

Global Corporate: Mirror Swap and Asset Swap (Excess Return) Indices

This document is intended to be read in conjunction with the [Global Fixed Income Methodology](#), [USD Bellwether Swap Indices](#), [GBP Bellwether Swap Indices](#), [EUR Bellwether Swap Indices](#), [JPY Bellwether Swap Indices](#) and the [Global Corporate Index](#), these documents collectively constitute the index methodology for this Index.

The Global Corporate Mirror Swap Index is a funded benchmark constructed to match the duration risk of the Global Corporate Index using a portfolio of Bellwether Swap Indices. The Global Corporate Asset Swap Index is a funded benchmark constructed as the difference between the Total Return of the Global Corporate Index and the Total Return of the Mirror Swap Index. The Mirror Swap and Asset Swap Indices follow the Bloomberg Indices' monthly rebalancing conventions. The indices were launched on January 2009.

Description of Index Constituents The Mirror Swap Index consists of a portfolio of USD, EUR, GBP and JPY Bellwether Swap Indices, and the Asset Swap Index consists of the Global Corp, Global Corp Mirror Swap, and the funding component.

Index Ticker I20590US: Global Corporate Mirror Swap Total Return Index Value Unhedged
I32108US: Global Corporate Asset Swap Index Total Return Index Value Unhedged

Eligibility Requirements

Currency USD, EUR, GBP, and JPY

Currency Mapping The Mirror Swap Index consist of 4 swap currencies, and non-swap currencies are mapped to the swap currencies.

"Swap" Currency	Mapped Global Corp Eligible "Swap" Currency
USD	AUD, CAD, CLP, COP, MXN, PEN
EUR	CHF, CZK, DKK, HUF, ILS, NOK, PLN, RON, SEK
JPY	CNY, HKD, IDR, KRW, MYR, SGD, THB, AUD
AUD	NZD

Minimum Liquidity Requirements None

Bellwether Swap Portfolio The Mirror Swap Index consists of a portfolio of 25 Bellwether Swap Indices

- USD: 03M, 06M, 2Yr, 5Yr, 10Yr, 20Yr and 30Yr Bellwether Swap Indices
- EUR: 06M, 2Yr, 5Yr, 10Yr, 20Yr and 30Yr Bellwether Swap Indices
- JPY: 06M, 2Yr, 5Yr, 10Yr, 20Yr and 30Yr Bellwether Swap Indices
- GBP: 06M, 2Yr, 5Yr, 10Yr, 20Yr and 30Yr Bellwether Swap Indices

The Bellwether Swap Indices are weighted to match the beginning of the month Key Rate Duration (KRDs) profile of the Global Corporate Index.

Funding Components A funding component is added to make the Mirror Swap and Asset Swap Index a funded strategy, and comparable with the returns of a traditional cash index.

"Swap" Currency	Funding Instrument	Ticker
USD	USD 3M Bellwether Swap Index	I03595
EUR	EUR 6M Bellwether Swap Index	I05138
GBP	GBP 6M Bellwether Swap Index	I08106
JPY	JPY 6M Bellwether Swap Index	I08087

Returns Methodology

The Bellwether Swap Indices portfolio returns is calculated by the weighted total return of the curve duration matched Bellwether Indices. The total returns of the funding components are then added to make the Mirror Swap Index a funded index:

Global Corp Mirror Swap Index Total Return = Bellwether Swap Portfolios (Market weighted by currency) Total Return + Funding Components (Market weighted by currency) Total Return

The Global Corporate Asset Swap Index Total Return is defined as it's funded excess return:

Global Corp Asset Swap Index Total Return = {Global Corp Total Return - Global Corp Mirror Swap Index Total Return} + Funding Components (Market weighted by currency) Total Return

Construction and Rebalancing Rules

Global Corporate MFI Futures Weights Calculation as of 29th September 2023

Currency	Market Value	Market Value %	Par Maturity	Global Agg Corp KRD	Swap Duration	Hedge Ratio	Swap Notional
		A		B	C	(B/ C) * A	
USD	7,891,808,495.00	71.38%	6 months	0.05	0.49	0.07547	754,653.43
			2 Years	0.56	1.90	0.21145	2,114,483.09
			5 Years	1.36	4.48	0.21717	2,171,651.38
			10 Years	1.33	8.11	0.11729	1,172,872.61
			20 Years	1.60	13.78	0.08313	831,266.22
			30 Years	1.42	17.32	0.05834	583,411.03
			Cash (3 months)		0.00	-0.04903	-490,276.22
			Funding			0.71381	7,138,061.53
EUR	2,633,782,570.00	23.82%	2 Years	0.79	1.92	0.09773	977,302.84
			5 Years	1.97	4.58	0.10235	1,023,524.67
			10 Years	1.33	8.52	0.03729	372,931.55
			20 Years	0.23	14.79	0.00369	36,898.44
			30 Years	0.04	19.68	0.00048	4,786.49
			Cash (6 months)		0.00	-0.00332	-33,214.10
			Funding			0.23822	2,382,229.89
GBP	442,732,625.00	4.00%	2 Years	0.58	1.90	0.01224	122,358.99
			5 Years	1.44	4.46	0.01296	129,563.47
			10 Years	1.80	8.17	0.00881	88,139.46
			20 Years	1.49	13.79	0.00433	43,267.76
			30 Years	0.77	17.30	0.00179	17,867.19
			Cash (6 months)		0.00	-0.00007	-749.66
			Funding			0.04004	400,447.21
JPY	87,631,007.00	0.79%	2 Years	0.92	2.00	0.00364	36,421.73
			5 Years	1.30	4.95	0.00303	30,329.42
			10 Years	1.21	9.69	0.00131	13,114.73
			20 Years	0.26	18.12	0.00011	1,123.26
			30 Years	0.09	25.17	0.00003	280.27
			Cash (6 months)		0.00	-0.00020	-2,008.05
			Funding			0.00793	79,261.37
Total		100%				100.00%	10,000,000.00

*60% of the JPY Global Corp 7 Year KRD is allocated into the 5 Year hedge and 40% of the JPY Global Corp 7 Year KRD is allocated into the 10 Year hedge.

Frequency

For each index, Bloomberg maintains two universes: the Returns (Backward) and the Projected (Forward) Universes. The composition of the Returns Universe is rebalanced at each month-end and represents the fixed weights of index/instrument on which index returns are calculated for the next month. The Projected Universe is a forward-looking projection where the weights in the Futures basket change daily to reflect the characteristics of the target cash index but are not used for return calculations. On the last business day of the month (the rebalancing date), the weights of the latest Projected Universe becomes the Returns Universe for the following month.

Index KRDs Matching and Weight Calculation

Each Bellwether Swap Index is weighted to match the corresponding KRD exposure of the Global Corporate Index relative to the respective swap curve for each of the four currencies.

The total investment in the mirror swap index must equal the market value of the Global Corporate Index, any residual capital left over from swaps is invested in cash. In other words, the hedge ratios for the six swaps and cash in each currency add up its market weight in the cash index. The amount invested in cash may be negative as in the table above, which represents borrowed cash.

Environmental, Social and Governance (ESG) Disclosures

The Index does not take into account any ESG factors or pursue any ESG objectives, please refer to the [Global Fixed Income Methodology](#) ESG disclosures.

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