S&P Dow Jones Indices

A Division of S&P Global

S&P PRISM Indices
Methodology

October 2024

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Introduction

Index Objectives and Highlights

S&P PRISM Index. The index is a weighted return index constructed by applying the Risk Control index framework to an inverse risk weighted basket of three component indices that account for technical and fundamental indicators.

S&P PRISM Factor Index. The index is a weighted return index constructed by applying the Risk Control index framework to an inverse risk weighted basket of three component indices and cash that account for technical and fundamental indicators.

S&P PRISM ETF Tracker Index. The index is a weighted return index constructed by applying the Risk Control index framework to an inverse risk weighted basket of three component ETFs and cash that account for technical and fundamental indicators.

The three underlying component indices/ETFs that compose a respective PRISM index each represent a different asset class, as defined below:

S&P PRISM Index Underlying Component Index	Asset Class Represented
S&P 500 TR (SOFR Plus 3M Term Credit Spread) (USD) ER	Equities
S&P GSCI Excess Return Index	Commodities
S&P 10-Year U.S. Treasury Note Futures Excess Return Index	Fixed Income

S&P PRISM Factor Index Underlying Component Index	Asset Class Represented
S&P Quality, Value, Momentum Multi-Factor ER (3M T-Bill +.35%) Index	Equities
S&P GSCI Excess Return Index	Commodities
S&P 10-Year U.S. Treasury Note Futures Excess Return Index	Fixed Income

S&P PRISM ETF Tracker Index	Asset Class Represented
iShares Core S&P 500 ETF (IVV)	Equities
iShares S&P GSCI Commodity-Indexed Trust (GSG)	Commodities
iShares iBoxx $ Investment Grade Corporate Bond ETF (LQD)	Fixed Income

Please refer to Index Construction for details on each index's allocation to equities, commodities, and fixed income.

Index Family

The S&P PRISM Indices family currently consists of:

- S&P PRISM Index
- S&P PRISM Factor Index
- S&P PRISM ETF Tracker Index

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific

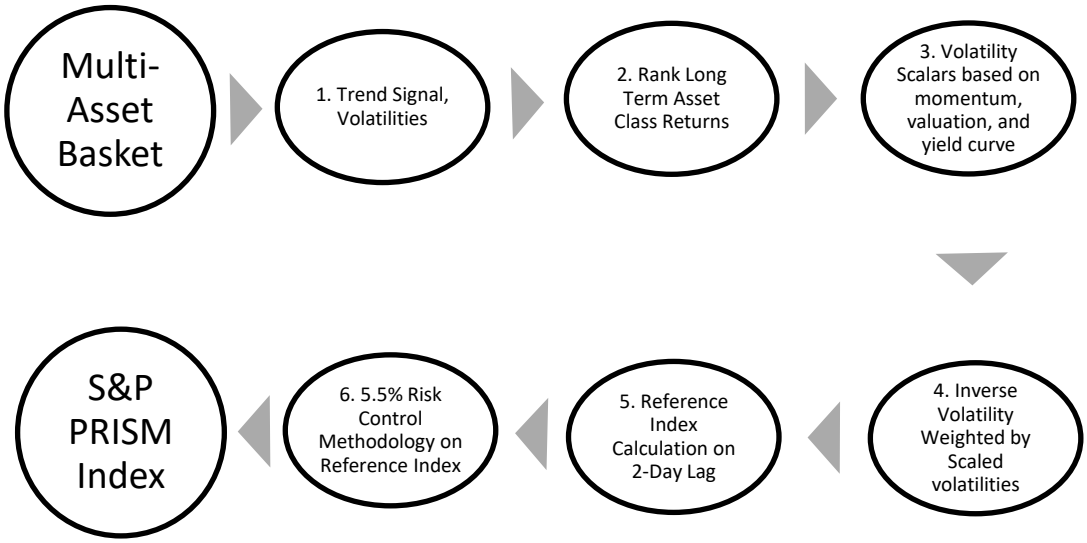
topic. The list of the main supplemental documents for this methodology, and the hyperlinks to those documents, is as follows:

Supporting Document	URL
S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices' Commodities Indices Policies & Practices Methodology	Commodities Indices Policies & Practices
S&P Dow Jones Indices' Index Mathematics Methodology	Index Mathematics Methodology

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

S&P Prism Index

Index Construction



Approach

The index allocates among three component indices based on their respective realized volatilities and a multiplier that is applied to its volatility. The resulting weighted return index forms the underlying non-risk controlled index (the "reference index").

The commodity and treasury futures component indices are calculated and published by S&P DJI on a daily basis as excess return indices.

The third underlying sub-index, the S&P 500 TR (SOFR Plus 3M Term Credit Spread) (USD) ER, is calculated as follows and is based on the S&P 500 TR Index using SOFR + 0.13088% for the interest rate:

S&P 500 TR (SOFR Plus 3M Term Credit Spread) (USD) ER (SP500 ER3ML)

$$SP500\ ER3ML_t = SP500\ ER3ML_{t-1} * (1 + SP500\ 3ML_t\ Excess\ Return\ )$$

$$SP500\ 3ML_t\ \ Excess\ Return = \left(\frac{SP500\ TR\ Index_t}{SP500\ TR\ Index_{t-1}}\right) - \left((SOFR_{t-1} + 0.13088\%) * \frac{NumDays_t}{360}\right) - 1$$

NumDays = number of calendar days since previous business day

Step 1: Trend Signals and Volatilities

Before calculating the weights in the reference index, three trend signals are calculated. For each sub-index, the following process is used to calculate a binary "position indicator" series of 1 or 0:

A. Calculate the 200 day simple moving average of the underlying sub-indices.

$$200DMA_{asset,t} = \frac{\sum_{i=t}^{t-199} Index_{asset,i}}{200}$$

B. Calculate a trend signal based on the following rule:

$$Trend\ Signal_{asset,t} = \begin{cases} 1, & if\ Index_{asset,t} > 200DMA_{asset,t} \\ 0, & otherwise \end{cases}$$

C. Create two series, $UpCount_t$ and $DownCount_t$, that count the instances of Up or Down signals. The two series start at 0 on the 200th day, and then increment each day thereafter.

$$UpCount_{asset,200} = DownCount_{asset,200} = 0$$

$$UpCount_{asset,t} = \begin{cases} UpCount_{asset,t-1} + 1, & if\ Trend\ Signal_{asset,t} = 1 \\ 0, & otherwise \end{cases}$$

$$DownCount_{asset,t} = \begin{cases} DownCount_{asset,t-1} + 1, & if\ Trend\ Signal_{asset,t} = 0 \\ 0, & otherwise \end{cases}$$

D. Finally, calculate the binary "position indicator" as follows:

$$Position\ Indicator_{asset,t} = \begin{cases} 1, & if\ UpCount_{asset,t} > 4 \\ 0, & if\ UpCount_{asset,t} \leq 4\ AND\ DownCount_{asset,t} > 4 \\ Position\ Indicator_{asset,t-1}, & otherwise \end{cases}$$

E. For each sub-index, compute the 90 day annualized volatility of excess returns using a short term and long term decay factor of 94% and 97%, respectively, to calculate the volatilities:

$$Volatility_{asset,t} = \sqrt{\frac{\sum_{i=0}^{89}\left(DailyReturn_{asset,i} - AvgDailyReturn_{asset,t}\right)^2}{89}} * \sqrt{252}$$

where,

$$DailyReturn_{asset,t} = \frac{Index_{asset,t}}{Index_{asset,t-1}} - 1$$

$$AvgDailyReturn_{asset,t} \frac{\sum_{i=0}^{89} \frac{Index_{asset,t-i}}{Index_{asset,t-i-1}} - 1}{90}$$

Step 2: Rank Long Sub-Index Returns

A. For each sub-index, compute the 200 day excess return:

$$200\ Day\ Return_{asset,t} = \frac{Index_{asset,t}}{Index_{asset,t-200}} - 1$$

B. For each of the three sub-indices on an excess return basis, plus cash (which has a daily excess return of 0), rank the 200 day excess returns on day *t* across the sub-indices, with 1 being the highest return, and 4 being the lowest return.

C. Compute the trailing 5 day average rank for equities and fixed income.

Step 3: Volatility Scalars

A. Calculate a yield curve multiplier that is based on a lagged 120 day 60 day average of the spread between the 10-year U.S. Treasury rate and the 3-month U.S. Treasury rate as follows:

$$Yield\ Curve\ Multiplier_t = \begin{cases} 1, & if\ \frac{\sum_{i=1}^{60} 10\ Year\ Rate_{t-119-i} - 3\ Month\ Tbill\ Rate_{t-119-i}}{60} > 0 \\ 5, & Otherwise \end{cases}$$

B. Calculate a bond trend indicator:

$$Bond\ Trend\ Position_t = \begin{cases} 10, & if\ Position\ Indicator_{Bond,t} = 0\ AND\ (10\ Year\ Rate_t - 3\ Month\ Tbill\ Rate_t) < 0 \\ 1, & Otherwise \end{cases}$$

C. Calculate the earnings yield and reference 10-year yield as:

$$EY_t = Earnings\ Yield = \frac{1}{1\ yr\ forward\ PE_{t,s\&p500}}$$

$$10Y_t = 10 - Year\ Yield\ at\ time\ t$$

D. Calculate equity and bond volatility multipliers.

	Yield Curve Multiplier (3A)	Average Equity Rank (2C)	10Y vs EY (3C)	Position Indicator_t (1D)	Equity Mult_t (Result)
Scenario 1	1	4			5
Scenario 2	1	<> 4	10Y > EY		5
Scenario 3	1	<> 4	10Y <= EY	1	1
Scenario 4	1	<> 4	10Y <= EY	<> 1	5
Scenario 5	<> 1				Yield Curve Multiplier$_t$

	Avg Fixed Income Rank (2C)	20 Day 10Y MA (1A)	Bond Trend Position_t (3B)	Fixed Income Mult_t (Result)
Scenario 1	4			10
Scenario 2	<> 4	< 2%		10
Scenario 3	<> 4	>= 2%	1	1
Scenario 4	<> 4	>= 2%	<> 1	10

Step 4: Inverse Volatility Weighting

A. Calculate the scaled volatilities for both equities and fixed income as:

$$Equity\ Vol_t = Volatility_{Equity,t} * Equity\ Mult_t$$

$$Fixed\ Income\ Vol_t = Volatility_{Fixed\ Income,t} * Fixed\ Income\ Mult_t$$

B. Determine the inverse weights with regard to the target volatility:

$$Inverse_{Equity,t} = \frac{5.5\%}{Equity\ Vol_t}$$

$$Inverse_{FI,t} = \frac{5.5\%}{Fixed\ Income\ Vol_t}$$

$$Inverse_{Comm,t} = \begin{cases} \frac{5.5\%}{Volatility_{Comm,t}}, & if\ Rank_{Comm,t} = 1\ AND\ Position\ Indicator_{Comm,t} = 1 \\ 0\%, & Otherwise \end{cases}$$

C. Calculate the final weights for each sub-index:

$$Final\ Weight_{asset,t} = \frac{Inverse_{asset,t}}{\sum_{asset} Inverse_{asset,t}}$$

Step 5: Reference Index Calculation

A. Calculate the index return:

$$Weighted\ Avg\ Return_t = \sum Final\ Weight_{asset,t-2} * Excess\ Daily\ Return_{asset,t}$$

$$Ref\ Index\ Return_t = \begin{cases} 0.75 * Weighted\ Avg\ Return_t\ , if\ Equity\ Mult_{t-2} + Fixed\ Income\ Mult_{t-2} = 15 \\ Weighted\ Avg\ Return_t\ , \quad Otherwise \end{cases}$$

B. Final step is to calculate the reference index level:

$$Ref\ Index\ Level_t = Ref\ Index\ Level_{t-1} * (1 + Ref\ Index\ Return_t)$$

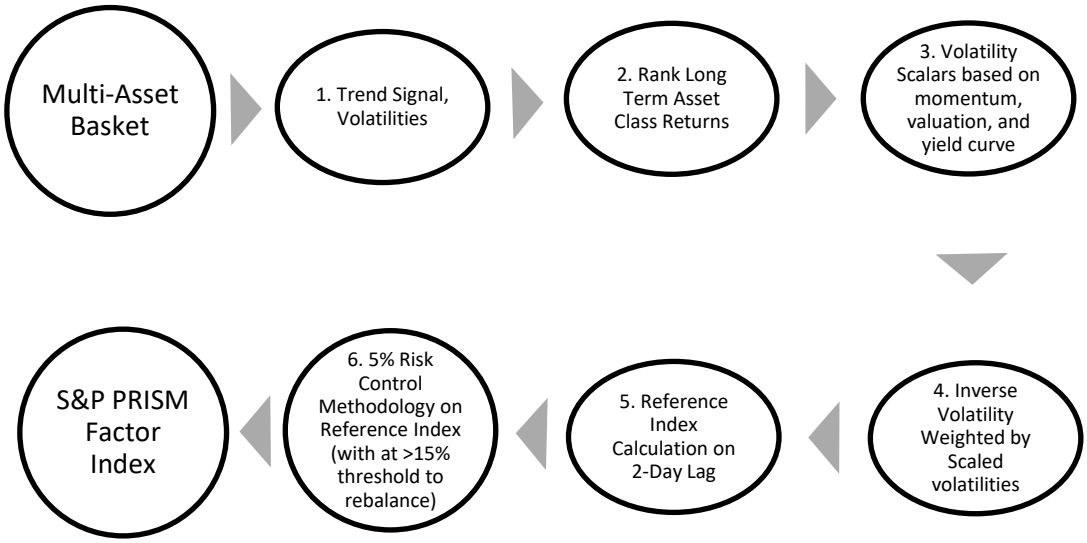
Step 6: Final Index Level

In order to calculate the final index levels, a risk control methodology is applied. Please refer to the Risk Control Indices section of the Index Mathematics Methodology, where the underlying index is the reference index calculated above and:

$$K_{rb} = Min(100\%, \frac{5.5\%}{Realized\ Volatility_{t-2}})$$

S&P Prism Factor Index

Index Construction



Approach

The index allocates among three sub-indices based on their respective realized volatilities and a multiplier that is applied to its volatility. The resulting index of indices forms the underlying non-risk controlled index (the "reference index").

The underlying Commodity and Treasury futures sub-indices are calculated and published by S&P DJI on a daily basis as excess return indices.

The third underlying sub-index, the S&P 500 QVM ER (3M T-Bill +.35%) Index, is calculated as follows and is based on the S&P 500 Quality, Value, Momentum Multi-Factor TR Index using the 3-month T-Bill for the interest rate and a 0.35% spread:

S&P 500 Quality, Value, Momentum Multi-Factor ER (3M T-Bill + .35%) Index (SPQVMTBER)

$$SPQVMER_t = SPQVMER_{t-1} * (1 + SPQVMER_t\ Excess\ Return\ )$$

$$SPQVMER_t\ Excess\ Return = \left(\frac{SP500\ QVM\ TR\ Index_t}{SP500\ QVM\ TR\ Index_{t-1}}\right) - \left(\left(1/\left(1 - \frac{91}{360} * InterestRate_{t-1}\right)\right)^{\left(\frac{NumDays_t}{91}\right)} - 1\right) - \left(spread_{t-1} * \frac{NumDays_t}{360}\right) - 1$$

Step 1: Trend Signals and Volatilities

Before calculating the weights in the reference index, three trend signals are calculated. For each sub-index, the following process is used to calculate a binary "position indicator" series of 1 or 0:

A. Calculate the 200 day simple moving average of the underlying sub-indices:

$$200DMA_{asset,t} = \frac{\sum_{i=t}^{t-199} Index_{asset,i}}{200}$$

B. Calculate a trend signal based on the following rule:

$$Trend\ Signal_{asset,t} = \begin{cases} 1, & if\ Index_{asset,t} > 200DMA_{asset,t} \\ 0, & otherwise \end{cases}$$

C. Create two series, $UpCount_t$ and $DownCount_t$, that serve as counting indices. These indices will start at 0 on the 200th day, and then increment each day thereafter.

$$UpCount_{asset,200} = DownCount_{asset,200} = 0$$

$$UpCount_{asset,t} = \begin{cases} UpCount_{asset,t-1} + 1, & if\ Trend\ Signal_{asset,t} = 1 \\ 0, & otherwise \end{cases}$$

$$DownCount_{asset,t} = \begin{cases} DownCount_{asset,t-1} + 1, & if\ Trend\ Signal_{asset,t} = 0 \\ 0, & otherwise \end{cases}$$

D. Finally, calculate the binary "position indicator" as follows:

$$Position\ Indicator_{asset,t} = \begin{cases} 1, & if\ UpCount_{asset,t} > 4 \\ 0, & if\ UpCount_{asset,t} \leq 4\ AND\ DownCount_{asset,t} > 4 \\ Position\ Indicator_{asset,t-1}, & otherwise \end{cases}$$

E. For each sub-index, compute the 90 day annualized volatility of excess returns:

$$Volatility_{asset,t} = \sqrt{\frac{\sum_{i=0}^{89}\left(DailyReturn_{asset,i} - AvgDailyReturn_{asset,t}\right)^2}{89}} * \sqrt{252}$$

where,

$$DailyReturn_{asset,t} = \frac{Index_{asset,t}}{Index_{asset,t-1}} - 1$$

$$AvgDailyReturn_{asset,t} \frac{\sum_{i=0}^{89} \frac{Index_{asset,t-i}}{Index_{asset,t-i-1}} - 1}{90}$$

Step 2: Rank Long Sub-Index Returns

A. For each sub-index, compute the 200 day excess return:

$$200\ Day\ Return_{asset,t} = \frac{Index_{asset,t}}{Index_{asset,t-200}} - 1$$

B. For each of the three sub-indices on an excess return basis, plus cash (which has a daily excess return of 0), rank the 200 day excess returns on day t across the sub-indices, with 1 being the highest return, and 4 being the lowest return.

C. Compute the trailing five day average rank for equities and fixed income:

Step 3: Volatility Scalars

A. Calculate a yield curve multiplier that is based on a lagged 120 day 60 day average of the spread between the 10-year U.S. Treasury rate and the 3-month U.S. Treasury rate as follows:

$$Yield\ Curve\ Multiplier_t = \begin{cases} 1, & if\ \frac{\sum_{i=1}^{60} 10\ Year\ Rate_{t-119-i} - 3\ Month\ Tbill\ Rate_{t-119-i}}{60} > 0 \\ 5, & Otherwise \end{cases}$$

B. Calculate a bond trend indicator:

$$Bond\ Trend\ Position_t = \begin{cases} 10, & if\ Position\ Indicator_{Bond,t} = 0\ AND\ (10\ Year\ Rate_t - 3\ Month\ Tbill\ Rate_t) < 0 \\ 1, & Otherwise \end{cases}$$

C. Calculate the earnings yield and reference 10-year yield as:

$$EY_t = Earnings\ Yield = \frac{1}{1\ yr\ forward\ PE_{t,s\&p500}}$$

$$10Y_t = 10 - Year\ Yield\ at\ time\ t$$

D. Calculate asset class volatility initial multipliers (*Initial Mult*).

	Yield Curve Multiplier (3A)	Average Equity Rank (2C)	10Y vs EY (3C)	Position Indicator_t (1D)	Initial Equity Mult_t (Result)
Scenario 1	1	4			5
Scenario 2	1	<> 4	10Y > EY		5
Scenario 3	1	<> 4	10Y <= EY	1	1
Scenario 4	1	<> 4	10Y <= EY	<> 1	5
Scenario 5	<> 1				Yield Curve Multiplier$_t$

	Avg Fixed Income Rank (2C)	200 Day 10Y MA (1A)	Bond Trend Position_t (3B)	Initial Fixed Income Mult_t (Result)
Scenario 1	4			10
Scenario 2	<> 4	< 2%		10
Scenario 3	<> 4	>= 2%	1	1
Scenario 4	<> 4	>= 2%	<> 1	10

	Commodity Rank (2B)	Position Indicator_t (1D)	Initial Commodity Mult_t (Result)
Scenario 1	1	1	1
Scenario 2	<> 1		0
Scenario 3		<>1	0

E. Apply smoothing constant for final volatility multipliers.

In order to reduce turnover, a smoothing constant, *sc*, of 0.95 is applied to all three asset classes' resulting multipliers. The final volatility multipliers for each asset class, *i,* are calculated as per below:

$$Mult(i) = (sc * Mult_{t-1}) + (1 - sc)(Initial\ Mult_t)$$

Step 4: Inverse Volatility Weighting

A. Calculate the scaled volatilities for both equities and fixed income as:

$$Equity\ Vol_t = Volatility_{Equity,t} * Equity\ Mult_t$$

$$Fixed\ Income\ Vol_t = Volatility_{Fixed\ Income,t} * Fixed\ Income\ Mult_t$$

B. Determine the inverse weights with regard to the target volatility:

$$Inverse_{Equity,t} = \frac{5\%}{Equity\ Vol_t}$$

$$Inverse_{FI,t} = \frac{5\%}{Fixed\ Income\ Vol_t}$$

$$InverseComm(t) = \frac{5\%}{Volatility(Comm(t))}\text{*CommodityMult(t)}$$

C. Calculate the final weights for each sub-index:

$$Final\ Weight_{asset,t} = \frac{Inverse_{asset,t}}{\sum_{asset} Inverse_{asset,t}}$$

Step 5: Reference Index Calculation

A. Calculate the initial weighted average return:

$$Weighted\ Avg\ Return_t = \sum Final\ Weight_{asset,t-2} * Excess\ Daily\ Return_{asset,t}$$

B. Circuit Breaker: A circuit breaker mechanism is in place when $Equity\ Mult_{t-2} + Fixed\ Income\ Mult_{t-2} = 15$. In this scenario, the Reference Index Return is scaled by 75% so that 25% weight is placed into interest-free cash, $Final\ Weight_{CR\ Cash,t-2}$,as illustrated in step 5C.

C. Reference Index Return

$$Ref\ Index\ Return_t = \begin{cases} .75 * Weighted\ Avg\ Return_t\ , if\ Equity\ Mult_{t-2} + Fixed\ Income\ Mult_{t-2} = 15 \\ Weighted\ Avg\ Return_t\ , \quad Otherwise \end{cases}$$

D. Final step is to calculate the reference index level:

$$Ref\ Index\ Level_t = Ref\ Index\ Level_{t-1} * (1 + Ref\ Index\ Return_t)$$

Step 6: Risk Controlled Index Level

In order to calculate the final index levels, a risk control methodology is applied.

A. Please refer to the Risk Control Indices section of the Index Mathematics Methodology where the underlying index is the reference index calculated above with initial index exposure, *K*, calculated as below:

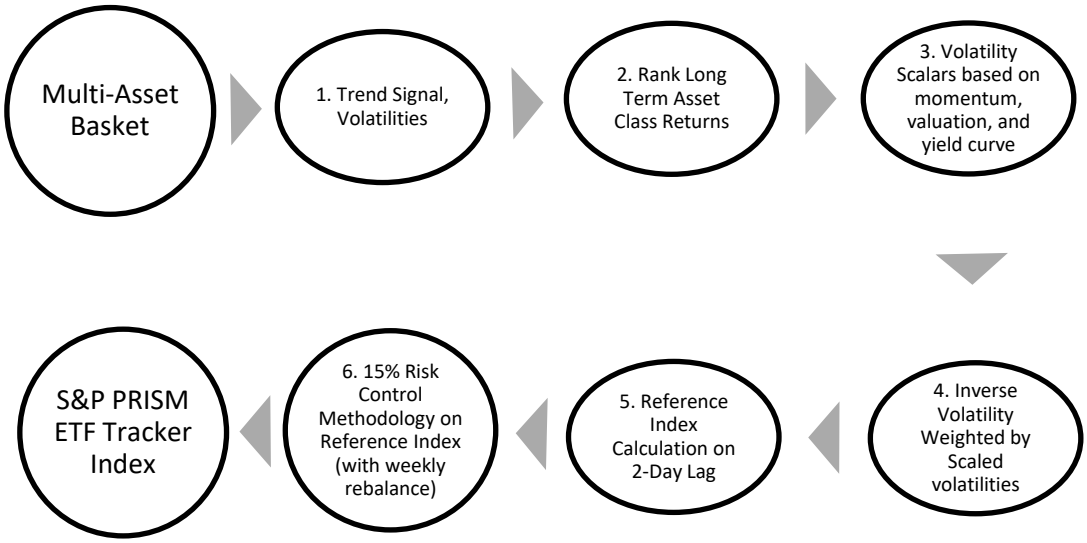
$$K_{rb} = Min(100\%, \frac{5\%}{Realized\ Volatility_{t-2}})$$

B. To reduce turnover across asset classes, the final scaled risk control asset class exposures including any circuit breaker cash, $Final\ Weight\ RC_{asset,t}$, from Steps 5A and 5B, $Final\ Weight_{asset,t}$ are subject to a minimum aggregate threshold change of 15% on an absolute basis:

$$Final\ Weight\ RC_{asset,t-2} = \begin{cases} Final\ Weight_{n,t-2}, if \left(\sum_{i=1}^{n} absolute(Final\ Weight_{n,t-2} - Final\ Weight\ RC_{n,t-3}) \right) \geq 15\% \\ Final\ Weight\ RC_{n,t-3}\ , \quad Otherwise \end{cases}$$

S&P Prism ETF Tracker Index

Index Construction



Approach

The index allocates among three ETFs based on respective realized volatility and a multiplier applied to that volatility. The resulting index of ETFs forms the underlying non-risk-controlled index (the "reference index").

Step 1: Trend Signals and Volatilities

Before calculating the weights in the reference index, three trend signals are calculated. Using the corporate action adjusted prices of each ETF, the following process calculates a binary "position indicator" series of 1 or 0:

A. Calculate the 200 day simple moving average of the underlying ETF.

$$200DMA_{asset,t} = \frac{\sum_{i=t}^{t-199} ETF_{asset,i}}{200}$$

B. Calculate a trend signal based on the following rule:

$$Trend\ Signal_{asset,t} = \begin{cases} 1, & if\ ETF_{asset,t} > 200DMA_{asset,t} \\ 0, & otherwise \end{cases}$$

C. Create two series, $UpCount_t$ and $DownCount_t$, that serve as counting indices. The counting indices start at 0 on the 200th day, then increment each day thereafter.

$$UpCount_{asset,200} = DownCount_{asset,200} = 0$$

$$UpCount_{asset,t} = \begin{cases} UpCount_{asset,t-1} + 1, & if\ Trend\ Signal_{asset,t} = 1 \\ 0, & otherwise \end{cases}$$

$$DownCount_{asset,t} = \begin{cases} DownCount_{asset,t-1} + 1, & if\ Trend\ Signal_{asset,t} = 0 \\ 0, & otherwise \end{cases}$$

D. Finally, calculate the binary "position indicator" as follows:

$$Position\ Indicator_{asset,t} = \begin{cases} 1, & if\ UpCount_{asset,t} > 4 \\ 0, & if\ UpCount_{asset,t} \leq 4\ AND\ DownCount_{asset,t} > 4 \\ Position\ Indicator_{asset,t-1}, & otherwise \end{cases}$$

E. For each ETF, compute the 90 day annualized volatility of returns:

$$Volatility_{asset,t} = \sqrt{\frac{\sum_{i=0}^{89}\left(DailyReturn_{asset,i} - AvgDailyReturn_{asset,t}\right)^2}{89}} * \sqrt{252}$$

where,

$$DailyReturn_{asset,t} = \frac{ETF_{asset,t}}{ETF_{asset,t-1}} - 1$$

$$AvgDailyReturn_{asset,t} \frac{\sum_{i=0}^{89} \frac{ETF_{asset,t-i}}{ETF_{asset,t-i-1}} - 1}{90}$$

Step 2: Rank Long ETF Returns

A. For each ETF, compute the 200 day return:

$$200Day\ Return_{asset,t} = \frac{ETF_{asset,t}}{ETF_{asset,t-200}} - 1$$

B. For each of the three ETFs plus cash (cash accrues interest at the 3M T-bill rate), rank the 200 day returns on day *t* across the sub-indices, with one being the highest return and four the lowest.

C. Compute the trailing five day average rank for equities and fixed income.

Step 3: Volatility Scalars

A. Calculate a yield curve multiplier based on a lagged 120 day 60 day average of the spread between the 10-year U.S. Treasury rate and the 3-month U.S. Treasury rate as follows:

$$Yield\ Curve\ Multiplier_t = \begin{cases} 1, & if\ \frac{\sum_{i=1}^{60} 10\ Year\ Rate_{t-119-i} - 3\ Month\ Tbill\ Rate_{t-119-i}}{60} > 0 \\ 5, & Otherwise \end{cases}$$

B. Calculate a bond trend indicator:

$$Bond\ Trend\ Position_t = \begin{cases} 1, & if\ Position\ Indicator_{Bond,t} = 1 \\ 10, & if\ Position\ Indicator_{Bond,t} = 0\ AND\ (10\ Year\ Rate_t - 3\ Month\ Tbill\ Rate_t) < 0 \\ 1, & Otherwise \end{cases}$$

C. Calculate the earnings yield and reference 10-year yield as:

$$EY_t = Earnings\ Yield = \frac{1}{1\ yr\ forward\ PE_{t,s\&p500}}$$

$$10Y_t = 10 - Year\ Yield\ at\ time\ t$$

D. Calculate a corporate bond valuation indicator:

$$Signal1 = 10\ if\ (10\ Year\ Rate_t - Corporate\ Rate_t) < 1.5\%, Otherwise\ 0$$

$$Signal2 = \ 10\ if (10\ Year\ Rate_t) < 2\%, Otherwise\ 0$$

$$Corporate\ Bond\ Valuation_t = maximum(1, sum(Signal1 + Signal2))$$

E. Calculate asset class volatility initial multipliers (*Initial Mult*).

	Yield Curve Multiplier (3A)	Average Equity Rank (2C)	10Y vs EY (3C)	Position Indicator_t (1D)	Initial Equity Mult_t (Result)
Scenario 1	1	4			5
Scenario 2	1	<> 4	10Y > EY		5
Scenario 3	1	<> 4	10Y <= EY	1	1
Scenario 4	1	<> 4	10Y <= EY	<> 1	5
Scenario 5	<> 1				Yield Curve Multiplier$_t$

	Avg Fixed Income Rank (2C)	Bond Trend Indicator (3B)	Corporate Bond Valuation Indicator (3G)	Initial Fixed Income Mult_t (Result)
Scenario 1	4			10
Scenario 2	<> 4	1	1	1
Scenario 3	<> 4	1	10	10
Scenario 4	<> 4	1	20	20
Scenario 5	<> 4	<>1		10

	Commodity Rank (2B)	Position Indicator_t (1D)	Initial Commodity Mult_t (Result)
Scenario 1	1	1	1
Scenario 2	<> 1		0
Scenario 3		<>1	0

$$Note: for\ commodities, InitialMult(t) = 1\ if\ Trend\ Indicator == 1\ and\ Rank == 1$$

F. $0\ otherwise$ Apply smoothing constant for final volatility multipliers.

In order to reduce turnover, a smoothing constant, *sc*, of 0.95 is applied to all three asset classes' resulting multipliers. The final volatility multipliers for each asset class, *i,* are calculated as per below:

$$Mult(i) = \big(sc \cdot Mult(t-1)\big) + (1 - sc) \cdot InitialMult(t)$$

Step 4: Inverse Volatility Weighting

A. Calculate the scaled volatilities for both equities and fixed income as:

$$Equity\ Vol_t = Volatility_{Equity,t} * Equity\ Mult_t$$

$$Fixed\ Income\ Vol_t = Volatility_{Fixed\ Income,t} * Fixed\ Income\ Mult_t$$

B. Determine the inverse weights with regard to the target volatility:

$$Inverse_{Equity,t} = \frac{15\%}{Equity\ Vol_t}$$

$$Inverse_{FI,t} = \frac{15\%}{Fixed\ Income\ Vol_t}$$

$$InverseComm(t) = \frac{15\%}{Volatility(Comm(t))}\text{*CommodityMult(t)}$$

C. Calculate the final weights for each ETF:

$$Final\ Weight_{asset,t} = \frac{Inverse_{asset,t}}{\sum_{asset} Inverse_{asset,t}}$$

Step 5: Reference Index Calculation

A. Calculate the initial weighted average return:

$$Weighted\ Avg\ Return_t = \sum Final\ Weight_{asset,t-2} * Excess\ Daily\ Return_{asset,t}$$

B. Circuit Breaker: A circuit breaker mechanism is in place when $Initial\ Equity\ Mult_{t-2} > 1\ and\ Initial\ Fixed\ Income\ Mult_{t-2} > 1.$ In this scenario, the reference index return is scaled by 75% so that 25% weight is placed into cash, $Final\ Weight_{CR\ Cash,t-2}$, as illustrated in step 5C.

C. Reference Index Return

$$Ref\ Index\ Return_t = \begin{cases} .75 * Weighted\ Avg\ Return_t\ , if\ Equity\ Mult_{t-2} > 1 and\ Fixed\ Income\ Mult_{t-2} > 1 \\ Weighted\ Avg\ Return_t\ , \quad Otherwise \end{cases}$$

D. Final step is to calculate the reference index level.

$$Ref\ Index\ Level_t = Ref\ Index\ Level_{t-1} * (1 + Ref\ Index\ Return_t)$$

Step 6: Risk Controlled Index Level

To calculate the final index level apply a daily risk control methodology rebalancing on Wednesdays.

Please refer to the Risk Control Indices section of the Index Mathematics Methodology where the underlying index is the reference index calculated above with initial index exposure, *K*, calculated as below:

$$K_{rb} = Min(100\%, \frac{15\%}{Realized\ Volatility_{t-2}})$$

where:

rb = rebalancing date

Index Maintenance

Rebalancing

S&P PRISM and S&P PRISM Factor Indices. The indices rebalance on U.S. business days after the market close. If a component of an index is not published on the rebalancing date, the prior value of that component is used. As part of the rebalancing process, the weights of the various asset class components are determined based on the sub-indices weights in the benchmarks as described in *Index Construction*.

S&P PRISM ETF Tracker Index. The index rebalances prior to the market open on every Wednesday. If that day is a holiday the index rebalances prior to the open of the next business day.

Corporate Actions

For information on corporate actions, please refer to the Non-Market Capitalization Indices section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

S&P PRISM ETF Tracker Index. In addition to the standard Non-Market Capitalization Indices corporate action treatments, the index includes the following treatments for ETF actions.

Corporate Action	Index Adjustment
ETF Share Split	Index shares are multiplied by, and price is divided by, the split factor.
Dividends	The prices of the ETF making the dividend is reduced by the per share dividend amount after market close on the day before the dividend ex-date.
Delistings	The delisted ETF is removed from the index and replaced with a suitable substitute.

Currency of Calculation and Additional Index Return Series

In addition to the indices detailed in this methodology, additional return series versions of the indices may be available, including, but not limited to the following versions: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control. For a list of available indices, please refer to *S&P DJI Methodology & Regulatory Status Database*.

For information on the calculation of different types of indices, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

For the inputs necessary to calculate certain types of indices, including decrement, dynamic hedged, fair value, and risk control indices, please refer to the Parameters documents available at www.spglobal.com/spdji/en.

Base Date and History Availability

Index history availability, base dates, and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value[1]
S&P PRISM Index	02/12/2018	08/16/1990	08/16/1990	999.24
S&P PRISM Factor Index	10/31/2019	03/05/1996	03/05/1996	999.96
S&P PRISM ETF Tracker Index	10/20/2022	08/21/2008	08/21/2008	1000

[1] The S&P PRISM and PRISM Factor indices were rebased effective after the close on April 12, 2021. Prior to this, the base value for each index was 1,000.

Index Governance

Index Committee

An S&P Dow Jones Index Committee maintains the indices. The Committee meets regularly. At each meeting, the Committee reviews matters that may affect index constituents, statistics comparing the composition of the index to the market, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting constituents, treatment of dividends, share counts or other matters.

S&P Dow Jones Indices considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology S&P Dow Jones Indices' Commodities Indices Policies & Practices Methodology.

Index Policy

Holiday Schedule

The indices calculate on all U.S. equity market business days.

A complete holiday schedule for the year is available at www.spglobal.com/spdji.

Rebalancing

The index committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Recalculation Policy

For information on the recalculation policy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Contact Information

For questions regarding an index, please contact: index_services@spglobal.com.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at *www.spglobal.com/spdji,* major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

Tickers

The table below lists headline indices covered by this document. All versions of the below indices that may exist are also covered by this document. Please refer to *S&P DJI Methodology & Regulatory Status Database* for a complete list of indices covered by this document.

Index	Return Type	BBG	RIC
S&P PRISM Index (USD)	Excess Return	SPPRISME	.SPPRISME
S&P PRISM Factor Index (USD)	Total Return Excess Return	SPFPRSM SPFPRSME	-- --
S&P PRISM ETF Tracker Index (USD)	Total Return	SPPRETFT	--

Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, www.spglobal.com/spdji/en/contact-us.

Web site

For further information, please refer to S&P Dow Jones Indices' Web site at www.spglobal.com/spdji.

Appendix A

Methodology Changes

Methodology changes since February 12, 2018, are as follows:

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Interest Rate: S&P 500 TR (SOFR Plus 3M Term Credit Spread) (USD) ER	12/17/2021	Three-month USD LIBOR interest rate.	SOFR + 0.13088% interest rate.

Appendix B

ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[2]		
1.	**Name of the benchmark administrator.**	S&P Dow Jones Indices LLC.
2.	**Underlying asset class of the ESG benchmark.[3]**	N/A
3.	**Name of the S&P Dow Jones Indices benchmark or family of benchmarks.**	S&P DJI Multi-Asset Indices Benchmark Statement
4.	**Do any of the indices maintained by this methodology take into account ESG factors?**	No
Appendix latest update:		January 2021
Appendix first publication:		January 2021

[2] The information contained in this Appendix is intended to meet the requirements of the European Union Commission Delegated Regulation (EU) 2020/1817 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the minimum content of the explanation of how environmental, social and governance factors are reflected in the benchmark methodology and the retained EU law in the UK [The Benchmarks (amendment and Transitional Provision) (EU Exit) Regulations 2019].

[3] The 'underlying assets' are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

Disclaimer

Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates ("S&P DJI") defines various dates to assist our clients by providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P DJI defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index's launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate certain ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history

will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not represent the results of actual trading of investable assets/securities. S&P DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any assets.

Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

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