

# Barclays Multi-Asset Sharpe Ratio RC 5% Index

This fact sheet contains limited information with respect to the Barclays Multi-Asset Sharpe Ratio RC 5% Index. More detailed information about the indices can be found in a presentation available upon request. Please note that the Barclays Multi-Asset Sharpe Ratio RC 5% Index was launched in March 2014, so all returns presented herein prior to this date are based on historical backtesting. All statistical data is retrieved from Excess Return figures. Data shown is net of all transaction costs, fees and an adjustment factor.

## Index Overview

The Index provides an innovative and intuitive approach to trend investing, one of the most well-known ways of investing. The main features of the index include:

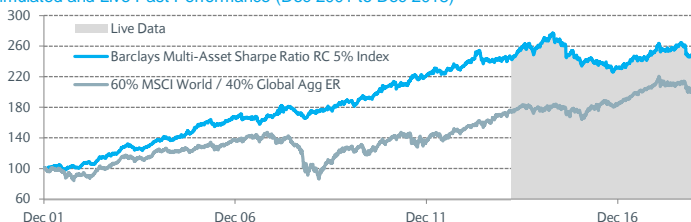
- It recognises the need to adapt to changing regimes and dynamically allocates among ten different underlyings from five asset classes by using a trend-following approach. The approach aims to provide diversification thus reducing portfolio risk and potentially enhancing returns.
- On a monthly basis the index selects five assets that have exhibited the highest Sharpe ratios over the previous three months. This selection allows identification of assets with the highest historical risk-adjusted return.
- To ensure diversification of the portfolio, the allocation into assets is done in a way such that each index component has the same risk contribution to the overall portfolio as measured by volatility.
- The index also aims to manage the risk around a specified fixed target level by dynamically adjusting the exposure to selected assets.

Simulated Past Returns <sup>1</sup>	1M Return	YTD Return	1Y Return	3Y Ann. Return	3Y Sharpe
Barclays Multi-Asset Sharpe Ratio RC 5% Index	0.91%	-2.05%	-2.05%	0.64%	0.12
60% MSCI World / 40% Global Agg ER	-4.39%	-7.83%	-7.83%	3.59%	0.56

## Underlying Indices and Allocations

Asset Class	Type	Description	Bbg.	Allocations	
				Dec 18	Jan 19
Equity	US	Barclays US Tracker Excess Return Index	BXIIUSER	-	-
	Europe	Barclays Eurozone Low Vol Equity ER	BXIIIEEE	-	-
	Japan	Topix Total Return	TPXDDVD	-	-
	EM	iShares MSCI Emerging Markets ETF	EEM UP	-	-
Commodities	Comm.	S&P GSCI Excess Return Index	SPGSCIP	-	-
	Gold	SPDR Gold Shares	GLD UP	12.0%	10.9%
Bonds	Europe	Barclays Euro-Bund Alt Roll Futures	BXIIIE10U	27.4%	30.8%
	US	Barclays US 10yr Note Futures	BXIIU10U	33.1%	32.0%
Real Estate	US	iShares US Real Estate ETF	IYR UP	7.5%	6.3%
Money Markets	US	BBA Libor 1 Month	US0001M	20.0%	20.0%

## Simulated and Live Past Performance (Dec 2001 to Dec 2018)



	Barclays Multi-Asset Sharpe Ratio RC 5% Index	60% MSCI World / 40% Global Agg ER
Annualised return	5.51%	3.99%
Annualised volatility	5.75%	9.71%
Sharpe ratio	0.96	0.41
Max drawdown	-18.45%	-41.60%
% positive months	64.39%	59.02%

## Monthly Simulated and Live Past Performance<sup>1</sup>

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year	Bench.
2003	2.58%	0.83%	-1.90%	0.31%	4.42%	1.86%	0.81%	2.51%	-0.61%	2.35%	0.87%	3.60%	18.92%	23.16%
2004	2.35%	2.22%	0.32%	-2.90%	-0.81%	0.29%	-0.80%	2.25%	1.08%	2.28%	1.72%	10.62%	10.62%	10.89%
2005	0.33%	1.47%	-0.68%	-1.46%	1.34%	1.57%	0.68%	0.27%	4.29%	-1.69%	1.86%	3.58%	12.00%	0.36%
2006	2.24%	0.19%	1.71%	0.87%	-2.52%	-0.28%	0.19%	0.67%	1.56%	1.55%	1.33%	0.35%	8.05%	8.92%
2007	0.95%	-1.12%	-0.24%	0.04%	-0.28%	0.02%	-1.61%	-1.04%	1.58%	3.04%	-0.39%	0.02%	0.87%	3.76%
2008	1.90%	2.69%	1.38%	-0.97%	2.05%	-1.45%	-1.97%	-1.26%	-1.57%	-2.21%	3.25%	2.50%	4.18%	-26.74%
2009	-1.41%	0.92%	1.15%	-0.15%	1.25%	0.06%	1.64%	0.79%	1.48%	-0.82%	2.34%	-0.53%	6.85%	20.73%
2010	-1.75%	0.19%	3.38%	2.32%	-1.83%	0.88%	-0.27%	2.87%	1.26%	0.64%	1.43%	1.26%	10.73%	9.37%
2011	0.35%	2.22%	-2.37%	2.24%	-0.76%	-1.08%	3.69%	2.02%	-1.51%	0.69%	0.02%	1.28%	6.81%	-1.11%
2012	1.60%	0.47%	1.80%	-0.83%	-1.43%	0.21%	2.29%	0.45%	0.75%	-1.22%	0.70%	1.42%	6.31%	11.11%
2013	1.50%	0.41%	1.54%	3.73%	-3.04%	-2.12%	0.33%	-0.56%	0.10%	1.24%	0.87%	0.02%	3.94%	13.97%
2014	-0.93%	1.40%	-0.44%	1.40%	2.44%	1.44%	0.03%	1.66%	-2.01%	-0.10%	1.63%	0.95%	7.63%	3.12%
2015	2.77%	-0.44%	1.22%	-1.27%	-0.29%	-1.57%	-1.05%	-5.23%	0.60%	0.50%	-1.42%	-1.20%	-7.33%	-1.72%
2016	-2.74%	1.98%	0.59%	-0.28%	-1.60%	0.24%	-0.42%	-1.50%	-0.54%	-0.67%	-1.06%	0.77%	-5.20%	4.93%
2017	-0.43%	2.04%	0.70%	1.88%	1.37%	-0.98%	0.49%	0.54%	-0.98%	2.76%	1.03%	1.02%	9.78%	14.94%
2018	2.66%	-2.22%	-0.29%	0.13%	1.13%	0.34%	0.80%	1.50%	-1.67%	-4.59%	-0.54%	0.91%	-2.05%	-7.39%

<sup>1</sup>The index went live in March 2014

Source: Barclays, Bloomberg | As of 28 Dec 18

Pre-inception period: Index Base Date is December 2001. Index Live Date is March 2014. Historical and hypothetical performance is not indicative of future performance. Performance data reflect all costs/fees incorporated in the index formula, but do not reflect additional fees that may apply to an index swap transaction. See Historical Index Performance Disclaimer for further information. The benchmark is calculated using NDDUWI and LEGATRUU indices, rebalanced monthly and made Excess Return by subtracting the 1-month LIBOR Rate. Before 4th February 2008, BXIIIR5U is extended with BXIIIMS5U.

## Information

### Investment Objective

Dynamically rebalanced index which aims to provide returns from a range of ten assets within a risk-controlled framework. The dynamic allocation mechanism adjusts the exposure into five asset classes based on their historical Sharpe ratio.

### Key Features

- Allocation is based on a rules-driven method
- Aims to offer diversification across multiple asset classes
- Risk control mechanism may provide more stable volatility by adjusting the exposure to the selected assets depending on the prevailing volatility

### Key Considerations

- The Index may not perform in non-trending markets and positive performance in one period may not extend to the next period
- The underlying assets are assessed on their historical Sharpe Ratio rather than return only. As a result, the underlying assets with the highest returns are not necessarily selected
- The risk control mechanism may not be reactive enough in case of a large and unexpected move on any one day in the Portfolio

## Characteristics

### Index Sponsor

Barclays Risk Analytics and Index Solutions (BRAIS)

### Currency

USD

### Type

Excess Return

### Liquidity

Daily

### Live date

Mar-14

### Rebalancing

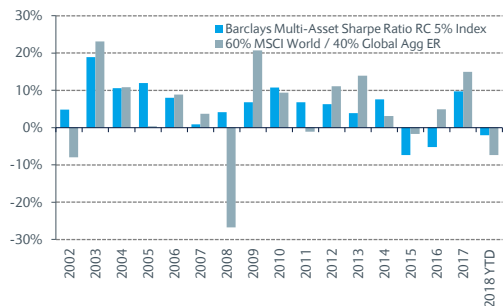
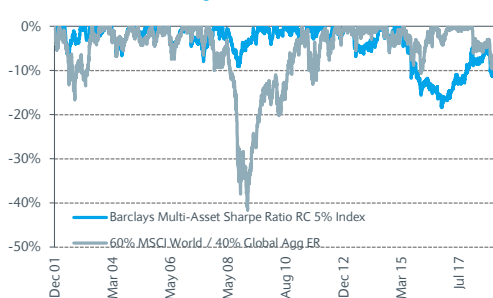
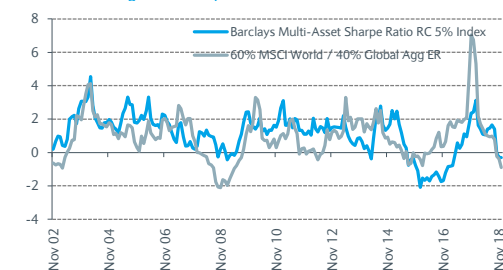
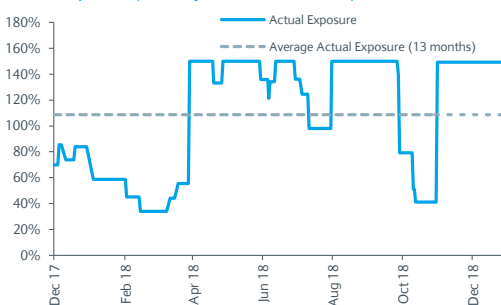
Monthly

### Bloomberg Ticker

BXIIIR5U Index

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**Simulated Annual Returns<sup>1</sup>**

**Simulated Historical Rolling Drawdowns<sup>1</sup>**

**Simulated Rolling 12M Sharpe Ratio since November 2002<sup>1</sup>**

**Actual Exposure (Volatility Control Mechanism)<sup>1</sup>**

**Historical Allocations**

Underlying	Bbg.	Allocations											
		Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 18	Dec 18
US Equity	BXIIUSER	31.9%	28.0%	16.3%	-	-	-	14.8%	13.2%	15.4%	31.3%	-	-
Europe Equity	BXIILEE	21.1%	-	-	-	11.7%	17.1%	19.5%	14.1%	13.7%	27.1%	-	-
Japan Equity	TPXDDV	19.9%	18.9%	18.4%	-	-	11.3%	-	-	-	15.9%	-	-
EM Equity	EEM UP	14.5%	14.7%	13.5%	6.6%	-	-	-	-	-	12.1%	-	-
Commod.	SPGSCIP	12.6%	15.7%	22.7%	12.5%	10.2%	12.0%	-	-	-	13.6%	-	-
Gold	GLD UP	-	22.7%	29.1%	15.9%	14.7%	-	-	-	-	-	11.0%	12.0%
Europe Bonds	BXII10U	-	-	-	44.9%	43.5%	46.6%	37.8%	28.5%	27.9%	-	26.8%	27.4%
US Bonds	BXIIU10U	-	-	-	-	-	-	-	32.5%	31.7%	-	33.9%	33.1%
Real Estate	IYR UP	-	-	-	-	-	13.0%	15.6%	11.7%	11.3%	-	-	7.5%
Cash	US0001M	-	-	-	20.0%	20.0%	-	-	-	-	-	20.0%	20.0%

<sup>1</sup> Source: Barclays, Bloomberg | As of 28 Dec 18

Pre-inception period: Index Base Date is December 2001. Index Live Date is March 2014. Historical and hypothetical performance is not indicative of future performance. Performance data reflect all costs/fees incorporated in the index formula, but do not reflect additional fees that may apply to an index swap transaction. See Historical Index Performance Disclaimer for further information. The benchmark is calculated using NDDUWI and LEGATRUU Indices, rebalanced monthly and made Excess Return by subtracting the 1-month LIBOR Rate. Before 4th February 2008, BXIIIR5U is extended with BXIIMS5U.

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**Historical Index Performance Disclaimer**

The following communication includes historical performance data related to select indices developed and published by Barclays Bank PLC ("Barclays"). This disclaimer is intended to highlight the risks inherent in assessing such performance data.

Historical index performance can be assessed with respect to the index inception date:

**Pre-inception index performance**

Pre-inception index performance refers to the period prior to the index inception date (defined as the period from the "Index Base Date" to the "Index Live Date"). This performance is hypothetical and back-tested using criteria applied retroactively. It benefits from hindsight and knowledge of factors that may have favorably affected the performance and cannot account for all financial risk that may affect the actual performance of the index. It is in Barclays' interest to demonstrate favorable pre-inception index performance. The actual performance of the index may vary significantly from the pre-inception index performance. You should not rely on hypothetical index performance information.

**Post-inception index performance**

Post-inception index performance refers to the period after the index inception date (defined as the period from the "Index Live Date" to the date of this presentation, unless otherwise stated). This performance is actual historical performance of the index. Historical performance is not indicative of future performance.

All index performance data included in this communication are accompanied by a footnote specifying the relevant Index Base Date and Index Live Date. The Index Live date is defined as the date on which the index rules were established and the index was first published. Actual historical performance is highlighted in blue. Hypothetical performance is not highlighted.

Historical index performance is provided for a period of at least 10 years, unless the instruments underlying the index were only available or sufficiently liquid for a lesser period. In that case, historical index performance is provided from the time when the instruments underlying the index were available or sufficiently liquid. Performance, volatility, Sharpe ratio and correlation data are calculated using monthly returns and maximum drawdown data are calculated using daily returns.

The index methodology is available for review upon request, subject to the execution of a non-disclosure agreement.

Barclays or an affiliate of Barclays prepared the provided performance information (including the hypothetical performance information), may be the index sponsor and potentially is the counterparty to a transaction referencing the index.

The performance data reflect all costs, charges and fees that are incorporated into the Index formula. The performance data, however, do not reflect any additional fees that may be paid by a counterparty to a transaction referencing the index, and which may be agreed between Barclays and the counterparty.

**Risk Factors**

**ADJUSTED INDEX COMPONENTS-** The Index applies a rules-based strategy to the Index Components whereby an excess return and currency adjusted version of such Index Component is determined (each being an "Adjusted Index Component"). Each such Adjusted Index Component is calculated as the excess return of the relevant Index Component net of applicable Running Costs and adjusted for fluctuations in the currency exchange rate of such Index Component compared to the currency of the Index (if applicable).

**TREND/SHARPE RATIO FEATURE-** The Index will not benefit from any appreciation in any Adjusted Index Component ranked six or lower. Further, as the determination of the selected Adjusted Index Components only occurs monthly, the Index is exposed to both upside and downside movements of the selected Adjusted Index Components until the next monthly Index Rebalancing Date. By using the Sharpe Ratio as a measure within the Index, the Index assumes that the Sharpe Ratio is a potential indicator of the future direction of an Adjusted Index Component. There is no assurance that this assumption is correct, nor is there any assurance that the rules-based strategy taken by the Index will generate positive returns.

**VOLATILITY CONTROL AND LEVERAGE-** The Index is calculated using a volatility control mechanism whereby the exposure to the Adjusted Index Components (the "Actual Exposure") may be increased up to a maximum exposure of 150% in periods of low measured volatility and decreased to a minimum exposure of 0 per cent in periods of high measured volatility. Leverage has the potential to magnify gains as well as losses. Likewise, any reduction in exposure may cushion the effect of market falls but constrain the benefit of market rises.

**IMPLEMENTATION DELAY-** There is an in built delay of two Index Business Days between when the volatility of an Index Components is calculated and when the change to Actual Exposure, by way of the volatility control mechanism, is implemented. Sharp and sudden movements in the performance of the Index Components may not be immediately accounted for in the level of the Index due to the application of the volatility control mechanism.

**UNEQUAL WEIGHTING-** As the weightings of the selected Adjusted Index Components are likely to be unequal, the value or performance of at least one Adjusted Index Component is likely to have a disproportionately large influence on the performance of the Index as a whole.

**ETF COMPONENTS-** In relation to any Index Component that is an ETF, the Index will automatically reinvest any dividends paid in respect of such ETF on any relevant day where such ETF is trading ex-dividend (net of any relevant withholding tax that would be levied by any relevant governmental or taxing authority) for the purposes of determining the Adjusted Index Component Level in respect of such Index Component.

**INTRADAY FOREIGN EXCHANGE RISK-** Where Index Components are denominated in a currency other than the currency of the Index, the performance of the relevant Adjusted Index Component will be affected by fluctuations in the relevant intraday foreign exchange rate.

**RUNNING COST- THE VALUE OF EACH ADJUSTED INDEX COMPONENT WILL BE REDUCED BY THE RUNNING COST IN RESPECT OF SUCH INDEX COMPONENT.** Such Running Cost represents the estimated trading cost per annum hypothetically incurred by a hedge provider in taking a long position (or notional investment) in an Index Component, such as (but not limited to) license fees. The Running Cost applicable to each Index Component is fixed and specified in the Index Rules. Such deductions will act as a drag on the performance of the Index and the level of the Index will trail the value of a hypothetical identically constituted synthetic strategy from which such amounts are not deducted. For the avoidance of doubt, the published level of the Index already incorporates the above costs.

**COST DEDUCTED FROM BARCLAYS INDEX COMPONENTS- THE LEVEL OF THE BARCLAYS EUROZONE LOW VOLATILITY EQUITY ER EUR INDEX (THE "RELEVANT INDEX") WILL BE REDUCED BY A TRANSACTION COST.** Such transaction cost reflects the estimated cost per annum hypothetically incurred by a hedge provider in taking a long position in the assets represented by such Relevant Index and rebalancing such position over each monthly rebalancing period in accordance with changes to the Relevant Index. Such deduction will act as a drag on the performance of each Relevant Index and the level of each Relevant Index will trail the value of a hypothetical identically constituted synthetic strategy from which such amounts are not deducted. For the avoidance of doubt, the Index Component Level of each Relevant Index used for the purposes of calculating the level of the Index already incorporates the above cost.

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