PGIM Quant US Multi-Asset Positioning Index Methodology

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1. Introduction

This document (the "Methodology") is published by PGIM Quantitative Solutions ("PGIM Quant") to be used as guiding principles for the calculation and maintenance of the PGIM Quant US Multi-Asset Positioning Index (referred to herein as the "MAP Index").

2. Description of Index

The MAP Index is an excess return index that measures the performance of a multi-asset-class strategy allocation to US equities and US Treasuries with a risk control overlay. The MAP Index weights are allocated to three underlying indices ("Index Constituents") with dynamic allocations based on macroeconomic conditions, a risk budgeting optimization, and a target volatility of 6.0%.

The three Index Constituents are the UBS US Large Cap Equity Intraday RC 10% ER Index and UBS Tech Equity Intraday RC 10% ER Index for US equities, and the UBS US Momentum Dynamic Bond Index for US Treasuries.

The weights across the Index Constituents are determined on a monthly basis following a risk budgeting optimization.

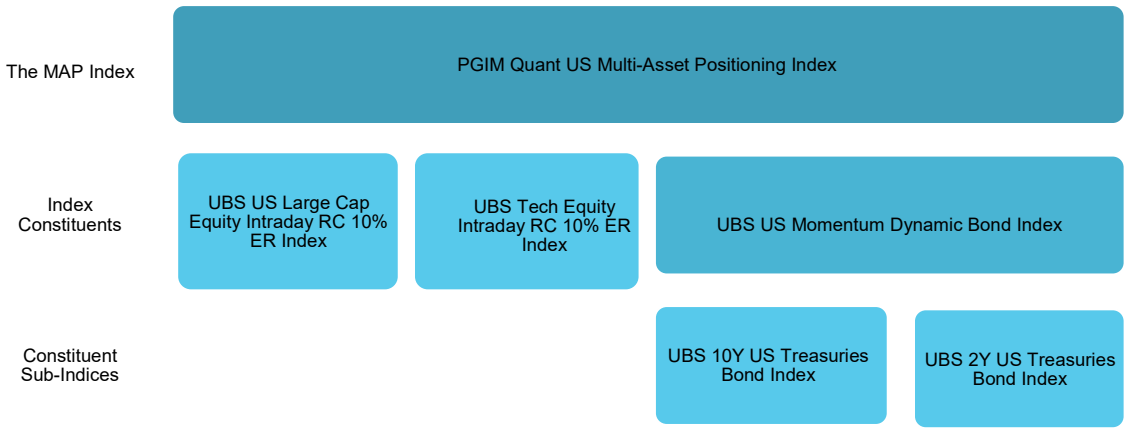
A leverage to such weights is calculated on a daily basis to target a volatility of 6.0% and is capped at 250%.

Each component of the UBS US Large Cap Equity Intraday RC 10% ER Index, the UBS Tech Equity Intraday RC 10% ER Index, and UBS US Momentum Dynamic Bond Index is itself a futures-based weighted return index that measures the performance of their respective asset class.

The weight of each the UBS US Large Cap Equity Intraday RC 10% ER Index and the UBS Tech Equity Intraday RC 10% ER Index is allocated to US equity futures. The positions of the relevant underlying futures contracts are dynamically allocated daily with intra-day positions determined based on a 10% intraday volatility and an intraday trend signal.

The UBS US Momentum Dynamic Bond Index allocates dynamically to two UBS US Treasury Futures Trackers representing the US Treasury market across two different maturities (2y and 10y) with weights varying depending on momentum across three UBS US Treasury Futures Trackers (2y, 5y and 10y) and the intrinsic level of the 10y rates.

Exhibit 1: Overview of the MAP Index



3. Definitions and Methodology

3.1 DEFINITIONS

Definitions of terms provided within this Section are applicable only within this Section unless the context otherwise requires.

Covariance Start Date	Feb 3rd, 2004;
Index Base Date	May 11th, 2005;
Closing Level	determined under Section 3.2.1 below;
Component Dealing Day	in respect of an Index Component, an Index Business Day on which the closing level of that Index Component is scheduled to be calculated and published by the calculation agent for that Index Component;
Covariance Matrix Component	an index listed in Table 3;
Currency of the Index	US Dollars;
Disrupted Day	in respect of an Index Component, a day on which a Market Disruption Event has occurred or is continuing for that Index Component;
Exchange(s)	the exchanges listed in Table 2;
Final Index Level	in respect of any Index Business Day as determined in accordance with Section 3.4.3.
Index	the PGIM Quant US Multi-Asset Positioning Index;
Index Business Day	a day on which all the Exchanges are scheduled to be open for trading for their regular trading session;
Index Calculation Agent	the third party agent appointed by PGIM Quant to calculate and maintain the MAP Index, which currently is Solactive AG;
Index Component	an Index Constituent or Covariance Matrix Component;
Index Constituent	an index listed in Table 2;
Index Rebalancing Day	an Index Business Day that satisfies all of the following conditions: - A Component Dealing Day as defined in respect of the UBS US Momentum Dynamic Bond Index - A Component Dealing Day as defined in respect of the UBS US Large Cap Equity Intraday RC 10% ER Index - A Component Dealing Day as defined in respect of the UBS Tech Equity Intraday RC 10% ER Index;
Index Risk Budget Calculation Day	the Intermediate Level Start Date and the 5th Index Business Day of a given calendar month starting on the month of the Intermediate Level Start Date;

Index Risk Budget Rebalance Day	the Intermediate Level Start Date and the second (2nd) Index Business Day after the most recent Index Risk Budget Calculation Day; if such Index Risk Budget Rebalance Day is a Disrupted Day, the next Index Business Day that is not a Disrupted Day;
Index Publication Day	a day when the New York Stock Exchange is scheduled to be open for its regular session;
Index Sponsor	PGIM Quantitative Solutions LLC;
Intermediate Index Level	the level of the index prior to exposure adjustment for target volatility
Intermediate Level Start Date	February 9, 2005
Market Data Event	an event as further described and determined pursuant to Section 5;
Market Disruption Event	in respect of an Index Component, the unavailability of the official closing price, level, rate, or other material measure or input for that Index Component on a day such price, level, rate, or other measure or input is scheduled to be published or to be available (*e.g.*, a planned or unplanned market closure), and as further determined by the Index Calculation Agent pursuant to Section 3.2. If the Index Calculation Agent determines, after consultation with the Index Sponsor, that the applicable event described above could materially interfere with the ability of market participants to transact in positions with respect to the MAP Index or its underlying components, the Market Disruption will be addressed in accordance with the processes described in Section 3.2.2 below;
PGIM Quant Macro Indicator	indicates the Growth State of the US economy based on business sentiment, as further described in Section 3.3.2 below;
PGIM Quant Macro Indicator Release Date	the 4th Index Business Day of a given calendar month;
Official Closing Level	in respect of an Index Business Day, the level of the Index Component published by its calculation agent for such Index Business Day.

3.2 INDEX DETERMINATION

3.2.1 Closing Level

Closing Level is defined with respect to an Index Component and as of an Index Business Day:

(a) the Official Closing Level of such Index Component as of that most recent Component Dealing Day published by the calculation agent for such Index Component if the most recent

Component Dealing Day for that Index Component occurring on or immediately preceding that Index Business Day is not a Disrupted Day for that Index Component; or

(b) the Official Closing Level of that Index Component on the immediately preceding Index Business Day that is not disrupted if the most recent Component Dealing Day for that Index Component occurring on or immediately preceding that Index Business Day is a Disrupted Day for that Index Component.

On the fifth Index Business Day following the occurrence of a Market Disruption Event with respect to an Index Component included in the MAP Index, if such Market Disruption is continuing, the provisions of Section 3.2.2 Consequence of a Disrupted Day shall apply.

3.2.2 Market Disruption Events and Disrupted Days

The Index Calculation Agent may determine, after consultation with the Index Sponsor, that a Market Disruption Event has occurred or is continuing if such event could materially interfere with the ability of market participants to transact in positions with respect to the MAP Index or its underlying components.

Furthermore, if any Index Business Day is a Disrupted Day, then the Index Calculation Agent shall:

(1) suspend the calculation, publication and dissemination of the Final Index Level until the first succeeding Index Business Day which is not a Disrupted Day.
(2) use the last published Final Index Level immediately preceding the Disrupted Days(s) and shall not publish any type of Final Index Level for the Disrupted Day(s) even under the circumstances where certain information may become available which could potentially allow for publication during such Disrupted Days.

3.2.3 Change to the Index Components

The Index Components are not expected to be changed or replaced. However, if the Index Calculation Agent determines, after consultation with the Index Sponsor, that any of the following events has occurred:

(i) the termination or impairment of any relevant license or other right relied upon by the Index Sponsor or its affiliates in respect of an Index Component; or
(ii) the permanent cancellation or unavailability of an Index Component; or
(iii) any other event that the Index Calculation Agent determines, after consultation with the Index Sponsor, could materially interfere with the administration of the MAP Index or with the ability of market participants to transact in positions with respect to the MAP Index or its underlying components, either permanently or for an indefinite period,

then the affected Index Component may be replaced by a successor component that, in the determination of the Index Calculation Agent, after consultation with the Index Sponsor, possesses substantially similar characteristics or provides substantially similar exposure as compared to the original Index Component. If no such replacement is available, the Index Calculation Agent will seek to replace the affected Index Component with a substitute that the Index Calculation Agent determines, after consultation with the Index Sponsor, to be an appropriate substitute, considering the context of the MAP Index.

3.2.4 Revision to Final Index Level

(1) If the Index Calculation Agent determines that the price, level, rate, or other measure made available for an Index Component reflects a manifest error, the calculation of the MAP Index may be delayed until such time as a corrected price, level, rate or other measure is made available. In the event a corrected price, level, rate, or other measure in respect of an Index

Component is not made available on a timely basis, or in the event that the price, level, rate, or other measure made available for an Index Component is subsequently corrected and such correction is published, then the Index Calculation Agent may, if eligible, determine, adjust, or correct the relevant calculation or determination of the Final Index Level, including the price, level, rate, or other measure of its Index Components, as of any Index Business Day to take into account such correction.

(2) In the event the Index Calculation Agent discovers a manifest error pursuant to 3.2.4(1) above, the period for correcting such an error shall not extend more than (3) Index Business Days from the date of the original publication of the incorrect Final Index Level. The Index Calculation Agent shall consult with the Index Sponsor and obtain their approval prior to making any such correction.

3.2.5 Publication of Changes to the MAP Index and to the Methodology

Changes to the Index Components made by the Index Calculation Agent will be publicly announced as promptly as is reasonably practicable. Adjustments made by the Index Calculation Agent will be publicly announced as promptly as is reasonably practicable. Notwithstanding the foregoing, the Index Calculation Agent in consultation with the Index Sponsor may modify the MAP Index (including its composition), the Methodology, or any data obtained from a third party, in its sole discretion and without notice, to correct any manifest error, or to cure or correct any ambiguity, contradiction, or defect, in the description or operation of the MAP Index.

3.2.6 Index Publication

Subject to adjustment or suspension in the case of Disrupted Days, the Final Index Level will be published on each Index Publication Day with a precision of 2 decimal places with 0.005 rounded upwards in the Currency of the Index.

The Index Calculation Agent may calculate the MAP Index to a greater degree of accuracy or specificity and may use any rounding convention it considers appropriate for any data used or calculations performed (which may include using data with a higher level of specificity than that which is published on any particular data source) to determine the Final Index Level.

None of the Index Sponsor, the Index Calculation Agent, or any other Relevant Person will be liable to any person for publishing, disseminating, or making available or for omitting to publish, disseminate, or make available the Final Index Level at any particular time or on any particular venue or in any particular manner or in accordance with any particular methodology or practice.

3.3 INDEX DATA

Table 1: Parameters

Terms	**Definition**
Leverage Cap	250%
Rebalancing Threshold	5%
Target Volatility	6.00%
VAF Min	0.95
VAF Max	1.2
Decay Factor λ_{long} **Decay Factor λ_{short}**	0.97 0.94

Table 2: Index Constituents, TLC^k

k	Asset	Index Constituent	Bloomberg Ticker	Exchange
1	Equity	UBS US Large Cap Equity Intraday RC 10% ER Index	UBLCE10E Index	Chicago Mercantile Exchange (CME)
2	Equity	UBS Tech Equity Intraday RC 10% ER Index	UBTEC10E Index	Chicago Mercantile Exchange (CME)
3	Bond	UBS US Momentum Dynamic Bond Index	UBSUMDBO Index	Chicago Board of Trade (CBOT)

Table 3: Covariance Matrix Components

k	Asset	Covariance Matrix Component	Bloomberg Ticker
1	Equity	UBS US Large Cap Equity Intraday RC 10% ER Index	UBLCE10E Index
2	Equity	UBS Tech Equity Intraday RC 10% ER Index	UBTEC10E Index
3	Bond	UBS 10Y Treasuries 10Y USD Index	MLTAU10E Index

3.3.1 Determination of the Macro Risk Budget

On an Index Risk Budget Calculation Day *t*, the Macro Risk Budget *s ("*$MACRO_s$*"*), representing the vector of risk budget across Equity, Tech Equity, and Bond is determined in accordance with the following Table:

Table 4: Macro Risk Budget (MACRO)

	MACRO 1	MACRO 2	MACRO 3
Growth State	Deceleration	Stability	Acceleration
US Equity Risk Budget	0.1	0.3	0.4
US Tech Equity Risk Budget	0.1	0.3	0.4
Bond Risk Budget	0.8	0.4	0.2

where:
$Growth\ State_t$ means, in respect of an Index Risk Budget Calculation Day *t,* the latest available determination of the Growth State as described below.

3.3.2 Determination of the Growth State

The Growth State is the output of the PGIM Quant Macro Indicator, which categorizes the growth state of the US economy based on business sentiment. Business sentiment is measured using a composite of ISM Manufacturing and Services confidence. For an Index Risk Budget Calculation Day prior to April 2006, the Growth State is set at MACRO 2 by default.

3.3.2.1 Calculation of the ISM confidence factor

3.3.2.1.1 Calculation of the Weights

$$Weight_{MANUF,t} = \begin{cases} \dfrac{MANUF_t}{GDP_t} & where\ available \\ Weight_{MANUF,t-1} & otherwise \end{cases}$$

$MANUF_t$ Four quarter moving average of US BEA Nominal Value Added of Manufacturing, SAAR, Billions

GDP_t Four quarter moving average of US BEA Nominal Gross Domestic Product, SAAR, Billions

US BEA data should be rounded to the nearest decimal point, if not already rounded as such.

For the purpose of calculating the history of weights prior to the go-live date, a one-month lag from the end of the quarter is assumed for the BEA data. For instance, if updating as of March 2025, the weights updated in November 2024 shall depend on the Q3 2024 BEA data.

3.3.2.1.2 Calculation of the Composite

$$ISM_t = ISM\_Manufacturing_t * Weight_{MANUF,t} + ISM_{Services,t} * \left(1 - Weight_{MANUF,t}\right)$$

$ISM\_Manufacturing_t$ The latest ISM Manufacturing index at time t

$ISM\_Services_t$ The latest ISM Services index at time t

3.3.2.2 Categorization of Growth State

The ISM composite is used to categorize three growth states of the economy consistent with deceleration, stability, and acceleration.

Each ISM index is constructed such that a value above 50 is consistent with the survey respondents expecting an expansion of that segment of the economy (manufacturing vs. services). Similarly, one below 50 is consistent with a contraction.

Growth State 1 is assigned when the ISM index is consistent with a contraction and is also trending downward. In other words, the economy is contracting and conditions are deteriorating. Growth State 2 is assigned when the ISM index is equal to or above 50, or the economy is expanding. Finally, Growth State 3 is associated with a contracting economy and the ISM index is trending upwards. Historically, this is consistent with an economy that is recovering from a prior slowdown.

Mathematically, the Growth State at time t, GS_t, is identified by:

$$GS_t = \begin{cases} 1 & ISM\_MA_t < 50 \wedge ISM\_MA\_chg_t < 0 \\ 2 & ISM\_MA_t \geq 50 \\ 3 & ISM\_MA_t < 50 \wedge ISM\_MA\_chg_t \geq 0 \end{cases}$$

ISM_MA_t The three-month simple moving average of ISM_t, calculated at monthly frequency

$ISM\_MA\_chg_t$ The three-month difference of ISM_MA_t, calculated at monthly frequency

3.4 INDEX CALCULATION

3.4.1 Calculation of the Theoretical Weights and Target Units

3.4.1.1 Calculation of Weekly Return for each Covariance Matrix Component

In respect of a Covariance Matrix Component k, the Weekly Return, WR_t^k, on an Index Business Day t is calculated as per the below formula:

$$WR_t^k = \frac{P_t^k}{P_{t-5}^k} - 1$$

Where:

P_t^k means the Closing Level of Covariance Matrix Component k in respect of Index Business Day t;

P_{t-5}^k means the Closing Level of Covariance Matrix Component k in respect of the 5th Index Business Day prior to Index Business Day t

3.4.1.2 Calculation of Covariance Matrix

The Covariance Matrix $C_{t-N+1,t}$ of size 3×3 and of N Index Business Days is calculated using the vector of the Weekly Return $\overrightarrow{WR_{t-N+1,t}}$, $\{WR_s^k, for\ s = t-N+1, \dots, t\ and\ k = 1,2,3\}$ in accordance with the formula from Section 3.4.1.1, and then rounded to 5 decimal points with 0.00005 rounded upwards.

k refers to k-th Covariance Matrix Component in accordance with Table 3.

The element $C_{t-N+1,t}(i,j)$ is defined as follows, where multiplying by $N/5$ represents the conversion to a daily annualized covariance.

$$C_{t-N+1,t}(i,j) = \frac{N}{5} * \frac{1}{N-1} \times \sum_{s=t}^{t-N+1} \left(WR_s^i - \mu_t^i\right)\left(WR_s^j - \mu_t^j\right), \qquad for\ i,j \in \{1,2,3\}$$

$$\mu_t^k = \frac{1}{N} \times \sum_{s=t}^{t-N+1} WR_s^k, \qquad for\ k = 1,2,3\ and\ N = 252$$

3.4.1.3 Calculation of Theoretical Weights

On each Index Risk Budget Rebalance Day t, provided with a 3×3 Covariance Matrix C which was calculated on the Index Risk Budget Calculation Day using the Weekly Return time series, and a 3×1 vector of MACRO Risk Budget s $\overrightarrow{MACRO_s}$, the Theoretical Weights TW_t^k in respect of the Index Constituent k and a month t are calculated using two steps:

(i) Find solution by optimizing the following function using the **Optimizer**:

identify the best W that minimizes $\sqrt{(W)^T.C.W} - \sum_{k=1}^{3} MACRO_s^k \times \ln(rbw_t^k)$

subject to: $rbw_t^k \geq 0, \forall\ k \in (1,2,3)$

where:

$MACRO_s^k$ means the k-th element of the vector $\overrightarrow{MACRO_s}$, representing the MACRO Risk Budget ("$MACRO_s^k$") allocated to Index Constituent k in a predefined growth state s, as defined in Table 4 of Section 3.3;

C means the Covariance Matrix calculated using the Weekly Return $\overrightarrow{WR_{t-N+1,t}}$, $\{WR_s^k, for\ s = t - N + 1, \dots, t\ and\ k = 1, 2, 3\}$ as defined in Sections 3.4.1.1 and 3.4.1.2;

rbw_t^k means the risk budget k-th element of the vector W_t in respect of the Covariance Matrix Component k, as defined in Table 3 of Section 3.3;

W_t means the vector of 3×1 weights being optimized by the Optimizer on the Index Risk Budget Calculation Day t;

Optimizer means the ECOS solver, which is an interior-point solver for second-order cone programming, within the CVXPY Python Library, details on which can be found at https://www.cvxpy.org/index.html. In the event that a solution to a given optimization problem is not found when using the ECOS solver, the SCS solver, which uses an operator splitting method to solve conic optimization problems, is used. In the event that a solution is not found to an optimization problem within a given rebalancing selection calculation with either solver, the given rebalancing selection calculation is aborted and the portfolio is not rebalanced.

(ii) Normalize the optimal risk parity weights, with a precision of 5 decimal places and 0.000005 rounded upwards:

$$TW_t^k = \frac{rbw_t^k}{\sum_{k=1}^{3} rbw_t^k}$$

3.4.2 Calculation of the Intermediate Index Level

On Index Business Day t, the Intermediate Index Level, IIL_t, is calculated as:

(i) On the Intermediate Level Start Date, the Intermediate Index Level is set to 100;
(ii) On each Index Business Day t following the Base Date, the Intermediate Index Level will be calculated by the Index Calculation Agent in accordance with the following formula:

$$IIL_t = IIL_{t-1} + \sum_{k=1}^{3} Unit_{t-1}^k \times (TLC_t^k - TLC_{t-1}^k)$$

Where:

IIL_{t-1} means the Intermediate Index Level on the Index Business Day immediately preceding Index Business Day t;

TLC_t^k means the Closing Level of the Index Constituent k in respect of Index Business Day t;

TLC_{t-1}^k means the Closing Level of the Index Constituent k in respect of the Index Business Day immediately prior to Index Business Day t;

$Unit_{t-1}^k$ means the Unit in respect of the Index Business Day immediately preceding Index Business Day t for Index Constituent k, calculated in accordance with Section 3.4.2.1.

3.4.2.1 Calculation of Units for each Index Constituent

If the Index Business Day t is a Risk Budgeting Day that is not Disrupted Day for Index Constituent k then the Index Calculation Agent shall determine the Unit of each Index Constituent in accordance with the following formula:

$$Unit_t^k = \frac{IIL_{t-2} \times w_t^k}{TLC_{t-2}^k}$$

Otherwise:

$$Unit_t^k = Unit_{t-1}^k$$

Where:

IIL_{t-2} means the Intermediate Index Level on the Index Business Day that is two (2) Index Business Days prior to Index Business Day t;

TLC_{t-2}^k means the Closing Level of Index Constituent k in respect of the Index Business Day that is two (2) Index Business Days prior to Index Business Day t;

w_t^k means the weight in respect of the Index Business Day t and Index Constituent k as determined in accordance to Section 3.4.1.3.

For the calculation of Unit on the one (1) Index Business Day immediately following the Base Date, IL_{t-1} is deemed to be equal to 100.

3.4.3 Calculation of the Final Index Level

On Index Business Day t, the Final Index Level, FIL_t, is calculated as:

(i) On the Base Date, the Final Index Level is set to 100;
(ii) On each Index Business Day t , following the Base Date, the Final Index Level will be calculated by the Index Calculation Agent in accordance with the following formula:

$$FIL_t = FIL_{t-1} + FU_{t-1} \times (IIL_t - IIL_{t-1})$$

Where:

FIL_{t-1} means the Final Index Level on the Index Business Day immediately preceding Index Business Day t;

FU_{t-1} means the Unit of Final Index for Index Business Day t-1, as calculated in Section 3.4.4;

IIL_t means the Intermediate Index Level on the Index Business Day t, as calculated in Section 3.4.2;

IIL_{t-1} means the Intermediate Index Level on the Index Business Day immediately preceding Index Business Day t.

3.4.4 Calculation of Final Index Units

If the Index Business Day t is an Index Rebalancing Day and

$$ABS(TExpo_t - Exposure_{t-1}) \geq Rebalance\ Threshold$$

then:

$$FU_t = \frac{FIL_{t-1}}{IIL_{t-1}} \times Exposure_t$$

Otherwise:

$$FU_t = FU_{t-1}$$

Where:

FIL_{t-1} means the Final Index Level on the Index Business Day immediately preceding Index Business Day t;

IIL_{t-1} means the Intermediate Index Level on the Index Business Day immediately preceding Index Business Day t;

$Exposure_{t-1}$ means the Exposure to the Final Index on the Index Business Day immediately preceding Index Business Day t;

$TExpo_t$ means the Target Exposure on Index Business Day t as determined in accordance with Section 3.4.4.2;

$Rebalancing\ Threshold$ means the Rebalancing Threshold as specified in Section 3.3.

3.4.4.1 Calculation of Exposure

On each Index Business Day t, the Exposure is calculated in accordance with the following formula:

If the Index Business Day t is an Index Rebalancing Day that is not a Disrupted Day for any Index Component, the Exposure is calculated in accordance with the following formula:

$$Exposure_t = TExpo_t$$

Otherwise:

$$Exposure_t = \frac{IIL_{t-1} \times FU_{t-1}}{FIL_{t-1}}$$

Where:

FIL_{t-1} means the Final Index level on the Index Business Day immediately preceding Index Business Day t;

FU_{t-1} means the Unit of Final Index for Index Business Day immediately preceding Index Business Day t;

IIL_{t-1} means the Intermediate Index Level on the Index Business Day that is one (1) Index Business Days prior to Index Business Day t;

$TExpo_t$ means the Target Exposure on Index Business Day t as determined in accordance with Section 3.4.4.2.

3.4.4.2 Calculation of Target Exposure

For an Index Business Day t, the target exposure is:

$$TExpo_t = \text{MAX}\left(0, \text{MIN}\left(\frac{TargetVol}{RV_{t-1}} \times VAF_{t-1}, Leverage\ Cap\right)\right)$$

$TargetVol$ means the Volatility Target as specified in Section 3.3;

$Leverage\ Cap$ means the Leverage Cap as specified in Section 3.3;

RV_{t-1} means the Realized Volatility on the Index Business Day that is one (1) Index Business Days prior to Index Business Day t, as determined in accordance to Section 3.4.4.3;

VAF_{t-1} means the Volatility Adjustment Factor on the Index Business Day that is one (1) Index Business Days prior to Index Business Day t, as determined in accordance to Section 3.4.4.4.

3.4.4.3 Calculation of Realized Volatility

On Index Business Day t, the Realized Volatility is calculated as per the following formula:

From the Index Base Date:

$$RV_t = \max\left(HV_{t,42,\lambda_{short}}, HV_{t,63,\lambda_{long}}\right)$$

Where $HV_{t,i,\lambda}$ means the Historical Volatility on the Index Business Day t, with length i and using Decay Factor λ:

$$HV_{t,i,\lambda} = \sqrt{252} \times \sqrt{\frac{\sum_{j=0}^{i-1} \lambda^j \times \left(\frac{IIL_{t-j}}{IIL_{t-j-l}} - 1\right)^2}{\sum_{j=0}^{i-1} \lambda^j}}$$

IIL_{t-j} means the level of the Intermediate Index on the Index Business Day that is j Index Business Days prior to Index Business Day *t;*

IIL_{t-j-l} means the level of the Intermediate Index on the Index Business Day that is *(j+l)* Index Business Days prior to Index Business Day *t*;

λ means the Decay Factor, $\lambda_{short} = 0.94,\ \lambda_{long} = 0.97$

3.4.4.4 Calculation of Volatility Adjustment Factor

As of Index Business Day t, the Volatility Adjustment Factor, VAF_t, is calculated as:

(i) For each day up to and including 125 Index Business Days after the Base Date, set equal to 1.0;
(ii) With respect to any Index Business Day, t, thereafter:

$$VAF_t = \text{MAX}\left(VAF_{Min}, \text{MIN}\left(VAF_{Max}, \sqrt{\text{MAX}\left(0, 2 - \frac{Volatility\_FIL^2}{TargetVol^2}\right)}\right)\right)$$

Where:

$$Volatility\_FIL \qquad \sqrt{252}\, x \sqrt{\frac{1}{126}\sum_{s=0}^{125}\left(\left(\frac{FIL_{t-s}}{FIL_{t-s-1}}-1\right)-\frac{1}{126}\sum_{s=0}^{125}\left(\frac{FIL_{t-s}}{FIL_{t-s-1}}-1\right)\right)^2}$$

FIL_{t-s} means the Final Index Level on the Index Business Day that is s Index Business Days prior to Index Business Day t;

FIL_{t-s-1} means the Final Index Level on the Index Business Day that is $s+1$ Index Business Days prior to Index Business Day t;

VAF_{Min} means the Minimum VAF, as per Section 3.3;

VAF_{Max} means the Maximum VAF, as per Section 3.3;

$TargetVol$ means the Target Volatility as specified in Table 1 in Section 3.3.

4. Index Dissemination

4.1 IDENTIFIERS

Index Name	**Bloomberg Code**
PGIM Quant US Multi-Asset Positioning Index	PQUSMAP Index
UBS US Large Cap Equity Intraday RC 10% ER Index	UBLCE10E Index
UBS Tech Equity Intraday RC 10% ER Index	UBTEC10E Index
UBS US Momentum Dynamic Bond Index	UBSUMDBO Index
ISM Services PMI (Monthly)	NAPMNMI Index
ISM Manufacturing PMI (Monthly)	NAPMPMI Index
GDP, US Nominal Dollars SAAR (Quarterly)	GDP CUR$ Index
Value Added to GDP by Manufacturing	VADDMANF Index

4.2 OTHER INFORMATION

Index Name	Launch Date	Base Date
PGIM Quant US Multi-Asset Positioning Index	April 15th, 2025	May 11th, 2005
UBS US Large Cap Equity Intraday RC 10% ER Index	February 4th, 2025	February 3rd, 2000
UBS Tech Equity Intraday RC 10% ER Index (USD)	February 4th, 2025	February 3rd, 2004
UBS US Momentum Dynamic Bond Index	February 24th, 2025	February 2nd, 2000

5. Material Data Event

A "Material Data Event" occurs if any of the following events occurs, and PGIM Quant determines in its absolute and sole discretion that such event is material:

- The Index Component provider cancels or suspends indefinitely the contribution of one or more of the Index Components;
- The Index Calculation Agent ceases to provide calculation services; or
- It is not practical or commercially practicable or reasonable, for legal or regulatory purposes, for PGIM Quant to continue to offer the MAP Index.

If a Material Data Event occurs, PGIM Quant, acting in good faith and in a commercially reasonable manner, shall select a substitute for the impacted data/services that it determines, in its absolute and sole discretion, data/services that possess similar characteristics as compared to the impacted data/services, provided that, if PGIM Quant determines that no substitute is available, it may make determinations that include, but are not limited to, setting the Growth State, going forward indefinitely, to a fixed value (such as "Stability"), or replace the calculation/formula of the Growth State altogether with a methodology which may use alternative data or reduced data and/or other factors to more closely replicate the effect of the Growth State or, if commercially reasonable, replace the Growth State with a substitute that possesses similar characteristics as compared to the original data or, in an extreme scenario, decide to terminate the MAP Index.

6. DISCLAIMERS

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The PGIM Quant US Multi-Asset Positioning Index (the "MAP Index") is a rules-based, excess return index designed to measure the performance of a multi-asset-class strategy allocating to US equities and US Treasuries with a risk control overlay. It is not actively managed. The MAP Index weights are allocated to three underlying indices ("Index Constituents"), with dynamic allocations based on a PGIM Quant macroeconomic signal to measure the current economic regime, a risk budgeting optimization and a target volatility of 6.0%. The three Index Constituents are the UBS US Large Cap Equity Intraday RC 10% ER Index and UBS Tech Equity Intraday RC 10% ER Index for US equities, and the UBS US Momentum Dynamic Bond Index for US Treasuries. Any interruption in the availability of the Index Constituents may prevent PGIM Quant from making the MAP Index available. PGIM Quant does not guarantee that the MAP Index will be able to capture the economic regime effectively, that the determined economic regime will still be relevant in the future, or that any target volatility or objective will be achieved. Any risk budgeting optimization should not be confused with and does not imply low risk or the ability to control risk. There is no guarantee that the MAP Index will not underperform some or all of the Index Constituents. In particular, the MAP Index may have a significant weight in one of those Index Constituents at the time of a sudden drop, or an insignificant weight in one of those Index Constituents at a time it has strong performance. Different indices with a different set of underlying assets may significantly outperform the MAP Index.

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The MAP Index was launched on April 15, 2025 (the “Launch Date”).

Pre-Inception Backtested Performance: The methodology of the MAP Index was developed through, among other things, backtesting the performance of the Index Constituents over time periods prior to the Launch Date. Any performance of the MAP Index prior to the Launch Date is hypothetical and simulated performance data created by retroactively applying the MAP Index's calculation methodology and strategy to historical prices of the Index Constituents and certain factors and assumptions that PGIM Quant in its discretion considered appropriate and integral. For parts of the backtesting period, allocations to the Index Constituents have had strong performance. Such simulated performance data may reflect a bias towards strategies that have performed well in the past. No future performance of the MAP Index can be predicted based on the hypothetical and simulated pre-inception performance or the historical returns described herein.

All backtested index values – that is, simulated performance – shown for periods prior to the Launch Date are hypothetical, and are provided "AS IS" for informational and educational purposes only. The results reflect performance of an index not historically offered to investors and do NOT represent returns that any investor actually attained. PGIM Quant provides no assurance or guarantee that the MAP Index will operate or would have operated in the past in a manner consistent with these factors and assumptions. In the event any of such factors and assumptions used prove not to be true, results are likely to vary materially from the examples shown herein.

Backtested performance is developed with the benefit of hindsight and has inherent limitations. BACKTESTED PERFORMANCE IS HYPOTHETICAL AND NOT ACTUAL PERFORMANCE OR A RELIABLE

INDICATOR OR GUARANTEE OF FUTURE RETURNS. Specifically, backtested results do not reflect actual trading, or the effect at the time of contemporaneous material economic and market factors on the decision-making process. Since trades have not actually been executed, results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity, transaction costs and other expenses. You should expect that the economic and market conditions present during the time period of the backtested results are not representative of all possible economic and market conditions and scenarios that have occurred or will occur in the future. The macroeconomic risks of using the MAP Index methodology in a different time period or the financial risk of executing trades in a live portfolio which include the potential market impact on prices caused by buying or selling that could cause the model's buy or sell prices to differ from the frictionless trades of the backtested model. There are numerous factors related to the specific Index Constituents, or the economy or markets in general, which cannot be, and have not been accounted for in the preparation of the MAP Index, all of which can affect actual performance. Further, backtesting allows the methodology to be adjusted to generate particular hypothetical past returns. You should expect that actual performance will differ, possibly significantly, from backtested performance.

Costs and Expenses: PGIM Quant sponsors the MAP Index but does not manage actual assets in relation to the MAP Index. MAP Index returns do not reflect payment of any sales charges or commissions, management fees, performance fees, expenses or other transaction costs an investor will pay, if applicable, to purchase instruments linked to the MAP Index or that are intended to track the performance of the MAP Index. The imposition of these fees and charges would cause actual and any back-tested performance of any instruments purchased to be lower than the MAP Index performance shown.

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How the Index Volatility Mechanism Works: The MAP Index employs a rules-based allocation among the UBS US Large Cap Equity Intraday RC 10% ER Index, the UBS Tech Equity Intraday RC 10% ER Index and the UBS US Momentum Dynamic Bond Index (i.e., the Index Constituents). The MAP Index dynamically adjusts allocations to the three Index Constituents based a PGIM Quant macroeconomic

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