International Securities
Services Association

OTC Derivatives

Verification of Valuations Working Group

September 2008

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September 2008

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1 Introduction

The objectives of the International Securities Services Association's (ISSA) OTC Derivatives Verification of Valuations Working Group (the Working Group) at a high level include the following:

- Debate key industry issues relating to OTC derivatives and achieve demonstrable progress in moving issues forward.
- Wherever possible, draw conclusions that can be used to influence the broader industry agenda.
- Publish the conclusions in the form of industry best practices that are supported by the ISSA membership.

One of the first topics that the Working Group has been tasked to focus on is the establishment of best practices for the process by which the valuations of OTC derivatives held in regulated funds are validated/verified versus other sources. This may for example, involve verifying an independently sourced valuation versus a counterparty price on a weekly basis.

The challenge is that existing guidelines and regulations for the verification of OTC derivative valuations leave significant room for interpretation. Whilst the regulatory frameworks for all key markets will be examined by the Working Group, the following extract from the UCITS (Undertakings for Collective Investment in Transferable Securities) regulation highlights the challenge (the key sections have been bolded):

> "…the reference to reliable and verifiable valuation shall be understood as a reference to a valuation, by the UCITS, corresponding to the fair value…, which does not rely only on market quotations by the counter-party and which fulfils the following criteria:
>
> - The basis for the valuation is either a reliable up-to-date market value of the instrument or, if such a value is not available, a pricing model using an adequate recognized methodology;
> - **Verification of the valuation is carried out by one of the following:**
>   - **An appropriate third party which is independent from the counter-party of the OTC derivative, at an adequate frequency and in such a way that the UCITS is able to check it;**
>   - **A unit within the UCITS which is independent from the department in charge of managing the assets and which is adequately equipped for such purpose"**

Source: Commission Directive 2007/16/EC, 19th March 2007

Over the last months, the Working Group has engaged in collating feedback from industry practitioners; Asset Managers, Investment Banks and Securities Services providers, in terms of how these guidelines have been implemented to date. The outcome of these discussions is a determination of best practice that is included in this document.

The Working Group has also reviewed whether any OTC derivatives-related market infrastructure or vendors have any plans in this domain and more specifically any near term developments that could support the verification of valuations requirement.

At this juncture, it is important to note that the Working Group recognises that the Fund Board is ultimately responsible for determining what is reasonable and appropriate for the verification of valuations for OTC derivatives. The procedure should be set by the Fund Board, agreed with the Investment Manager and Third Party Fund Administrator and ultimately reviewed by the Fund Auditor.

This procedure should describe, inter alia, which primary source should be used for the Net Asset Valuation (NAV) calculation, which alternative source should be used for the verification of the primary valuation, plus what tolerance levels should be applied and the appropriate escalation procedures in case of discrepancies.

Finally, this document represents the combined effort of a number of different organisations including BNP Paribas, Deutsche Bank, JP Morgan, Morgan Stanley, Schroders and UBS. We are very grateful to the individuals concerned and the sponsoring organisations for their contribution to the Working Group and for their support in bringing this study to a clear and succinct conclusion.

If you have any questions on this document, please do not hesitate to contact Jon Lloyd, Head of Global Derivatives Services, JP Morgan on +44 20 7325 1058 or jon.k.lloyd@jpmorgan.com.

If you have any questions on the role of ISSA, please do not hesitate to contact Peter Gnepf, ISSA Secretariat, UBS on +41 44 235 74 21 or peter.gnepf@ubs.com. There is also an ISSA website at www.issanet.org.

2 Scope of the review

The scope of the review specifically covered the following:

- Verification of valuations for OTC derivatives
- Key markets including France, Germany, Luxembourg, Ireland, the United Kingdom and the United States
- The roles and responsibilities of regulated funds and related Fund Boards in the key markets in relation to the verification of valuations requirement
- The role of key stakeholders including the Investment Managers and Third Party Administrators in relation to the verification of valuations requirement.

N.B. UCITS regulations were used as the baseline framework against which all key markets were compared as it provided the most comprehensive set of guidelines.

The scope of this review specifically excluded the following:

- The valuation process itself for OTC derivatives
- Verification of valuations for non-OTC derivative instruments
- Unregulated funds in any of the key markets
- Any markets not listed as key markets
- The roles and responsibilities of other fund structures including Pension Funds, Hedge Funds, Insurance Companies, Charities, Endowments and Foundations.

The Working Group was made up of the following ISSA organisations:

- Securities Services providers: BNP Paribas, JP Morgan
- Broker-Dealers: Deutsche Bank, Morgan Stanley
- Asset Managers: Schroders, UBS

Based on the individual participant's experience, the sponsoring organisations line of business and the collective network of industry contacts, it was felt that the Working Group was able to bring a sufficiently broad perspective on the issues and topics discussed.

3 Summary of current regulatory frameworks for key markets

The regulatory framework for each key market, where available, was reviewed by two different members of the Working Group for completeness. The details have been summarised in the table below. N.B. the US market was the only market where a regulatory framework was not available and hence the content is based on feedback received from some key market participants.

Table 1: Summary of current regulatory frameworks for key markets

	UCITS	France	Germany	Ireland		Luxembourg	United Kingdom	United States
Primary Valuation Source	Counterparty valuation on a daily basis	Counterparty valuation on a daily basis	Fund Manager valuation	Counterparty valuation on a daily basis	Independent valuation calculated by the Collective Investment Scheme or by a pricing vendor on a daily basis	Counterparty valuation on a daily basis	Counterparty valuation on a daily basis	Best available fair market value source, which is reasonable in relation to the security
Alternative Valuation Source	Independent valuation using pricing models	Independent valuation using pricing models	Not clearly defined			Independent valuation using pricing models	Independent valuation using pricing models	Pricing model is acceptable when quoted prices are not available
Verification Procedure	Validated against an appropriate and independent third party source or independent unit within the UCITS	Validated against an appropriate and independent third party source or independent unit within the UCITS	All Fund Manager valuations must be verified by the Depotbank / Custodian with an independent price	Verified by an independent party who is approved for the purpose by the trustee	Reconciled to the counterparty valuation	Validated against an appropriate and independent third party source or independent unit within the UCITS	Validated against an appropriate and independent third party source or independent unit within the UCITS	Not clearly defined
Verification Frequency	On an "adequate" frequency	On a "regular" basis	On a weekly basis	At least weekly	On a monthly basis	On an "appropriate" frequency	On an "adequate" frequency	Not clearly defined
Resolution Requirement	Not clearly defined	Not clearly defined, but industry practice is for the UCITS pricing committee for the fund to define the requirements	Not clearly defined	Not clearly defined	Significant differences must be promptly investigated and explained	Not clearly defined, but industry practice is for the UCITS pricing committee for the fund to define the requirements	Not clearly defined	Not clearly defined
Consultation or Guidance		Code Monétaire et Financier Décret no. 2007-1206 du 10/08/2007; and Règlement général de AMF (Livre III) article 322-15	The German Investment Act (InvG) and Derivative Regulation include provisions concerning the valuation process, but clear and explicit definitions are not provided	Revised guidance note 1/00 was issued in July 2007 removing the primacy of the counterparty valuation and permitting the use of an "alternative" valuation defined as either a model price or a price from an independent pricing vendor		The CSSF issued Circular 07/308 in August 2007 providing further clarification to UCITS guidelines for risk management and the obligation to perform a reliable and independent daily valuation	The FSA are currently consulting on changes to CP 07/06, providing further clarification to CIS rules for OTC derivatives. Changes will go into effect from 23 July 2008	While FASB and SEC have Fair Value Pricing guidance, there is no specific language on OTCs

In this table, the following definitions apply:

- **Primary Valuation Source:** refers to the source of the valuation used for inclusion in the NAV for the regulated fund.
- **Alternative Valuation Source:** refers to the source of the valuation used for inclusion in the NAV for the regulated fund in the event that the primary valuation source is either not available or not appropriate.
- **Verification Procedure:** refers to the process by which a verification of the primary or alternative valuation should be performed.
- **Verification Frequency:** refers to the frequency that the verification of valuations procedure should be performed.
- **Resolution Requirement:** refers to guidelines as to how verification of valuations breaks should be managed.
- **Consultation/Guidance:** provides details of any known consultation underway relating to verification of valuations requirements.

Please note: Whilst this table has been thoroughly reviewed by the Working Group and is believed to be a fair representation of the regulatory requirements at this time, the details are subject to interpretation and change. Hence the content should be used for informational purposes only.

4 Verification of valuations alternative scenarios considered

Based on Table 1, the following eight verification of valuations scenarios were determined as the alternatives to be considered.

Table 2: Summary of verification of valuation solutions

	Option 1A	Option 1B	Option 2A	Option 2B	Option 2C	Option 3A	Option 3B	Option 3C
Primary Valuation Source	Counterparty price	Counterparty price	Third party independently calculated price	Third party independently calculated price	Third party independently calculated price	Price calculated by an independent unit of the Investment Manager	Price calculated by an independent unit of the Investment Manager	Price calculated by an independent unit of the Investment Manager
Verification of Valuation Source	Third party independently calculated price	Price calculated by an independent unit of the Investment Manager	Price calculated by an independent unit of the Investment Manager	Counterparty price	Price calculated by an independent unit of the Investment Manager	Third party independently calculated price	Counterparty price	Third party independently calculated price
Additional Verification of Valuation Source					Counterparty price			Counterparty price
Pros	Fair market value proxy incorporated in process	Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Leverages existing operational processes	Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Leverages existing operational processes	Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Fair market value proxy incorporated in process
Cons	Does not resolve counterparty price collection issues	Does not resolve counterparty price collection issues	Does not appear to comply with Irish regulations No fair market value proxy	Does not appear to comply with standard UCITS Does not resolve counterparty price collection issues	More costly as three valuation sources required	Does not appear to comply with Irish regulations No fair market value proxy Less demonstrable transparency for primary valuation	Does not appear to comply with standard UCITS Does not resolve counterparty price collection issues Less demonstrable transparency for primary valuation	Potentially more costly as three valuation sources required Less demonstrable transparency for primary valuation

In this table, the following definitions apply:

- **Primary Valuation Source:** refers to the source of the valuation used for inclusion in the NAV calculation for the regulated fund.
- **Verification of Valuation Source:** refers to the source of the valuation used to verify the primary valuation at an adequate frequency.
- **Additional Verification of Valuation Source:** refers to the source of an additional valuation that is used to verify the primary valuation.
- **Pros/Cons:** provides reasons in favour/against promoting the specific scenario as a best practice.

N.B. based on the use of either a two-way or a three-way verification of valuations process there are actually twelve different permutations. However, the Working Group focused on the eight permutations derivable from Table 1.

5 Recommendation for best practice

Based on a thorough review of each scenario versus a set of best practice criteria, only options 2C and 3C comprehensively covered all requirements. Hence, the best practice recommendation is as follows:

- **Primary Valuation:** should be either a third party independently calculated price or a price calculated by an independent unit of the Investment Manager.
- **Verification of Valuation:** should be performed on a weekly basis by comparing the primary valuation versus either a third party independently calculated price or the price calculated by an independent unit of the Investment Manager (depending on which one is used for the primary valuation).
- **Additional Verification of Valuation:** should be performed on a monthly basis using the counterparty price versus the primary valuation.

The best practice criteria and analysis in support of this recommendation have been included below in a revised version of Table 2.

Table 3: Updated summary of verification of valuation solutions

	Option 1A	Option 1B	Option 2A	Option 2B	Option 2C	Option 3A	Option 3B	Option 3C
Primary Valuation Source	Counterparty price	Counterparty price	Third party independently calculated price	Third party independently calculated price	Third party independently calculated price	Price calculated by an independent unit of the Investment Manager	Price calculated by an independent unit of the Investment Manager	Price calculated by an independent unit of the Investment Manager
Verification of Valuation Source	Third party independently calculated price	Price calculated by an independent unit of the Investment Manager	Price calculated by an independent unit of the Investment Manager	Counterparty price	Price calculated by an independent unit of the Investment Manager	Third party independently calculated price	Counterparty price	Third party independently calculated price
Additional Verification of Valuation Source					Counterparty price			Counterparty price
Pros	Fair market value proxy incorporated in process	Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Leverages existing operational processes	Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Leverages existing operational processes	Fair market value proxy incorporated in process	More scalable as less reliance on counterparty prices Fair market value proxy incorporated in process
Cons	Does not resolve counterparty price collection issues	Does not resolve counterparty price collection issues	Does not appear to comply with Irish regulations No fair market value proxy	Does not appear to comply with standard UCITS Does not resolve counterparty price collection issues	More costly as three valuation sources required	Does not appear to comply with Irish regulations No fair market value proxy Less demonstrable transparency for primary valuation	Does not appear to comply with standard UCITS Does not resolve counterparty price collection issues Less demonstrable transparency for primary valuation	Potentially more costly as three valuation sources required Less demonstrable transparency for primary valuation

Should meet regulatory requirements	YES	YES	NO	NO	YES	NO	NO	YES
Should be scalable and controllable	NO	NO	YES	NO	YES	YES	NO	YES
Needs to reduce reliance on counterparty prices	NO	NO	YES	NO	YES	YES	NO	YES
Needs to consider convergence with procedures for cash instruments	YES	YES	YES	YES	YES	YES	YES	YES
Should leverage existing processes wherever possible	YES	YES	YES	NO	YES	YES	YES	YES
Should not exclude reference to a fair market value proxy	YES	YES	NO	YES	YES	NO	YES	YES

As described on the previous page, in order to reduce the list of verification of valuations scenarios, a set of criteria for defining best practice was defined against which each scenario was benchmarked as follows:

- Should meet regulatory requirements.
- Should be scalable and controllable.
- Needs to reduce reliance on counterparty prices.
- Needs to consider convergence with procedures for cash instruments.
- Should leverage existing processes wherever possible.
- Should not exclude reference to a fair market value proxy.

In addition, it was agreed that regulations are subject to change, so wherever possible the best practice should be dynamic. This was interpreted as meaning that best practice should be generic enough to accommodate reasonable changes in regulations.

Another comment was made that the best practice should be efficient and cost effective. The expectation is that this requirement is implicit in the “Should be scalable and controllable” and “Should leverage existing processes wherever possible” criteria.

Furthermore, it is important to emphasise that best practice does not mean to say that whatever ISSA promotes is the only practice. The scenarios detailed in Table 2 satisfy specific jurisdictional requirements and therefore may continue to be appropriate for certain fund typologies.

For information, there was a good deal of debate as to what represents an adequate frequency for the verification of valuations process. The recommendation of a weekly process does not preclude a more frequent process, and in some cases the verification of valuations could be a daily exercise. However, this would represent a significant investment for some key participants and thus render the best practice impractical for the foreseeable future.

One other important area of debate related to whether the verification of valuations should be performed pre- or post-NAV. On the basis that the best practice is for a weekly verification of valuations, this becomes a non-issue as there is little added-value performing a pre-NAV check when the process is performed weekly but the NAV is published on a daily basis.

Finally, it was agreed that the verification of valuations procedure requires a clear escalation and resolution policy for any price discrepancies to be established by the Fund Board. This policy should take into account tolerances and materiality considerations to ensure the number and type of breaks is reasonable.

6 Conclusion

In conclusion, a considerable amount of progress has been achieved in a very short period of time, which is a testimony to the commitment and effort of the Working Group participants.

The best practice recommendations detailed in this document achieve a degree of clarity and practical resolution that the industry will find of considerable use.

In the meantime, thanks again to the individual participants and the sponsoring organizations for their contribution to date.

Participation

- First meeting in October 2007 with subsequent meetings in November and December 2007 included:
  - BNP Paribas
  - Deutsche Bank
  - JP Morgan
  - Morgan Stanley
  - Schroders
  - UBS
- Informal discussions with a number of Audit firms to validate recommendation
- High level review of key market vendors/utilities capabilities to support proposal
- Final recommendation presented to ISSA Board in December 2007
- Proposed publication sent to select ISSA members for review in January 2008
- Presentation to the ISSA symposium in June 2008

Appendix

UCITS Guidelines, March 2007

Commission Directive 2007/16/EC – 19th March 2007

- The reference to reliable and verifiable valuation shall be understood as a reference to a valuation, by the UCITS, corresponding to the fair value…, which does not rely only on market quotations by the counterparty and which fulfils the following criteria:
- The basis for the valuation is either a reliable up-to-date market value of the instrument or, if such a value is not available, a pricing model using an adequate recognised methodology;
- Verification of the valuation is carried out by one of the following:
  - An appropriate third-party which is independent from the counterparty of the OTC derivative, at an adequate frequency and in such a way that the UCITS is able to check it;
  - A unit within the UCITS which is independent from the department in charge of managing the assets and which is adequately equipped for such purpose

CESR Guidelines, March 2007

CESR Guidelines, March 2007

- The "process for accurate and independent assessment of the value of the OTC derivatives" requires:
  - "a process which enables the UCITS throughout the life of the derivative to value the investment concerned with reasonable accuracy at its fair value on a reliable basis reflecting an up-to-date market value"
  - "a risk analysis realized by a department independent from commercial or operational units and from the counterparty or, if these conditions cannot be fulfilled, by an independent third-party
    - … in the latter case, the UCITS remains responsible for the correct valuation of the OTC derivatives and must, inter alia, check that the independent third-party can adequately value the types of OTC derivatives it wishes to conclude"
- CESR's view is that "independent" and "adequately equipped" in this context means a unit which has the adequate means (both human and technical) to perform this valuation. This implies that the UCITS has its own valuation systems, which can however be provided by an independent third party. This excludes the use of valuation models provided by a party related to the UCITS (such as a dealing room with which OTC derivatives are concluded…)