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Response to CESR's technical advice at level 2 on the format and content of Key Information Document disclosures for UCITS (Ref. CESR/09-552) as well as to the addendum (Ref. CESR/09-716)

Dear Mr. Comporti,

I am a professor for capital market research at the WHU – Otto Beisheim School of Management, Germany, and academic director at EDG AG (EDG), which is part of vwd group. EDG has become a recognized provider of financial services ranging from risk classification, price validation, product ratings to consulting services for several asset classes. In total, more than 200,000 retail products in the German, Swiss and Austrian markets are continuously monitored. vwd group is an exchange listed full service provider for financial solutions, specialized in retail banking and private wealth management.

I appreciate the opportunity to contribute to CESR by responding to the Consultation Papers and its posed questions. My response to the Consultation Papers (CESR/09-552; CESR/09-716) focuses on the 'Risk and Reward Disclosure' and is based on my research experience in asset and risk management as well as on more than five year experience in delivering pricing and risk classification services to the financial industry.

Yours sincerely,



Prof. Dr. Lutz Johanning

Preliminary Remarks

We highly support the CESR initiative to dynamically publish a risk figure and a risk classification for UCITS. The synthetic risk and reward indicator (SRRI) enables retail investors to accurately distinguish between different funds' risk and return profiles.

In our comments we would like to highlight the following methodological points:

I. Risk measures - volatility or value at risk (VaR)?

The current CESR approach proposes volatility for funds with symmetric payoffs and value at risk for structured funds. Volatility is especially appropriate for instruments with normal or at least fairly symmetric distributions without fat tails, e.g. unstructured funds or diversified stock investments. For instruments with symmetric distributions, VaR and volatility methodologies yield equivalent risk classifications. However, for instruments with asymmetric distributions, e.g. structured funds, volatility either over- or underestimates risk. For these instruments, VaR reflects the asymmetry (skewness and kurtosis) more appropriate and therefore yields more precise risk classifications.

To summarize, VaR does not have any disadvantages for symmetric distributions, but yields more appropriate results for structured funds. Due to its widespread application in the financial industry (Basle II, funds using derivatives¹, proposed in Solvency II), we recommend to base the risk classification solely on VaR instead of a combination of VaR and volatility.

II. Measurement methodology - Monte Carlo versus historical simulation:

The current approach recommends historical simulation for VaR calculation. Historical simulation is a non-parametric approach that can reflect any shape of a return distribution. However, the resulting VaR-estimates heavily depend on extreme events. As long as these events are included in the historical observation period, VaR is high, once these events drop out, VaR will fall immediately. Hence, "there is substantial estimation error in the sample quantile".² For the proposed 95 % confidence interval and the five year historical observation period this problem may be less severe. Since Monte Carlo simulation allows for increasing the number of runs, it is the most accurate risk methodology. Fat tails could be implemented by using appropriate distributions, e.g. t-distributions.³

To summarize, a non-parametric approach (such as historical simulation) is always less accurate than a parametric approach, hence a methodology based on Monte Carlo simulation is recommended.

¹ 2007/16/EG; UCITS III; DerivateV § 8 ff.

² Jorion, Philippe (2008): Value at Risk - The New Benchmark for Managing Financial Risk, p. 265.

³ Jorion, Philippe (2008): Value at Risk - The New Benchmark for Managing Financial Risk, p. 266-267.

III. Holding period and confidence level:

The CESR approach proposes the VaR for a 95 % confidence level and a holding period of one year (or end of maturity).

A holding period of one year – although recommended in other regulatory frameworks as Basle II for credit risk – will induce severe problems: technically, risk forecasts heavily depend on return / drift predictions. These predictions are very imprecise, and there is no empirical evidence that long-term risk forecasts are accurate.⁴ Therefore, we recommend a more accurate risk measure for a short-term holding period (e.g. 10 days), although it does not match long-term investment horizons.

In general, we are in favor of the proposed 95% confidence level because it yields in more observations and thus in better estimates. However, all other regulatory frameworks (e.g. Basle II) propose at least a 99% confidence level. Therefore, it might be advantageous to adapt the 99% confidence level.

Since this approach (99% confidence level, 10 days holding period) is already applied by funds that invest in derivatives,⁵ the adaption of these standards could significantly lower the barriers of implementing the synthetic risk and reward indicator for the industry.

IV. Square root of time rule:

The proposed approach (Box 3 Computation of VaR-Based Volatility) recommends to apply the square root of time rule to transform long-term risks into short-term risks and vice versa. This rule requires independently and identically distributed returns that do not exist in capital markets. Danielsson and Zigrand stated in their 2005 published paper “On time-scaling of risk and the square-root-of-time rule”: “The reason is that the scaling by the square root of time does not sufficiently scale the jump risk which interacts nonlinearly with the Brownian term. An exception may be at the 10 day horizon....”⁶ Misclassifications by scaling risks using this rule can be avoided if short-term risks are used.

Summary

A synthetic risk and reward indicator based on value at risk with a short holding period (e.g. 10 days) complies with all of the given CESR requirements as stated in the Consultation Paper (CESR/09-552). For structured funds, Monte Carlo simulation should be favored in terms of accuracy of risk estimates and robustness of the classification.

In the ongoing consultation on “Packaged Retail Investment Products” (PRIIPS) it is mentioned that the Key Information Document (KID) might be as well implemented

⁴ Jongwoo Kim J., Malz A., Mina J (1999) LongRun Technical Document

⁵ 2007/16/EG; UCITS III; DerivateV § 11

⁶ Danielsson, J. and Zigrand, J.-P. (2005) On time-scaling of risk and the square-root-of-time rule, page 17.

for those. This is another argument in favor of a Monte Carlo simulation. Monte Carlo simulation is the most flexible approach in terms of identifying risk in financial markets across different asset classes and payoff profiles. Retail investors do have the chance to evaluate risk across different asset classes with one consistent Monte Carlo methodology.

In the following paragraphs we answer selected questions as posed by CESR in the Consultation Papers (CESR/09-716; CESR/09-552).

Questions for the consultation (CESR/09-552)

Do you agree that Option B (a synthetic risk and reward indicator accompanied by a narrative) should be recommended in CESR's final advice?

Yes. A SRRI accompanied by a narrative approach should be recommended. A quantitative measure enables financial advisors and investors to clearly distinguish and compare different UCITS.

Questions for the consultation (CESR/09-716)

Question 1 - 3:

Do you agree with the criteria considered by CESR to formulate its proposals regarding the volatility intervals? Are you aware of any other factors that should be considered?

Which option (A or B) do you see as more appropriate for the KID?

Would you like to propose any other alternative for the volatility intervals? If so, please explain your reasoning.

Answer 1 - 3:

We are in favor of the proposed Option B, although these intervals seem to be very conservative. A concluding formulation for the borders of risk classes should be recommended once the applied product universe is finally distinguished. Subsequently CESR ought to conduct an analogical procedure to the one presented in ANNEX I in the Addendum to CESR's Consultation Paper (CESR/09-716).

Question 4 - 6:

Do you agree that introducing some rules for assessing migration is desirable?

If so, which option (2 or 3) do you think is more appropriate?

Would you like to propose any other rule for assessing migrations? If so please explain your reasoning.

Answer 4 - 6:

The application of migration rules would increase the complexity of the risk classification. Therefore, if a UCITS has a sustainable risk shift due to the methodology, the risk class should change immediately. Furthermore, retail banks and private wealth managers define individual migration rules matching their business specifics. These migrations rules might conflict the official CESR migration rules.

Question 7 - 8:

Do you agree with CESR's proposal concerning the methodology to compute the SRRI of structured funds? If not, please explain and, if possible, suggest alternatives.

Do you agree with CESR's proposal to use VaR as an (intermediate) instrument for the measurement of volatility? Is the proposed VaR-based approach appropriate to convey correct information about the relevant return volatility of structured funds?

Answer 7 - 8:

As discussed in the preliminary remarks, the methodology proposed by CESR to calculate the SRRI of structured funds is not the most comprehensive approach. A non-parametric approach, like the proposed historical simulation, is less accurate than Monte Carlo simulation. Risk estimations for longer holding periods (e.g. one year) are not applicable in terms of reliability and robustness of the results. In addition, the application of the square root of time rule in order to scale results from weekly intervals to yearly or longer periods further decreases accuracy.

Question 9:

Do you share the view that the solution proposed by CESR is flexible enough to accommodate the specific features of all (or most) types of structured fund? If not, please explain your comments and suggest alternatives or explain how the approach could be adjusted or improved.

Answer 9:

Basically, a VaR approach is able to accommodate all types of UCITS. Besides the arguments specified above, the general applicability is another convincing advantage of the proposed VaR methodology.

Question 10 - 11:

Do you agree with CESR's proposal concerning the methodology to compute the VaR-based volatility of structured funds over a holding period of 1 year? If not, please explain your comments and suggest alternatives.

Do you agree with CESR's proposal concerning the methodology to compute the VaR-based volatility of structured funds at maturity? If not, please explain your comments and suggest alternatives.

Answer 10 - 11:

See Preliminary Remarks III.

Question 12 - 13:

Do you agree with CESR's decision not to promote further the adoption of the delta representation approach for the computation of volatility of structured funds?

Do you share the view that CESR's current proposal represents an improvement with respect to the delta representation approach? If not, please clarify why you believe that the delta representation approach may be more suitable to estimate the volatility of structured funds.

Answer 12 - 13:

A delta representation approach delivers, as suggested from CESR, insufficiently accurate results of the real risk of a structured fund. The delta representation approach is not capable to consider time to maturity or moneyness of the derivate component of the fund. The currently proposed methodology is an improvement to the delta representation approach.

Question 14:

Do you consider it possible and appropriate to allow the use of Monte Carlo simulations for the computation of the SRRI of structured funds? If yes, please explain whether these methods are more suitable for the computation of VaR or, directly, for that of volatility measures.

Answer 14:

As stated above, a parametric approach like the Monte Carlo simulation should be favored in the light of the accuracy and robustness of the risk estimations. Within a Monte Carlo approach it is possible to consider different risk factors like price and volatility of the underlying, interest rates or currency rates. In addition, the correlations between those risk factors can be considered in the simulation. The effect of changing correlations can have a significant impact on the observed/estimated VaR figures, especially if – in a simulated crisis – all risk factors take unfavorable directions. Using a Monte Carlo simulation provides the highest reachable flexibility while estimating risk for different structured funds. Almost every asymmetric return distribution or payoff profile can be evaluated.

Question 15:

Do you believe that it would be possible to avoid significant differences in the outcome of such simulations across management companies? What should be the key methodological requirements needed to avoid such divergences?

Answer 15:

It is almost impossible to avoid differences in the outcomes of Monte Carlo simulations across management companies. How significant those differences are is directly linked to the requirements which should be determined by CCSR. A parametric approach like the Monte Carlo simulation is based on different input parameters as well as methodological assumptions. In order to minimize divergences across management companies CCSR should recommend following requirements:

- a comprehensive numeration of all risk factors affecting the overall risk of a specified financial instrument such as underlying prices, volatilities, interest rates or currency rates;
- stochastic processes for these risk factors, i.e. assumptions about the distribution of risk parameters (e.g. log-normal distribution vs. mean reversion considering interest rates);
- observation periods for the risk factors employed in such a simulation
- confidence level (e.g. 99 %);
- holding period (e.g. 10 days);
- number of simulation paths (e.g. 10,000);

The most complex methodological requirement concerns the specification of valuation assumptions/models for derivative components. CCSR might propose standard models and might require their application, however, model risk for e.g. exotic option components still exists.