S&P Risk Parity Index Consultation

NEW YORK, DECEMBER 18, 2019: S&P Dow Jones Indices (“S&P DJI”) is conducting a consultation with members of the investment community on potential changes to the S&P Risk Parity Index Family.

S&P DJI is considering the following methodology changes to 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 is proposing to change this calculation so that volatility would be calculated on a U.S. Dollar time series, but the notional would be maintained in U.S. Dollars (no currency conversion) and only the change in futures contract value would 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 proposal 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 15 years. The asset class return calculation is as follows:

\[
AssetClassReturn_{i,t} = \sum_{t=\max(0, r-(15+252))}^r (ComponentReturn_{j,t} \times ComponentWeight_{j,t-1})
\]

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

\[
IndexReturn_t = \sum_{t=\max(0, r-(15+252))}^r (ComponentReturn_{j,t} \times AssetClassWeight_{k,t-1} \times ComponentWeight_{j,t-1})
\]

As both formulas show, the indices use the historical rebalancing weight \((t-1)\) to build the daily return series of 15 years. Instead of using the historical weight, S&P DJI is proposing to 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. Under this proposal, the current weight would be held constant over the 15-year period.

For more information on the formulas provided, please refer to the S&P Risk Parity Index Family Methodology available here.
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 is proposing to 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

Under the current methodology, 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 is proposing to instead use asset class-specific roll schedules. The proposed roll schedules for each asset class are as follows:

- **Equity Futures.** Roll periods would follow the roll schedules as per the S&P Equity Futures and Currency Futures Indices Methodology.
- **Fixed Income Futures.** Roll periods would follow the S&P Global Bond Futures Index Series Methodology.
- **Commodities Futures.** Roll periods would 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 is proposing to eliminate this step in order to simplify the calculation process. Under this proposal, the leverage adjustment would 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

S&P DJI is proposing to implement the changes described above, if adopted, effective with the February 2020 rebalancing period.

QUESTIONS

Please answer the following questions and provide S&P DJI with the reasoning behind your answers:

1. **Do you agree with the proposed methodology changes?**
2. **If the proposed changes described above are adopted, when would be the most appropriate time to implement them?**
   - With the February 2020 rebalancing period
   - At another time (please specify)
3. **Do you have any other comments or feedback regarding the proposed changes outlined above?**

Your participation in this consultation is important as we gather information from various market participants to properly evaluate your views and preferences. S&P DJI will make responses to consultations externally available upon request.1 If you do not want your response to be made

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1 Individual and company names as well as contact details will be redacted.
available, you must clearly state that in your response. Please respond to this survey by **January 16, 2020**. After this date, S&P DJI will no longer accept survey responses. Prior to the Index Committee’s final review, S&P DJI will consider the issues and may request clarifications from respondents as part of that review. **Alternative options to the proposed questions after the deadline require that the consultation be re-opened to the public.**

To participate in this consultation, please visit the online survey available [here](https://example.com).

For further information about this consultation, please contact S&P Dow Jones Indices at [index_services@spglobal.com](mailto:index_services@spglobal.com).

*Please be advised that all comments from this consultation will be reviewed and considered before a final decision is made; however, S&P DJI makes no guarantees or is under any obligation to comply with any of the responses. The survey may result in no changes or outcome of any kind. If S&P DJI decides to change the index methodology, an announcement will be posted on our website.*

Thank you for taking the time to complete this survey.

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

The graphs and tables below and on the following page show the hypothetical results that would have occurred had the proposed changes to the Volatility Calculation for Non-U.S. Dollar Instruments, Monthly Component Rebalancing Weights Calculation, and Index Calculation of Rebalancing Weights been in effect for the S&P Risk Parity Index – 10% Target Volatility over a 15-year period ending 12/31/2018. For clarity, the hypothetical results are not reflective of the proposed Index Composition and Roll Schedule changes. Please note that the analysis used LME Copper instead of COMEX Copper.
Historical Allocation by Asset Class

Current S&P Risk Parity – 10% Target Volatility Index

Proposed S&P Risk Parity – 10% Target Volatility Index

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<th></th>
<th>Equity</th>
<th>Fixed Income</th>
<th>Commodities</th>
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<td>Max</td>
<td>23.68%</td>
<td>64.62%</td>
<td>23.60%</td>
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<tr>
<td>Min</td>
<td>17.53%</td>
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<td>17.84%</td>
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<table>
<thead>
<tr>
<th></th>
<th>Equity</th>
<th>Fixed Income</th>
<th>Commodities</th>
</tr>
</thead>
<tbody>
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<td>67.11%</td>
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<td>Max</td>
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<td>69.69%</td>
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<tr>
<td>Min</td>
<td>14.00%</td>
<td>62.98%</td>
<td>15.36%</td>
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ABOUT S&P DOW JONES INDICES

S&P Dow Jones Indices is the largest global resource for essential index-based concepts, data and research, and home to iconic financial market indicators, such as the S&P 500® and the Dow Jones Industrial Average®. More assets are invested in products based on our indices than products based on indices from any other provider in the world. Since Charles Dow invented the first index in 1884, S&P DJI has been innovating and developing indices across the spectrum of asset classes helping to define the way investors measure and trade the markets.

S&P Dow Jones Indices is a division of S&P Global (NYSE: SPGI), which provides essential intelligence for individuals, companies and governments to make decisions with confidence. For more information, visit www.spdji.com.

FOR MORE INFORMATION:
S&P Dow Jones Indices
index_services@spglobal.com