

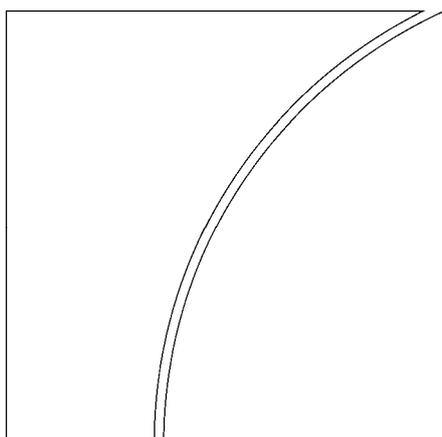
Basel Committee on Banking Supervision

Consultative Document

Supervisory guidance for assessing banks' financial instrument fair value practices

Issued for comment by 6 February 2009

November 2008



BANK FOR INTERNATIONAL SETTLEMENTS

Requests for copies of publications, or for additions/changes to the mailing list, should be sent to:

Bank for International Settlements
Press & Communications
CH-4002 Basel, Switzerland

E-mail: publications@bis.org
Fax: +41 61 280 9100 and +41 61 280 8100

© *Bank for International Settlements 2008. All rights reserved. Brief excerpts may be reproduced or translated provided the source is stated.*

ISBN print: 92-9131-780-2
ISBN web: 92-9197-780-2

Table of Contents

Introduction.....	1
A. Valuation governance and controls	2
Principle 1.....	2
Principle 2.....	3
Principle 3.....	4
B. Risk management and reporting for valuation.....	5
Principle 4.....	5
Principle 5.....	6
Principle 6.....	7
Principle 7.....	8
Principle 8.....	9
Principle 9.....	10
Principle 10.....	10

Supervisory guidance for assessing banks' financial instrument fair value practices

Introduction

Over the past year, risk management and reporting issues related to bank valuations of complex or illiquid financial instruments, and the implications for regulatory capital requirements and bank supervision, have received considerable attention. The application of fair value accounting to a wider range of financial instruments, together with experiences from the recent market turmoil, have emphasised the critical importance of robust risk management and control processes around the measurement of fair values and their reliability. Moreover, given the significance of fair value measurements for regulatory capital adequacy and internal bank risk management it is equally important that supervisors assess the soundness of banks' valuation practices through the Pillar 2 supervisory review process under the Basel II Framework.

In June 2008, the Basel Committee on Banking Supervision published an assessment of fair value measurement and modelling challenges faced by banks during the market turmoil.¹ Building on that work as well as the Committee's 2006 guidance on the use of the fair value option,² the purpose of this document is to provide guidance to banks and banking supervisors to help strengthen their assessment of banks' valuation processes for financial instruments and promote improvements in banks' risk management and control processes.

The principles in this document cover supervisory expectations regarding bank practices and the supervisory assessment of valuation practices. The principles seek to promote a strong governance process around valuations; the use of reliable inputs and diverse information sources; the articulation and communication of valuation uncertainty both within a bank and to external stakeholders; the allocation of sufficient banking and supervisory resources to the valuation process; independent verification and validation processes; consistency in valuation practices for risk management and reporting purposes, where possible; and strong supervisory oversight around bank valuation practices.

This guidance applies to all financial instruments that are measured at fair value, both in normal market conditions and during periods of stress, and regardless of the financial reporting designation within a fair value hierarchy. This guidance does not set forth additional accounting requirements beyond those established by the accounting standard setters.³

The supervisory expectations set forth in this guidance are applicable to all banks. However, the extent of application should be commensurate with the significance and complexity of a bank's fair valued exposures.

¹ *Fair value measurement and modelling: An assessment of challenges and lessons learned from the market stress*, June 2008.

² *Supervisory guidance on the use of the fair value option for financial instruments by banks*, June 2006

³ The International Accounting Standards Board (IASB) has recently issued guidance to enhance fair value measurement and related disclosures. See *Measuring and disclosing the fair value of financial instruments in markets that are no longer active*, October 2008.

Supervisory expectations relevant to financial instrument valuations

A. Valuation governance and controls

Principle 1

Supervisors expect a bank's board and senior management to ensure adequate governance structures and control processes with respect to the fair valuation of financial instruments for risk management and financial reporting purposes. These processes should be consistently applied across the bank and integrated with risk measurement and management processes.

Governance

The valuation governance structures and related processes should be embedded in the overall governance structure of the bank, and consistent for both risk management and reporting purposes. The governance structures and processes are expected to explicitly cover the role of the board and senior management. More specifically, the board's oversight responsibilities for the bank's use of fair value accounting should include:

- Reviewing and approving written policies related to fair valuations;
- Ongoing review of valuation model performance issues escalated to senior management for resolution and all significant changes to valuation policies;
- Ensuring adequate resources are devoted to the valuation process;
- Articulating the bank's tolerance for exposures subject to valuation uncertainty and monitoring compliance with the board's overall policy settings at an aggregate firm-wide level;
- Ensuring independence in the valuation process between risk taking and control units;
- Ensuring appropriate internal and external audit coverage of fair valuations and related processes and controls;
- Ensuring accounting and disclosures are consistent with the applicable accounting framework; and
- Ensuring significant differences, if any, between accounting and risk management measurements are well documented and monitored.

Controls

Controls and procedures should be designed to ensure fair value measurements are reliable. They should further ensure clear and robust production, assignment and verification of financial instrument valuations. Among other things the controls and procedures should:

- Include well documented policies for all significant valuation methodologies, which would be reviewed by management and approved by the board as frequently as necessary and at least annually.
- Detail the range of acceptable practices for the initial pricing, marking-to-market/model, valuation adjustments, observability and reliability of inputs, and periodic independent revaluation depending on the nature of the financial instruments and sources of independent prices; and

- Establish the information feeds and thresholds for determining when there is a presumptive case for challenging the valuation model. The valuation model may be challenged when valuations or valuation inputs are materially different from available external market information and that information is deemed to be reliable (eg objective thresholds that indicate when IPV, test trades or other cross-checks indicate significant differences with model-based valuations).

Valuation controls should be applied consistently across similar instruments (risks) and across business lines (books). These controls should be subject to internal audit review with the resources and expertise required to identify and provide an effective review of practices.

A fundamental feature of adequate control processes is that the final approval of valuations should not be the responsibility of the risk taking units. There should be clear and independent reporting lines to ensure that valuations are independently determined. Banks should maintain functional separation between the front office (the risk taking units that typically provide the initial fair valuation estimates) and the measurement and control unit (the unit providing independent price verification – IPV) at all times. In addition, the unit responsible for IPV within the bank should source prices independently of the relevant trading desk.⁴

New product approval processes should include all internal stakeholders relevant to risk measurement, risk control, financial reporting and the assignment and verification of valuations of financial instruments. Moreover, the process should be supported by a transparent, well-documented inventory of acceptable valuation methodologies that are specific and relevant to products and businesses.

Principle 2

Supervisors expect that a bank will have adequate capacity, including during periods of stress, to establish and verify valuations for instruments in which it engages.

A bank is expected to have adequate capacity and capability to produce valuations and determine the appropriateness of valuations obtained from third-party pricing services. This capacity should be commensurate with the importance and riskiness of these exposures in the context of the business profile of the institution. A bank's capacity should also be sufficiently resilient to periods of rapid growth in a business and periods of market stress. Furthermore, senior management should ensure that the bank has the resources and capabilities to estimate appropriately the inherent risks and the value of financial instruments, including complex and illiquid instruments.

During stressed market conditions, market discontinuity or illiquidity can make valuation of many instruments particularly challenging. For exposures that represent material risk, a bank is expected to have the capacity to produce valuations using alternative methods in the event that primary inputs and approaches become unreliable, unavailable or not relevant due to market discontinuities or illiquidity.

A bank is expected to test and review the performance of its valuation models under possible stress conditions, so that it understands the limitations of the models under such conditions.

⁴ IPV is the process by which market prices or inputs are verified for accuracy. It entails a higher standard of accuracy in that the prices or inputs are used to determine profit and loss figures, whereas daily marking-to-market is primarily used for management reporting between reporting dates.

Bank valuation methodologies are expected to not place undue reliance on a single information source (eg external ratings) especially when valuing complex or illiquid products. Bank processes should emphasise the importance of assessing fair value using a diversity of approaches and having in place a range of mechanisms to cross-check valuations.

The use of a third-party pricing service for fair valuations for financial instruments does not relieve the board of its oversight responsibility or senior management of its responsibility to ensure appropriate fair valuations and provide appropriate supervision, monitoring and management of risks. Management must understand the basis of any measurement and valuation techniques used by outside parties so that it has a sufficient basis upon which to determine the appropriateness of the techniques used, the underlying assumptions and selection of inputs and the consistency of application.

Principle 3

Supervisors expect a bank's senior management to ensure that policies for categorising financial instruments on the balance sheet are consistent with the management of the financial instruments and with the valuation capabilities of the bank, both for accounting and regulatory purposes.

Supervisors expect that a bank will initially categorise and report financial instruments in financial reports in accordance with applicable accounting and regulatory reporting requirements. Senior management should ensure that the classification for both accounting and regulatory purposes is consistent with the way the bank measures and manages risk. Any significant differences in categorisation for the measurement and management of risk and that necessary for the applicable accounting framework should be well documented and approved by senior management and appropriate board level committees.

Supervisors acknowledge that a bank's strategy and therefore the management of financial instruments may change based on changes in economic conditions. In these circumstances, any subsequent reclassification of financial instruments should be made under the control of the bank's senior management and appropriate board level committees and strictly in accordance with accounting requirements.⁵ When financial instruments are transferred into another portfolio, the accounting and regulatory capital requirements of this portfolio should be strictly applied. Classification and reclassification practices should not be used with the view to achieve a particular result. Of particular importance is the specific information related to reclassifications (eg reasons and impacts) that should be disclosed in accordance with accounting rules.

Senior management should ensure that appropriate control policies and practices are in place as regards classification and any subsequent reclassification of financial instruments. Moreover, senior management should ensure that internal policies related to classification and reclassification of financial instruments are applied consistently over time and within a

⁵ On 13 October 2008 the IASB issued amendments regarding the reclassification of financial assets (Amendments to IAS 39 Financial Instruments: Recognition and Measurement and IFRS 7 Financial Instruments: Disclosures). Those amendments, for example, introduce the possibility of reclassification of loans out of the trading assets category if the entity has the intention and ability to hold them for the foreseeable future and, in rare circumstances, reclassification of securities out of the trading assets category. The reclassification of securities, in rare circumstances, was already permitted under US generally accepted accounting principles (GAAP). Moreover, the possibility to reclassify financial instruments to the loan category under IFRS permits a bank to substantially align the accounting for reclassifications of loans under IFRS with that permitted under US GAAP. Disclosures related to reclassified financial assets are also required.

group. The bank should, for instance, maintain documentation that supports the initial classification and any subsequent transfers between asset categories.

B. Risk management and reporting for valuation

Principle 4

Supervisors expect a bank to have in place sound processes for the design and validation of methodologies used to produce valuations.

Key characteristics of sound processes for valuation methodology design and validation include: (i) independence of the validation from the design function; (ii) rigorous validation; (iii) integrated control processes; and (iv) sufficiently resourced internal and external audit programmes.

Independence of model validation

A valuation model, including any material changes to it, must be validated by an independent, suitably qualified group prior to usage, with periodic reviews to ensure the model remains suitable for its intended use. Independent validation requires the human and financial resources needed to provide an effective challenge. The validation group should have reporting lines that are independent of the risk taking units.

Rigorous validation

Model validation processes should be systematically applied for both internally generated and, to the extent possible, vendor provided models. Validation includes evaluations of:

- the model's theoretical soundness and mathematical integrity;
- the appropriateness of model assumptions, including consistency with market practices;
- sensitivity analyses performed to assess the impact of variations in model parameters on fair value, including under stress conditions; and
- backtesting.

A bank must understand and document the conditions under which the performance of the model would not be acceptable. Appropriate action should be taken when performance of the model is not acceptable. This action could include valuation adjustments for model limitations or model risk, or if necessary, changes to the model.

Integrated control processes

A bank is expected to have in place policies defining a regular cycle for valuation model review that reflects the vulnerabilities of individual models. Policies should also identify specific triggers (eg indications of deterioration in model performance or quality) that will cause the review cycle for a valuation model to be accelerated.

A bank should have explicit links between the results of the IPV process or indicators of performance of positions and the review process of models. Whenever possible, these links should be expressed in terms of explicit quantitative thresholds, the crossing of which should

trigger a review of the valuation model and or valuation procedure. These triggers should be consistent with sound practices in risk management.

Profit and loss (P&L) attribution processes are a key aspect of valuation control. For fair valuations where changes in fair value are reflected in the P&L statement, these processes should take place daily so that management understands the reliability and sources of P&L. The results of these processes can then feed back into periodic processes such as IPV and model validation.

Audit programme

Sound internal and external audit programmes play an important role in the bank's validation process. External and internal audit should devote considerable resources to reviewing the control environment, the availability and reliability of information or evidence used in the valuation process, and the reliability of estimated fair values. This includes the price verification processes and testing valuations of significant transactions. Audit programmes should also evaluate whether the disclosures about fair values made by the bank are in accordance with the applicable accounting standards.⁶

Principle 5

Supervisors expect that a bank will maximise the use of relevant and reliable inputs and incorporate all other important information so that fair value estimates are as reliable as possible.

The relevance and reliability of valuations are directly related to the quality and reliability of the inputs. A bank is expected to consider all relevant market information and other factors likely to have a material effect on an instrument's fair value when selecting the appropriate inputs to use in the valuation process. It should maximise the use of relevant observable inputs and minimise the use of unobservable inputs when estimating fair value using a valuation technique. However, observable inputs or transactions may not be relevant, such as in a forced liquidation or distressed sale, or transactions may not be observable, such as when markets are inactive. In such cases, the observable data should be considered, but may not be determinative.

In assessing whether a source is reliable and relevant, the following factors should be considered:

- The frequency and availability of the prices/quotes and whether those prices represent actual regularly occurring transactions on an arm's length basis. Whether the price/quote is an indicative price or a binding offer.
- Whether the available prices are relatively consistent with available corroborating market information and if the prices vary significantly across market participants.
- Whether prices are transparent and generally available to market participants.

⁶ In October 2008, the International Auditing and Assurance Standards Board (IAASB) issued a Staff Audit Practice Alert, *Challenges in Auditing Fair Value Accounting Estimates in the Current Market Environment*. The IAASB Staff guidance highlights international standards on auditing that are particularly relevant for external audits of fair value estimates and related disclosures.

- The timeliness of the pricing data relative to the frequency of valuations, such that the pricing data can be relied upon. Recent pricing data will tend to be more reliable than stale data.
- The number of independent sources that produce the quotes/prices. It is also important to consider the dispersion of prices/quotes available. This will assist market participants in assessing the quality of the pricing data.
- The maturity of the market, and in particular whether quotes will continue to be available for the foreseeable future.
- The similarity between the financial instrument sold in a transaction and the instrument held by the institution.
- The nature of a transaction, especially in inactive markets, and whether it reflected a forced or distressed sale (which are not relevant) or otherwise involved a seller that needed to sell and one or very few buyers (which may require consideration of other information and management judgement in determining the implications for the estimate of fair value).

A bank has to be able to identify when active markets become inactive as this will affect the quality, transparency and reliability of inputs to a valuation. It should have in place appropriate procedures for valuing financial instruments when markets are inactive. These procedures should be well documented, approved by senior management and where appropriate, developed after external consultation.

Principle 6

Supervisors expect a bank to have a rigorous and consistent process to determine valuation adjustments for risk management, regulatory and financial reporting purposes, where appropriate.

The overall governance and control framework for valuations should include valuation adjustment processes. These processes should ensure an appropriate segregation of duties and ensure review by appropriate levels of management. Furthermore, procedures for the resolution and escalation of valuation issues and exceptions to the board of directors or a committee thereof (such as the audit or risk committee) should be defined and documented.

Valuation adjustments should be initially authorised and monitored subsequently by an independent control group (eg IPV or financial control unit, and/or independent model validation unit). Valuation adjustments should be supported by appropriate and regularly maintained documentation. Senior management should be involved in the valuation adjustment process, including the regular involvement of the Chief Risk Officer and/or the Chief Financial Officer (or equivalent positions). Significant valuation adjustments and significant differences between fair values included in financial reporting and those used in risk management or regulatory reporting should be reported to senior management in a timely manner. In addition, there should be a clear process to resolve significant disagreements about valuation adjustments and to escalate material valuation issues to the bank's board of directors or appropriate board committee. Reporting to senior management and to the board should be on a regular basis in an appropriately aggregated and understandable form.

Fair value measurements may involve a significant amount of judgment, including judgments about whether a market is active or inactive and whether a price in a market for the same or similar instrument is representative of fair value. Judgement is also used in the selection and use of observable and unobservable inputs. A bank should have rigorous and consistent

processes to recognise and react when changes to a valuation estimate are necessary. Based on facts and circumstances, including changes in market conditions, a bank may need to use judgment to determine whether an adjustment to a valuation estimate or a valuation input is needed to reflect an appropriate fair value measurement.

For financial reporting purposes, an entity must include appropriate risk factors that market participants would consider in determining fair value. Risk factors include risk related to model uncertainty, liquidity, credit or other risks (such as a risk premium that a market participant would consider in pricing a complex financial instrument). To the extent that risks are not incorporated in the valuation estimate or valuation model, supervisors expect banks to make adjustments to estimates of fair value to ensure the valuation properly reflects all appropriate risks, consistent with a market participant view.

If changing market conditions and associated risks are not included in a model valuation, adjustments to the model or to the valuation may be necessary to reflect what the transaction price would have been on the measurement date for a financial instrument. These adjustments should be made consistently with the assessment of risk and uncertainties surrounding the valuation of the item. However, adjustments should not be made if they do not result in a better estimate of fair value.

Banks should be aware that some regulatory adjustments required by prudential filters or used for risk management purposes may not be appropriate for financial reporting purposes. For example, discount adjustments for a large block of financial instruments cannot be made to fair valuations when these instruments are market observable (ie level 1) for financial reporting purposes, but may be considered for risk management purposes under prudent valuation guidance. However, supervisors expect banks to have rigorous governance and control processes for all valuation adjustments, regardless of whether they are for risk management, regulatory or financial reporting. Fair values used for financial reporting purposes must be internally reconciled to valuations used for risk management and regulatory purposes. Any significant differences should be understood by senior management and reported to the board.

Principle 7

Supervisors expect that a bank will have valuation and risk management processes that explicitly assess valuation uncertainty and include this as part of information communicated to the board and senior management.

Outside of actual transactions, uncertainty about the current value of a financial instrument should be viewed as an inherent characteristic of the valuation process. Uncertainty is specific to the instrument and to the point in time the valuation is effected, and is not exclusive to any individual valuation methodology.

Many factors can give rise to valuation uncertainty. Some are related to the specific instruments being valued and may include, for example, complexity of payoffs stemming from embedded non-linearities and option-type structures; longer term maturity; and the absence of readily available market prices on closely related instruments that can guide the valuation through arbitrage and comparison. Each of these are features that can lead to greater uncertainty about current valuation. Similarly, aspects not related to the design of the instrument can influence the uncertainty around its value. For instance, the depth and breadth of the market in which it is traded will affect its liquidity and hence the price at which a transaction can take place. In addition, characteristics of the holder can be important. The liquidation of a position that represents a significant share of the overall supply of a particular

instrument will likely affect the market price and so will have an impact on the realised value for the seller.

Many drivers of uncertainty around current values also affect the risk in the future value of an instrument (eg liquidity risk and counterparty risk). Similarly, the structure of cash flows associated with an instrument affects both the sensitivity of future value to market and credit risk, and also affects the way these risks are discounted to produce an estimate of current value.

Supervisors expect bank valuation and risk measurement systems to systematically recognise and account for valuation uncertainty. In particular, valuation processes and methodologies should produce an explicit assessment of uncertainty related to the assignment of value for all instruments or portfolios. While qualitative assessments are a useful starting point, it is desirable that banks have developed methodologies that provide, to the extent possible, quantitative assessments. These methodologies may gauge the sensitivity of value to the use of alternative models and modelling assumptions (when applicable), to the use of alternative values for key input parameters to the pricing process, and to alternative scenarios to the presumed availability of counterparties. This analysis should be commensurate to the importance of the specific exposure for the overall solvency of the institution.

Assessments of valuation uncertainty are expected to be fully integrated in the internal decision-making process of the institution. Quantitative and qualitative assessments of uncertainty should accompany all internal reports of valuation information through the firm as well as the reports containing risk information across the institution. It is important that this information reaches all relevant bodies in the institution where investment and risk management decisions are made, including senior management and the board. It is also important that the information is communicated with the same frequency and timeliness that information about value of positions and associated risks are communicated to the same bodies.

Principle 8

Supervisors expect that a bank's external reporting will promote transparency by providing timely, relevant, reliable and decision-useful information.

The purpose of external reporting is to provide relevant and useful information for the intended users for an intended purpose. Supervisors expect that a bank's external financial reporting will provide transparent information related to fair value.

Information useful to users includes descriptions of valuation techniques used to determine fair value and the instruments to which they are applied. Explanations of the valuation inputs and assumptions used in the fair value measurements should be disclosed to help inform users about the judgments made in determining fair value. In addition, appropriate disclosure about the sensitivity of fair value measurements to reasonably possible alternatives is also of particular interest to users. A disclosed description of the bank's valuation governance and controls processes can improve understanding of the quality of the bank's fair valuations and the robustness of related risk management processes. These disclosures are especially important in times of market stress and uncertainty. Accordingly, senior management should consider whether disclosures around valuation uncertainty can be made more meaningful. Moreover, appropriate disclosures should also be provided with respect to financial asset reclassifications.

A bank should regularly review its disclosure policies to ensure that the information disclosed continues to be relevant to its business model and products and to current market conditions.

Supervisory assessment of valuation practices

Principle 9

Supervisors may require banks to provide supplemental information to assist them in assessing valuation and governance processes.

In connection with assessing fair values, banks are to disclose information about fair values, including corporate governance, controls, and methodologies, and on the use of the fair value option required by their relevant accounting framework (eg International Financial Reporting Standards (IFRS) 7 disclosures). In addition to this publicly available information, supervisors may wish to periodically obtain supplemental information about fair values and related internal processes from their banks. Normally, this will be information that a bank should have developed for internal purposes. Such information would assist supervisors, for example, in assessing the quality of valuations and in better understanding the risk of instruments measured at fair value, the volatility and impact on earnings and capital adequacy.⁷ When a bank has made significant transfers between asset categories involving assets reported at their fair values, the supervisor may also want to obtain additional supplemental information about these transfers.

To assess the engagement of senior management in valuation issues, supervisors may request valuation reports provided to the board or information from assessments by external auditors or by a bank's internal auditors or independent risk management groups.

Where there is material uncertainty surrounding valuation practices and where feasible, supervisors may consider undertaking test portfolio exercises. Supervisors should ensure that such exercises are not viewed as providing model validation.

Principle 10

Supervisors should evaluate a bank's financial instruments valuation practices including relevant governance, risk management and control practices; and incorporate their evaluation when assessing capital adequacy.

Supervisors expect banks to promptly address any deficiencies identified by internal and external auditors with respect to their valuations and related corporate governance, controls, risk management and disclosure policies and practices. When supervisors bring any risk management or control deficiencies regarding valuations and related processes to the attention of management, they should consider the full range of supervisory measures at their disposal to ensure that deficiencies receive appropriate attention from management and are corrected in a timely manner. Supervisory responses could include the following approaches and measures:

- Communicating supervisors' concerns routinely to the bank's senior management and supervisors' significant concerns to the bank's board and evaluating management's and the board's responses as to how they are addressing these concerns.

⁷ The Committee's Supervisory guidance on the use of the fair value option for financial instruments by banks (June 2006) includes examples of supplemental information that supervisors would find useful in assessing a bank's use of the fair value option.

- Factoring into supervisory ratings any concerns with respect to a bank's fair value practices (eg factoring this into prudential risk management or capital adequacy assessments).
- Taking informal or formal supervisory actions (which can be of a non-public or public nature) requiring management and the board to remedy the deficiencies in a specified timeframe and to provide the supervisor with periodic written progress reports.

While supervisors expect banks to have strong processes and controls and to promptly correct deficiencies, there may be certain circumstances in which deficiencies exist and warrant some adjustments to regulatory capital. For example:

- A change in regulatory classification of financial instruments may be necessary for capital adequacy or regulatory reporting purposes. This may be the case if a bank exhibits weaknesses in the valuation processes or controls relating to trading book positions or if a bank is not reporting fair valued financial instruments for regulatory purposes consistent with the way the bank measures and manages risk.
- If a bank exhibits significant weaknesses in its risk management policies, systems and controls related to valuations, this may result in a supervisory determination that the bank needs to hold more capital in relation to its overall risk exposure (eg under Pillar 2 of the Basel II Framework). Furthermore, if such weaknesses call into question the reliability of the fair values, it is appropriate in certain circumstances for a supervisor to exclude from or make adjustments to Tier 1 capital for the associated unrealised gains (and perhaps non-impairment losses), or require other prudential adjustments for capital purposes (eg for potential overstatement of fair value based on a third party valuation).