S&P Risk Parity Index Consultation Results

NEW YORK, FEBRUARY 10, 2020: S&P Dow Jones Indices (“S&P DJI”) has conducted a consultation with members of the investment community on potential changes to the S&P Risk Parity Index Family.

S&P DJI will amend specific rules in the daily index calculation, as well as the rules and calculations pertaining to the monthly rebalancing. The proposed changes are described below.

VOLATILITY CALCULATION FOR NON-U.S. DOLLAR INSTRUMENTS

Currently, the volatility calculation for non-U.S. Dollar futures contracts involves converting values (underlying futures contract settlement price + change in futures contract value) to U.S. Dollars and calculating the volatility on the U.S. Dollar time series.

S&P DJI will change this calculation so that volatility will be calculated on a U.S. Dollar time series, but the notional will be maintained in U.S. Dollars (no currency conversion) and only the change in futures contract value will be converted into U.S. Dollars. Given that futures contracts are unfunded instruments and no currency risk exists on the notional, the aim of this change is to mitigate the impact of currency rates on volatility so that weights are more reflective of the actual volatility contribution.

MONTHLY COMPONENT REBALANCING WEIGHTS CALCULATION

Currently, asset class weights are calculated based on the volatility of the asset class daily return series of up to 15 years. The current asset class return calculation is as follows:

\[
\text{AssetClassReturn}_{i,t} = \sum_{t=\text{max}(0,t-(15+302))}^{\text{max}(365,t)} (\text{ComponentReturn}_{j,t} \times \text{ComponentWeight}_{j,t-1})
\]

Similarly, the final index weights are calculated based on the volatility of the index daily return series of up to 15 years. The index return calculation is as follows:

\[
\text{IndexReturn}_{t} = \sum_{t=\text{max}(0,t-(15+302))}^{\text{max}(365,t)} (\text{ComponentReturn}_{j,t} \times \text{AssetClassWeight}_{k,t-1} \times \text{ComponentWeight}_{j,t-1})
\]

As both formulas show, the indices use the historical rebalancing weight \((t-1)\) to build the daily return series of up to 15 years. Instead of using the historical weight, S&P DJI will instead use the current rebalancing weight, as calculated in the previous step, which determines the asset class constituent weights on the rebalancing \((r)\), so that volatility (and thus weights) reflect the current index composition. With this change, the current weight will be held constant over the 15-year period.
INDEX COMPOSITION

Currently, U.S. equities are represented in the index using standard S&P 500 Index futures contracts. With the aim of using a more liquid component, S&P DJI will instead use S&P 500 E-Mini Index futures contracts. E-Mini futures provide the same U.S. equities representation but have historically been more liquid than standard S&P 500 Index futures.

ROLL SCHEDULE

Currently, the roll for all constituent futures contracts takes place after the close of business on the second business day of the month. In order to align the roll period with historical peak liquidity windows, S&P DJI will instead use asset class-specific roll schedules. The roll schedules for each asset class will be as follows:

- **Equity Futures.** Roll periods will follow the roll schedules as per the [S&P Equity Futures and Currency Futures Indices Methodology](#).
- **Fixed Income Futures.** Roll periods will follow the [S&P Global Bond Futures Index Series Methodology](#).
- **Commodities Futures.** Roll periods will follow the [S&P GSCI Methodology](#).

INDEX CALCULATION OF REBALANCING WEIGHTS

Currently, index rebalancing weights are determined by calculating the individual asset class’ standard deviation, and then adjusting the asset class weights based on their relation to the target volatility. S&P DJI will eliminate this step in order to simplify the calculation process. Instead, the leverage adjustment will be performed at the final step to calculate the index rebalancing weights, as the last index volatility adjustment will cause the index to conform to the target volatility.

IMPLEMENTATION TIMING

These changes will be implemented in conjunction with the April rebalancing calculation, which is scheduled to take place on Wednesday, April 1, 2020.

INDEX HISTORY

Index history from the existing base date of January 3, 2003 will be recalculated and restated. The restated index history will use the same base value of 1000.

INDEX FILE DISSEMENATION

Given the impending implementation of the methodology changes previously detailed, S&P DJI will decommission and replace the index files currently being disseminated with new ones. Final details regarding the new replacement files will be provided in a separate announcement by the first week of March 2020.

Please note that the S&P Risk Parity Index Family Methodology on S&P DJI’s website is being updated to reflect these changes.

For more information about S&P Dow Jones Indices, please visit [www.spdji.com](http://www.spdji.com).

INDEX ANNOUNCEMENT
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