

Committee of European Securities Regulators (CESR)
11-13 Avenue de Friedland
75008 Paris
France

Response to Addendum to Consultation Paper CESR/09-552 (CESR/09-716)

MSCI Barra is a leading global provider of investment decision support tools, including indices and portfolio risk and performance analytics for use by institutions in managing equity, fixed income and multi-asset class portfolios. Our flagship products are our international equity indices marketed under the MSCI brand and our portfolio analytics marketed under the Barra brand. Our products are used in many areas of the investment process, including portfolio construction and optimization, performance benchmarking and attribution, risk management and analysis, index-linked investment product creation, asset allocation, investment manager selection and investment research.

Over the last 40 years we have worked closely with the investment community to ensure that our portfolio management tools reflect the ever-changing nature of the global financial markets. This has given us considerable insight into the impact of regulations on the processes and measures used by a wide range of institutional investors around the world. We believe that this insight, together with the considerable expertise of our highly qualified research team, puts us in a unique position to comment on the CESR Consultation paper.

Our recommendations are guided by several principles. First, empirical studies can provide guidance to the efficacy of different schemes for classifying funds according to their risk. Using 55 equity market funds, we carried out a study of the volatility classification schemes proposed by CESR. The results led us to recommend a relatively high degree of granularity for classification and a maximally conservative approach to migration. Second, since it is impossible to prescribe a common volatility estimation methodology for the entire universe of UCITS funds, we recommend that UCITS funds be required to document the methodologies they use in a thorough and transparent way. Finally, we felt that the methodology proposed by CESR for estimating volatility of structured funds may introduce unnecessary serial correlation. We make specific suggestions about how this can be avoided.

We appreciate the opportunity to comment on the proposed changes to the UCITS regulation and we commend the CESR for a thoughtful and effective proposal.

1. GENERAL METHODOLOGICAL APPROACH

The CESR approach to estimating volatility can be applied to a broad class of funds, and it strikes a reasonable balance between stability and responsiveness. This is illustrated in Figures 1-4, which show time series of volatility estimates for 55 equity market portfolios¹ during the period January 2002 – March 2009. Estimates are consonant with the general methodological approach; they are based on equally-weighted weekly returns observed over three-year trailing windows.

¹ The markets are constructed by cap weighting the estimation universes of each of the country supported by the Barra GEM2 global equity model. They thus span a large portion of the investible equity markets around the globe, and from the perspective of volatility, we use them as proxies for equity funds held by UCITS

As suggested by Figures 1-4 and discussed in greater detail below, the volatility rank of a fund is a useful indicator of the level of risk. However, there is a dependence of fund volatility on market regime. A fund volatility ranking can be due to an overall change in the level of market risk, or it could simply reflect the composition of the fund. Hence the volatility rankings would be even more meaningful in context. Based on our study, we recommend that:

- Funds provide historical context: Each fund could be required to publish both the current volatility rank as well as any available historical information (previous ranks or the number of migrations over a specified trailing time period, say five years)
- CESR provides cross-sectional context: Information across funds could be aggregated and published so investors can learn, perhaps by visiting a website, how the ranking and migration record of a particular fund relates to other funds

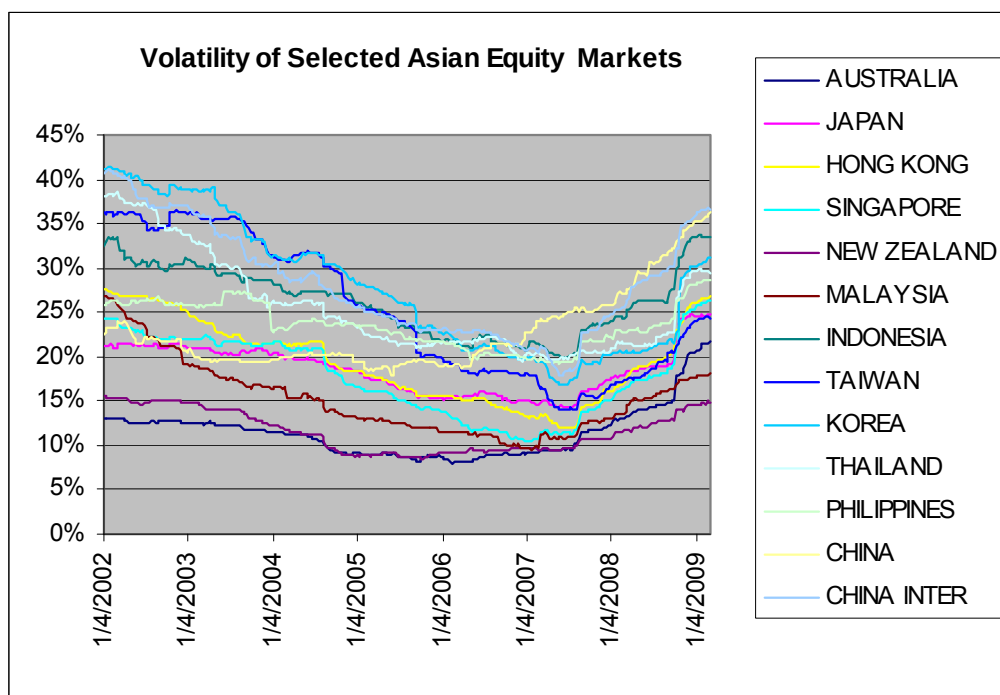


Figure 1. Volatility of Asian equity markets (3-years trailing weekly data)

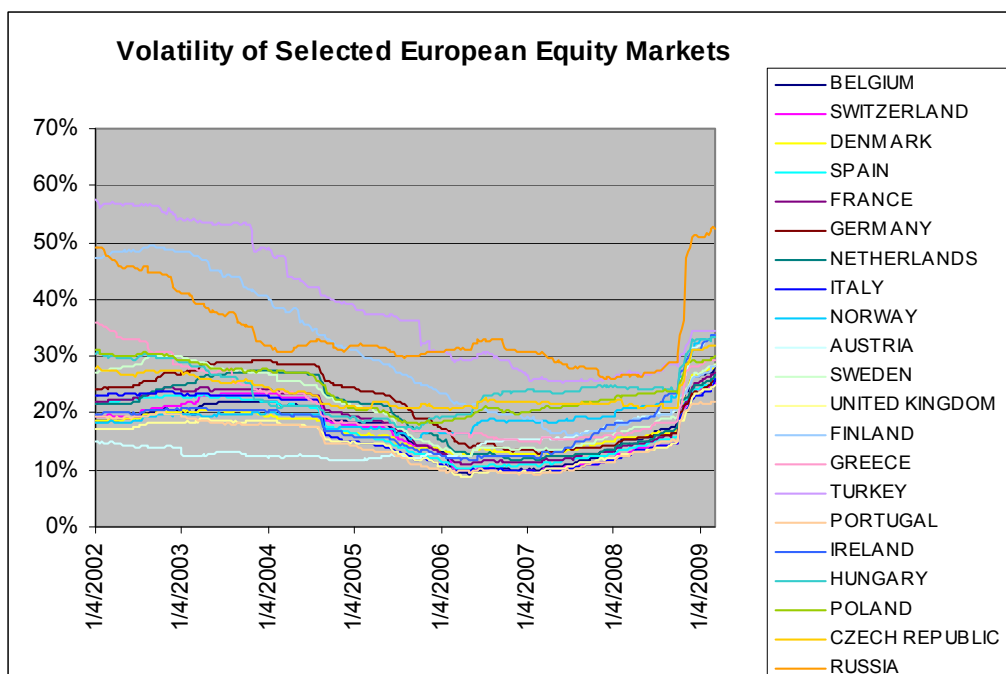


Figure 2. Volatility of European equity markets (3-years trailing weekly data)

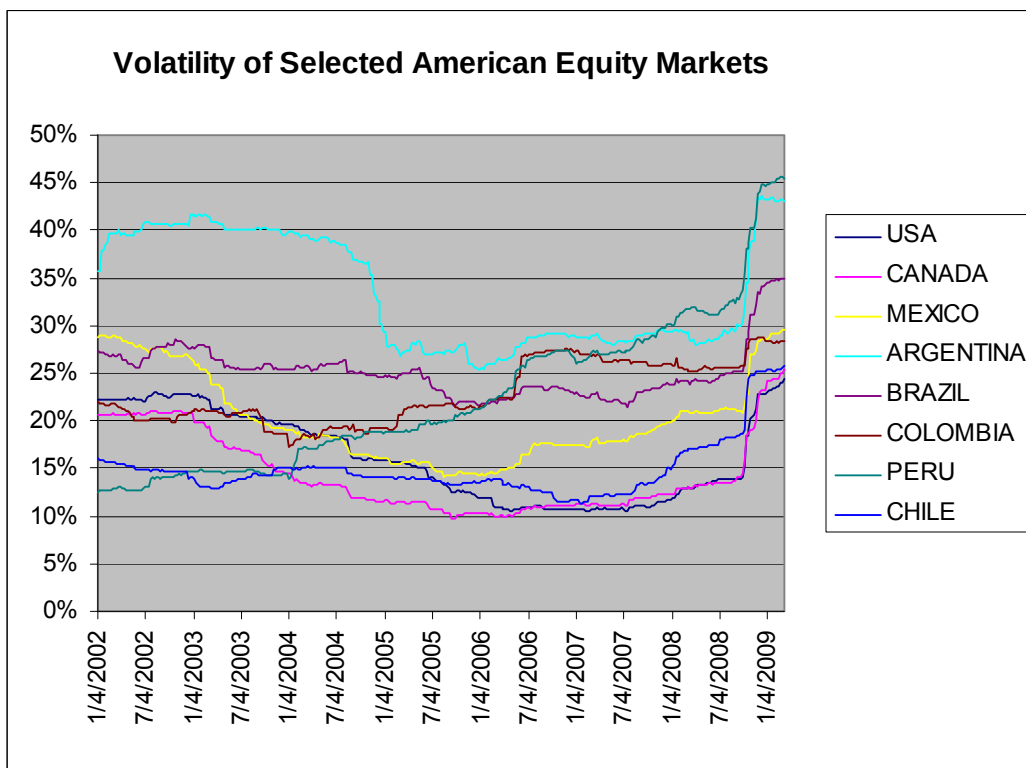


Figure 3. Volatility of American equity markets (3-years trailing weekly data)

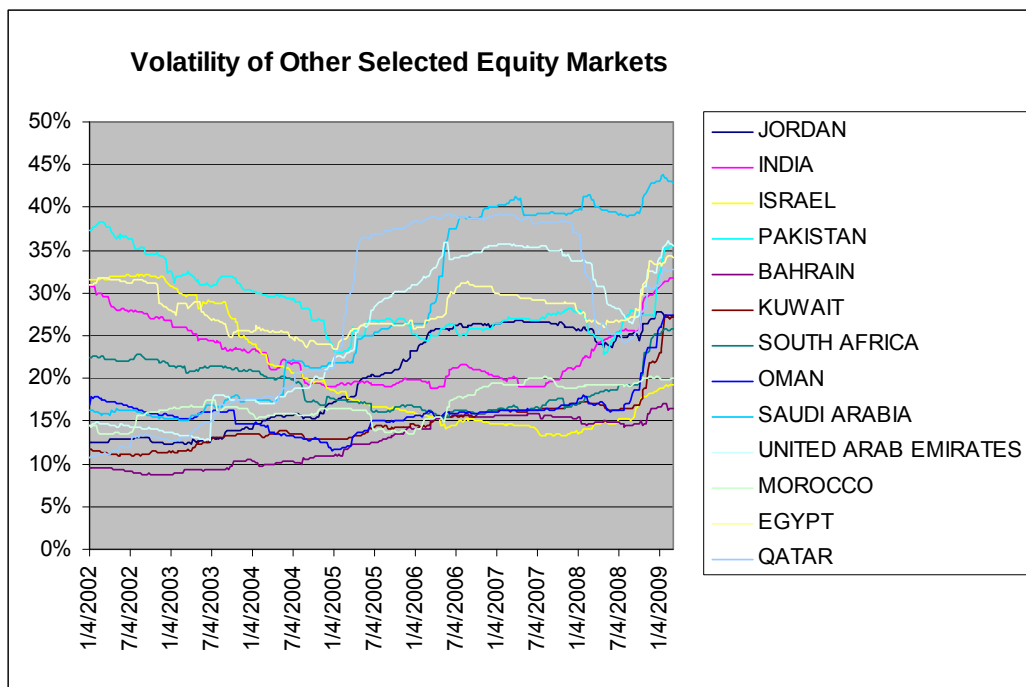


Figure 4. Volatility of other equity markets (3-years trailing weekly data)

2. DEFINITION OF THE VOLATILITY BUCKETS

2.1 CESR proposal for volatility intervals

CESR proposes two ways to volatility intervals that determine a fund's rank. Option A is more granular at the low end, corresponding to funds composed of sovereign and investment grade bonds. Option B is more granular at the high end, corresponding to equity funds and funds composed of speculative instruments. We believe it is important for the volatility grid to differentiate funds within the same asset class without causing an excessive number of migrations across risk categories. The tabulated values in Tables 1-2 demonstrate that Option B distinguishes equity market portfolios better than Option A. While the number of migrations is also higher for Option B (see Tables 3-4), we believe the benefit of finer differentiation outweighs the cost associated with extra migrations. We have not studied bond funds or indices empirically, but it is possible that the analogous result holds for these funds with the roles of Option A and B reversed. As a result, we recommend that:

- The volatility intervals should be at least as granular as Option B.
- An empirical study, using the methodology described in the CESR document, should be undertaken to decide whether additional granularity at the low end of the volatility spectrum is warranted.

2.2 Periodic updating of the SRRI – rules to assess migration

Assessment migration rules tend to stabilize the fund rankings over time: Rule 2 would tend to prevent a migration due to a temporal anomaly, and Rule 3 would tend to prevent a migration resulting from noise in volatility estimates. In principle, it makes sense to use both rules. In other words, a migration should take place only if the newly computed volatility exceeds a threshold plus a safety margin (given by the standard error of the estimate) for the three consecutive months at the end of the update period.

Using 55 equity market portfolios, we studied the effect of using Rule 1, Rule 2 alone, Rule 3 alone, and Rules 2 and 3 in combination. We considered two cases, one including the period of much increased volatility starting in August 2008 (see Fig.1-4), and one excluding it. In the first case, volatility ranking is determined in Jan 2003, and migrations are assessed yearly until Jan 2009. In the second, the same analysis is carried out annually from July 2002 to July 2008

In both time periods and with respect to all sets of migration criteria, Option B led to more equity market portfolio migrations than Option A. However, as expected, the discrepancies are far greater when data from the volatility crisis are included, and the stabilization that comes from combining Rule 2 and Rule 3 is evident. As a result, we recommend that:

- Rules 2 and 3 should be used in combination.

Option A

Year (Jan)	0% to 0.5%	0.5% to 1.6%	1.6% to 4%	4% to 10%	10% to 25%	>25%
2009	0	0	0	0	17	38
2008	0	0	0	0	43	12
2007	0	0	0	7	37	11
2006	0	0	0	3	44	8
2005	0	0	0	2	45	8
2004	0	0	0	0	39	16
Year (Jul)						
2008	0	0	0	0	40	15
2007	0	0	0	3	40	12
2006	0	0	0	3	41	11
2005	0	0	0	2	43	10
2004	0	0	0	0	41	14
2003	0	0	0	1	38	16

Table 1: Number of equity market portfolios in volatility buckets specified by Option A, as determined in January (top half) or July (bottom half) of each year.

Option B

Year (Jan)	0% to 1.5%	1.5 to 5%	5% to 10%	10% to 15%	15% to 25%	>25%
2009	0	0	0	1	16	38
2008	0	0	0	15	28	12
2007	0	0	7	15	22	11
2006	0	0	3	19	25	8
2005	0	0	2	10	35	8
2004	0	0	0	9	30	16
Year (Jul)						
2008	0	0	0	9	31	15
2007	0	0	3	20	20	12
2006	0	0	3	18	23	11
2005	0	0	2	15	28	10
2004	0	0	0	7	34	14
2003	0	0	1	6	32	16

Table 2: Number of equity market portfolios in volatility buckets specified by Option B, as determined in January (top half) or July (bottom half) of each year.

Option A

Jan data	zero migrations	≤ 1	≤ 2	≤ 3	≤ 4
Rule 1	16%	55%	98%	100%	100%
Rule 2	27%	65%	98%	100%	100%
Rule 3	33%	64%	100%	100%	100%
Rule 2+3	38%	69%	100%	100%	100%
Jul data					
Rule 1	42%	82%	100%	100%	100%
Rule 2	44%	84%	100%	100%	100%
Rule 3	47%	91%	100%	100%	100%
Rule 2+3	49%	91%	100%	100%	100%

Table 3: Total number of migrations across volatility buckets specified by Option A, as determined in January from 2004-2009 (top half) or July 2003-2008 (bottom half).

Option B

Jan data	zero migrations	≤ 1	≤ 2	≤ 3	≤ 4
Rule 1	5%	18%	69%	82%	100%
Rule 2	13%	25%	78%	91%	100%
Rule 3	9%	22%	85%	96%	100%
Rule 2+3	15%	29%	91%	96%	100%
Jul data					
Rule 1	11%	44%	78%	96%	100%
Rule 2	13%	51%	84%	96%	100%
Rule 3	15%	64%	89%	96%	100%
Rule 2+3	15%	73%	95%	96%	100%

Table 4: Total number of migrations across volatility buckets specified by Option B, as determined in January from 2004-2009 (top half) or July 2003-2008 (bottom half).

3. SPECIFIC ISSUES REGARDING THE COMPUTATION OF VOLATILITY

This section addresses the issue of estimating volatility for funds that have insufficient history. The recommendations involve backfilling data with a proxy for any fund with a clearly defined benchmark. The recommendations are less satisfying when there is no benchmark. In that case, volatility is taken to be the maximum (most conservative estimate) of a set of alternatives that depend on the nature of the fund. We suggest that factor models provide a natural solution to the problem of insufficient history for many funds. If the fund follows an investment strategy that is consistent over time and the fund returns are linear in the risk factors, the fund factor exposures at a given point in time and the history of factor returns can be used to generate a synthetic time series of portfolio returns, from which an accurate estimate of the volatility could be derived.

4. THE SPECIAL CASE OF STRUCTURED FUNDS

The idea of reverse engineering volatility from VaR (or CVaR, also known as shortfall) for structured funds is insightful, broad, flexible and straightforward to implement, hence promising. At a high level, we endorse the methodology proposed by CESR. In particular we support the use of an

historical simulation approach where the fund returns are calculated from historical scenarios for the underlying indices, rates, and volatilities over the past 5 years. However, the recommendation of using yearly (or to maturity) index returns computed weekly over the past five years has the substantial drawback of providing (historically) simulated fund returns that will be temporally correlated to a high degree, due to the overlap of the yearly (or to maturity) period from one week to the next. As a result the calculated 95% VaR will be very close to the worst yearly loss over the past 5 years.

An alternative, similar, approach without this drawback would be to calculate the weekly VaR based on 260 observations of independent weekly returns (instead of 260 observations of highly dependent yearly returns) and to derive the volatility measure as in

$$\text{Eq. 1} \quad \text{VaR} = -\left(i_{rf} - \frac{\sigma_w^2}{2}\right) + 1.65\sigma_w$$

with annualization obtained as specified in Box 3 of the CESR document. This approach will also likely make the estimate of the volatility less sensitive to the risk free rate (the first term on the right hand side of Eq. 1 is likely to be much smaller than the second term). Given that the use of the risk free rate when valuing the future value of a fund at maturity or after one year is due to the desire of avoiding the use of subjective estimates of the drift, but it is not really justified theoretically, this decreased sensitivity to the risk free rate is a desirable feature of this modified approach.

In addition, the CESR document does not specify whether the fund value should be (historically) simulated by taking into account passage of time (i.e. should the fund embedded options at horizon be valued with the maturity those options have today, or with the decreased maturity associated with the return horizon?). The difference in wording in Box 3 and 4, point 2 suggests that passage of time should be accounted for, for investment until maturity, so it is likely that the same assumption should be made for a one year holding period. It is worth pointing out that accounting for passage of time makes the VaR calculation more complex for structured funds with payoff distributed over time. The modified proposal described in Eq. 1 has the desirable feature of being less sensitive to the choice made about passage of time.

The CESR specification does not include criteria for the valuation models, which can heavily influence the results. Moreover, the efficacy of the method cannot be assessed without empirical tests. Therefore, we recommend that:

- Before making a final recommendation on structured funds, CESR may want to experiment with volatility implied by both VaR and CVaR². It is possible that CVaR leads to more conservative estimates than VaR.
- CESR require detailed documentation of valuation models for auditing purposes. It might be desirable to specify more precise criteria for the valuation models that can be used in connection with the method. For example, should passage of time effects be taken into account? Should changes in market volatilities be incorporated?

We agree that the adoption of the delta representation approach should not be promoted as a way to estimate the volatility of structured funds and that the current proposal represents an improvement over the delta approach (provided the issue raised above about the serial correlation of yearly historical returns is addressed). The contingencies embedded in many of these funds are often associated to knock-out features that would be poorly approximated by a delta approximation. Furthermore, with one year or to-maturity holding periods, the risk of an equivalent delta position would neglect gamma and higher order effects that would substantially affect the fund volatility estimate.

² A volatility estimate can be reverse engineered from CVaR following the same modelling assumptions specified in Box 3-4 of the CESR document

We believe that it is appropriate to allow the use of Monte Carlo simulations for the computation of the SRRI of structured funds. Market conditions determining the value of the fund, not returns on the fund itself, should be simulated, in our opinion. A drawback of Monte Carlo simulation is its reliance on modeling assumptions about the drivers of risk and their relationship to funds. We agree that CESR should provide guidance on the basic features of the simulation, for instance compliance with a risk-neutrality principle. A feature of the Monte Carlo approach is that it can simulate yearly (or to-maturity) changes in market conditions without the complications discussed above for the historical approach. If the risk model used to simulate market conditions is tuned to a horizon of a year or more, a volatility estimate based on the corresponding period will provide a more appropriate SRRI for the fund than one based on a weekly holding period.

The issue of potentially different outcomes due to different methodological approaches to simulation is serious and not easily resolved. A minimal requirement is documentation that allows the simulation process to be audited. While it would be desirable to do more, that may be infeasible

A handwritten signature in black ink, appearing to read "Lisa Goldberg", with a long horizontal flourish extending to the right.

Dr. Lisa Goldberg
Executive Director
MSCI Barra Research

A handwritten signature in black ink, appearing to read "Angelo Barbieri", with a long horizontal flourish extending to the right.

Dr. Angelo Barbieri
Executive Director
MSCI Barra Research

A handwritten signature in black ink, appearing to read "Raveen Bhansali", with a long horizontal flourish extending to the right.

Raveen Bhansali
Managing Director
MSCI Barra, Portfolio Analytics Group