MSCI Economic Regime Allocator Indexes Methodology

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Contents

1 Introduction

The MSCI Economic Regime Allocator suite of Indexes[1] consists of following indexes:

- The MSCI World Economic Regime Sector Allocator Index
- The MSCI World Economic Regime Asset Allocator Index
- The MSCI USA Economic Regime Sector Allocator Index
- The MSCI USA Economic Regime Asset Allocator Index
- The MSCI World Economic Regime Sector Allocator 10% Risk Control Index
- The MSCI World Economic Regime Asset Allocator 5% Risk Control Index
- The MSCI USA Economic Regime Sector Allocator 10% Risk Control Index
- The MSCI USA Economic Regime Asset Allocator 5% Risk Control Index

The MSCI World Economic Regime Sector Allocator Index aims to represent the performance of a strategy that allocates daily to cash[2] and MSCI World Sector Indexes[3] based on GDP Growth Indicator and Inflation Indicator calculated by QuantCube Technology[4].

The MSCI World Economic Regime Asset Allocator Index aims to represent the performance of a strategy that allocates daily to cash, SGX 10-Year US Treasury Futures Index[5] and MSCI World Sector Indexes based on GDP Growth Indicator and Inflation Indicator calculated by QuantCube Technology.

The MSCI USA Economic Regime Sector Allocator Index aims to represent the performance of a strategy that allocates daily to cash and MSCI USA Sector Indexes[6] based on GDP Growth Indicator and Inflation Indicator calculated by QuantCube Technology.

The MSCI USA Economic Regime Asset Allocator Index aims to represent the performance of a strategy that allocates daily to cash, SGX 10-Year US Treasury Futures Index and MSCI USA Sector Indexes based on GDP Growth Indicator and Inflation Indicator calculated by QuantCube Technology.

[1] Please note, the MSCI Economic Regime Allocator suite of Indexes are calculated daily on each index calculation date as defined by MSCI as per MSCI INDEX CALCULATION METHODOLOGY

[2] LIBOR USD rate is used until 28-Nov-2014, SOFR is used effective 01-Dec-2014

[3] Please refer to table of MSCI Regional Sector Indexes in Section 3.1 for list of MSCI World Sector Indexes

[4] QuantCube is a cross-sectoral Research & Development company which analyses billions of alternative data points in real time to uncover macroeconomic insights ahead of the market for investment. Please refer to Appendix 2 for details

[5] Total Return variant of SGX 10-Year US Treasury Futures Index is used. Please refer to Appendix 1 for details

[6] Please refer to table of MSCI Regional Sector Indexes in Section 3.1 for list of MSCI USA Sector Indexes

The MSCI World Economic Regime Sector Allocator 10% Risk Control Index and the MSCI USA Economic Regime Sector Allocator 10% Risk Control Index aim to represent the performance of the MSCI World Economic Regime Sector Allocator Index and of the MSCI USA Economic Regime Sector Allocator Index respectively, while targeting a risk level of 10%.

The MSCI World Economic Regime Asset Allocator 5% Risk Control Index and the MSCI USA Economic Regime Asset Allocator 5% Risk Control Index aim to represent the performance of the MSCI World Economic Regime Asset Allocator Index and the MSCI USA Economic Regime Asset Allocator Index respectively, while targeting a risk level of 5%.

2 Definition of Economic Regimes

The methodology defines four economic regimes labelled as Stagflation, Heating Up, Slow Growth and Goldilocks based on rising or falling GDP Growth Indicator and Inflation Indicator as provided by QuantCube Technology.

- "Goldilocks" – Rising GDP Growth Indicator and Falling Inflation Indicator
- "Slow Growth" – Slowing GDP Growth Indicator and Falling Inflation Indicator
- "Stagflation" – Slowing GDP Growth Indicator and Rising Inflation Indicator
- "Heating Up" – Rising GDP Growth Indicator and Rising Inflation Indicator

For detailed definition of these four economic regimes and their calculation using QuantCube's GDP Growth Indicator and Inflation Indicator, please refer to Appendix 3.

3 Constructing the MSCI Economic Regime Sector Allocator Indexes

The MSCI World Economic Regime Sector Allocator Index and the MSCI USA Economic Regime Sector Allocator Index are reviewed daily by identifying the economic regime as per the steps described in Appendix 3.

3.1 Determining the Component Asset Weight

At each daily Index Review, based on the economic regime identified, the following weights[7] are allocated to cash and a set of MSCI Regional Sector Indexes[8] to create the MSCI World Economic Regime Sector Allocator Index and the MSCI USA Economic Regime Sector Allocator Index:

	MSCI Regional Energy Index	MSCI Regional Materials Index	MSCI Regional Industrials Index	MSCI Regional Consumer Discretionary Index	MSCI Regional Consumer Staples Index	MSCI Regional Health Care Index	MSCI Regional Financials Index	MSCI Regional Information Technology Index	MSCI Regional Communication Services Index	MSCI Regional Utilities Index	Cash
Stagflation	12.5%				12.5%	12.5%				12.5%	50%
Heating Up		25%		25%		25%		25%			
Slow Growth					10%	10%	10%		10%	10%	50%
Goldilocks	25%	25%	25%					25%			

3.2 Applying the MSCI Risk Control Indexes Methodology

The MSCI Risk Control Indexes Methodology[9] is applied sequentially on the MSCI World Economic Regime Sector Allocator Index and the MSCI USA Economic Regime Sector Allocator Index to construct the MSCI World Economic Regime Sector Allocator 10% Risk Control Index and the MSCI USA Economic Regime Sector Allocator 10% Risk Control Index respectively. The parameters for the application of the risk control methodology in the MSCI World Economic Regime Sector Allocator 10% Risk Control Index and the MSCI USA Economic Regime Sector Allocator 10% Risk Control Index are noted in Appendix 4.

[7] The weights assigned to cash and MSCI Regional Sector Indexes in the MSCI World Economic Regime Sector Allocator Index the MSCI USA Economic Regime Allocator Index are re-weighted to their target allocation daily even if there is no change in the Economic Regime identified

[8] The Regions are defined as World and USA for the MSCI World Economic Regime Allocator Indexes and the MSCI USA Economic Regime Allocator Index, respectively

[9] Please refer to MSCI Risk Control Indexes Methodology for more details

3.3 Maintaining the MSCI Economic Regime Sector Allocator Indexes

3.3.1 Index Reviews

The MSCI World Economic Regime Sector Allocator Index and the MSCI USA Economic Regime Sector Allocator Index are reviewed on a daily basis as per the steps described in Section 3.1. The pro forma Index for each of the MSCI World Economic Regime Sector Allocator Index and the MSCI USA Economic Regime Sector Allocator Index is announced three business days before the effective date.

3.3.2 Daily Risk Control Application

The MSCI World Economic Regime Sector Allocator 10% Risk Control Index and the MSCI USA Economic Regime Sector Allocator 10% Risk Control Index are rebalanced on a daily basis, in accordance with the MSCI Risk Control Indexes Methodology with the parameters detailed in Appendix 4.

3.3.3 Ongoing Event-Related Changes

The treatment of common corporate events within each of the MSCI World Sector Indexes and the MSCI USA Sector Indexes listed in Section 3.1 are applied as per the MSCI Global Investable Market Indexes Methodology[10].

[10] Please refer to MSCI Global Investable Market Indexes Methodology at: https://www.msci.com/index-methodology

4 Constructing the MSCI Economic Regime Asset Allocator Indexes

The MSCI World Economic Regime Asset Allocator Index and the MSCI USA Economic Regime Asset Allocator Index are reviewed daily by identifying the economic regime as per the steps described in Appendix 3.

4.1 Determining the Component Asset Weight

At each daily Index Review, based on the economic regime identified, the following weights[11] are allocated to SGX 10-Year US Treasury Futures Index, cash and a set of MSCI Regional Sector Indexes to create the MSCI World Economic Regime Asset Allocator Index and the MSCI USA Economic Regime Asset Allocator Index:

	MSCI Regional Energy Index	MSCI Regional Materials Index	MSCI Regional Industrials Index	MSCI Regional Consumer Discretionary Index	MSCI Regional Consumer Staples Index	MSCI Regional Health Care Index	MSCI Regional Financials Index	MSCI Regional Information Technology Index	MSCI Regional Communication Services Index	MSCI Reginal Utilities Index	SGX 10-Year US Treasury Futures Index	Cash
Stagflation	5%				5%	5%				5%		80%
Heating Up		20%		20%		20%		20%				20%
Slow Growth					4%	4%	4%		4%	4%	80%	
Goldilocks	15%	15%	15%					15%			40%	

4.2 Applying the MSCI Risk Control Indexes Methodology

The MSCI Risk Control Indexes Methodology is applied sequentially on the MSCI World Economic Regime Asset Allocator Index and the MSCI USA Economic Regime Asset Allocator Index to construct the MSCI World Economic Regime Asset Allocator 5% Risk Control Index and the MSCI USA Economic Regime Asset Allocator 5% Risk Control Index. The parameters for the application of the risk control methodology in the MSCI World Economic Regime Asset Allocator 5% Risk Control Index and the MSCI USA Economic Regime Asset Allocator 5% Risk Control Index are noted in Appendix 4.

[11] The weights assigned to SGX 10-Year US Treasury Futures Index, cash and MSCI World Sector Indexes in the MSCI World Economic Regime Asset Allocator Index are re-weighted to their target allocation daily even if there is no change in the Economic Regime identified

4.3 Maintaining the MSCI Economic Regime Asset Allocator Indexes

4.3.1 Index Reviews

The MSCI World Economic Regime Asset Allocator Index and the MSCI USA Economic Regime Asset Allocator Index are reviewed on a daily basis as per the steps described in Section 4.1. The pro forma Index for each of the MSCI World Economic Regime Asset Allocator Index and the MSCI USA Economic Regime Asset Allocator Index is announced three business days before the effective date.

4.3.2 Daily Risk Control Application

The MSCI World Economic Regime Asset Allocator 5% Risk Control Index and the MSCI USA Economic Regime Asset Allocator 5% Risk Control Index are rebalanced on a daily basis, in accordance with the MSCI Risk Control Indexes Methodology with the parameters detailed in Appendix 4.

4.3.3 Ongoing Event-Related Changes

The treatment of common corporate events within each of the MSCI World Sector Indexes and the MSCI USA Sector Indexes listed in Section 4.1 are applied as per the MSCI Global Investable Market Indexes Methodology[12].

[12] Please refer to MSCI Global Investable Market Indexes Methodology at: https://www.msci.com/index-methodology

5 Handling Suspect or Missing GDP Growth Indicator and Inflation Indicator

If, at an Index Review, MSCI determines that the primary source data from QuantCube Technology is not reflective of market conditions or there is temporary outage of data for 4 or more days, the economic regime, component assets and weights will be determined based on latest available OECD CLI[13] and OECD CPI[14] values as per the following steps ("fallback mechanism")[15]:

- Calculation of change in OECD CLI
- Calculation of change in OECD CPI
- Rules to assign economic regimes
- Determining the component asset weights

When the fallback mechanism comes into effect, the index review frequency will change from daily to a quarterly basis to coincide with the regular February, May, August and November Index Reviews of the MSCI World Index. The changes are implemented at the end of February, May, August, and November.

Subsequently, a review of an alternative data source for the GDP Growth Indicator and Inflation Indicator would be conducted. The adoption of an alternative data source and any amendments to the methodology to reflect this will be announced to all clients simultaneously. MSCI may consult with clients to gather their feedback on the choice of alternative sources in line with MSCI Index Consultation Policy[16].

[13] Please refer to OECD CLI at: Leading indicators - Composite leading indicator (CLI) - OECD Data

[14] Please refer to OECD CPI at: Prices - Inflation (CPI) - OECD Data

[15] Please refer to Appendix 5 for detailed steps of applying Fallback Mechanism

[16] Please refer to MSCI Index Policies document at: https://www.msci.com/index-methodology

Appendix 1: Methodology of Total Return Variant of SGX 10-Year US Treasury Futures Index

The SGX 10-Year US Treasury Futures Index is calculated in USD. The index methodology of SGX 10-Year US Treasury Futures Index (Excess Return) has been published at the link below as iEdge U.S. Treasury Notes Futures Index Methodology:
https://api2.sgx.com/sites/default/files/2020-06/iEdge%20US%20Treasury%20Futures%20Index%20-%20Index%20Methodology_DCI_A4_4%20Jun%202020_1.pdf

The Total Return variant of the SGX 10-Year US Treasury Futures Index is calculated from the excess return version of the SGX 10-Year US Treasury Futures Index using the formula below:

$$Total\ return = \left(\frac{ER\ Index_t}{ER\ Index_{t-1}} - 1\right) + \left(\frac{Interest\ rate}{360}\right) * D_{t,t-1}$$

$ER\ Index_t$ – SGX 10-Year US Treasury Futures Index level on business day t
$ER\ Index_{t-1}$ – SGX 10-Year US Treasury Futures Index level on business day t-1
$Interest\ rate$ – Fed Funds Rate is used as funding rate
$D_{t,t-1}$– Number of actual calendar days between business day t-1 and t

$$TR\ Index = TR\ Index_{t-1} * (1 + Total\ Return)$$

$TR\ Index_{t-1}$ – Total Return variant of SGX 10-Year US Treasury Futures Index level on business day t-1

Appendix 2: QuantCube Economic Growth Indicator

The following two indicators from QuantCube Technology are used in the construction of the MSCI Economic Regime Allocator Indexes.

GDP Growth Indicator

- GDP Growth Indicator tracks year-over-year (YoY) economic growth at a country level in real-time. It relies exclusively on real-time alternative data to provide timely insights ahead of official numbers or other nowcast models relying on official data.

Inflation Indicator

- Inflation Indicator is a real-time indicator that quantifies the current Consumer Price Index at a country level by crossing and aggregating multiple subcomponents like Motor Fuels, Fruits, Vegetables and others.

For further details on the calculation methodology, please refer to

Real-time macro nowcasting for GDP, Inflation, Investment Decisions — Quant Cube Technology (quant-cube.com)

Appendix 3: Economic Regime

At each index review, economic regime is defined based on the change in the GDP Growth Indicator and change in the Inflation Indicator. The calculation of change in the GDP Growth Indicator and change in the Inflation Indicator, and the rules to assign economic regime are as follows:

1) Calculation of Change in the GDP Growth Indicator

At each index review date (t), GDP Growth Indicator for USA ($US - QCGGI$) and GDP Growth Indicator for China ($CN - QCGGI$) are both considered to calculate the change in GDP Growth Indicator.

- **Calculation of Change in the GDP Growth Indicator for USA**

  Both short-term and long-term signals for USA are calculated based on the following rules:

$$US - QCGGI_{short-term} = Average^{17}\left(US - QCGGI_{(t-1)} : US - QCGGI_{(t-5)}\right) - Average\left(US - QCGGI_{(t-6)} : US - QCGGI_{(t-10)}\right)$$

$$US - QCGGI_{long-term} = Average\left(US - QCGGI_{(t-1)} : US - QCGGI_{(t-5)}\right) - Average\left(US - QCGGI_{(t-21)} : US - QCGGI_{(t-25)}\right)$$

  Where:

  $US - QCGGI_{(t-i)}$ - GDP Growth Indicator value for USA as of i business days prior to t

- **Calculation of Change in the GDP Growth Indicator for China**

  Both short-term and long-term signals for China are calculated based on the following rules:

$$CN - QCGGI_{short-term} = Average\left(CN - QCGGI_{(t-1)} : CN - QCGGI_{(t-5)}\right) - Average\left(CN - QCGGI_{(t-6)} : CN - QCGGI_{(t-10)}\right)$$

$$CN - QCGGI_{long-term} = Average\left(CN - QCGGI_{(t-1)} : CN - QCGGI_{(t-5)}\right) - Average\left(CN - QCGGI_{(t-21)} : CN - QCGGI_{(t-25)}\right)$$

  Where:

  $CN - QCGGI_{(t-i)}$ - GDP Growth Indicator value for China as of i business days prior to t

[17] When a value is missing for any day, it will be dropped and excluded from the calculation of average. The same missing value treatment is applied in across all average calculation of both GDP Growth Indicator and Inflation Indicator

2) Calculation of Change in the Inflation Indicator

At each index review date (t), Inflation Indicator for USA ($US - QCII$) is used to calculate short-term and long-term signals respectively based on the following rule:

$$US - QCII_{short-term} = Average\left(US - QCII_{(t-1)} : US - QCII_{(t-5)}\right) - Average\left(US - QCII_{(t-6)} : US - QCII_{(t-10)}\right)$$

$$US - QCII_{long-term} = Average\left(US - QCII_{(t-1)} : US - QCII_{(t-5)}\right) - Average\left(US - QCII_{(t-21)} : US - QCII_{(t-25)}\right)$$

Where:

$US - QCII_{(t-i)}$ - Inflation Indicator value for USA as of i business days prior to t

3) Rules to Assign Economic Regimes

Economic Regime	Short-term and Long-term Signals
Stagflation	(($US - QCGGI_{short-term}$<=0 or $US - QCGGI_{long-term}$ <=0) and ($CN - QCGGI_{short-term}$<=0 or $CN - QCGGI_{long-term}$<=0)) and ($US - QCII_{short-term}$>0 and $US - QCII_{long-term}$>0)
Heating Up	(($US - QCGGI_{short-term}$ >0 and $US - QCGGI_{long-term}$ >0) or ($CN - QCGGI_{short-term}$ >0 and $CN - QCGGI_{long-term}$ >0)) and ($US - QCII_{short-term}$ >0 and $US - QCII_{long-term}$ >0)
Slow Growth	(($US - QCGGI_{short-term}$ <=0 or $US - QCGGI_{long-term}$ <=0) and ($CN - QCGGI_{short-term}$ <=0 or $CN - QCGGI_{long-term}$<=0)) and ($US - QCII_{short-term}$ <=0 or $US - QCII_{long-term}$ <=0)
Goldilocks	(($US - QCGGI_{short-term}$ >0 and $US - QCGGI_{long-term}$ >0) or ($CN - QCGGI_{short-term}$ >0 and $CN - QCGGI_{long-term}$ >0)) and ($US - QCII_{short-term}$ <=0 or $US - QCII_{long-term}$ <=0)

Appendix 4: Parameters Used for the MSCI Economic Regime Allocator Risk Control Indexes

Parameters for the MSCI World Economic Regime Sector Allocator 10% Risk Control Index

- The MSCI Risk Control Indexes Methodology[18] is applied on the MSCI World Economic Regime Sector Allocator Index using the following parameters:

	MSCI Risk Control Indexes Methodology Parameters	Parameters
1	Calendar Rule	Daily
2	Return Variant of MSCI World Economic Regime Sector Allocator Index	Net Total Return
3	Risk Free Rate	LIBOR up to 31-Aug-2021 and SOFR effective 01-Sep-2021
4	Risk Free Maturity Rate	1D
5	Rebalancing Type	Volatility
	Volatility Rebalancing Parameters	
6	Risk Control Level	10%
7	Base Currency of MSCI World Economic Regime Sector Allocator Index and the cash component	USD
8	Maximum Leverage	150%
9	Buffer	5%
10	Volatility Calculation Type	Equal Weighted Volatility
	Estimator Parameters	
11	Lag Between Rebalancing Date and Effective Date	3 business days
12	Short Term number of days estimate	20
13	Long Term number of days estimate	60

Parameters for the MSCI World Economic Regime Asset Allocator 5% Risk Control Index

- The MSCI Risk Control Indexes Methodology is applied on the MSCI World Economic Regime Asset Allocator Index using the following parameters:

	MSCI Risk Control Indexes Methodology Parameters	Parameters
1	Calendar Rule	Daily
2	Return Variant of MSCI World Economic Regime Asset Allocator Index	Net Total Return
3	Risk Free Rate	LIBOR up to 31-Aug-2021 and SOFR effective 01-Sep-2021
4	Risk Free Maturity Rate	1D
5	Rebalancing Type	Volatility
	Volatility Rebalancing Parameters	

[18]Please refer to the MSCI Risk Control Indexes methodology at www.msci.com/index-methodology

6	Risk Control Level	5%
7	Base Currency of MSCI World Economic Regime Asset Allocator Index and the cash component	USD
8	Maximum Leverage	150%
9	Buffer	5%
10	Volatility Calculation Type	Equal Weighted Volatility
	Estimator Parameters	
11	Lag Between Rebalancing Date and Effective Date	3 business days
12	Short Term number of days estimate	20
13	Long Term number of days estimate	60

Parameters for the MSCI USA Economic Regime Sector Allocator 10% Risk Control Index

- The MSCI Risk Control Indexes Methodology is applied on the MSCI USA Economic Regime Sector Allocator Index using the following parameters:

	MSCI Risk Control Indexes Methodology Parameters	Parameters
1	Calendar Rule	Daily
2	Return Variant of MSCI USA Economic Regime Sector Allocator Index	Net Total Return
3	Risk Free Rate	LIBOR up to 31-Aug-2021 and SOFR effective 01-Sep-2021
4	Risk Free Maturity Rate	1D
5	Rebalancing Type	Volatility
	Volatility Rebalancing Parameters	
6	Risk Control Level	10%
7	Base Currency of MSCI USA Economic Regime Sector Allocator Index and the cash component	USD
8	Maximum Leverage	150%
9	Buffer	5%
10	Volatility Calculation Type	Equal Weighted Volatility
	Estimator Parameters	
11	Lag Between Rebalancing Date and Effective Date	3 business days
12	Short Term number of days estimate	20
13	Long Term number of days estimate	60

Parameters for the MSCI USA Economic Regime Asset Allocator 5% Risk Control Index

- The MSCI Risk Control Indexes Methodology is applied on the MSCI USA Economic Regime Asset Allocator Index using the following parameters:

	MSCI Risk Control Indexes Methodology Parameters	Parameters
1	Calendar Rule	Daily
2	Return Variant of MSCI USA Economic Regime Asset Allocator Index	Net Total Return
3	Risk Free Rate	LIBOR up to 31-Aug-2021 and SOFR effective 01-Sep-2021
4	Risk Free Maturity Rate	1D
5	Rebalancing Type	Volatility
	Volatility Rebalancing Parameters	
6	Risk Control Level	5%
7	Base Currency of MSCI USA Economic Regime Asset Allocator Index and the cash component	USD
8	Maximum Leverage	150%
9	Buffer	5%
10	Volatility Calculation Type	Equal Weighted Volatility
	Estimator Parameters	
11	Lag Between Rebalancing Date and Effective Date	3 business days
12	Short Term number of days estimate	20
13	Long Term number of days estimate	60

Appendix 5: Application of Fallback Mechanism

1) Calculation of Change in OECD CLI

The MSCI Risk Control Indexes Methodology is applied on the MSCI USA Economic Regime Asset Allocator Index using the following parameters:

At each index review date (t), OECD CLI for USA ($US - CLI$) and OECD CLI for China ($CN - CLI$) are both considered to calculate signals as per the following rule:

$$US - CLIYOY_{qoq\ change} = \frac{US - CLI_{(t)}}{US - CLI_{(t-12m)}} - \frac{US - CLI_{(t-3m)}}{US - CLI_{(t-15m)}}$$

$$CN - CLIYOY_{qoq\ change} = \frac{CN - CLI_{(t)}}{CN - CLI_{(t-12m)}} - \frac{CN - CLI_{(t-3m)}}{CN - CLI_{(t-15m)}}$$

Where:

$US - CLI_{(t)}$ - latest available OECD CLI value for USA as of t

$US - CLI_{(t-3m)}$ - latest available OECD CLI value for USA as of a quarter prior to t

$US - CLI_{(t-12m)}$ - latest available OECD CLI value for USA as of a year prior to t

$US - CLI_{(t-15m)}$ - latest available OECD CLI value for USA as of a year and a quarter prior to t

$CN - CLI_{(t)}$ - latest available OECD CLI value for China as of t

$CN - CLI_{(t-3m)}$ - latest available OECD CLI value for China as of a quarter prior to t

$CN - CLI_{(t-12m)}$ - latest available OECD CLI value for China as of a year prior to t

$CN - CLI_{(t-15m)}$ - latest available OECD CLI value for China as of a year and a quarter prior to t

2) Calculation of Change in OECD CPI

At each index review date (t), OECD CPI for USA ($US - CPI$) are considered to calculate signals as per the following rule:

$$US - CPIYOY_{qoq\ change} = \frac{US - CPI_{(t)}}{US - CPI_{(t-12m)}} - \frac{US - CPI_{(t-3m)}}{US - CPI_{(t-15m)}}$$

Where:

$US - CPI_{(t)}$ - latest available OECD CPI value for USA as of t

$US - CPI_{(t-3m)}$ - latest available OECD CPI value for USA as of a quarter prior to t

$US - CPI_{(t-12m)}$ - latest available OECD CPI value for USA as of a year prior to t

$US - CPI_{(t-15m)}$ - latest available OECD CPI value for USA as of a year and a quarter prior to t

3) Rules to Assign Economic Regimes

Economic Regime	Short-term and Long-term Signals
Stagflation	($US - CLIYOY_{qoq\ change}$<=0 and $CN - CLIYOY_{qoq\ change}$<=0) and ($US - CPIYOY_{qoq\ change}$>0)
Heating Up	($US - CLIYOY_{qoq\ change}$ >0 or $CN - CLIYOY_{qoq\ change}$ >0) and ($US - CPIYOY_{qoq\ change}$>0)
Slow Growth	($US - CLIYOY_{qoq\ change}$<=0 and $CN - CLIYOY_{qoq\ change}$<=0) and ($US - CPIYOY_{qoq\ change}$ <=0)
Goldilocks	($US - CLIYOY_{qoq\ change}$ >0 or $CN - CLIYOY_{qoq\ change}$ >0) and ($US - CPIYOY_{qoq\ change}$ <=0)

4) Determining the Component Asset Weights

Based on the economic regime identified quarterly, component assets and weight to each asset class is determined per the steps described in Section 3.1 and Section 4.1.

Appendix 6: Changes to this Document

The following section has been updated effective January 31, 2025:

- Appendix 3: Updated the Calculation of Change in the GDP Growth Indicator and CPI Inflation Indicator

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