

# ISDA

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## **Meeting with AIG Members on Data Issues**

- Washington DC, April 16<sup>th</sup>, 2003 -

Outlined in the paper is a summary of the responses from the ISDA Internal Ratings Working Group (IRWG) on “data” issues arising from the AIG questionnaire on the New Basel Accord and notes from the meeting with members of the AIG and representatives from ISDA that took place in Washington DC on April 16th.

Contents:

**Attendees**

**Introduction** – background and format of the meeting.

**Key Messages from the meeting**

Structure of the paper:

**Summary** – a brief note on where there was clear common ground between the firms.

**Key Messages** – single, overriding issues or concerns worth highlighting for further discussion

**The Detail** – expanding on the key messages above, and including any interesting responses or examples used in the submissions, not necessarily a consensus view and not considered as a key message.

**Industry Quotes** – used throughout to illustrate a point, and to preserve the wide spectrum of industry practise highlighted in the responses we received.

**Notes** – notes from the meeting discussion

**Attendees from the AIG:**

Ms Claire Renoirte	National Bank of Belgium	Belgium
Mr Frans Beukelaers	Banking and Finance Commission	Belgium
Ms Adri van Hilten	Office of the Superintendent of Financial Institutions	Canada
Mr Lorey Hoffman	Office of the Superintendent of Financial Institutions	Canada
Mr Cong-Khanh Tran	Commission Bancaire	France
Mr Robert Coppes	De Nederlandsche Bank N.V.	Netherlands
Ms Kristian Bentzer	Finansinspektionen	Sweden
Mr Kevin Ryan	The Financial Services Authority	UK
Mr Joseph Evers	Office of the Comptroller of the Currency United States	United States
Mr David Wright	Board of Governors of the Federal Reserve System	United States
Mr Peter Hirsch	Federal Deposit and Insurance Cor	United States

(\*Apologies: Germany, Switzerland, Japan)

**ISDA Representatives:**

Mr Adam Gilbert	JP Morgan Chase	United States
Mr Alan Hilton	Barclays	UK
Ms. Atoosa Guity	Bank of New York	United States
Mr Bernhard Steiner	UBS Warburg	UK
Mr Christian Lajoie	BNP Paribas	France
Ms. Desta Medhinhuff	Union Bank of California	United States
Mr Ed Duncan	ISDA	UK
Mr Hiroshi Kawai	Sumitomo Mitsui Banking Corp	Japan
Mr Idzard van Eeghen	ABN Amro	Netherlands
Mr Joerg Hornischer	Deutsche Bank	Germany
Mr Jonathan Gray	Royal Bank of Scotland	UK
Ms. Lyn McGowan	RBC Financial Group	Canada
Mr Michel Crouhy	CIBC	Canada
Mr Yoshiyuki Kosuge	Bank of Tokyo-Mitsubishi	Japan

(\*Apologies, CSFB, Citigroup, Morgan Stanley, Dresdner, UFJ)

## Introduction

The meeting began at 09:00 at the University club of Washington, Washington DC. Lorey Hoffman (OFSI) chaired the meeting for the AIG and Edward Duncan (ISDA) and Michel Crouhy (CIBC, and chair of the IRWG) led the response for the industry.

Lorey Hoffman of OFSI opened the meeting with a roll call and introductory remarks outlining the role of the AIG. He described the AIG as a “process” or “forum” for sharing knowledge.

- The AIG would not produce any guidance of its own regarding implementation.

Only a few AIG members planned to publish papers on implementation:

- US (ANPR) – to include the Advanced approach for credit risk (due June/July)
- UK FSA – initial guidance to be published in “Imp2” (July), *won't be as detailed as the US Guidance.*
- Both the Canadians and the Netherlands were also expected to publish local guidance, although no timescales were given.
- France – will not publish guidance until after 2005.
- Belgians still considering their options

*n.b. delegates discussed the Basel text available at the time (QIS 3, Technical Guidance), although references were made throughout to the contents of CP 3*

The results of the meeting would be written up for the wider Accord Implementation Group in time for the meeting in June in Montreal.

The AIG confirmed that they had received the ISDA paper, entitled “Discussion points with AIG members on Data Issues” in advance of the meeting, and were happy to structure the meeting on the paper, walking through the summaries, key messages and some of the detail over the course of the meeting.

ISDA thanked the AIG for organising the meeting and giving the industry a chance to raise its concerns around the considerable data requirements of the New Accord and regarding the implementation of the requirements of the Accord by the different national regulators present.

ISDA represents the leading participants in the privately negotiated derivatives industry and includes most of the world's major financial institutions, as well as many of the businesses, governmental entities and other end users that rely on over-the-counter derivatives to manage efficiently the financial risks inherent in their core economic activities.

ISDA's activities in Risk Management are extensive ranging from our work with the Models Task Force and Credit Risk Mitigation Sub-Group on the wording of the Accord, through to our work on implementation on the Operational Risk side and with the AIG on the Credit Risk side. ISDA runs global market surveys each year on collateral, operations, credit derivatives and recently for the first time this year on the validation of internal ratings systems.

ISDA introduced the “data issues” paper and explained the process and objectives behind the content. The time period available in which to put the paper together was relatively short and limited the ability of ISDA to present a single industry voice and for this reason many of the varied responses remained intact in quotation form in the paper submitted (**details** section under each question heading).

**Key Messages from the meeting:**

- Regulators are at different stages of their thinking on the implementation of the New Accord, ranging from those who are relatively fluent in the key implementation issues and are familiar with the considerable data challenges facing the industry, to those who, on the day, contributed little to the discussion and appeared less advanced in their understanding of the issues at hand.
- Regulators had different approaches to consultation with the industry. Some of the regulators present had undertaken extensive dialogue with firms in order to further their understanding of the data challenges facing the industry, while at least one had initiated a consultation process through joint industry working groups to discuss Accord implementation. It was clear, however, that others had consulted little with the industry and were less able to comment on the discussion.
- Regulators also had very different plans for transparency going forward. At least three of the regulators present were planning to publish their initial thoughts on implementation (through guidance or consultation papers) shortly after the publication of CP 3. The majority of the others, at least at the time, had no plans to publish anything on implementation at all. Some of the regulators present were still thinking about it and were undecided.
- The industry seemingly requires both flexibility and further guidance in regulatory implementation and achieving the right balance will not be easy. Flexibility to allow for a wide-range of industry practise in risk management and the continued evolution of risk management techniques, and further guidance to enable the industry to embark on expensive and time-consuming Basel II projects safe in the knowledge that their internal rating systems will be within the range of interpretation imposed by national regulators.
- Regulators will approach the words of the Accord in markedly different ways. In the US regulators are choosing those elements of the Accord to best suit the firms under their jurisdiction (e.g. they will not be implementing a standardized or foundation approach). For the largest banks in the US this means the Advanced approach for both credit and operational risk. In Canada the largest banks will be required to adopt the Advanced approach for credit risk. In the European Union, a Directive will determine the freedom and flexibility with which national regulators can approach the Accord. It is therefore unlikely that Basel II becomes an international standard.

## 1. Key borrower and facility characteristics (Technical Guidance SS 376)

### Summary

It is clear from industry response that different levels of sophistication related to data capture and maintenance for credit risk models exist in the market place today. This ranges from those firms who have yet to invest in the necessary IT projects to improve the data in their internal ratings systems to those firms who envisage no problems with data requirements, boasting good information about borrowers dating back over 10 years.

### Key Messages

There are several key messages that emerge from the answers on key borrower and facility characteristics and these are outlined below:

- Data requirements are not the same for all borrowers – e.g. challenges on the retail side differ greatly to those on the corporate side, challenges within the corporate side vary further still (see below).
- Data requirements may change over time – identification of new key drivers to evaluate credit risk make retroactive assignment impossible
- Granularity is determined by many different factors.

### The Detail

#### Data requirements are not the same for all borrowers:

1. Corporate - Data challenges on the corporate side relate to the lack of default data, automation of the data processes (where, in a few cases data is still captured and stored on paper within a credit/relationship “hard” file) and also granularity. Corporate exposures can be further sub-divided into investment grade and non-investment grade borrowers. Acute problems lie in investment grade portfolios where there is little or no default data available.

2. Retail - Data challenges on the retail side are distinct to those on the corporate side. They tend to relate to volume, consistency of default data and granularity. Problems of consistency could be due to potential differences in the definitions of key characteristics within bank groups and across banks’ internal ratings.

N.b. data requirements for loan facilities are different again, and tend to be determined on a case-by-case basis.

*“This requirement results in a huge amount of data which has to be stored electronically. Because rating/scoring systems differ, they have different data profiles. This makes it difficult to merge data from different rating/scoring systems and to store them in a unique database. Another problem is data quality, i.e. warranting the completeness and correctness of the data.”*

*“Many firms validate internal ratings for investment grade corporates by either (1) satisfying themselves that internal ratings are at least as conservative as external ratings on average for corporates that are both internally and externally rated or by (2) at least using the same rating methods to rate corporates that do and not have external ratings”*

**Retroactive assignment:**

Future data requirements are unknown. New key drivers of risk may emerge with increased sophistication in risk management techniques. New and updated ratings systems may be based on criteria that did not exist in the past and may not exist today (e.g. Does the customer have a DSL-port?). The industry appreciates that having more data is a good thing (“its nice to have”), but many firms consider the requirement that firms store data to allow for retroactive reassignment of ratings, unreasonable.

*“It is an unreasonable requirement to be able to restate historic ratings based on new rating models. Example: In Europe many local accounting regimes don't require quarterly accounts. If the fact that firms account on a quarterly basis (or not) is a factor in the rating model, all restated ratings prior to the emergence of IAS would be systematically wrong.”*

*“Increased sophistication might lead to the identification of new key drivers that currently are not stored, i.e. there remains a risk that at a future point the retroactive assignment might not be possible.”*

*“What for? What would a retro-active out-of-sample test achieve?”*

**Granularity:**

The required level of granularity is obviously a key concern for the industry. The challenge exists as much for historical data as for the setting up of new data collections (data going back and data going forward).

The level is often determined by internal factors and not by regulatory requirements. These include, the IT systems in place, the compliance function, the validation methodology (which could differ for model parameters and rating methodology, where for rating methodology validation is based on balance sheet, behaviour, market and management, demographic information etc), the financial statements, delinquency periods etc. Some banks conduct a cost – benefit analysis before deciding whether to store additional data.

*“Basel should not specify detailed data requirements to be disclosed for borrower and facility characteristics.”*

*“We believe our systems to be flexible, but we cannot confirm this until we have seen the final disclosure requirements. Additional feeds might be triggered by the additional reporting requirements in the financial systems (as opposed to risk systems)”*

Retroactive reassignment – where the AIG viewed this as a key requirement the industry expressed doubts as whether or not it was achievable. The Fed’s David Wright stated that firms operating in a “learning environment” should be able to go back and look at a particular segment or portfolio and retroactively realign/reassign ratings based on historical data. The industry agreed that this would be a useful exercise but described this as a “nice to have” rather than a “must have”.

## 2. Definition of default (Technical Guidance SS 399 – 401)

### Summary

The majority of respondents do not have any serious problems with recording a (non-accounting) definition of default under Basel II. There is a relationship between the definition set by regulatory reporting requirements and that contained in financial reporting requirements, and the industry feel that there is a need for consistency between the two. Outside of this, the challenges identified include, the combining of exposures on a group basis on the retail side (especially with small business' and other sets of customers), identifying a distress sale and recording the input of the relevant credit expert (considered critical). (see **the detail** below)

*“The main point on the definition of default issue is, that the implementation of the definition of default has a huge impact on the capital charge for a bank. Therefore, a unique interpretation and implementation of the definition of default by all regulators is essential to warrant for a national and international level playing field.”*

*“A single bank cannot solve these difficulties. In order to guarantee an international level playing field and a comparable regulatory capital charge the Basel Committee has to publish a distinct description of how to record the specific criteria. In addition, all soft criteria have to be removed from the definition of default”.*

### Key Messages

- There is a need for consistency between accounting standards definitions (US GAAP and IFRS) and Basel definitions
- For retroactive data, the historical default data may not be based on the present definition of default.

### The Detail

Definition of default: Accounting standards or Basel II definitions?

Many firms have recognised the need for consistent definitions in both their financial reporting and regulatory reporting requirements. It is worth noting that should the definitions differ considerably under either reporting standard this could result in firms having to maintain two default triggers: one for accounting and for regulatory reporting. Two sets of default statistics would have to be maintained.

*“For example one can easily imagine a loan to a defaulted obligor that is not impaired (e.g. cash collateralised). Alignment and consistency is important however to make sure that not both combinations are possible: default-not impaired and non default-impaired. That would make it a mess, but isn't the case with the current definitions.”*

*“Certain default definitions are driven by accounting (SLLP) and credit policies (Unlikely to pay). As defaults for each obligor are referenced across the organization, it is difficult to ensure that the policies are applied with absolute consistency (human factor!). In other words, a "trigger-happy" credit officer in one entity can push an entire obligor relationship into default.”*

*“Maintaining a consistent definition of default is made more difficult by the frequency with which the definition has changed and also the extent to which national discretion plays a part.”*

*“To date, some of the indicators are technically not available, because internal credit risk concepts do use different definition of default”*

*“Implementation of Basel II requires us to collect more [default] data than we think we need for internal credit risk management”*

*“We oppose non-accounting definitions and support alignment between Basel II and Accounting default definitions”*

*“Assets that are not delinquent can be considered as defaults according to qualitative criteria, with provisions and charge-offs made accordingly and therefore collecting data for defaults may be difficult”*

**Other discussion points raised:**

Possible challenges identified include,

- The combining of exposures on a group basis on the retail side (especially with small business' and other sets of customers),
- Identifying a distress sale
- Recording the input of the relevant credit expert (considered critical).

**How will you make use of the historical data you gather to validate and improve the banks' estimates of defaults? (see Section 12 on Validation)**

### **3. Identification of borrowers and facilities/pools that experience default (Technical Guidance SS 377, 378)**

#### **Default recognition and actual experiences.**

##### **Summary**

The recognition of default is generally based on the transition of an internal rating from a performing category to an impaired or default category. In internal ratings systems impaired and defaulted counterparties and facilities are assigned corresponding rating categories. Often these counterparties and facilities, as and when they become impaired or defaulted, are handed over to specialised working groups who manage them using different bespoke systems.

##### **Key Messages**

- The time frame for when internal ratings come under review varies from firm-to-firm (this could be quarterly, semi-annually, or annually).
- In cases where the discriminatory power is not deemed satisfactory an evaluation of the key model drivers is generally triggered.
- A combination of internal and external data is used when actual experience is not sufficient to produce reliable statistics (particularly prevalent on the corporate side)
- In theory significantly different capital requirements for identical portfolios can be obtained depending on whether you choose EDF or PD estimates based on historical vs. market sensitive information.

##### **The Detail**

###### **Ratings review timeframe:**

The time frame for when internal ratings come under review varies from firm-to-firm (this could be quarterly, semi-annually, or annually). Many firms will use early warning systems such as delinquency periods for retail or KMW alerts for corporate exposures. These triggers will initiate additional reviews to identify impairment.

*“For corporate exposures, defaulted assets are specified as a result of a quarterly assessment. On the retail side defaulted assets are specified by a delinquency period.”*

*“For the Wholesale Portfolios, each obligor and facility is assigned a risk rating, one of which identifies a default. In addition, a history of risk ratings for each obligor/facility is maintained. For the retail portfolios, delinquency status and/or write off dates and amounts are tracked and maintained on a current and historical basis.”*

**Actual experience and model adjustments:**

More detail on adjustments made to models can be found in Section 12 on validation. The ISDA, RMA, BBA Internal Ratings Validation Survey will be published in May 2003. The survey breaks down validation techniques by asset class and model type, with sections on statistical models, expert judgement models, hybrid models, and external vendor models. For the purpose of this paper and discussion with the AIG the following examples are included: -

Firm One.

*“As a matter of practice, actual experience (as determined through analysis of historical information) is used as the basis for the estimation of critical factors such as PDs, LGDs and EADs, and supplemented with or validated against comparable external data sources.”*

Firm Two

*“For PD we use a master scale. Any new information relating to actual PD would lead to a recalibration to the master scale.*

*For LGD we intend to regularly back test /validate the database. The results of these tests will be used to update and refine the model.”*

Firm Three

*“PD: A master scale is used. If observed default frequencies differ significantly from the estimated default probability in the rating class under consideration, then customers assigned to this rating class have to be re-rated.*

*LGD: If estimated LGDs (assigned separately to collateral and unsecured part of a facility) differ significantly from the realised loss rate (taking recoveries into account), then the estimate has to be updated.”*

**Question 3 (Identification of borrowers and facilities/pools that experience default)**

At least 2 industry representatives planned to maintain 2 sets of PD data, a regulatory PD, and a market sensitive PD for business management purposes. One firm had recently switched to more market sensitive EDFs, but still used longer-term ratings for regulatory approval purposes. The Fed insisted that firms not maintain “phantom” Internal Ratings Systems but appreciated the need to use more risk sensitive PD data in models determining pricing and economic capital. In these circumstances where both firms and regulators depart from the Basel text, sufficient documentation would be required describing procedures and controls in place to allow for the departure. This would represent a very “loose” interpretation of the “use test” as currently drafted. The AIG stated that a number of regulators had discussed this and that regulatory thinking was in line.

#### 4. Guarantees (Technical Guidance SS 428)

##### Summary

On the whole guarantees are treated in the same way as other exposures. Data requirements and the process of evaluation process are no different. There has been the suggestion that the availability of data and the level of automation in the collection/storage of guarantee data might be more of a problem and therefore rating guarantees perhaps a bigger challenge (see **Detail** below). These key messages came out of the responses: -

##### Key Messages

- A guaranteed exposure should attract a lower risk weight than a comparable direct unsecured exposure to the guarantor
- See ISDA's work on Joint Default probabilities (also SS267 and SS268)

##### Detail

#### How will you ensure that a guaranteed exposure does not attract a lower risk weight than a comparable direct exposure to the guarantor?

*"..we have strong objections concerning the implied concept behind this rule. We think that it is economically reasonable to account for guarantee recoveries via the LGD. No caps should be implemented as these caps distort the primary credit risk parameters that reflect the bank's true default empirics. In other words, the arbitrary introduction of any caps will lead to a one-sided divergence of forecasted credit losses from the empirics, i.e. an overestimation."*

*"A guaranteed exposure should attract a lower risk weight than a comparable direct unsecured exposure to the guarantor. The guarantee is reflected in the LGD parameter. Only of the guarantee is granted by a related company (e.g. the parent guarantee), the PD is affected."*

*"Current rating process allows for the substitution of Guarantor for Borrower if certain conditions are met. In these cases, full risk assessment is conducted on the Guarantor only. Under Basle II, we will have to amend our process to require a full assessment on the Borrower, as well, in cases where we have allowed substitution"*

#### Where is [guarantee information] maintained?

*"Guarantor information is largely gathered in the bank's IT systems (though not all of it). Information of "non-customer" guarantors is not necessarily fed into the internal IT systems (such as financials, external ratings, etc)"*

*"It is largely maintained via hardcopy placed in the credit/relationship file but [the firm] is undertaking a major MIS initiative to capture this information in electronic format to allow for analysis and back testing."*

*“Information on guarantees is stored in collateral databases and delivered to the data warehouse”*

Question 4 (Guarantees)

The Regulators thought it desirable to maintain information on guarantees, along with information on obligors, in a central database. Given that the industry were unlikely to treat guarantees any differently from other exposures this was not considered a major issue. David Wright said that the Fed wished to encourage joint default probability analysis, and acknowledged that the substitution method was a conservative regulatory approach to capital. The industry drew a distinction between retail and corporate exposures, where in retail information on the guarantor is unlikely to be updated beyond origination, while the obligor would continue to be assessed on a behavioural scorecard basis. It would therefore be unlikely that the firm would go back to the guarantor each time the score of the obligor was updated. It was noted that if information on the guarantor were not included in the rating then the firm would arrive at a much more conservative rating. The North American regulators, in their guidance would not requiring firms under the IRB approach to change their retail risk management practise.

## 5. Components of loss and recovery (Technical Guidance SS 378; SS 407)

The New Accord includes requirements to keep a history of LGD and EAD estimates, and key data used to derive the estimate (e.g., collateral, loan type and experience).

### Summary

There is still a lot of work to be done by IRB firms in order to meet the minimum data requirements for maintaining internal LGD and EAD estimates. This represents the single biggest data challenge for the industry. It is clear from the responses that IT systems in a number of areas will need to be extended and interfaces established in order to meet standards at the onset of the implementation of the Accord. These IT projects are both costly and time-consuming. It is apparent that firms are at different stages of development, with some projects not yet underway, others mid-process, and a few needing only minor enhancements.

#### **Transition arrangements and the Use Test**

As the Accord currently stands transition arrangements are subject to national discretion. They are available for Standardized and Foundation IRB, where only two years of history for PD calculation are required initially, increasing to five years as the transition arrangements expire. They do not apply to the Advanced IRB approach. However the Use Test, that requires firms demonstrate internal ratings systems have been up and running for 3 years prior to implementation date, can be relaxed under all three approaches at the discretion of the national supervisor.

*“Although we have collected historical recovery data (or LGD) for quite a long time, data coverage is not quite sufficient. It is thought critical not only to upgrade the internal IT systems but also to introduce additional procedural flow in branch offices in order to enable thorough data collection.”*

*“The major challenge is whether the historical data is available and sufficiently granular to derive estimates (e.g. “break events” in the past such as mergers and changes in risk methodologies make collecting the relevant data more difficult)”*

*“Some information on collateral (especially recoveries, workout costs) is not electronically available for parts of the portfolio”*

### Key Messages

- The main challenge is the availability and granularity of historical default data (this is particularly relevant to portfolios of high quality borrowers)
- The level at which the components of loss and recovery are maintained will depend on the product or portfolio in question (e.g. retail or corporate?)
- Indirect costs are difficult to determine

**The Detail**

1. Components of loss and recovery: data challenges?

The major challenge is whether the historical data is available and sufficiently granular to derive estimates. Firms would like to retain data for as long as possible, but note that relevance of the data and a cost/benefit analysis in storing it plays a large part. Data will have to be kept for longer periods, and the tracking of estimates will need to be improved along with enhanced systems for validation.

2. The level at which the components of loss and recovery are maintained will depend on the product or portfolio in question:

*“Different costs will be maintained at different levels”*

*“There is a detailed data capturing (estimated liquidation values; recoveries from collateral liquidation/guarantor payments or payments of the customer, workout costs, dates etc.) on customer and collateral level. If possible data are captured separately on transaction level.”*

3. Credit Risk Mitigants:

*Recognition under the advanced approach*  
 267. Banks using the advanced approach for estimating LGDs may reflect the risk mitigating effect of guarantees and credit derivatives through either adjusted borrower grades or through adjusting LGD estimates. In doing so, banks must not include the effect of double default in such adjustments. The adjusted risk weight must not be less than that of a comparable direct exposure to the protection provider.

268. A bank relying on own-estimates of LGD has the option to adopt the treatment outlined above for banks under the foundation IRB approach (paragraphs 262 to 266), or to make an adjustment to its LGD estimate of the exposure to reflect the presence of the guarantee. Under this option, there are no limits to the range of eligible guarantors although the set of minimum requirements provided in paragraph 431 concerning the type of guarantee must be satisfied.

*“LGDs are separated into LGDs for collateral and LGDs for the unsecured part of a facility. As long as the liquidation / work out process is not finalised (i.e. not all recoveries are captured) calculated LGDs are conservative estimates”*

*“.. the LGD calculation is based on a complex algorithm that allows a differentiation of the underlying primary credit risk parameters (e.g. collateral and guarantee recovery rates, recovery rates on uncollateralized portions of credit transactions etc.) along a variety of dimensions. The choice of dimensions of differentiation is strictly a function of the underlying default economics, i.e. where a rebucketing actually leads to significantly different parameter estimates.”*

4. Components of loss and recovery: amount and source, timing and administration costs:

*“What is meant by the “source” of the components of loss and recovery? This would appear to be a vague notion with many grey areas. For example, take a “work-in-progress” (inventory) which may be completed (resulting in additional credit usage) before being sold (*

*and collected with other receivables)? In this case what is the source, liquidation inventory, liquidation receivables, cash flow from operations? And how do you take account of the additional credit usage (assuming it can distinguished from other causes of additional credit usage)?”*

*“Administrative costs are not allocated to facilities level.”*

*“Not clear to us why one would need to track the source and timing of administrative costs for this purpose for regulatory capital purposes.”*

#### 5. Components of loss and recovery: Economic Loss and the discount factor

- The discount factor used in calculating economic loss varies (some firms don't use one, others use the contractual rate at time of default, others use a Treasury rate, one firm specified a 15% discount factor)
- The Committee has yet to provide a definition of economic loss (n.b. ISDA proposed one in its consultation)

*“We use a 15% discount factor in calculating economic loss”*

*“The discount factor will be provided by Treasury.”*

*“Currently, do not use a discount factor.”*

*“Risk-free rate plus spread to adjust for volatility of observed recovery proceeds”*

#### **European Loss Given Default Database**

The European Loss Given Default Database initiative enables participants to share a database for European institutions for Loss Given Default statistics. They also have access to the data collected by RMA among a group of North American banks over the past several years and by ISDA/RMA in Asia.

This data will, over time, allow participants to populate Risk-Based Rating and Capital Allocation models, and to better price credit derivatives. It is intended that the data be available only to participants.

The British Bankers' Association, ISDA, and the RMA have worked with a select group of European banks to adapt the North American reporting format to European needs. By agreement with the other Associations, RMA is acting as Project Manager for the study. The European Banking Federation has also added its endorsement to the study.

Participating institutions submit data in electronic form. Data is to be submitted quarterly. RMA performs various check and verification procedures on the data, compiles the figures, and distributes reports. These provide a composite picture of the loss and recovery characteristics of commercial loans. Each institution is able to measure their profile to that of the group. The data remains the legal property of the submitting institution. No identifying obligor information is submitted.

More information on this initiative is available via the sponsoring associations.

Question 5 (Components of loss and recovery)

Some members of the AIG had witnessed firms effectively pulling together full and extensive loss databases by hiring additional staff and “sending them down to the basement” to work on paper files and old records (“forensic” collating of data). Some members of the AIG therefore believed that there was enough data that could be collected in order to operate within the requirements of the New Accord.

ISDA disagreed with this assessment suggesting that “paper files” were of limited use, containing not nearly enough granularity (no information on collateral, unlikely to be anything on indirect costs, and difficult to track recoveries). ISDA also questioned its comparability with current and future data. Where the regulators cannot see how there cannot be enough data, ISDA members disagreed. In Canada where almost all the big banks are pooling their loss data, in some segments (such as high quality bank exposures) only 50 defaulted accounts have been uncovered, not enough for effective statistical validation tests? ISDA highlighted the difficulties involved with particular exposures, such as corporate lending or lending to SMEs where the recovery period may be very slow, where fire sales were less common, but restructurings and slow liquidations were more common.

Other discussion points included:

The ECB’s work with Central Banks on the various data collection platforms in place and how they might be used for Basel II implementation.

The discount factor and how members of ISDA thought it inconceivable that a regulator would want to determine the discount factor.

The AIG identified a “data circle” where firms ask themselves the question “what data do we need to establish an Internal Rating System?” followed by the question “what data do you have to have to build an IRS ?”

## 6. Reporting requirements (Technical Guidance SS 387)

### Summary

Although firms reported few problems meeting the standards under para 387, many felt that these questions were out of the scope of this questionnaire.

### Key Messages

- There is a distinction to be made between the data requirements for internal ratings systems under an Advanced IRB approach and the requirements for a bank's internal reporting framework.
- The data requirements for internal reporting will be determined by sound corporate governance principles and the minimum requirements under Pillar 3 (still to be determined). These are distinct from the data requirements that need to be met in order to maintain an advanced internal ratings system.
- External disclosure requirements under Pillar 3 will require significant enhancements to firms' reporting capabilities.

### The Detail

*"We do not foresee any major challenges with respect to our internal reporting framework"*

*"A new reporting scheme to comply with Basel II rules is currently under revision / being developed."*

*"We have a myriad of reports and reporting capabilities for all levels of the firm -- from the dealmaker to the middle office to the risk committees to the board of directors. Indeed, our supervisors have direct access to exposure systems.... we do not believe Basel should be opining in this area other than to indicate what best practices are."*

*"The bank has electronic storage capabilities regarding reports. Reports will be kept as long as necessary. Regarding data storage: rating details need huge storage capabilities"*

*"Examples for security measures: Access rights will be restricted; report documents cannot be changed etc."*

*"Since the reporting implications are not yet fully clear, we envisage re-designing our reporting capabilities to support the new regime and its requirements. Whatever the external disclosure frequency turns out to be, we envisage monthly reporting for internal purposes. We are paying particular attention to the documentation and validation of methods to ease the supervisory review process."*

## 7. Use of external data (Technical Guidance SS 397)

### Summary

The main concern about using external data in calculating estimates is whether it is applicable to the firm's business (is the default criteria of an external rating in line with internal or regulatory requirements?). The quality of the data is also a concern, with a lot of external data being confidential and not publicly available, the quality of the rating could be unknown. The use of external data/models varies: some firms only use it for benchmarking/validation purposes. The ISDA RMA BBA Internal Ratings Validation Survey, to be published in May 2003, has a section on external data used in model development, data pooling for validation and external vendor models.

*"Our main concerns are the comparability of population and calculation methods"*

*"The assignment of default probabilities to external ratings implies statistical uncertainty. The default criteria of external rating might be not in line with internal or regulatory requirements. The quality of the rating is unknown."*

*"External default data and internal default data is usually not based on the same definition of default. Also, rating architecture may be fundamentally different making cross-references extremely difficult."*

### Key Messages

- There is a wide range of practise when it comes to the use of external data, but generally firms use external data to enhance their internal ratings process
- There is a considerable amount of judgement involved in the use of external data – review and approval of the data, statistical analysis reviewed by oversight bodies (e.g. Parameter Review Board), adjustments made where definitions differ etc.
- Adjustments are often made to external data
- Firms are unlikely to have sufficient internal loss data across every rating category and using external data as a supplement is common.
- Many firms only use external data for validation purposes.

### The Detail

#### **There is a wide range of practise when it comes to the use of external data:**

Firms can use external data to enhance internal ratings systems in a number of ways. The data can be used in the model development process, in the ratings themselves, or as part of a validation or benchmarking process.

*“We use external data and models either as inputs to our own process or in its stead. We applaud initiatives by our own regulator to engage third-party vendors in discussion as to how the process might work going forward. As in many other areas, use of third party input calls for intelligent judgement.”*

*“We don’t use external data”*

*“We do not currently use external data for calculating estimates but just for a verification purpose only.”*

**Use of Judgement:**

*“Review/approval of the external data by Parameter Review Board. As part of this process, external data is inputted into existing models and the results analyzed to determine applicability.”*

*“If the geographic areas do not match, then the data assists within the context of the application of management judgment.”*

*“...there seems to be insufficient external data for certain parameters (e.g. Investment Grade Defaults). This lack of data makes the application of management judgment (supported by analysis) necessary”*

**Adjustments to the data:**

Adjustments are made: to account for effects in the business cycle; where default criteria differ; where benchmarks derived from bond portfolios are applied to loans.

*“We make corrections to adjust for the effects in the business cycle.”*

*“Adjustments to the PD are made where default definitions are different. External LGD benchmarks derived from bond portfolios might need adjustment if applied to loans. However we currently limit the use of external LGD data to testing and benchmarking.”*

*“Adjustments have to be made for instance in case external data are based on default criteria not used by the bank.”*

**Validating external data (see also Section 12):**

Tests performed include: ensuring that the characteristics of external sample fit the internal portfolio (country and industry codes, borrower and facility names etc.), migration analysis (internal vs. external assessment), parameter distribution, performance of derived estimates, changes in parameters over time etc.

*“The external data should fulfil the same statistical hypothesis test as internal data.”*

*“Several statistical tests, e.g. migration analysis (internal assessment vs. external assessment).”*

**Other concerns expressed about the use of external data:**

The majority of external data available is based on US data. There is very little bank loan specific data. A number of concerns around data pooling exercises have been raised including the increasing potential of systemic risk, legal constraints regarding the delivery and use of data, and the comparability of data.

*“The assignment of default probabilities to external ratings implies statistical uncertainty. The default criteria of external rating might be not in line with internal or regulatory requirements. The quality of the rating is unknown.”*

*“A lot of external data is confidential and may not be publicly available”*

## 8. Collateral (Technical Guidance SS 123; 454 – 470)

### Summary

The major concern that members raised related to the difficulty in accurately allocating collateral to individual exposures. One firm in particular stated that matching collateral to a facility proved a major challenge in the QIS 3 exercise. It is also evident that different types of collateral require different valuation processes (e.g. real estate vs. stock).

*“We are concerned that the new accord could have us carrying out needless revaluation of collateral/security taken against fully performing loans. To the extent that this can be undertaken against indices for (for example) real estate assets, this would ease the burden”*

*“From a wholesale perspective, policies will have to be updated as some of the requirements are more restrictive than current Bank methodology permits (e.g. requirement to have a first lien). From a retail perspective, volume (i.e. number of accounts with collateral held against them...residential mortgages) is an issue as well as the implied cost of providing updated collateral valuations”.*

*“Market values of financial collateral such as equity, bonds, mutual funds are updated on daily, weekly monthly basis. Physical collateral is updated less frequently.”*

The ISDA Margin Survey 2002 represents the fourth year in which ISDA has surveyed the state of collateral use and management in the over-the-counter (OTC) derivatives industry. The survey attempts to describe and communicate the current status of collateral management in an objective, consistent manner. ISDA also hopes to promote greater transparency by increasing understanding of collateral management as well as of counterparty risk management among regulators and other industry groups.

For access to the survey please refer to the “Surveys and Market Statistics” section of the ISDA web site ([www.isda.org](http://www.isda.org))

### Key Messages

- The frequency with which the existence and valuation of collateral is updated depends on the type of asset in question
- System feeds are key to ensuring a continuous monitoring of valuations – matching collateral to facility (a major challenge of the QIS 3 exercise), updating collateral valuations and haircuts, and capturing recovery information.
- Many firms are still in the process of identifying the relevant feeds in order to comply with para.s 454 – 470.
- To recognise the value of non-financial collateral you need to have liquid markets

### The Detail

*“The frequency with which the existence and valuation of collateral is updated depends on the type of asset in question (e.g. maintaining a consistent and regular valuation for real estate is*

*considered a problem) and varies enormously (from daily, for margin, to annually, for some firms' corporate loans)"*

*"Effective central categorisation (counterparties, facilities, transactions, and collateral) is critical to success."*

*"Regulatory considerations are overtaking common sense and are proving costly. The benefits remain yet to be seen."*

*"The implementation of all requirements stated in §§454-470 will be time-consuming and expensive"*

Question 8 (Collateral)

The industry describe the rules on collateral as an "annoyance" (e.g. fx haircut – only occurs where you have wrong-way exposure). Derivatives collateral (as with Securities Lending transactions) is supported by the ISDA master documentation, where generally thousands of trades are supported by a general basket of collateral, revalued daily, with margin calls updated daily.

The Group were unsure as to whether the fx haircut applies under the IRB approach. ISDA members expressed concerns that under the Foundation approach you would need to create a new set of haircuts that would not be relevant.

## 9 Retail seasoning effects (Technical Guidance SS 414)

### Summary

Application of retail seasoning effects varies from firm to firm. In general application is based on empirical analysis and some form of expert judgement. The majority of responses had no significant issues with the estimation of PDs and LGDs for retail exposures or with the requirements to segment the retail portfolio into borrower pools under the IRB approach.

*“No significant issues/problems are foreseen in estimating PDs and LGDs for retail exposures based on the requirements set out under SS 349 and 356 given sufficient resources.”*

*“It has been recognized internally that segmentation of the retail portfolio by seasoning and vintage is quite important from a risk profile point of view.”*

### Key Messages

- Flexibility in approach is required

*“It is considered necessary to keep a flexible segmentation framework so that back-tested risk profiles are properly reflected from time to time in the segmentation of the portfolio.”*

*“We don't think there should be any seasoning requirements. We will use them where think it makes sense to do so as we do today. Segmentation should be left to the banks subject to a reasonability test.”*

### The Detail

*“Seasoning is taken into account when monitoring the performance of risk pools, where it is relevant, either within rating methods or by cohorting exposures.”*

*“PDs are reset every month. Seasoning is incorporated into PD estimates based on empirical analysis and portfolio specialist judgement”*

*“The seasoning effect is only taken into account for home loans. We assign a different PD based on the transaction year and the historical default analysis”*

**10 Minimum requirements for LGD estimates (Technical Guidance SS 415 – 420)****Summary**

The majority of firms have no issue with calculating realised LGDs. The main difficulty expressed in calculating default-weighted LGDs seems to be in obtaining enough default data. Systems in some firms need to be updated to ensure the relevant data capture with regards to the history of recoveries (incl. workout costs) and the need to capture economic loss.

*“We calculate default-weighted LGDs and see no difficulties here.”*

*“Data coverage needs to be made thorough. IT systems are to be upgraded and work flows in branch offices are also to be changed so that thorough data gathering is enabled.”*

**Key Messages**

- In many cases IT systems will need upgrading
- You cannot expect the same level of granularity in LGD data as you have with PD data.

*“IT systems for data collection have to be extended.”*

*“Data coverage needs to be made thorough. IT systems are to be upgraded and work flows in branch offices are also to be changed so that thorough data gathering is enabled.”*

**The Detail**

Three specific issues/examples were raised in the industry response: -

1. *“Estimating default-weighted LGDs for specific loan facilities within a reasonably close band (low standard deviation) was difficult. In particular as full recovery may sometimes occur irrespective of the type of facility (e.g. a defaulted company that is acquired by another company and where the subordinated loan is repaid gives a realised LGD of 0% whereas the average for subordinated loans may be as high as 75%. The standard deviation is then very high, although few would deny that distinguishing subordinated loans for LGD-purposes makes sense)”*
2. An extremely conservative interpretation of the Basel standard could lead to a regulator requiring recession-based LGD numbers (e.g. as currently interpreted by the UK FSA). This is regarded as unrealistic and could be problematic, not only in terms of firm’s own current practise but also in terms of competitive standing should other regulators impose less extreme interpretations.

*“While we have no particular issue with default weighted LGDs, our regulator has indicated that they interpret the Basel standard as requiring recession-based numbers. We regard this as unrealistic.”*

3. *“..we don't derive LGD's as observed values from loss empirics. Therefore, we don't have a 1-to-1 relationship between defaults and LGD's. Rather, we have a "data point"-*

*weighted collateral recovery rate estimate, where the weights are a function of the importance of the collateral type in question in the bank's lending practice.*

*For portions of 7-year time series, manual data collection exercises on defaulted loans will be necessary. In order to have a true default weighting of collateral recovery rates, all defaulted loans would have to be analyzed. This might be cost-prohibitive and also not economically sensible as an additional data point for a very common collateral type may not improve the descriptive power of the estimate significantly”*

Question 10 (Minimum requirements for LGD estimates)

ISDA members stressed the need for more flexibility here, with further recognition of the “learning environment” that firms operate in. One firm gave the example of the effect that a sharp downturn in the property market had on risk management practises, with corresponding LGD data for this period no longer relevant to the firms “upgraded” practises. This was reinforced by another ISDA member who recounted the changes that occurred in risk managing their firm’s own Real Estate exposures, which rendered the data prior to the changes irrelevant.

## 11 Minimum requirements for EAD estimates (Technical Guidance SS 421 – 426)

### Summary

As with LGD estimates, lack of data is once again the key stumbling block for estimating EADs. IT systems in a number of banks will need to be upgraded to ensure relevant and robust default data. For certain exposures (e.g. specific segments, industries, or regions) it would be difficult to obtain the historical EAD estimates in order to compare them with actual default data. External data maybe leveraged where insufficient observations are available.

*“It may difficult to collect historic EAD estimates and compare with actual data in certain segments or industries or regions”*

*“There is a lack of robust data to estimate EADs and we do not have the system to collect them”*

### Key Messages

- Similar problems exist for EAD and LGD estimates

### The Detail

Firm One.

Specifically on off-balance sheet exposures: *“Off balance sheet items are tricky, in particular products with a CCF less than 100%. Take this simple example: Under a credit facility of 100 a performance bond of 100 is outstanding at default. The CCF is 50% so the credit equivalent of this bond is 50. The economic loss suffered is say 20. Is EAD 100% and LGD = 20%, or is EAD(CCF) 50% and LGD = 40%? Same, but what if loss is 60? The issue at hand is that the risk adjustment for CCF-products like performance bonds can be achieved through EAD or LGD, with consistent results for both and both even generate the same end-result for regulatory capital. The question is, will both approaches be allowed at the option of each bank or not?”*

Firm Two.

*“Usually the EAD estimate is based on the so-called k-factor/delta-factor approach, i.e. EAD is estimated by adding a certain percentage (k or delta) of the unutilized limit to the current utilization. This leads to an exposure at default irrespective of whether the product type allows cash or non-cash usage. A second primary credit risk parameter is estimated to convert this "Cash/Non-Cash"-EAD into a Cash-Equivalent EAD by ascertaining how much cash the bank will be drawn on in default. For cash usage products, this factor is obviously 1.*

*Example: The bank has issued a line on bank guarantees to an obligor over 1000 on which at default the bank had issued guarantee documents of 600. Therefore: "Cash/Non-Cash"-EAD = 60%. The beneficiaries of the guarantees redeem 450 (=maximum cash loss for the bank) in cash terms from the bank, implying a factor of 75% needed to convert to a Cash-Equivalent EAD.*

*In our opinion a bank has to demonstrate reasonability on primary risk parameter level rather than on EAD level.”*

**12. Validation of Estimates (Technical Guidance SS 448 – 453)**

**Summary**

The standard of validation of internal ratings systems varies enormously. The ISDA RMA BBA Internal Ratings Validation Survey is published in May 2003, and is the first extensive global study on internal ratings validation to be published.

*“The validation concept is currently under development”*

*“From a wholesale and retail perspective, no significant challenges are foreseen in demonstrating that the rating process and systems to calculate PD, LGD and EAD estimates are valid.”*

**Key Messages**

- Standard statistical tests are commonly used. Examples of these include, calculation of the prognosis power via CoC, GINI coefficient (CAP or Powerstat)
- Inadequate data to apply meaningful statistical tests
- Not enough time has been spent on discussing acceptable validation techniques for expert-judgement models (representing a large proportion of some banks’ exposure)

*“The Bank’s internal rating systems, as well as overall risk management framework based on it, do not have long-run historical track records and, therefore, stable performance of risk measurement is generally yet to be achieved.”*

*“Insufficient (default) data history for parts of the portfolio (e.g. project finance) to apply meaningful statistical tests.”*

**The Detail (examples)**

Firm One

*For PD: annual analysis of defaults per rating grade gives some indication of the rating tool’s ability to discriminate between grades.*

*For LGD: the intention is to consolidate the data into a single relational database. The factors that influence LGD are to be identified. Various statistical tests are to be used on these factors to identify the best “predictors”, and combination of “predictors”.*

Firm Two

*Rough description for PD: validation of PD estimates via comparison of defaulted and non-defaulted customers per rating class; statistical tests (statistical error etc.); analysis of rating migration*

*Rough description for LGD: validation of LGDs using the recoveries from collateral liquidation/payments from guarantors or payments from the borrower as well as liquidation costs; statistical tests (statistical error etc.)*

*Rough description for EAD: validation of CCFs using limit and outstanding information at default and one-year prior to default; additional consideration of collection costs and accrued interests*

**Firm Three**

*Same approach as we use now to validate and improve performance of current portfolio management tools but with more history and greater granularity. That is under current practice, we make use of the appropriate historical information to validate and improve the firm's estimates of exposure at default, defaults and loss given default.*

**Tolerance Limits:**

Tolerance limits are not always used.

*"The limit will depend on the extent of the database used for validation"*

*"Judging from experience, quantitative "tolerance limits" (e.g. minimum Gini-coefficient for rating systems) are generally not applicable. Commercial judgement based on intuitive understanding of underlying business economics should be guiding decisions when and how to initiate corrective actions in the case of process break-downs. Usually, problems occur not as a result of flawed models (e.g. ratings) but rather stem from the application and use of models in the bank's business processes. If, therefore, quantitative issues are not the important drivers of risk assessment problems, it must be clear that also have little applicability in diagnostics and treatment."*

**Actual Estimates:**

Actual estimates are generally stored in an independent database, with limited access. Estimates will be updated by each "validation run" or they can be recalculated at any time.

**Documentation:**

A number of firms already document some or all of the elements of the firm's validation process (e.g. the result of a negative outcome – in case the observed default frequency differs significantly from the estimated default probability of a rating class, customers in the rating class will be re-rated)

(From Section 2)

**How will you make use of the historical data you gather to validate and improve the banks' estimates of defaults?**

*"Given the problems involved in storing historical data (consistency, compliance etc) we can only use future data to validate and improve the estimates of defaults."*

*“The historical data are used for periodic (at least annually) calibration of our ratings/ scorings. Beyond that further validation of PD’s (defined as expected default frequency) is neither necessary nor possible. Example: If a bank applies a through the cycle rating it is c.p. expected that the average PD of a rating category varies significantly depending on the business cycle. Whereas the PD’s of a point in time rating should remain constant over time. The only reasonable validation procedure for a rating/ scoring system is the determination of the discriminant power.”*

Question 12 (Validation of Estimates)

The regulators admitted to facing a “leap of faith” when it came down to the validation of internal ratings systems, stating that the challenges involved were very different to those faced in market risk.

Some regulators present said that they were leaning more towards a descriptive approach, where firms would be required to supply a description of the process and control environment in order to gain IRB approval.

ISDA will discuss validation with the AIG at their June meeting in Montreal.