UK | STRUCTURED PRODUCTS ASSOCIATION ™

Understanding UKSPA Risk Ratings for Structured Products

A guide to the UKSPA Risk Ratings for UK financial advisers.

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The UKSPA Risk Ratings are not a complete measure of the risk of losing money, or of the riskiness of a structured product compared to other investments. For more information, please see page 16.

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Introduction

As a financial adviser, you work with your clients to build portfolios that meet their investment needs. This includes making sure that you understand each client's appetite for risk and suggesting products that are appropriate given this appetite.

Up until now, whilst structured product providers are very clear in describing the risks in the product literature, there has been no numeric risk value assigned. We are therefore delighted to announce the launch of our UKSPA Risk Ratings, allowing you to compare different structured products more easily.

The UKSPA Risk Ratings are designed to:

- Provide you with a meaningful indication of the overall risk profile of each product
- Take account of both market risk and credit risk
- Allow you to compare different structured products more easily, and select those that match your clients' risk appetite more closely

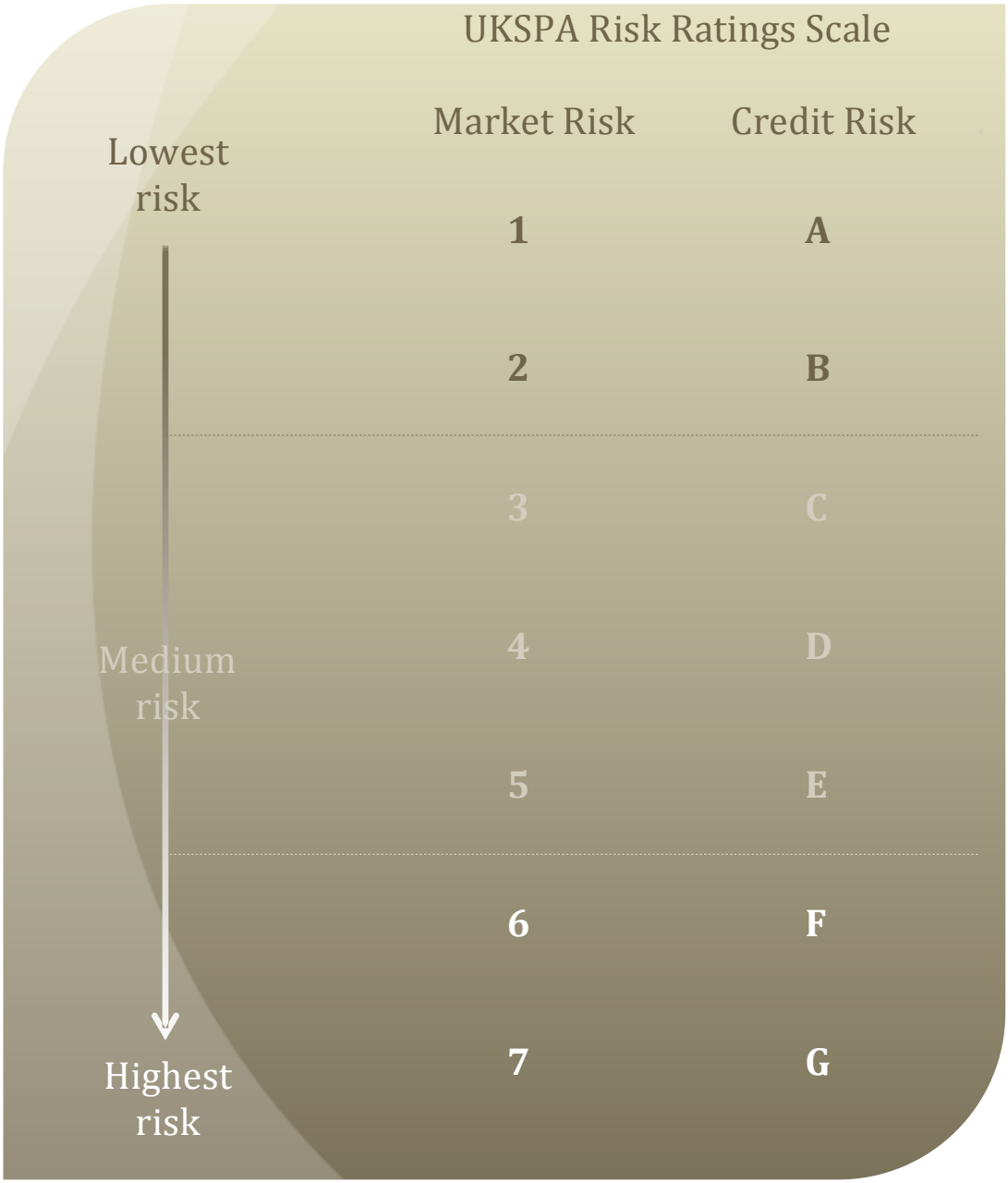
We hope you find the UKSPA Risk Ratings a useful development to the structured products industry, and a help to you when choosing between different products for your clients.

Sincerely,

Zak De Mariveles
Chairman, UK Structured Products Association

What will the UKSPA Risk Ratings look like?

The UKSPA Risk Ratings will consist of a numeric value and a letter. The number value of 1 to 7 tells you the *market risk* of a product and the letter from A to G tells you the *credit risk* of a product.



For example, if you see a product with an UKSPA Risk Rating of 2F, that product includes low levels of market risk, but high levels of counterparty risk. Similarly, a product scored at 4A includes medium levels of market risk, but the lowest level of counterparty risk.

What is the purpose of the UKSPA Risk Ratings?

A clear set of objectives

The calculation methodology we have adopted follows a detailed discussion with our members and other industry professionals. It has been designed to satisfy a set of objectives (please see below), in line with the objectives defined by the Committee of European Securities Regulators ('CESR') for the Synthetic Risk and Return Indicator ('SRRI') used by the fund industry[1].

The UKSPA Risk Ratings:

- Provide a meaningful indication of the overall risk profile of each product
- Allows for easy identification of products in different risk categories
- Follow a simple and transparent calculation method
- Are easy and cost-effective to implement by product providers
- Can easily be understood by auditors, advisers and distributors
- Are subject to easy and effective supervision by regulators and compliance teams
- Adhere to an adequate degree of stability with respect to normal market trends and fluctuations in financial markets.

A comprehensive measure of the risks faced by investors

Investors in structured products typically face two main risks:

- *Market risk*: the risk of losing money if the market moves in a particular way
- *Credit risk*: the risk of losing money if the issuer of that product goes into liquidation and is unable to meet their payment obligations to investors

Any meaningful risk rating for structured products should encompass both these risks. The UKSPA Risk Rating is therefore a two-dimensional rating, consisting of:

- A number-based rating from 1-7, to represent the *market risk* of a product
- A letter-based rating from A-G, to represent the *credit risk* of a product

For example, a product with the rating 1A will be a low risk product, with the lowest level for both market risk and credit risk. A product with the rating 7G will be a high risk product, with the highest level for both market risk and credit risk.

There are other risks associated with investing in structured products (for example, liquidity risk and inflation risk), however these are not incorporated into the UKSPA Risk Ratings. Instead, they should be clearly described in any investor-facing materials.

[1] Specifically, CESR's guidelines on the methodology for the calculation of the synthetic risk and reward indicator in the Key Investor Information Document, published 1st July 2010 (www.esma.europa.eu/system/files/10_673.pdf)

Calculating market risk

Our market risk rating is based on the volatility of the product. Volatility can be a useful indicator of risk, as it reflects how much *uncertainty* there is about the future value of a product or security. To calculate the volatility of a product, we first need to break the product down into its component parts:

- The *bond component*: this is the part of the product that provides for any capital protection at maturity
- The *risky component*: this is the part of the product that provides for any returns, achieved by taking exposure to an underlying asset

We then determine the volatility of each component, to assess how much risk it adds to the product.

For the bond component:

Bond component volatility = level of capital protection x length of investment term x rate volatility

The level of protection at maturity offered by a product, if any, is key in determining its overall risk profile, as it removes the risk of losing money if the underlying asset does not perform as expected. We therefore define the bond component as the value of any capital that is protected at maturity. The volatility of this component is based on the volatility for the rate implied for the corresponding Zero Coupon Bond, multiplied by the term of that bond.

For Structured Capital At Risk Products ('SCARPS'), the bond component does not contribute at all to the volatility of the product, as the level of capital protection is zero.

The only exception to this is when a SCARP offers a fixed income stream during the investment term that is non-dependent on the performance of an underlying asset. In this case, the sum of the income payments will be treated as 'capital' for the purpose of the calculation of the rating. Please see example 2 on page 10 ('Illustrations') for more information.

For the risky component:

Risky component volatility = capital at risk x delta x volatility of the underlying asset

Structured products typically offer exposure to an underlying asset. How much exposure they offer is determined by the 'delta' of the product. Products with a lower delta offer less exposure to the underlying asset and products with a higher delta offer greater exposure to an underlying asset. The delta will differ for each structured product and is determined by the product provider. As it is not a publically available measure, each product provider will provide us with the delta for their products to be used in the calculation of the risky component volatility. For the purpose of the UKSPA risky component volatility calculation, the *absolute* value of the delta will be used.

The volatility of the risky component also depends on the volatility of the underlying asset (or assets). We measure this by looking at the 5-year realised volatility for the underlying asset, which is readily available from various market data providers (including Bloomberg).

For fully capital protected products, the risky component does not contribute at all to the volatility of the product, as there is no capital at risk.

IMPORTANT DEFINITIONS

UNDERLYING ASSET: A structured product return is typically linked to the performance of another financial instrument. This is most commonly an equity index (e.g. the FTSE 100 Index) but could be anything from a basket of shares, an inflation rate or a commodity. For certain products, returns could be linked to more than one underlying asset.

VOLATILITY: This is a measure that tells us how the price of a financial instrument has varied over time. An instrument with low volatility will typically have a very stable price, whereas an instrument with high volatility will have a price that can fluctuate quite frequently and sharply. Higher volatility tends to indicate higher risk, as there is greater uncertainty as to the future price of that instrument.

5-YEAR REALISED VOLATILITY: The daily standard deviation of log returns of the underlying asset over the past 5 years (i.e. how much the underlying asset's price has changed, on average, on a daily basis over the past 5 years).

ZERO COUPON BOND: A financial instrument with a fixed investment term that is designed to repay a fixed amount (its 'face value') at the end of that term. The price of a zero coupon bond is based on a number of factors: the credit quality of the issuer, the length of the investment term, interest rates and the face value of the bond.

How is the risky component volatility calculated if there is more than one underlying asset for a product?

Risky component volatility = capital at risk x [(delta$_1$ x Volatility$_1$) + (delta$_2$ x Volatility$_2$) + … (delta$_n$ x volatility$_n$)]

Where delta = the absolute value of delta for each underlying asset, n, and volatility = the volatility of each underlying asset, n.

It is quite common in the UK retail market to see products where the returns are linked to more than one underlying asset. For these products, the calculation of the risky component volatility will be calculated slightly differently. For each underlying asset, the absolute value of its delta will be multiplied by its volatility level. The sum of these values for each underlying asset will then be multiplied by the proportion of an investor's capital that is risk to get the overall risky component volatility.

Please see the 'illustrations' section on page 10/11 for an example of how this calculation works.

Putting it together…

Once we have the volatility of the bond component and the risky component, we can add them together to generate the overall volatility of the product:

Bond component volatility
(capital protected x length of term x rate volatility)

+

Risky component volatility
(capital at risk x delta x volatility of the underlying asset)

=

Product volatility

We assign the UKSPA Market Risk Rating based on this product volatility. The different volatility brackets (and therefore UKSPA Market Risk Ratings) are in line with the brackets used by CESR in the SRRI calculation for funds:

Product volatility	UKSPA Market Risk Rating
0% - 0.5%	1
0.5% - 2.0%	2
2.0% - 5.0%	3
5.0% - 10.0%	4
10.0% - 15.0%	5
15.0% - 25.0%	6
25.0% or more	7

Illustrations

Please note that these are sample illustrations only, to show you how the UKSPA Market Risk Rating is calculated for different product types. They do not necessarily reflect what products are available for your clients to purchase at any given time, nor are they based on actual market data.

Example 1: Fully capital protected product, offering 100% of any positive performance in the FTSE 100 Index over a 6-year term.

Level of capital protection = 100%
Length of investment term = 6 years
Rate volatility = 0.60%
→ **Bond component volatility = 100% x 6 x 0.60% = 3.6%**

Capital at risk = 0%
Delta (absolute value) = 65%
Volatility of underlying asset = 20%
→ **Risky component volatility = 0% x 65% x 20% = 0%**

Product Volatility = 3.6% + 0% = 3.6%

UKSPA Market Risk Rating = 3

Example 2: SCARP product (with the repayment of capital linked to the FTSE 100 Index), offering a fixed 4% p.a. income over a 5-year term.

Level of capital protection = 20% (i.e. 4% x 5 years)
Length of investment term = 5 years
Rate volatility = 0.50%
→ **Bond component volatility = 20% x 5 x 0.50% = 0.50%**
%

Capital at risk = 80%
Delta (absolute value) = 40%
Volatility of underlying asset = 20%
→ **Risky component volatility=80% x 40% x 20%= 6.4%**

Product Volatility = 0.5 % + 6.4% = 6.9%

UKSPA Market Risk Rating = 4

Example 3: SCARP product, offering a fixed return of 100% as long as the FTSE 100 Index closes at or above its initial level at the end of a 6-year term. Capital is at risk if the FTSE 100 Index closes below 50% of its initial level at the end of the 6-year term.

Level of capital protection = 0%
Length of investment term = 6 years
Rate volatility = 0.60%
→ **Bond component volatility = 0% x 6 x 0.60% = 0 %**

Capital at risk = 100%
Delta (absolute value) = 50%
Volatility of underlying asset = 20%
→ **Risky component volatility = 100% x 50% x 20% = 10%**

→ **Product Volatility = 0% + 10% = 10%**

→ **UKSPA Market Risk Rating = 5**

Example 4: SCARP product, offering a fixed return of 150% as long as the FTSE 100 Index and the S&P 500 Index both close at or above their initial levels at the end of a 6-year term. Capital is at risk if either index closes below 50% of its initial level at the end of the 6-year term.

Level of capital protection = 0%
Length of investment term = 6 years
Rate volatility = 0.60%
→ **Bond component volatility = 0% x 6 x 0.60% = 0 %**

Capital at risk = 100%
FTSE Delta (absolute value) = 50%
FTSE Volatility = 20%
S&P 500 Delta (absolute value) = 40%
S&P 500 Volatility = 25%
→ **Risky component volatility = 100% x [(50% x 20%) + (40% x 25%)] = 20.0%**

→ **Product Volatility = 0% + 20% = 20%**

→ **UKSPA Market Risk Rating = 6**

Calculating credit risk

The UKSPA Credit Risk Rating is determined based on the credit rating assigned to the issuer of the structured product. For investment-based plans, this will be the counterparty and for deposit-based plans, this will be the deposit taker.

We will use the Standard & Poor's rating for an issuer where available. If unavailable, we will use the Moody's rating, and if that is also unavailable we will use the Fitch rating. If the issuer is not rated by any of these three rating agencies, we will use the ratings assigned by any other well-known ratings agency. If there are no ratings agencies that have assigned the issuer with a credit rating, the product will automatically fall into the highest UKSPA Credit Risk Rating category (G).

<table>
<tr><th rowspan="2">Ratings generic classification</th><th rowspan="2">UKSPA Credit Risk Rating</th><th colspan="2">Corresponding S&P rating</th><th colspan="2">Corresponding Moody's rating</th><th colspan="2">Corresponding Fitch rating</th></tr>
<tr><th>Long-term</th><th>Short-term</th><th>Long-term</th><th>Short-term</th><th>Long-term</th><th>Short-term</th></tr>
<tr><td>Prime</td><td>A</td><td>AAA</td><td rowspan="3">A-1+</td><td>Aaa</td><td rowspan="6">P-1</td><td>AAA</td><td rowspan="3">F1+</td></tr>
<tr><td rowspan="3">High grade</td><td rowspan="3">B</td><td>AA+</td><td>Aa1</td><td>AA+</td></tr>
<tr><td>AA</td><td>Aa2</td><td>AA</td></tr>
<tr><td>AA-</td><td>Aa3</td><td>AA-</td></tr>
<tr><td rowspan="2">Upper medium grade</td><td rowspan="3">C</td><td>A+</td><td rowspan="2">A-1</td><td>A1</td><td>A+</td><td rowspan="2">F1</td></tr>
<tr><td>A</td><td>A2</td><td>A</td></tr>
<tr><td rowspan="2">Lower medium grade</td><td rowspan="3">D</td><td>A-</td><td rowspan="2">A-2</td><td>A3</td><td rowspan="2">P-2</td><td>A-</td><td rowspan="2">F2</td></tr>
<tr><td>BBB+</td><td>Baa1</td><td>BBB+</td></tr>
<tr><td rowspan="2">Non-investment grade speculative</td><td>BBB</td><td rowspan="2">A-3</td><td>Baa2</td><td rowspan="2">P-3</td><td>BBB</td><td rowspan="2">F3</td></tr>
<tr><td rowspan="2">E</td><td>BBB-</td><td>Baa3</td><td>BBB-</td></tr>
<tr><td>BB+</td><td rowspan="6">B</td><td>Ba1</td><td rowspan="9">Not prime</td><td>BB+</td><td rowspan="6">B</td></tr>
<tr><td>BB</td><td>Ba2</td><td>BB</td></tr>
<tr><td rowspan="2">Highly speculative</td><td>BB-</td><td>Ba3</td><td>BB-</td></tr>
<tr><td rowspan="2">F</td><td>B+</td><td>B1</td><td>B+</td></tr>
<tr><td>B</td><td>B2</td><td>B</td></tr>
<tr><td>Substantial risks</td><td>B-</td><td>B3</td><td>B-</td></tr>
<tr><td>Extremely speculative</td><td rowspan="5">G</td><td>CCC+</td><td rowspan="4">C</td><td>Caa1</td><td rowspan="2">CCC</td><td rowspan="4">C</td></tr>
<tr><td rowspan="2">Default imminent with little prospect for recovery</td><td>CCC</td><td>Caa2</td></tr>
<tr><td>CCC-</td><td>Caa3</td></tr>
<tr><td>CC</td><td rowspan="2">Ca</td></tr>
<tr><td>In default</td><td>C</td><td>D</td><td>/</td><td>C</td><td>DDD</td><td rowspan="2">/</td></tr>
<tr><td></td><td></td><td></td><td>/</td><td>DD</td></tr>
</table>

How is the UKSPA Credit Risk Rating calculated for collateralised products?

The UKSPA Credit Risk Rating will be determined by the credit rating assigned to the issuer of the collateral. For example, in the case of a product collateralised by UK gilts, the credit rating of the UK Government would be used to determine the UKSPA Credit Risk Rating.

How is the UKSPA Credit Risk Rating calculated for products that diversify credit risk across a range of counterparties?

There are some products available to UK investors that spread credit risk across more than one counterparty / issuer. For these products, the UKSPA Credit Risk Rating will be determined by taking the *median* credit rating (rounded down) across those counterparties. For example, if a product used four counterparties that individually had a UKSPA Credit Risk Rating of C, C, C and D, the UKSPA Credit Risk Rating for the product would be C. If a produce used four counterparties with individual ratings of C, C, D and D, the UKSPA Credit Risk Rating for the product would be D.

Frequently Asked Questions

How should I use the UKSPA Risk Ratings?
The UKSPA Risk Ratings should help you when determining the appropriateness of a product for a client. In particular, they should help you determine whether a product may or may not be suitable based on how risky it is, compared to your client's appetite for risk.

It is important to note that whilst the UKSPA Risk Ratings do include measures of both market and credit risk, there will be other risk factors associated with an investment into any product. It is therefore important that any investor reads and understands the full brochure for any product before deciding to invest in it, particularly any section covering 'investment risks'.

Where can I find the UKSPA Risk Rating for a product?
The UKSPA Risk Rating should be available from the product provider, or on the UKSPA website in our 'products' section.

When will the UKSPA Risk Rating be calculated for a product?
The UKSPA Risk Rating will be calculated shortly before or during the subscription period for a product.

Will the UKSPA Risk Rating be updated during the term of a product?
At the moment, there are no plans to update the UKSPA Risk Rating during a product's investment term. Products will only be rated during the subscription period.

How do the UKSPA Risk Ratings tie in with broader regulatory changes across Europe for Packaged Retail Investment Products ('PRIPs')?
In April 2014, the European Parliament and Council agreed to introduce a Key Information Document ('KID') for investors as part of the PRIPs regulations. This is expected to come into force around the end of 2016. This document will provide a concise overview of the product it describes, including a risk indicator. Whilst the methodology for calculating that risk indicator is not yet finalised, UKSPA and our members will adopt the new methodology once it is defined and this will supercede the UKSPA Risk Rating.

Is the UKSPA Risk Rating the same as the Synthetic Risk and Return Indicator ('SRRI') used by the fund industry?

Whilst there are some broad similarities between the UKSPA Risk Rating and the SRRI (i.e. they are both volatility-based measures of risk, they both look at historical data over a 5-year period and they are both scaled from 1 to 7), they are not identical measures. UKSPA felt it was important to apply certain changes to the SRRI calculation to make sure it reflected the risk profile of structured products more accurately, namely the introduction of a credit risk measure and to reflect any capital protection provided by a structured product.

Who is responsible for calculating the UKSPA Risk Ratings?

We believe that it is important to make the calculations of UKSPA Risk Ratings as independent as possible from our members, to ensure that they are calculated fairly and consistently. We have therefore appointed Future Value Consultants, a company specialising in structured product valuations and research, to calculate the ratings on our behalf.

Future Value Consultants provide consultancy, analytics, reporting and research to many financial institutions in the UK, US and worldwide. Founded in 1998, Future Value Consultants has staff with expertise and experience in investment banking, insurance, IT applications and research methods.

Whilst Future Value Consultants will use publically available market data wherever it is possible to do so, there is one measure used in the calculation of the UKSPA Market Risk Rating that is not publically available, and where we rely on members to provide this data. Our members are committed to providing accurate data, and Future Value Consultants will compare members' data to ensure it is broadly consistent for similar products.

Can I show the UKSPA Risk Rating to my clients?

No. The UKSPA Risk Ratings have been designed for use by professional advisers only, to aid them when advising retail investors.

If you have any further questions on the UKSPA Risk Ratings, please contact us directly by emailing info@ukspassociation.com or calling 020 7198 8443.

Important information

- The UKSPA Risk Rating is a measure of the risk of a structured product based primarily on the past performance over 5 years of the underlying asset(s) of that product.

- The UKSPA Risk Rating is calculated using historical data. Historical data is not a reliable indication of the future.

- The lowest UKSPA Risk Rating category does not mean 'risk free'.

- The UKSPA Risk Rating for a product may change over time.

- The UKSPA Risk Rating is not a complete measure of the risk of losing the money that an investor has invested, or of the riskiness of the product compared to other investments.

- The UKSPA Risk Ratings do not take into consideration all the risks faced by investors in structured products, including:

    - *Liquidity risk:* There may not be a secondary market in which to sell the product. Therefore, investors may need to hold it until its maturity. If they do sell in the secondary market, the price they receive may be less than the amount that they originally invested.

    - *Tax risk:* How the product is treated for tax purposes will depend on an investor's individual circumstances. Tax regulations will change from time to time, and their after-tax return on the product could be negatively affected.

- Investors should read and understand the brochure for a structured product in full, including all risks, before making a decision to invest.

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