The Swedish Securities Dealers Association (SSDA) was founded in 1908 and is an association, which represents the common interest of banks and investment services firms active on the securities market. The mission of SSDA is a sound, strong and efficient Swedish securities market. SSDA promotes member's view in regards to regulatory, market and infrastructure-related issues.

Dear Sir, Madam,

The Swedish Security Dealers Association (SSDA) welcomes the Joint European Supervisory Authorities' discussion paper on Key Information Documents for Packaged Retail and Insurance-based Investment Products (PRIIPs) that addresses several concerns that can arise in the establishment of uniform rules on the contents, presentation and calculation of information to be disclosed in the KID.

The SSDA focus in our comments on the description of risk, performance scenarios and our own proposal of a "risk indicator" in our comments to the consultation questionnaire:

Risk:

- SSDA thinks that market; credit and liquidity risk should be explained under the risk section of the KID.

- SSDA is not in favor of integrating the different risks in to one summary risk indicator.

- SSDA believes that the different risks: market, credit and liquidity should be shown separately in the KID.

- SSDA believes that the most appropriate measure to evaluate and explain risk to consumers depends on the PRIIP characteristics. How the products behave, open ended vs. fixed maturity, linear or nonlinear exposure to the underlying asset, level of protection etc.

- SSDA believes that the different PRIIP needs different measure to evaluate risk.

- SSDA believes that each PRIIP category such as Funds, Structured products, Warrants etc. should have a risk indicator most appropriate for that specific category. A manufacturer in a PRIIP category must comply with the standards and methodology for calculating the risk indicator set by the Competent Authority. The Competent Authority should monitor and conduct supervision that manufacturers comply with the given standards.

Performance Scenarios

- SSDA believes that performance scenarios should show possible outcomes feasible under the PRIIP without any implications to their likelihood.

SSDA's Risk Indicator

- SSDA would like to advocate the risk indicator that the members in Sweden have worked on and decide to use in Sweden. Read more in the answer to question no 5 in the attached consultation form. See attached document explaining the methodology behind the risk measures.

Products in scope

It should be clarified which products are included within the scope of the PRIIPs Regulation:

- Products based on an OTC bilateral contract and that are used by the retail clients to hedge its position, such commodity swaps, currency swaps should be outside of the scope. Indeed derivatives do not offer an "investment opportunity" but only have a hedging purpose (no speculation at all). They do not exchange amounts repayable (as referred in Recital 6 PRIIPs) but they are subject to a payment of a premium.

- Products based on an interest rate exchange, such as an interest rate swap, a forward, an option should be out of scope. We consider

that these products ‘do not offer investment opportunities and these products are solely exposed to interest rates’ (recital 7 PRIIPs).

- Employee stock options – this represents a form of equity compensation (part of employee’s remuneration package) granted by the employer to its employees. They give the holder the right to purchase the company stock at a specified price for a limited duration of time (as agreed in the options agreement). They should be out of scope. This product has also a different goal than an ‘investment opportunity’ – it is a part of the remuneration package of an employee.

  We clearly argue that above products should be out of scope.

Best Regards,

Stefan Sonnerstedt

1: Do you have any views on how draft RTS for the KID might be integrated in practice with disclosures pursuant to other provisions?

SSDA: Generally speaking, as indicated in Annex 1, there are already a number of regulatory disclosure requirements in existing Union legislation. As a first comment it seems like the relation between the KID and the prospectus summary under regulation 809/2004 is missing. Our general view is that firms should be provided as large amount of flexibility as possible in terms of cross-referencing and relying on information provided under other legislations, in order to avoid duplication – or even triplication – of information and thereby ensuring that important pieces of information actually is noticed by the investor. This is a relevant risk if e.g. the investor receives risk information under MiFID, the Prospectus Regulation and the PRIIP Regulation. It appears to be clear from PRIIPS Level 1 (Article 6.2) that references to e.g. prospectuses would be allowed and that

information contained in other documents (other than marketing material) could be relied upon. On the opposite side it should be ensured that the information contained in the KID could be relied upon for the purpose of any other regulatory disclosure requirement. On the issue of implementation of KID requirements in practice, we would like to point out that due to the processes that each firm has put in place under each regulatory requirement, it may not in practice be possible to leverage from information that must be provided under other regulatory requirements. This could have to do with the timing; certain information is provided prior to the investor becoming a customer or prior to commencing using investment services whereas PRIIPs information is provided in connection with the transaction. It could also be constrained by division of duties between an issuer/manufacturer and a distributor. Another process related issue is the channel used for distribution of the PRIIP. In connection with that it could be mentioned that different regulatory requirements may allow slightly different methods for providing the information required. To summarize: the largest amount of flexibility is welcomed but due to operational setups and regulatory requirements it may not be possible to leverage from such flexibility.
On the specific relation to MiFID 2 the SSDA would like to emphasize the great importance of ensuring that the information provided in the KID is sufficient from a MiFID 2 disclosure perspective. We would advise the Joint Committee to keep close contact with ESMA and the Commission in this matter. In particular the SSDA supports the view that a distributor should be able to rely on any information provided by the product manufacturer in the KIID, prospectuses or the KID.

2: Do you agree with the description of the consumer´s perspective on risk expressed in the Key Questions?

SSDA: We have comments on the key question: “how much can I win” followed by the question “How much am I likely to win?”

SSDA believes that performance scenarios should show possible outcomes feasible under the PRIIP without any implications to their likelihood. The first question must be answered but trying to answer the second question will not necessarily add valuable information to retail investors.

See SSDA answer to Question no. 6.

3: Do you agree that market, credit and liquidity risk are the main risks for PRIIPs? Do you agree with the definitions the ESA’s propose for these?

SSDA agrees that market; credit and liquidity risks are the most essential risks that need to be addressed. SSDA also agrees to the definitions proposed by the ESA´s.

SSDA also agree that when the return in structured product comes from a credit related underlying asset then the credit exposure should be treated as market risk. Credit risk relates to the issuer of the PRIIP capability to fulfill its obligation under the PRIIP.

4: Do you have a view on the most appropriate measure(s) or combinations of these to be used to evaluate each type of risk? Do you consider some risk measures not appropriate in the PRIIPs context? Why? Please take into account access to data

SSDA believes that the most appropriate measure to evaluate and explain risk to consumers depends on the PRIIP characteristics. How the products behave, open ended vs fixed maturity, linear or nonlinear exposure to the underlying asset, level of protection etc.

Access to historical data is also one important factor that could put limitations to the use of some of the measures. SSDA believes that the different PRIIP needs different measure to evaluate risk. A risk measure appropriate for funds might be inappropriate for other types of PRIIP such as structured products.

Market risk could in most cases be subject to a quantitative measure such as EDV and Var.

Credit- and liquidity risk should be explained in qualitative format.

5: How do you think market, credit and liquidity risk could be integrated? If you believe they cannot be integrated, what should be shown on each in the KID

SSDA thinks that market, credit and liquidity risk should be explained under the risk section of the KID.

SSDA is not in favor of integrating the different risks in to one summary risk indicator.

SSDA believes that the different risks: market, credit and liquidity should be shown separately. Market risk should be explained with a quantative measure most appropriate for the PRIIP in question. Credit- and liquidity risk should be explained in qualitative measures such as credit rating and the characteristics of the PRIIP exit arrangements.

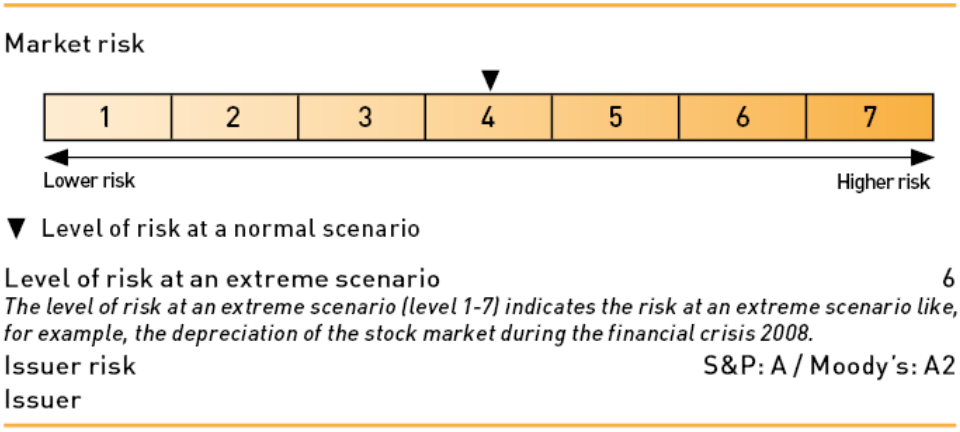
The members of Structured Products in Sweden (SPIS) under SSDA have agreed upon a risk indicator for the Swedish Structured Product Market. Two years ago SPIS started working with its members to develop a new set of risk measures in order to fulfill not only the demand for comparison with other existing measures currently available within the funds industry but also to add a new measure that would successfully describe the concepts of nonlinear exposure.

Furthermore, the measures should be balanced in terms of being easy to adopt and implement despite still being fairly accurate and provide useful guidance to its users among advisors and end clients.

The decision was made to create three isolated measures:

VAR99	(Extreme market situations)
EDV	(Normal market situations)
Credit Rating	(Issuer and guarantor risk)

SPIS suggested risk disclosure: See figure no.2 in the attached document.



6: Do you think that performance scenarios should include or be based on probabilistic modelling, or instead show possible outcomes relevant for the payouts feasible under the PRIIP but without any implications as to their likelihood?

Referring to Section 3.6.1 of the consultation paper, General approach and methodology:
This section points out two options for showing performance scenarios.

The first option where performance scenario describes how the product reacts in case of a hypothetical development of the underlying gives answer to the question "how much can I win".

To be able to answer the following question "How much am I likely to win? Option 2 applies where performance scenarios are selected on the basis of a probability distribution of expected returns fed by historical data.

SSDA: Using option 2 might give the retail investor an estimate of what to expect but this approach is problematic for the reasons described in section 3.6.1. One important issue is that manufacturers of different PRIIP will make their own assumptions about the future and therefore enter different input parameters into the agreed models for performance calculation.

Furthermore, to predict future performance based on historical data could also lead to retail investors building up expectations that are too optimistic and will end up with disappointment when the market don't repeat itself nor perform in line with the manufacturers predictions?

SSDA thinks it's dangerous to predict future performance based on historical data. SSDA suggests that a graph showing historical performance for the underlying asset should be presented instead of numbers based on probabilistic modeling.

7: How would you ensure a consistent approach across both firms and products were a modelling approach to be adopted?

SSDA believes that each PRIIP category such as Funds, Structured products, Warrants etc. should have a risk indicator most appropriate for that specific category. A manufacturer in a PRIIP category must comply with the standards and methodology for calculating the risk indicator set by the Competent Authority. The Competent Authority should monitor and conduct supervision that manufacturers comply with the given standards.

8: What time frames do you think would be appropriate for the performance scenarios?

SSDA suggest 5 years for open ended PRIIP and for PRIIP with a fixed maturity the time frame between start- and maturity date. PRIIP with a fixed maturity longer than 10 years should be treated in this context as being open ended.

9: Do you think that performance scenarios should include absolute figures, monetary amounts or percentages or a combination of these?

SSDA suggests monetary amounts and percentages (Annual percentages to facilitate comparison among products with different time frames and holding periods).

10: Are you aware of any practical issues that might arise with performance scenarios presented net of costs?

SSDA: Direct costs such as commission are easy to break down in the performance calculation, but when it comes to indirect costs such as inflation, tax, dividends and costs embedded in the price of the PRIIP it becomes problematic. Which costs should be included in the definition of indirect costs and secondly can all costs be explained to retail customers? The information should be simple, engaging and understandable and the section covering costs should be balanced compare to other sections in the KID.

SSDA believes that direct costs i.e. costs that are actually paid when the customer enters into the investment or explicitly deducted from the investment, whether before investment or during the life of the investment, or from the pay-out, should be subject to the performance net of cost calculation.

Indirect cost such as inflation, tax, missing dividends, return from alternative investment and costs embedded in the price of the PRIIP should be left out of the performance calculation net of cost.

11: Do you have any preferences in terms of the number or range of scenarios presented? Please explain.

SSDA: We believe that it depends on what is most appropriate for the PRIIP in question i.e. to the Priips characteristics. The range scenarios should capture the possible feature feasible for the PRIIP and there should be a balance between positive and negative scenarios.

12: Do you have any views, positive or negative, on the different examples for presentation of a summary risk indicator? Please outline advantages and disadvantages, and provide any other examples that you are aware of that you think would be useful.

SSDA: s main approach is that a summary risk indicator causes more damage than good. The reasons for that view are those mentioned on page 30 in the consultation paper.

The challenges with combining different risks relate to such steps as setting priorities or weightings for each type of risk, which is a complex issue. If quantitative measures are to be used, it would mean assigning a concrete quantified weighing to each type of risk in order to be able to sum the values of each type of risk. Other challenges with aggregating all three risks include the fact they may be correlated (e.g. credit risk may impact the market risk of a product).

SSDA suggests a multidimensional indicator where market, credit and liquidity risk are separated, see the SPIS proposal in the answer to question no. 5.

13: Do you have any views, positive or negative, on the different examples for presentation of performance scenarios? Please outline advantages and disadvantages, and provide any other examples that you are aware of that you think would be useful.

SSDA thinks that performance scenario describing how the product reacts in case of a hypothetical development of the underlying should be showed in a table. Se example: Figure no.3 in the attached document.

	Index Return	Repaid Amount	Effective Annual Return (inc. fees)
	-50%	1 000 000 kr	-3,8%
Ex.1	0%	1 000 000 kr	-3,8%
	0%	1 000 000 kr	-3,8%
Ex.2	+10%	1 130 000 kr	0,2%
	+20%	1 260 000 kr	3,9%
Ex.3	+30%	1 390 000 kr	7,4%
	+40%	1 520 000 kr	10,6%
	+50%	1 650 000 kr	13,7%

14: Do you have any views on possible combinations of a summary risk indicator with performance scenarios?

SSDA thinks that combining the summary risk indicator with performance scenarios would not simplify retail investor's ability of understanding.

15: Do you agree with the description of the consumer´s perspective on costs expressed in the Key Questions?

SSDA agrees that all key questions are relevant.

SSDA has comments to the follow up question to Key Question no 5, 6 and 8:

Follow up Question no: 5 "How much of my initial investment remains after cost deduction? E.g. how much of my investment is really invested?"

For structured products as one example where costs are embedded in the purchase price, two possible approaches for disclosures are presented in section 4.4.1.2. in the consultation paper.

SSDA is in favor of the first approach:

For example, if a manufacturer sells a structured Euro Medium Term Note (EMTN) at 1.000€, he should disclose in the KID that 3 % (30€) of the purchase price is a sales commission and that 2% (20€) of the acquisition price will be absorbed upfront to recompense the manufacturer for the cost the manufacturer incurs when structuring the note. The result is that 95% (950€) of the acquisition price will be invested in the note: there are 5% costs.

Follow up Question no: 6 “How much am I paying for my capital protection in relation to my overall investment?”

SSDA: It´s difficult to calculate the size of the “insurance premium” for enhancing capital protection. There is no standard method as far as SSDA knows.

Follow up Question no: 8 “How do these costs compare to other products?”

SSDA: The cost section in the KID should make it possible for retail investor to compare costs between different PRIIP. To conduct this comparison the customer need to look at the KID for each of the different PRIIP and then do the comparison on his/her own. SSDA: s view is that it would be impossible to put as a requisite that each KID should contain cost information for all different PRIIP.

For example, if a manufacturer sells a structured Euro Medium Term Note (EMTN) at 1,000€, he should disclose in the KID that 3% (30€) of the purchase price is a sales commission and 2% (20€) of the acquisition price will be absorbed upfront to recompense the manufacturer for the costs the manufacturer incurs when structuring the note. The result is that 95% (950€) of the acquisition price will be invested in the note: there are 5% costs.

16: What are the main challenges you see in achieving a level-playing field in cost disclosures, and how would you address them?

SSDA: Some PRIIP like mutual funds are open ended and charge its investors with an annual management fee. Other PRIIP such as structured products have in general no ongoing fees, instead the investor pays an implicit fee embedded in the price of the product. This is one example where a comparison of costs between different PRIIP could be challenging. To compare the costs an agreed break down of relevant direct- and indirect costs is needed. Next step is to agree on how to adjust for when the cost occurs (up front- or annual fees) so that the comparison could reflect the annual cost for different PRIIP over a certain holding period.

17: Do you agree with the outline of the main features of the cost structures for insurance-based investment products, structured products, CfDs and derivatives? Please describe any other costs or charges that should be included

SSDA: cost for listing on the exchange, cost for index licenses.

18: Do you have any views on how implicit costs, for instance costs embedded within the price of a structured product, might be best estimated or calculated?

The total size of the implicit costs differs between manufacturers depending on the manufacturer’s business model, ability to handle risk, competence, efficiency and so forth, same as for other

markets/industries. For example, the car industry where costs for bringing a new car to the market differs among car manufacturers.

SSDA:s conclusion is that it is possible for manufacturers to estimate the implicit costs, see the approach below.

For example, if a manufacturer sells a structured Euro Medium Term Note (EMTN) at 1.000€, he should disclose in the KID that 3 % (30€) of the purchase price is a sales commission and that 2% (20€) of the acquisition price will be absorbed upfront to recompense the manufacturer for the cost the manufacturer incurs when structuring the note. The result is that 95% (950€) of the acquisition price will be invested in the note: there are 5% costs.

SSDA:s opinion is that it adds no value for the retail investor to have more detailed information regarding the costs of 2% to recompense the manufacturer for the costs involved when structuring the note.

For example, if a manufacturer sells a structured Euro Medium Term Note (EMTN) at 1,000€, he should disclose in the KID that 3% (30€) of the purchase price is a sales commission and 2% (20€) of the acquisition price will be absorbed upfront to recompense the manufacturer for the costs the manufacturer incurs when structuring the note. The result is that 95% (950€) of the acquisition price will be invested in the note: there are 5% costs.

19: Do you agree with the costs and charges to be disclosed to investors as listed in table 12? If not please state your reasons, including describing any other cost or charges that should be included and the method of calculation.

SSDA agrees that the listed cost parameters could have an impact on the return from the Priip. SSDA thinks that some costs are more important to address than others due to their potential impact to the Priip.

The information about costs should be simple, engaging and understandable and the section covering costs should be balanced compare to other sections in the KID. If all costs listed in table 12 are to be addressed separately then the criteria's above will be difficult to fulfil.

SSDA believes that direct costs i.e. costs that are actually paid when the customer enters into the investment or explicitly deducted from the investment, whether before investment or during the life of the investment, or from the pay-out, should be addressed.

Indirect cost such as inflation, tax, missing dividends, and return from alternative investment should not be addressed as costs at all. In some situations a short explanation might be needed, for example if the underlying asset in the Priip is an equity index. In that case it´s relevant information for the customer to understand how dividends are treated.

Implicit costs i.e. costs embedded in the price of the Priip should be addressed with the clear distinction that these costs are not deducted from the initial investment. It should also be explained that implicit costs is compensation to the manufacturer for the costs involved when structuring the note.

SSDA suggests that all separate direct costs are bundled and labelled into direct costs and all implicit cost bundled and labelled as indirect/implicit costs.

20: Do you agree that a RIY or similar calculation method might be used for preparing 'total aggregate cost' figures?

SSDA: No comments

21: Are you aware of any other calculation methodologies for costs that should be considered by the ESAs?

SSDA: No comments

22: Do you agree that implicit or explicit growth rates should be assumed for the purpose of estimating 'total aggregate costs'? How might these be set, and should these assumptions be adjusted so as to be consistent with information included on the performance scenarios?

SSDA: No comments

23: How do you think implicit portfolio transaction costs should be taken into account, bearing in mind also possible methods for assessing implicit costs for structured products?

SSDA: No comments

24: Do you have any views on possible assumptions that should be made, and how these might be calibrated or set?

SSDA: No comments

25: What do you think are the key challenges in standardising the format of cost information across different PRIIPs, e.g. funds, derivatives, life insurance contracts?

SSDA: No comments

26: Do you have a marked preference or any objection for any of the presentational examples? If so, why? Please provide any alternative examples which you believe could be useful.

SSDA: No comments

27: In terms of a possible breakdown of costs, are you aware of cost structures for which a split between entry or exit costs, ongoing costs, and costs only paid in specific situations or under specific conditions, would not work?

SSDA: No comments

28: How do you think contingent costs should be addressed when showing total aggregated costs?

SSDA: No comments

29: How do you think should cumulative costs be shown?

SSDA: No comments

30: Do you have any views on the identity information that should be included?

SSDA: ISIN should be included, Website is sufficient.

31: Do you consider that the criteria set out in recital 18 are sufficiently clear, or would you see some merit in ESAs clarifying them further?

SSDA: Further clarification is recommended.

32: Do you agree that principles on how a PRIIP might be assigned a 'type' will be needed, and do you have views on how these might be set?

SSDA: Needs guidance of some sort, to set a standard would be beneficial.

33: Are you aware of classifications other than by legal type that you think should be considered?

SSDA: Use EUSIPA Classification.

34: Do you agree that general principles and as necessary prescribed statements might be needed for completing this section of the KID

SSDA: Yes.

35: Are you aware of other measures that might be taken to improve the quality of the section from the perspective of the retail investor?

SSDA: No comments

36: Do you have views on the information PRIIPs manufacturers should provide on consumer types?

SSDA: Must be discussed further.

37: What is the key information that needs to be given to the retail investor on insurance benefits, and how should this be presented?

SSDA: No comments

38: Are you aware of PRIIPs where the term may not be readily described, or where there are other issues?

SSDA: No

39: Are you aware of specific challenges arising for specific PRIIPs in completing this section?

SSDA: No

40: Are you aware of specific challenges arising for specific PRIIPs in completing this section?

SSDA: No

41: Are you aware of specific challenges arising for specific PRIIPs in completing this section?

SSDA: A distributor's use of sub-distributors comes with the same challenges as described regarding manufacturer and distributor. It is important that generic information or a reference to where further information can be found is allowed.

42: Do you agree that this section should link to a webpage of the manufacturer?

SSDA: Yes

43: Do you agree with the assessment of when PRIIPs might be concerned by article 6(3)?

SSDA: Yes

44: In your market, taking into account the list of criteria in the above section, what products would be concerned by article 6(2a)? What market share do these represent?

SSDA: No clear view.

45: Please provide sufficient information about these products to illustrate why they would be concerned?

SSDA: Unit-linked life insurance contracts and hybrid life insurance contracts.

46: Do you have views on how you think the KID should be adapted for article 6(3) products, taking into account the options outlined by the ESAs?

SSDA: No

47: How do you consider that the product manufacturer should meet the requirements to describe and detail the investment options available?

SSDA: No clear view.

48: Are you aware of further challenges that should be taken into account?

SSDA: The ESA must clarify if anything else but unit-linked life insurance contracts and hybrid life insurance contracts are intended to be covered by the relevant rule here.

49: Do you agree with the measures outlined for periodic review, revision and republication of the KID where 'material' changes are found?

SSDA: Since the KID has been designed as pre-contractual information the issuance/offering process for specific types of PRIIPS must be taken into account. For continuous PRIIPs like UCITS; YES. For PRIIPs offered in a non-continuous manner; NO

50: Where a PRIIP is being sold or traded on a secondary market, do you foresee particular challenges in keeping the KID up-to-date?

SSDA: Yes. Depending on the scope of other information points in the KID, e.g. costs on non-continuous offers, the drawing up of a reviewed KID could take place on the first day of listing on a secondary market place. Costs could be included in the primary market price but not, or different, in

the secondary market price. Some products (for example constant leverage certificate) are very volatile, e.g. substantial intraday price fluctuations, which would render updating the KID daily.

51: Where a PRIIP is offering a wide range of investment options, do you foresee any particular challenges in keeping the KID up-to-date?

SSDA: Yes, for example insurance products that holds a lot of volatile products (like mentioned in the answer to question no.50).

52: Are there circumstances where an active communication model should be provided?

SSDA: No, this is not the case for UCITS today, nor should it be for PRIIPs.

53: Do you agree that Recital 83 of the MiFID II might be used as a model for technical standards on the timing of the delivery of the KID?

SSDA: No comments

54: Are you aware of any other criteria or details that might be taken into account? 55: Do you think that the ESAs should aim to develop one or more overall templates for the KID?

SSDA: No comments

56: Do you think the KID should be adjusted to reflect the impact of regular payment options (on costs, performance, risk) where these are offered? If so, how

SSDA: No comments

57: Are there other cost or benefit drivers that you are aware of that have not been mentioned? Please consider both one-off and ongoing costs?

SSDA: No comments

58: Do you have any evidence on the specific costs or benefits that might be linked to the options already explored earlier in this Discussion Paper? Please provide specific information or references broken down by the specific options on which you wish to comment.

SSDA: No comments

59: Are you aware of situations in which costs might be disproportionate for particular options, for instance borne by a specific group of manufacturers to a far greater degree in terms relative to the turnover of that group of manufacturers, compared to other manufacturers?

SSDA: No comments

Attachment 1

SPIS RISK INDICATORS

METHODOLOGY GUIDE

VERSION: 1.0.15

DATE: JANUARY 25TH, 2015

Contents

Introduction

Following SPIS decision to require each member to calculate risk indicators for its structured products, there is a need to set the detailed rules of the methodology, in order to ensure consistency of the calculations between the members.

This guide details the specific rules of the risk indicators calculation methodology. It begins with describing the two risk indicators, continues with listing the assumptions and logic of the Monte Carlo mechanism, and then covers market data issues.

At this stage, the methodology doesn't cover credit linked products.

Risk Indicators

Indicator #1: VaR 99%

This risk indicator denotes the maximal potential loss at maturity in 99% level of confidence as calculated by the Monte Carlo (MC) engine (see relevant section below). After the calculation, the result is normalized to a 1 to 7 scale for simplicity and ease of comparison.

Calculation Methodology

1. A MC engine generates prices for each one of the product's underlyers for a pre-defined number of simulations under a set of assumptions - see section 3 for the Monte Carlo parameters.
2. The product's payoff/return is calculated per each of the above simulations.
3. The returns are then ordered in an ascending order from the worst to the best.
4. The return at the 1st percentile is the return that indicates the VaR 99%. One can say that with 99% confidence, the product is not expected to lose more than the VaR 99% return. Running with 10,000 simulations, the 100th worst simulation is the VaR 99%.
5. VaR volatility (V) is calculated by inputting the VaR 99% value in the next equation:

$$V = \frac{\sqrt{-LN(1+VaR) + \frac{Z(p)^2}{2}} + \frac{Z(p)}{\sqrt{2}}}{\sqrt{\frac{T}{2}}} = \frac{\sqrt{-LN(1+VaR) + \frac{Z(0.99)^2}{2}} + \frac{Z(0.99)}{\sqrt{2}}}{\sqrt{\frac{T}{2}}}$$

$$= \frac{\sqrt{\sim 2.7059 \; - LN(1+VaR)} - \sim 1.6449}{\sqrt{\frac{T}{2}}}$$

Where:
VaR = The return that indicates the VaR 99% value.
T = Product maturity in years.

Mapping to Risk Scale

In order to be able to easily compare between the wide varieties of products, the VaR volatility is then mapped to a scale of 1 to 7 according to the following table:

Risk Class	Volatility Intervals	
	Equal or above	Less than
1	0%	0.5%
2	0.5%	2%
3	2%	5%
4	5%	10%
5	10%	15%
6	15%	25%
7	25%	

Indicator #2: Average Downside

As opposed to the VaR 99% indicator, the Average Downside indicator supplies information about the volatility of the product, rather than its possible negative return.

Most Structured Products utilize an option component which reflects the product's market risk component. The calculation of the Average Downside indicator is based on the pricing of the option and uncovers the risk it holds.

Calculation Methodology

1. A MC engine generates prices for each one of the product's underlyers for a pre-defined number of simulations under a set of assumptions - see section 3 for the Monte Carlo parameters.
2. The product's payoff/return is calculated per each of the above simulations.
3. Positive returns are modified to be equal to 0%. Negative returns keep their value.
4. The absolute value of the average of all returns from the last step is calculated (M).
5. The calculated value of M is then inserted into the Black & Scholes equation as the premium of a put option on the redemption level of the product so that the option's premium equals to the product of M and the strike price.
   The risk free rate is omitted from the Black & Scholes equation since this value is the current value and does not refer to the rate that will exist at option's maturity.
   For a product with more than 1 underlyer, the strike is expressed in basis points (for example: a strike price of 100 for an "at the money" option).
6. Given the fact that the option's premium is known, and that all the other parameters of the formula are also known parameters (underlyer's price, option's term, etc.), the underlyer's volatility is extracted from the B&S formula.
7. The extracted volatility reflects the value of the Average Downside indicator.

Mapping to Risk Scale

The values received from the last step are distributed to volatility intervals that crowd the products in "buckets". The buckets differ between different groups of products that possess different levels of

risk. The next table provides volatility intervals which reflect the increasing level of risk borne by the product and, therefore, its position in the risk scale.

Risk Class	Volatility Intervals	
	Equal or above	Less than
1	0%	0.5%
2	0.5%	2%
3	2%	5%
4	5%	10%
5	10%	15%
6	15%	25%
7	25%	

Monte Carlo Engine

The MC engine is the component that is responsible for the generation of price simulations; these prices are then taken as input to the model that calculates the product's return.

The generation of prices is performed by applying the following steps:

1. Generate a normally distributed random number for each day of the product's term, and for each underlyer. Output produces a vector of T values for each one of the product's underlyers (where T equals the number of days since product's issue date until its maturity).
2. Calculate the correlation matrix (C) for the product's underlyers. The calculation is described in paragraph 3.6 since the matrix is actually an input for the engine.
3. Generate a correlation decomposition matrix (U) for the correlation matrix product's underlyers (C).
   Correlation decomposition matrix is calculated by one of these methods:
   - Cholesky Decomposition.
   - Spectral Decomposition. The Cholesky Decomposition fails when the determinant of the correlation matrix equals to 0. In that case the Spectral Decomposition is applied although it's more complicated and takes longer to compute.
4. For each day, multiply the random numbers generated in step 1 with the correlation decomposition matrix generated in step 3. This results in a vector of T values for each one of the product's underlyers; the values are normally distributed but as opposed to the vector that was created in step 1, the values are also correlated.
5. Generate prices for each one of the underlyers using the next formula:

$$P(T) = P(0) \times e^{\left(\mu - \frac{\sigma^2}{2}\right) \times T + \sigma \times N(0,1) \times \sqrt{T}}$$

   Where:
   - μ = Expected Return, see calculation method in paragraph 3.2.
   - σ = Expected Volatility, see calculation method in paragraph 3.5.
   - P(T) = price of underlyer for T.
   - T = Time from P(0).
     If P(0) was yesterday then T = 1/365
     If P(0) was a week ago then T = 7/365

- N(0,1) = The relevant random number that was generated in step 5 (or in step 1 in cases where the product contains only one underlyer).

6. Once all relevant prices are generated, the calculation model steps in and calculates the product's return based on its payoff and as derived from the prices.

These above steps are conducted per each simulation. The complete set of parameters for the MC mechanism follows.

Number of Simulations

The MC engine can generate a variable amount of simulations where each simulation contains a set of prices for each of the product's underlyers. To ensure the MC consistency, the minimal number of simulations should be 10,000.

Expected Returns

The MC engine receives as parameters an expected return value for each of the product's relevant underlying instruments. The calculation of the Expected Returns (ER) will be performed as follows:

A set of Reference Indices (RI) will be defined (such as: OMX30, Stoxx50, S&P500, etc.).

The Expected Return of each of the Reference Entities will be performed as follows:

- **Equity Risk Premium** (ERP) = Dividend Yield + Real Growth – Real Long Term Yield
  = Dividend Yield + Real Growth + Long Term Inflation – Nominal Long Term Yield
- **Expected Nominal Total Return** = Nominal Long Term Yield + ERP = Dividend Yield + Real Growth + Long Term Inflation Rate
- **Expected Return = Expected Nominal Total Return – Dividend Yield**

Where:

- **Real Growth**: is a fixed constant that is commonly between 1.0-1.5%. In these calculations, we will use the fixed value 1.25%.
- **Nominal Long Term Yield**: We will use the 10Y Semi Annual Swap Rate on the relevant currency (see Drift Parameters). If the exact swap can't be found, a similar one will be selected. Example of relevant Bloomberg tickers for various currencies: "USSW10 BGN Curncy", "SKSW10 Curncy", "EUSA10"
- **Long Term Inflation Rate**: A 10Y Zero Coupon Inflation Rate on the relevant currency (see drift parameters). Example of relevant Bloomberg tickers for various currencies: "USSWIT10 Curncy", "EUSWIT10"
- **Dividend Yield**: see Dividends section below.

For each underlying instrument, which is not a Reference Index:

- Assign a Reference Index to the instrument.
- Using the standard Capital Asset Pricing Model (CAPM), calculate the Expected Nominal Total Return of the instrument:
  $ENTR = R_f + \beta * [ER(RI) - R_f]$

ER = ENTR - DIV

Where:

- **ENTR**: Expected Nominal Total Return of the instrument
- **R_f**: Nominal Long Term Yield (see above)
- **ER(RI)**: Expected Nominal Total Return of the Reference Index (see above)
- **ER:** Expected Return of the instrument
- **DIV:** Dividend Yield of the instrument

Note:

Since in many cases the risk premium, dividend yield and currency discount rate, almost cancel each other and for simplicity of calculation, the expected return will be set as **zero (0%)**.

Drift parameters

The currency for a SEK product with quanto (i.e. the underlying price is handled as it is quoted in SEK and not converted using the FX rate) should be the underlying's denominated currency. For example: For a quanto product that uses the FTSE 100 index as an underlyer the GBP swap rate should be used. In case of a SEK denominated underlying, the SEK swap rate should be used.

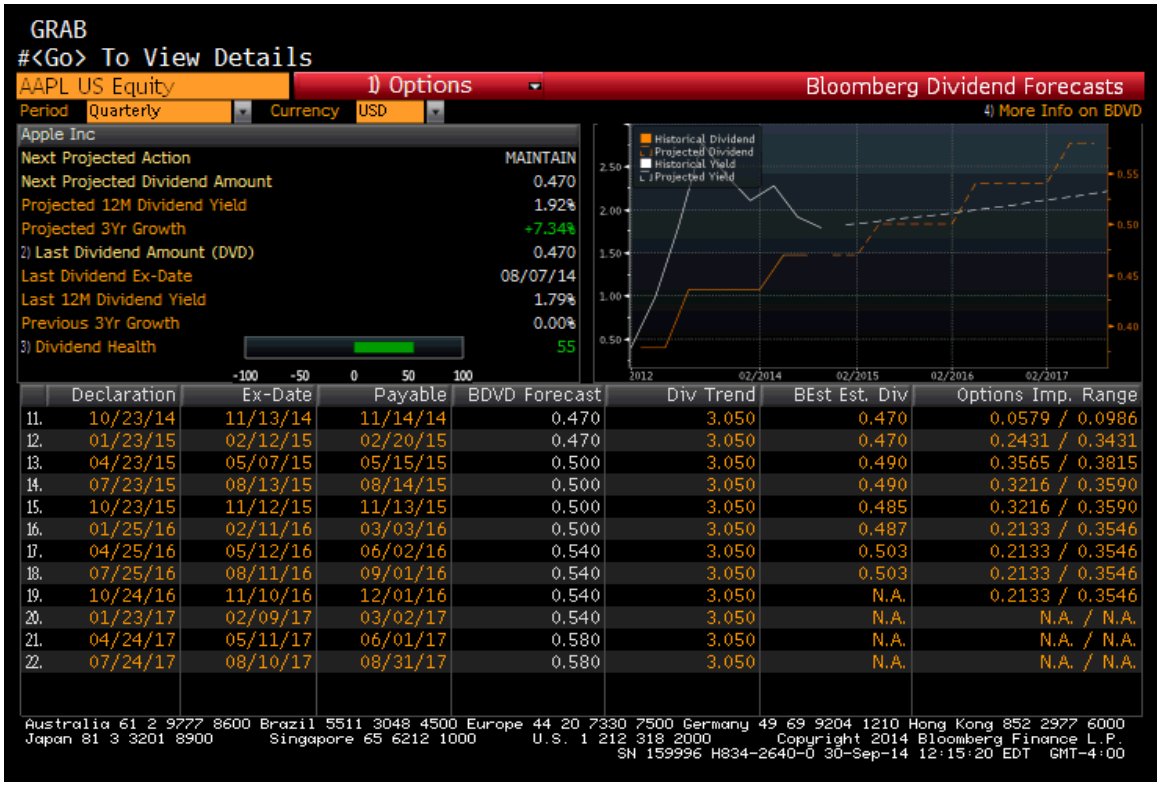
For a non quanto SEK product (where the underlying price is converted from its denominated currency to SEK), the SEK swap rate should be used, regardless of its underlyer's currency.

Dividends

Since product holders usually do not enjoy underlyers' dividend payments, the expected dividend rate should be subtracted from the underlyers' return expectations. Dividend payments should be extracted from a reliable source. For example: Bloomberg's Projected 12M Dividend Yield.

In a few cases the timing of the dividends has a major effect on the calculations and therefore should be taken into account. For example: an Autocall product with quarterly Autocall interval on a share that pays an annual dividend might need to consider the timing of the dividend.

For these cases where dividends' timing may have a great influence on the product's payoff, the expected ex dates of the dividends should be extracted from a reliable source, along with the dividend's absolute amounts. For example: Bloomberg's BDVD page (see picture) displays the expected dividends for the next years, each accompanied with its specific ex date. In case product term is longer than available future dividends, last dividend values should be replicated, using the same dividend interval (e.g. annual, quarterly).



Note:

When “synthetic dividends” are used for an underlying (mainly in funds), these should also be reduced from the expected return, in the same manner done for “real dividends”.

Other Costs

When underlyers embed additional fees, for example ETFs, the expected fees should be reduced from the expected return. In the ETF example, the management fee should be reduced.

Expected Volatilities

Volatilities are considered more predictable than returns. Therefore, the usage of past data for the estimation of volatilities is more likely to be effective. The volatility is calculated based on a historical period of 5 years with weekly observations (i.e. 5 year realized volatility).

The calculation steps are as follows:

1. Extract weekly returns based on the prices from the last 5 years. In case events have major effect on the returns, the prices should be adjusted, to prevent an unjustified increase in volatility due to “artificial” price changes.
2. Calculate standard deviation for the natural logarithm of the returns.
3. Multiply the result by $\sqrt{52}$ to convert the volatility from weekly to annual volatility.

$$Volatility = \sqrt{\frac{52}{T-1}\sum_{t=1}^{T}(R_w - \overline{R_w})^2}$$

Where:

$T = Number\ of\ weekly\ observations$

$R_w = \ln(1 + R_t)$

$\overline{R_w} =$ Average of all R_w Observations

$R_t = Weekly\ return\ on\ observation\ t$

Correlations

When a stress test is performed on a product that involves more than a single underlyer, correlations become a crucial parameter. Correlations should be calculated based on a historical period of 5 years. The correlations are calculated based on weekly returns of the underlyers.

Underlying Instrument Classes and Types

Structured Products utilize a variety of instruments from different asset classes and types. The MC parameters mentioned above are calculated in the same manner for the various types, but it is possible that some instruments may require application of different logic due to their unique and specific nature.

- Equity indices and shares
  These types of instruments use the standard inputs for expected return and volatility, as described in paragraphs 3.2 - 3.5.
- Indices and other underlyers with target volatility.
  Their realized volatility should be used (like any other instrument), reflecting the actual effectiveness of the strategy, and also to overcome different volatility measures used across the industry.

Market Data

Data Sources

Reliable market data is a very important factor when calculating the risk indicators. Discrepancies in data may lead to distorted results that may not reflect the product's risk in the most accurate way. Data sources should be common, reliable sources such as Bloomberg and Reuters.

Handling Data Failures/Challenges

As mentioned earlier in the document, some of the MC engine parameters are calculated based on historical data. The data sometimes contain failures and "noises" that, if not handled correctly, may cause miscalculations of the risk indicators.

Short History

Short history is typically the case for new underlyers. In addition, in a few cases, a major event happened to an instrument, causing the historical prices before the event to be irrelevant. For example, a fund that completely revised its investment policy or a share in a company that completely changed its business. In these circumstances the relevant returns of the instrument are available only from the date of inception of the new investment policy or company business. This time period may fall short of the span of time required for the calculation of expected volatility and correlations (5 years).

Handling short history should be performed differently if the underlyer is a synthetic instrument or a basic instrument. A synthetic instrument is one that is calculated with a formula that depends on other instruments, such as an ETF or a low volatility index. Otherwise, it is considered as a basic instrument, e.g. share, equity index, commodity.

Handling short history of a basic instrument should be carried out as follows:

If there is at least 1 year of history – use the available history.

If there is less than one year of history, a replacement for missing history should be taken. The replacement should be highly correlated with the original underlying (based on the existing history) and should belong to the same "nature of business", e.g. industry or sector (in case of shares).

Handling short history of a synthetic instrument should be carried out as follows:

The missing historical prices should be completed by calculating the instrument's formula. For example, ETF history can be calculated using the tracked index plus its historical distributions (dividends, based on the ETF rules, i.e. if it pays full dividends, or part of them) minus its expenses, i.e. Total Expense Ratio (TER).

Corporate Actions Adjustment

Corporate actions (CA) that are performed on assets may cause price distortions if not handled correctly. CA that cause major changes to prices should be adjusted.