relying on the levels of the BNP Paribas Global H-Factor Index may not be successful.**

There is a risk that the rules-based methodology of the BNP Paribas Global H-Factor Index does not meet its stated objectives, including meeting its annualized target volatility of 5%, resulting in underperformance of the components that comprise the index.

## **Correlation of performances among the underlying components may reduce the levels of the BNP Paribas Global H-Factor Index.**

Performances among the underlying components may become highly correlated from time to time. High correlation during periods of negative returns among underlying components representing any one sector or asset type that have a substantial weighting in the BNP Paribas Global H-Factor Index could have a material adverse effect on the levels of the BNP Paribas Global H-Factor Index, which could in turn negatively affect the performance any product or strategy based partly or wholly on the levels of the BNP Paribas Global H-Factor Index.

## **Legal and regulatory regimes may affect the BNP Paribas Global H-Factor Index, its components or its sub-components.**

The BNP Paribas Global H-Factor Index and its components (and sub-components thereof) are subject to legal and regulatory regimes in various regions and, in some cases, in other countries that may change in ways that could negatively affect the BNP Paribas Global H-Factor Index or its components (or sub-components thereof). Changes to the applicable legal or regulatory regimes may have a negative impact on the BNP Paribas Global H-Factor Index level. The components (or sub-components thereof) of the index that are traded on one or more public exchanges are subject to the rules of the relevant exchange.

## **The BNP Paribas Global H-Factor Index has limited historical information.**

The BNP Paribas Global H-Factor Index is a new strategy, launched on April 8<sup>th</sup>, 2022. The performance shown before that date is hypothetical past performance, based on hypothetical back-tested information. This brochure also contains certain performance data based on back-testing, i.e., calculations of the hypothetical levels of the BNP Paribas Global H-Factor Index as if it had actually existed during a defined period of time, and may in certain circumstances contain simulated levels information where the BNP Paribas Global H-Factor Index has recently been established or issued. For time periods prior to the launch of any ETF included in the index, back-testing uses alternative performance information derived from a proxy with similar asset exposure, rather than performance information for the relevant ETF. Further, you must note that such analysis is based on a number of working assumptions that may not be capable of duplication in actual trading terms. Unlike actual performance records, hypothetical or simulated performances, returns or scenarios may not necessarily reflect certain market factors such as liquidity constraints, fees and transaction costs and must be considered as illustrative only. Actual historical or back-tested past performance does not constitute an indication of future results. The actual performance of the BNP Paribas Global H-Factor Index may bear little relation to its hypothetical historical results.

## **The BNP Paribas Global H-Factor Index has limited public information.**

The BNP Paribas Global H-Factor Index is a custom index developed by BNP Paribas, the Index Sponsor. There is limited information relating to the BNP Paribas Global H-Factor Index that is publicly available. In addition, publicly available information on the BNP Paribas Global H-Factor Index, its methodology and its components is limited.

## **The BNP Paribas Global H-Factor Index's daily volatility control mechanism may result in a lower index level and the actual volatility of the BNP Paribas Global H-Factor Index may not equal its target volatility.**

The BNP Paribas Global H-Factor Index's daily volatility control allows the BNP Paribas Global H-Factor Index to dynamically adjust the value of the hypothetical exposure to the portfolio the index is based on and any cash component, depending on the volatility environment. However, the risk control overlay might limit overall levels of the BNP Paribas Global H-Factor Index in rising equity markets and may provide imperfect, limited protection in falling equity markets, particularly against sudden, large equity losses. No assurance can be given that the BNP Paribas Global H-Factor Index methodology will achieve its target volatility goals or that products or strategies based partly or wholly on the levels of the BNP Paribas Global H-Factor Index will outperform any alternative investment.

## **The closing levels of the BNP Paribas Global H-Factor Index will include the deduction of an Annual Fee.**

The closing level of the BNP Paribas Global H-Factor Index includes a deduction from the aggregate values of its components of an annual fee equal to 0.50% per annum. As a result of this deduction, the value of the BNP Paribas Global H-Factor Index will trail the value of a hypothetical identical portfolio from which no such amount is deducted.

## **The closing level of the BNP Paribas Global H-Factor Index is net of BNP Paribas' replication and rebalancing costs.**

The Closing Level of the BNP Paribas Global H-Factor Index is net of BNP Paribas' replication and rebalancing costs associated with the index. As a result of these costs, the value of the BNP Paribas Global H-Factor Index could trail the value of a hypothetical identical portfolio from which no such amount is deducted.

## **The BNP Paribas Global H-Factor Index is an excess return index.**

In general, returns from investing in futures contracts are derived from three sources: (1) changes in the price of such futures contracts (known as the "price return"), (2) profit or loss realized when rolling from a futures contract with one expiry date to another futures contract with a different, generally later, expiry date (known as the "roll return") and (3) interest earned on the cash (or other) collateral deposited in connection with the purchase of such futures contract (known as the "collateral return"). The components of the BNP Paribas Global H-Factor Index that seek to track futures contracts generate "excess returns", meaning the sum of the price return and roll return with respect to the underlying components. As a result, with respect to the BNP Paribas Global H-Factor Index's underlying components that seek to track futures contracts, an investment in an instrument linked to the BNP Paribas Global H-Factor Index will not generate the same returns that would be obtained from investing directly in future contracts that underlie such underlying components because the collateral return is not used in calculating the "excess return" index. With respect to each ETF included in the index, the index measures their performance plus dividends paid on such ETFs, less the interest rate. Increases in the level of the interest rate may offset in whole or in part increases in the levels of the index components that are ETFs.

## **BNP Paribas Arbitrage SNC, an affiliate of the BNP Paribas Global H-Factor Index Sponsor, BNP Paribas, is the index's calculation agent who is responsible for calculating the levels of the BNP Paribas Global H-Factor Index.**

The policies and calculations for which the calculation agent is responsible could have an impact, positive or negative, on the level of the BNP Paribas Global H-Factor Index. BNP Paribas and its affiliates are under no obligation to consider your interest as an investor in a product linked to the BNP Paribas Global H-Factor Index.

## **Portions of the BNP Paribas Global H-Factor Index may be effectively uninvested and earn no return.**

The BNP Paribas Global H-Factor Index, on each day on which it is calculated, adjusts its exposure to its components in an attempt to maintain an annualized volatility of 5%. If the aggregate weight of the components is less than 100%, the BNP Paribas Global H-Factor Index will allocate exposure to a hypothetical cash position. As a result, the BNP Paribas Global H-Factor Index may underperform a similar index that provides 100% exposure to its components. The hypothetical cash position is an uninvested position that does not earn interest or any other return.

## **The price, level or value of the components used in the BNP Paribas Global H-Factor Index may differ from other publicly available prices.**

The levels of the components that are Treasury Futures Indices (the "BNPP Component Indices") are intended to reflect the performance of the relevant futures contracts on a daily volume-weighted average price, subject to a set of trade filters selected by the Index Sponsor to exclude trades with certain codes provided by the relevant exchange that indicate non-standard trades. Such levels are calculated by the Index Calculation Agent or an affiliate thereof and are not publicly available and may not reflect all trades reported by the relevant futures exchange. (i) The daily closing price or any other price of the underlying futures contract may vary from the volume-weighted average price reflected by the level of the applicable BNPP Component Index.

Furthermore, a BNPP Component Index may be subject to a disruption due to the unavailability of a volume-weighted average price despite regular trading of the underlying futures contract and the availability of a closing price for such contract.

## **The BNP Paribas Global H-Factor Index's target volatility feature may reduce its appreciation potential.**

Under normal circumstances, equity or commodity futures may exhibit significantly higher volatility than the target volatility of 5%. Accordingly, the "volatility control" mechanism of the BNP Paribas Global H-Factor Index may have the effect of skewing allocations among components in the BNP Paribas Global H-Factor Index toward components that provide exposure to fixed-income assets (which typically have lower volatility than components that provide exposure to equity or commodity futures) or to cash (which has zero volatility). Index components that typically have lower volatility may have lower return potential than components that typically have higher volatility, and any allocation to cash will earn no return at all.

Moreover, if the BNP Paribas Global H-Factor Index has a relatively high allocation to components that provide exposure to fixed-income assets, it will be particularly sensitive to factors that adversely affect the value of fixed-income instruments, such as increases in interest rates or declining perceptions of credit quality. A high allocation to components that provide exposure to fixed-income assets may also cause the BNP Paribas Global H-Factor Index to underperform a portfolio more heavily weighted with higher volatility assets under certain circumstances. For example, in an equity bull market that is accompanied by rising interest rates, a portfolio heavily weighted with components that provide exposure to fixed-income assets might decline in value as a result of the rising interest rates, while a portfolio heavily weighted with components that provide exposure to equities would appreciate in value.

## **Other Key Risks:**

- The BNP Paribas Global H-Factor Index involves daily rebalancing that is applied to the components. Changes in the value of the components may offset each other.
- The BNP Paribas Global H-Factor Index is subject to risks associated with non-U.S. markets.
- Certain components are based on futures contracts and are may be subject to currency exchange risk. The BNP Paribas Global H-Factor Index contains a currency conversion mechanism that seeks to reduce losses due to currency exchange risk. It can also reduce or eliminate gains from currency exchange risk.
- BNP Paribas is the sponsor of the Treasury Futures Indices that underlie the BNP Paribas Global H-Factor Index.



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