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The Committee of European Securities Regulators 11-13 avenue de Friedland 75008 PARIS – FRANCE

<u>RiskMetrics Group's Reply to CESR's technical advice at level 2 on Risk Measurement for</u> the purposes of the calculation of UCITS' global exposure

RiskMetrics Group was originally founded upon a measurement of market risk in a portfolio. The Value at Risk (VaR) measurement techniques that we documented in 1994 have since acted as the baseline for many internal and regulatory risk disclosure practices.

Subsequently, RiskMetrics has also developed frameworks for the measurement of credit risk, used within both trading and traditional banking books. Over time, these have also been incorporated into risk management processes.

RiskMetrics is an Outsourcer of risk measurement functions for UCITS across all the appropriate jurisdictions, both directly and indirectly to the Company that manages the UCITS. This includes the majority of Europe's leading asset managers, hedge funds, and custodians, as well as non-EU based asset managers who wish to launch UCITS vehicles. RiskMetrics appreciates the opportunity to submit its views on CESR's proposals, based upon best practices that we have observed, for the measurement of UCITS' global exposure.

Whilst comments have been submitted regarding the commitment approach, the emphasis of this response is around the use of VaR for the calculation of global exposure.

First, CESR is to be complimented for reaffirming its commitment to measure and control derivatives activity using, at least as one alternative, a model-based approach. Despite the recent criticism of risk models, they remain an objective, scalable way to measure risks, extend naturally to new asset classes and provide straightforward treatment of issues such as netting, hedging and offsets. A continued commitment to a model-based approach, coupled with necessary scrutiny, will only lead to better models and controls in the future.

Specific to the two model-based approaches, we are in agreement with the general framework of the Relative VaR approach which we believe achieves the aim of the Committee in limiting leverage and exposure. We do have some concerns about the details of the proposal, and in particular recommend more scrutiny to ensure that the approach is not "gamed" by a cynical choice of reference portfolio. These concerns do not cause us to question, however, the validity of the approach.

In contrast, we have significant reservations about the Absolute VaR approach. Our most significant reservation is that this approach does not measure or limit exposure in the way that the Committee intends. Not only does the approach not have the intended effect, it also will have other unintended consequences. It is crucial that the Committee consider these before promoting such an approach.

The proposed methodology for the calculation of counterparty risk rests heavily on assumptions about the availability of daily liquidity, as well as the margining, independent valuation, and controls on counterparty quality. As we have seen over the past 18 months, such assumptions should not be taken for granted. Whilst RiskMetrics acknowledges the Committee's desire for simplicity and consistency of approach, we are concerned that the simple mark-to-market approach might give an overly optimistic view of counterparty exposure under stressed conditions. We recommend that the Committee complement the current proposal with recommendations to consider counterparty exposure in the event that daily liquidity, for example, is no longer available.

Finally, RiskMetrics endorses CESR's views that the risk profile should not be determined by how derivatives are used in a UCITS – typically classified as non-sophisticated and sophisticated funds. We agree with the Committee that the use of such terms should be abandoned.

A more comprehensive set of responses can be found below. RiskMetrics greatly appreciates CESR's time and attention, and would be delighted to discuss our thoughts with the Committee in further detail.

Section 1 – Calculation of Global Exposure using the Commitment Approach

1.1 <u>Context</u>

The proposed approach to the calculation of global exposure seems reasonable. However, as we have seen during the current period of high market volatility and uncertainty, adhering to "hard" thresholds can lead to de-leveraging en masse, which consequently can have adverse affects on the market in general. Whilst this has no impact on the derivation of global exposure using the commitment approach, it may have an impact to UCITS using a market volatility-based approach, e.g. VaR. Will the new UCITS Directive have scope to allow temporary EU-wide adjustments to the exposure requirements when deemed applicable?

As there are distinct guidelines for counterparty risk within the UCITS directive, and the issuer concentration guidelines include counterparty risk, it seems fair to calculate global exposure based on purely the market risk dimension of a UCITS.

1.2 Scope of Commitment Approach

The commitment approach, as set out in this consultation paper, is the most restrictive in terms the amount of leverage a UCITS can take. This is consistent with the Risk Management Principles paper, where a more advanced method of risk measurement should be used if a UCITS is utilising more leverage.

Any securities that create additional exposure/leverage should be included in the global exposure calculation.

1.3 Commitment Approach Calculation: General Principles

Market risk is typically defined as the potential loss due to market movements for any particular instrument, and therefore option 1 would be considered a specific method of calculating such a risk. Other related methods would be based off forecasting movements in the underlying markets and generating probability-weighted P&L distributions.

Option 2 describes the first order sensitivity of the asset to the market, and the exposure at risk due to movements in underlying markets, and can be validly used to help assess the market risk. However, it is a first order estimation of such risks, and therefore the market risk of assets with large second (or higher) order effects, e.g. gamma, convexity, would not be adequately described with this method. In instances where the market moves significantly, it can be argued that this method does not adequately describe the potential losses for any asset that exhibits more than just first order sensitivities, regardless of its magnitude.

1.4 Commitment Approach Calculation – Conversion Method

The proposed approach would combine delta-adjusted exposures with maximum potential loss calculations where applicable. Whilst there is a lack of consistency, the methods outlined would produce a reasonable estimate of the global exposure of the UCITS.

The inclusion of a non-exhaustive list of derivatives is very useful, and CESR should look to offer clarity on other credit derivatives, such CDS Index Baskets and tranche-based investments on such indices.

1.5 <u>Types of Financial Derivative Instrument which are not included in the global exposure calculation</u>

Whilst the approach outlined appears to make sense, CESR should look to provide a set of nonexhaustive examples to help illustrate the scenarios outlined in the text.

1.6 Sensitivity approach for derivatives on interest rates in the commitment calculation

Whilst it is reasonable for CESR to apply a sensitivity-based ratio to interest-rate financial derivative instruments, it does seem to be focused on allowing greater leverage to short duration UCITS, e.g. money market funds. During the current market regime, investors have experienced that short-term rates can be far more volatile than long-term rates. If one naively describes the potential loss of a UCITS due to interest rate risk as a product of volatility and sensitivity, then it seems that this proposal could generate additional risks for investors of short duration UCITS.

1.7 Commitment Approach calculation: netting & hedging effects

The proposals around netting and hedging set out in this proposal mirror standard investment techniques, hence should be relatively simple to implement.

It would be wise for CESR to define a quantitative threshold for the correlation requirement when hedging. However, the thresholds may have to differ by asset class, as it seems unlikely that the correlation between stocks and common index futures would be as high as for bonds and bond futures.

1.8 Computation of concentration risk arising from the use of financial derivatives instruments

RiskMetrics agrees with the proposal for the calculation of issuer concentration

Section 2 – Calculation of Global Exposure using the Value at Risk (VaR) Approach

2.1 Definition of VaR

RiskMetrics agrees with this definition of VaR

2.2 Compliance of the VaR methods with the provisions of Directive 85/611/EC

RiskMetrics agrees with the approach documented. Despite the recent criticism of risk models, they remain an objective, scalable way to measure risks, extend naturally to new asset classes and provide straightforward treatment of issues such as netting, hedging and offsets. A continued commitment to a model-based approach, coupled with necessary scrutiny, will only lead to better models and controls in the future.

2.3 Common VaR Methods

2.4 Input used in the calculation of VaR

2.5 Organisation and means of a UCITS/asset management company using VaR

The Committee has chosen VaR as the particular statistic to be used. While RiskMetrics has no strong objections to this choice, we encourage the Committee to be open to the use of other risk statistics, in particular Expected Shortfall (sometimes referred to as Conditional VaR), as well. These other risk statistics may not have the widespread acceptance that VaR does, but they are arguably more appropriate to the goal of the Committee, in that they are more sensitive than VaR to large, improbable market events. The Committee should not discourage innovation on the part of UCITS with respect to the risk statistic they employ.

We are mindful that the control of global exposure is for the control of leverage deriving from activity in financial derivatives. In many cases, in addition to leverage, these derivatives also introduce nonlinear relationships between the portfolio and its underlying risk drivers. The UCITS should be required to demonstrate that its risk model captures such effects adequately for its portfolio, and in particular should be prohibited from using a simple linear model if they wish to consider derivatives with nonlinear profiles.

For VaR, or for that matter any risk statistic, a crucial parameter is the forecast horizon. For simple portfolios and risk models, a simple scaling applies for conversion between the portfolio risks at different forecast horizons; this implies that for purposes of comparing the actual and any reference portfolio risks, the time horizon is irrelevant. But in the presence particularly of non-linear exposures, this simple scaling no longer applies, and the results of the VaR approach will depend on the forecast horizon chosen by the UCITS.

The Committee has chosen not to be prescriptive on the choice of forecast horizon, but at the same time gives some guidance that should be considered in conjunction with the forecast horizon decision. One piece of guidance regards the choice of input data (paragraph 2.4), wherein the Committee stipulates that one year of data should be used, while allowing for less data (or some weighting scheme) in volatile markets. We would like to stress that in risk modeling, the choice of an appropriate weighting scheme and length of data history is strongly linked to the horizon over which we would like to optimize our forecasts. By urging a full year of history, presumably with equal weighting, the Committee is expressing (implicitly) a view that the forecast horizon is relatively long.

A second piece of guidance regards backtesting (paragraph 2.5). While the Committee is not specific on the backtesting required, the typical application of backtesting in this context is to test actual daily profit and loss against daily risk forecasts. We do support the notion that the risk models should be scrutinized. We are concerned, however, that by constraining the input data in such a way to bias the risk model toward longer horizons and at the same time encouraging rigorous daily backtesting, the Committee is setting up a contradictory standard. This has been a problematic point in the minimum capital standards for bank trading portfolios, and the Committee should seek better clarity on this point.

Our recommendation is that the Committee provides guidance and discussion on the choice of forecast horizon, and possibly be prescriptive on this point. Most importantly, though, we recommend that given a choice of horizon, the UCITS be granted the freedom to choose both the input data and a backtesting framework that are appropriate for the horizon. In other words, the input data and backtesting scheme should follow logically from the time horizon choice, rather than being independently prescribed, possibly in contradiction. For the horizon itself, we encourage the Committee and the UCITS to consider a horizon of one month, rather than something as short as one to five days; the shortest horizons will tend to produce volatile risk statistics, a quality that is likely not desirable in the control of risk exposure.

There are two key components to any VaR measurement process for a UCITS: the first is to model the link between the relevant risk drivers and the NAV of the (assets held within the) UCITS; the second is to forecast movements in the underlying risk drivers, that are used to ascertain a change in the NAV of the UCITS, and hence an estimate of the risk.

RiskMetrics believes that both of these components need to be transparent, well-documented and validated by the risk management function and the competent authorities. They also need to be independently verifiable (where applicable). RiskMetrics would ask competent authorities to review the validation process for UCITS VaR measurement; in particular the underlying data that drives the forecasting process.

2.6 Definition of the relative VaR

2.7 Limits of the relative VaR approach and proposed safeguards

We are in agreement with the ideas behind the relative VaR approach. In our mind, those ideas are the following:

- 1. The ultimate goal of this approach, or any of the means to monitor global exposure, is to limit the amount of derivatives and leverage activity that a UCITS fund takes on, in such a way that the derivatives contribute no more risk than does the natural, unleveraged portfolio.
- The relative VaR approach stipulates that the UCITS compute the risk of its actual portfolio and the risk of a reference portfolio, and imposes a limit actual portfolio risk is no greater than twice the reference portfolio risk.

This approach being sound, the next step is to define both the reference portfolio and the measure of risk. We believe that more guidance could be provided on both of these points, in particular to address the concern that the relative VaR approach controls the risks for which it is designed.

Regarding the measure of risk, please refer to our comments on Section 2.5, particularly regarding the choice of forecast horizon.

With respect to the reference portfolio, the Committee rightly points out that a poor choice of portfolio could be irrelevant, in that it may not represent the actual portfolio, and moreover that the choice of reference portfolio could be "gamed", that is, that a reference portfolio with artificially high risk be chosen. The Committee provides qualitative guidance on the choice of reference portfolio. Given the importance of this choice, however, we believe that UCITS should be encouraged to provide quantitative evidence that their choice of reference portfolio is sound.

One of the qualitative criteria is that the "reference portfolio must have a risk profile that is very close, if not identical, to the UCITS portfolio". This implies that the reference and actual portfolios should be strongly related. We should expect the two portfolios to react to market moves in the same direction, and if significant leverage exists in the actual portfolio, it should be evident in the actual portfolio's greater reaction to these market moves. One method to demonstrate this would be to track the returns of the two portfolios through time, and to demonstrate an adequate historical relationship. Another method would be to model the two portfolios jointly in the risk model, and demonstrate an adequately strong level of correlation. To the extent that the UCITS is evaluated against a benchmark portfolio or index, the UCITS should be encouraged to use this benchmark as its reference portfolio, provided the benchmark is itself unleveraged.

Our final point regarding the Relative VaR approach concerns the role of stress testing. With large, complex portfolios, it is possible that a single risk measure could fail to reflect all sources of leverage in the portfolio. As VaR focuses on a single point in the portfolio distribution, it is particularly susceptible to this problem. We recommend, then, that a UCITS complement its relative VaR analysis with a number of simple stress tests, ensuring that the portfolio loss under these scenarios is not more than twice the loss of the reference portfolio.

2.8 Definition of Absolute VaR

2.9 Additional safeguards to mitigate the risks related to the use of the absolute VaR approach

In contrast to the Relative VaR approach, where we have small concerns but are supportive of the framework generally, we have significant reservations about the Absolute VaR approach. Our most significant reservation is that this approach does not measure or limit exposure in the way that the Committee intends. Not only does the approach not have the intended effect, it also will have other unintended consequences. It is crucial that the Committee consider these before promoting such an approach.

One unintended consequence is that the Absolute VaR approach would constrain leverage differently depending on the portfolio's asset mix. For a simple index portfolio, the proposed absolute VaR threshold (VaR over 20 days at 99% confidence must be less than 20% of NAV) corresponds to an annualized volatility of approximately 30%. This is a very high level for diversified bond portfolios, moderately high for diversified, large cap equity portfolios and fairly typical for small cap or more concentrated (by sector or geography) equity portfolios. The implication, then, would be that bond portfolios would be in general permitted significant leverage (with exposure perhaps exceeding the NAV of the fund), diversified equities moderate leverage, and concentrated equities little or no leverage. This is inconsistent with the implications of the commitment and Relative VaR approaches. The Committee should be explicit as to whether this is their intent.

A second unintended consequence is the procyclicality of the leverage restrictions. As is well documented, volatility varies through the economic cycle, and tends to take on its lowest levels during bubbles or periods of significant expansion. The consequence of the Absolute VaR approach, then, will be to permit significant levels during expansions (when volatility is low), and constrain leverage during economic contractions, as volatility is higher. A UCITS following this approach and maintaining leverage at the maximum permitted level essentially becomes a momentum investor, buying in rising markets and selling in falling ones. Importantly, this procyclicality does not result from either of the other two approaches.

We recommend that the Committee reconsider the Absolute VaR approach, and promote it only if they are willing to accept the consequences outlined above.

Section 3 – OTC Counterparty Risk Exposure

3.1 Background and introduction

3.2 OTC counterparty risk calculation methodology

The proposed methodology for the calculation of counterparty risk rests heavily on assumptions about the availability of daily liquidity, as well as the margining, independent valuation, and controls on counterparty quality. As we have seen over the past 18 months, such assumptions should not be taken for granted.

Whilst RiskMetrics acknowledges the Committee's desire for simplicity and consistency of approach, we are concerned that the simple mark-to-market approach might give an overly optimistic view of counterparty exposure under stressed conditions. Moreover, we are concerned that by advocating the mark-to-market approach generally, the Committee does not create, through the counterparty risk methodology, incentives for UCITS to improve their counterparty credit mitigation activities.

We recommend that at a minimum, the Committee complement the current proposal with recommendations to examine counterparty exposure under stress assumptions on aspects such as liquidity, margining efficiency and so forth. An example of such a stress test would be to examine the potential add-on for future credit exposure in the event of margining failures or a lack of liquidity. The stress methodology employed would need to be regularly tested by the UCITS manager for relevance. It would also need to be transparent and approved by the competent authorities.

Section 4 – Sophisticated/Non-Sophisticated UCITS

RiskMetrics endorses CESR's views that the risk profile of each UCITS should be determined by a rigorous risk identification process managed by an independent risk management function, and should not be determined by how derivatives are used in a UCITS – typically classified as non-sophisticated and sophisticated funds. We agree with the Committee that the use of such terms should be abandoned.

Looking through previous CESR consultations on the risk management function for UCITS, we have noticed that very few responses have been attributed to the many existing risk management teams that monitor UCITS. To assist CESR at this stage of their process, RiskMetrics would be delighted to set up a series of confidential "one-on-one" meetings, if required, between CESR and the risk management teams that we work with on UCITS, whereby CESR can gather evidence "first-hand" from practitioners who will be expected to act upon any recommendations made by CESR and the Commission. Even at this stage, RiskMetrics has been in contact with a couple of interested parties.

RiskMetrics hopes that CESR finds our responses above to the consultation useful. RiskMetrics greatly appreciates CESR's time and attention, and would be delighted to discuss our thoughts with the Committee in further detail.

Yours sincerely

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