

# CUBE ISSUERS 04/04/2017

## INTRODUCTION

As a structured product specialist CUBE works with many different issuers. Working with a range of issuers allows us to offer investors a choice of issuers for each product that they are considering. This note summarizes the capabilities of each of the issuers that we work with, and their credit rating. We introduce and describe our internal credit rating scale. This note also describes the way in which investors are able to buy and sell notes in the primary and secondary market.

## SUMMARY OF ISSUERS

ISSUER	EIS	S&P	MOODY	FITCH	ISSUER RATING	CHANCE OF DEFAULT	DISTRIBUTION RESTRICTIONS
Bank of America	No	BBB+	Baa1	A	B++	0.02%	Private placement to professional only
BBVA	No	BBB+	Baa1	A-	D-X	NA	No retail distribution
BNP Paribas	Yes	A	A1	A+	C+-	0.22%	None
Commerz	Yes	A-	Baa1	BBB+	D++	0.40%	None
Credit Suisse	Yes	A	A1	A	D+-	0.05%	Private placement to professional only
Deutsche Bank AG	No	A-	Baa2	A-	D+-	0.35%	Private placement to professional only
EFGI	Yes		A3	A	BXX	N/A	Private placement to professional or limited retail distribution
Goldman Sachs	Yes	A+	NR	A	C+-	0.32%	None
Investec	Yes		A2	BBB	B++	0.02%	Private Placement to professional or retail distribution
Jefferies	No	BBB-	Baa3	BBB-	D-X	NA	Private placement to professional only
J.P. Morgan	Yes	A-	A3	A+	B++	0.01%	Private placement to professional only
Morgan Stanley	Yes	BBB+	A3	A	C+-	0.04%	No retail distribution
Natixis	No	A	A2	A	D++	0.44%	Private placement to professional or limited retail distribution
RBC	Yes	AA-	Aa3	AA	BX-	0.02%	None
Societe Generale	Yes	A	A2	A	C++	0.38%	None
UBS	Yes	A+	A1	A+	B+X	NA	Private placement to professional or limited retail distribution
Unicredit AG	No	BBB	Baa1	A-	D++	0.02%	Private placement to professional only

Source; IPR 4 April 2017

## ISSUER RATING

The Issuer Rating is a 3-character score, for example "B+-", to indicate an issuer's creditworthiness, combining current CDS levels and recent CDS and stock price momentum:

The Issuer Rating is a ranking system that we have devised that aims to offer an instant insight into the status of the issuer and the direction that their CDS and share price is changing. Past experience has shown that credit ratings can lag events, and don't necessarily offer investors an early warning signal. Basing a rating on market variables that are quick to react to changing conditions will give investors an instant view of the markets perception of the issuer's creditworthiness.

## BLOOMBERG ONE YEAR CHANCE OF DEFAULT

Bloomberg's DRISK function calculates the probability that an issuer will default within the next year, using current levels of the issuer's gearing and share price volatility; it can therefore be calculated real time, provided the issuer's equity is traded.

The issuer's equity share price behaviour, together with its outstanding debt, is used to model the behaviour of the firm's total assets (in more detail, the issuer's equity is viewed as a call option on the firm's total assets, with a strike price equal to its liabilities; this enables the implied total assets to be calculated). In this model, default occurs when total assets fall below liabilities at any time in the next year. Bloomberg applies a final transformation to these chance-of-defaults to ensure they reflect historical actual default rates of firms of similar credit rating.

## 5Y CDS BUCKET

CDS	Rating
<b>0-50bp</b>	<b>A</b>
50-75bp	B
<b>75-100bp</b>	<b>C</b>
100-125bp	D
<b>125-150bp</b>	<b>E</b>
> 150bps	F
<b>not available</b>	<b>X</b>

## 5Y CDS MOMENTUM

This uses 20 and 60 trading day moving averages; for example, if the short (20day) moving average is below the long (60day) moving average, CDS rates are falling and this is regarded as positive:

CDS SIGNAL	MARK
<b>If short Moving Average &lt; long Moving Average</b>	<b>"+"</b>
If short Moving Average > long Moving Average	"."
<b>If not available</b>	<b>"x"</b>

## SHARE PRICE MOMENTUM

This uses 20 and 60 trading day moving averages; for example, if the short (20day) moving average is below the long (60day) moving average, the share price is falling and this is regarded as negative:

SHARE PRICE SIGNAL	MARK
If short Moving Average < long Moving Average	"+"
If short Moving Average > long Moving Average	"-"
If not available	"x"

## CUBE

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### CUBE RESEARCH

The IPR data reported above are based on research on the performance of the investment products listed, commissioned by CUBE from an independent company, Investment Product Research Ltd ('IPR'). If you require access to more detailed research, or want a full description of IPR's calculations, please visit [www.investmentproductresearch.com](http://www.investmentproductresearch.com). You will be required to register to access IPR uses its proprietary methodology to create approximately 5 million simulations of how the investment product may perform in the future; each simulation is based on a different re-ordering of the historical daily price movements of the underlying index (or indices) since the start of 1993. The time span 1993-2014 includes periods of both positive and negative performance of stock markets, so we consider it a useful data series on which to base simulations of market performance.

The tabulations and charts provide indications, based on these simulations, of the likelihood that the products will generate different levels of return. We also indicate for comparison the likelihood that the products will generate a given return based on a simple 'historical back-test', a customary measure of possible future performance based on the assumption that the future will replicate a period of past performance (again, the historical period used to generate the historical back-tests is the period since 1993). The IPR simulations are a more comprehensive test than the historical back-test: the great majority of the 5 million IPR simulations are not simple repetitions of a period of past performance. The general effect of the IPR simulations is to produce more conservative indications than the historical back-test of the return you may achieve on your investment.

However past performance of markets is not a reliable indicator of future performance, and should not be relied upon to make investment decisions. Additionally, neither the IPR analysis nor the historic back test take into account the possibility that the issuer may default; if the issuer defaults you will lose some or all of your money regardless of the future performance of markets.

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