

**Framework for Supervisory Information about
Derivatives and Trading Activities**

**Joint Report by the
Basle Committee on Banking Supervision
and the
Technical Committee of the
International Organization of Securities Commissions
("IOSCO")**

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Executive Summary

This paper enhances the supervisory information framework that was jointly published in May 1995 by the Basle Committee on Banking Supervision and the Technical Committee of the International Organization of Securities Commissions (IOSCO) to assess the derivatives activities of banks and securities firms. The 1995 framework has been widely implemented by banking and securities authorities for supervisory purposes, and has also served as a basis for collecting periodic data on worldwide derivatives markets.

The purpose of this revision is to keep pace with financial innovation and progress in risk management practices for trading and derivatives activities, particularly with regard to market risk. This initiative is part of the continuing effort by the Basle Committee and by IOSCO to monitor the trading and derivatives activities of banks and securities firms. In this regard, this revision builds upon earlier work of the two Committees, including the 1994 joint release of guidelines for improving risk management of derivatives activities and subsequent risk management guidance, and the 1995 joint recommendations for enhancing public disclosure in this important area that were presented in annual joint disclosure survey reports since that year. Moreover, since the initial release of the joint supervisory information framework for derivatives the Basle Committee amended its Capital Accord in 1996 to address market risk and in 1997 issued risk management guidance on interest rate risk that applies to banks. In addition, IOSCO has been exploring options for capturing market risk in the capital adequacy and risk management standards that apply to securities firms.

Given the continuing expansion of trading and derivatives activities in a context of volatile market conditions, it is important that supervisors further improve their understanding of how such activities affect the overall risk profile and profitability of banks and securities firms. The framework therefore presents examples of the type of information that the two Committees believe should be available within regulated firms and their material affiliates active in the derivatives markets or with significant exposure to market risks, and that should be accessible to supervisors. While the 1995 supervisory information framework concentrated on derivatives, the 1998 update expands the framework to more comprehensively address the market risk exposure arising from trading in both cash and derivatives instruments.

Mindful of the need to limit regulatory burden, the framework provides for flexible ways to collect supervisory information, including on-site examinations and external audits, discussions with institutions, special surveys, as well as regular reporting procedures. The framework also encourages supervisors to draw from internal information systems that banks and securities firms are developing to monitor their exposure to the various risks embedded in trading and derivatives activities. Furthermore, this reporting framework is meant to be consistent with the risk management standards and capital adequacy requirements that may be applicable to global banks and securities firms.

The overall supervisory information framework presented in this paper consists of two main parts. The first is a catalogue of data that the Committees have identified as important for an evaluation of the risks present in trading and derivatives activities, and that supervisors may build upon as they expand their reporting system. The second is a common minimum framework of internationally harmonised baseline information about derivatives activities (a subset of the catalogue) that the two Committees recommend that supervisors have available to them. The common minimum framework, while focusing primarily on information useful for assessing institutions' overall involvement in derivatives activities and their credit risk, has been expanded in this revision to illustrate information which is useful for assessing the market risk of trading and derivatives activities. The overall paper is organised into three sections, each of which is summarised below.

I. Introduction

In addition to providing a general overview of the paper, the introduction discusses a series of basic principles that underlie the overall supervisory information framework. These include the following:

- Supervisory data should be comprehensive, i.e. it should cover all types of derivative instruments and their major related risks and shed light on how derivatives contribute to an institution's overall business and risk profile. Where appropriate, derivatives positions should be evaluated together with related on-balance-sheet positions (e.g., for the purpose of assessing market risks and earnings). Quantitative information on derivatives needs to be evaluated in the context of qualitative information on an institution's overall risk profile and its ability to manage this risk.

- Supervisors should attempt to obtain a comprehensive picture of an institution's derivatives activities across different legal entities and jurisdictions.
- The trading and derivatives activities of an institution can change rapidly, affecting an institution's risk profile and profitability. Data on these activities should therefore be assessed with sufficient frequency to give a meaningful and timely picture of the risks faced by an institution.
- To limit the regulatory burden, supervisors are encouraged to draw on information that banks and securities firms generate for internal purposes. There should be as much consistency as possible between information obtained for reporting purposes and data that institutions must already compile for the purpose of complying with other supervisory requirements. In light of the different institutional, accounting and public policy approaches to supervision across the member countries of the two Committees, each supervisory authority has flexibility to implement the common minimum framework in a manner best suited to its regulatory environment.
- Each supervisor would apply the common minimum framework to internationally active institutions with significant derivatives operations, with flexibility also to extend the framework to other institutions with significant involvement in derivatives.

II. Catalogue of information for supervisory purposes

The catalogue of data items represents information that supervisors have identified as important for assessing the risks arising from firms' derivatives activities. It is intended to facilitate the development among supervisors of consistent conceptual methods for assessing the risk exposures related to derivatives. It is also intended to provide a basis for discussion between firms and their supervisors about the type of information that a firm should be aiming to maintain as part of its overall risk management control mechanism. In this context, supervisors should seek to ensure that the firm has both quantitative and qualitative information on its derivatives activities.

The information identified in the catalogue covers the following broad areas:

Credit risk: Credit risk is the risk that a counterparty may fail to fully perform on its financial obligations. The framework focuses on the credit risk of OTC derivatives rather than exchange-traded derivatives, for which a reduction in risk is achieved through an organised exchange or clearing house where there is payment and receipt of margin. The primary measures of credit risk are current credit exposure and potential credit exposure, taking into account the risk reducing

effects of legally enforceable netting agreements. In addition, the framework covers information on credit enhancements for both current and potential credit exposure. Finally, the framework discusses ways to assess the concentration of credit risk and counterparty credit quality.

Liquidity risk: Two types of liquidity risk that can be associated with derivative instruments are covered in the framework: market liquidity risk and funding risk. Market liquidity risk is the risk that a position cannot be eliminated quickly by either liquidating the instrument or by establishing offsetting positions. Funding risk is the risk that derivatives positions place adverse funding and cash flow pressures on an institution.

Market risk: Market risk is the risk that the value of on- or off-balance-sheet positions will be adversely affected by movements in equity and interest rate markets, currency exchange rates, and commodity prices. The framework covers two approaches for assessing market risks. One is to focus on position data that would allow independent supervisory assessment of an institution's market risks through some supervisory model. The other is to evaluate information on an institution's internal estimates of market risks. These estimates could be based on value-at-risk methodologies, as well as on other approaches such as duration analysis, or scenario methods.

Earnings: The framework discusses various types of information important for assessing the impact of derivatives on an institution's earnings profile. This includes information on trading income, broken down by broad risk classes (interest rate risk, foreign exchange risk and commodities and equities exposures), without regard to the type of instrument. The paper also suggests that a finer disaggregation of earnings could be useful for supervisory purposes. In addition, the framework discusses the importance of assessing information on both unrealised and realised derivatives losses.

Each of these areas of supervisory interest is presented in tabular form in Annexes 1 and 2 of the paper.

III. Common minimum information framework

The two Committees recommend that supervisors have available to them a minimum subset of the elements identified in the catalogue for large, internationally active banks and securities firms with significant involvement in derivatives activities. The information contained

in the common minimum framework represents a baseline of information that the Committees have identified as important for supervisors to begin assessing the nature and scope of an institution's derivatives activities and how derivatives contribute to a firm's overall risk profile. It is intended that supervisors supplement the information in the common minimum framework with other information drawn from the catalogue of data items discussed above.

The common minimum framework is illustrated in tables 1-5 of Annex 3. The common minimum framework, which initially focused on overall activity and credit risk of derivatives, has been enhanced to also address the market risk of trading and derivatives activities. In considering trading portfolios of both cash and derivatives instruments as well as non-traded derivatives, this approach is consistent with the information about market risk which global institutions typically would develop for risk management purposes and capital adequacy purposes. This extension of the common minimum framework is presented in Annexes 4 and 5 that present for banks and securities firms, respectively, two approaches to market risk information. The first approach is based on internal models that are increasingly used by global institutions for risk management purposes. The second approach is a standardised approach which may be alternatively used by institutions for capital purposes. The illustrations presented in Annexes 4 and 5 show examples of the types of information that global banks and securities firms would typically develop under these two approaches, which could then be useful for supervisory analysis.

FRAMEWORK FOR SUPERVISORY INFORMATION ABOUT DERIVATIVES AND TRADING ACTIVITIES

September 1998

I. Introduction

(a) Background

1. The Basle Committee on Banking Supervision¹ and the Technical Committee of the International Organization of Securities Commissions² (IOSCO) have been working to enhance the prudential supervision of the derivatives operations of banks and securities firms. For example, in July 1994 the Basle Committee and IOSCO jointly released documents providing guidance on the sound risk management of derivatives activities.³ Since 1995, the two Committees have published yearly surveys of disclosures about the trading and derivatives activities⁴ presented in the annual reports of global banks and securities firms. This effort is designed to encourage greater transparency in this important area.

2. The Basle Committee and IOSCO share a common interest in the effective supervision of the trading and derivatives activities of banks and securities firms and in adequate public disclosure of these activities. Their common concern prompted the Basle Committee and IOSCO

¹ The Basle Committee on Banking Supervision is a committee of banking supervisory authorities which was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States. It usually meets at the Bank for International Settlements in Basle, where its permanent Secretariat is located.

² The Technical Committee of IOSCO is a committee of supervisory authorities for securities firms in major industrialised countries. It consists of senior representatives of the securities regulators from Australia, France, Germany, Hong Kong, Italy, Japan, Malaysia, Mexico, the Netherlands, Ontario, Quebec, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

³ Examples of derivative instruments include forward contracts and their variations, such as swaps, forward rate agreements and futures contracts, and option contracts and their variations, such as caps, floors and swaptions.

⁴ For purposes of this framework, "trading and derivatives activities" refer to (a) trading activities involving on-balance-sheet instruments and off-balance-sheet derivatives and (b) non-trading derivatives activities, such as the use of derivatives to hedge the interest rate risk of the banking book.

to design and distribute the initial version of the information framework elaborated in this paper to supervisors of banks and securities firms in 1995. This framework describes information which the two Committees believe should be available within regulated firms and material affiliates active in the derivatives markets and that should be accessible to supervisors to assess the risks of derivatives and their impact on institutions' financial condition, capital adequacy and performance.

3. Moreover, this revision enhances the framework to incorporate information on financial innovations, such as credit derivatives,⁵ and enhanced information about the market risk of trading and derivatives activities.

4. Broadly defined, a derivative instrument is a financial contract whose value depends on the values of one or more underlying assets or indexes. While derivatives generally involve risks to which banks and securities firms have long been exposed, the rapid growth and complexity of these activities pose new challenges for firms and their supervisors. These challenges, together with the continuing growth of trading and derivatives activities, underscore the importance of ensuring that firms maintain and supervisors have access to meaningful, timely information concerning financial institutions' trading and derivatives activities.

5. The overall supervisory information framework advanced in this paper consists of two main components: 1) a catalogue discussing data that the Committees have identified as important for an evaluation of derivatives risks and that supervisors may choose from as they expand their reporting systems and 2) a common minimum framework of data elements (a subset of the catalogue) to which relevant supervisory authorities should have access. The catalogue component of the framework, discussed in section II, identifies the major types of risks arising from derivatives activities and the information needed to evaluate those risks. The areas identified as being of particular interest to supervisors are credit risk, market risk, liquidity risk and earnings.

⁵ Credit derivatives are financial instruments used to assume or mitigate the credit risk of loans and other assets. They may take the form of on-balance-sheet instruments (e.g., credit-linked notes) or off-balance sheet instruments (e.g., credit default swaps or total-rate-of-return swaps). Banking organisations and securities firms may employ these instruments either as end-users, purchasing credit protection or acquiring credit exposure from third parties, or as dealers intermediating such activity. End-user institutions may use credit derivatives to reduce credit concentrations, improve portfolio diversification, or manage overall credit risk exposure. Although the market for these instruments is relatively small when compared with other derivatives activities, institutions are entering into credit derivative transactions with increasing frequency.

6. This catalogue of data elements is intended to facilitate the development among supervisors of consistent conceptual methods for assessing the risk exposures related to derivatives. The catalogue is also intended to serve as a basis for discussion between firms and their supervisors about the type of information which the firm should be aiming to maintain as part of its overall risk management control mechanism. While the catalogue has been developed for both banks and securities firms, some of the items of the catalogue may be more relevant for banking supervisors than for securities firm supervisors and vice versa.

7. The common minimum framework, which is discussed in section III, represents a baseline of information that supervisors can use in assessing the impact of derivatives on an institution's overall risk profile. The minimum framework focuses to varying degrees on information relating to overall derivatives activity and to credit risk, market risk and liquidity risk. Individual supervisors can then supplement this information with other data elements drawn from the catalogue.

8. The minimum framework is also intended to provide a basis for coordinating supervisory reporting with other data collection initiatives on derivatives. In general, less information is available to supervisors on OTC derivatives than on exchange-traded derivatives, where statistics are available on the volume and value of transactions and on open interest. In the case of OTC derivatives, in most jurisdictions bank and securities supervisors do not collect information which gives an overall profile of activity in such products. At the time that the supervisory information framework was first published in 1995, such information was not available on a global basis.

9. Aggregated statistics on derivatives markets can be of significant value to supervisors. The growing use of OTC derivatives in conjunction with exchange-traded instruments reflects the financial market interrelationships between organised exchange markets, OTC derivatives activities and related underlying cash markets. This interrelationship between the markets underscores the need for supervisors to have access to timely and accurate information on OTC risk exposures of major market participants as well as the overall activity in the OTC markets.

10. In this context, a minimum level of harmonisation across G-10 countries of supervisory information about derivatives has served as an important input to the initiative of the Euro-currency Standing Committee of G-10 central banks to collect globally on a regular basis aggregate statistics on OTC and exchange-traded derivatives markets, both for macroeconomic and for macroprudential purposes. Under the Euro-currency Standing Committee initiative, data on the OTC and exchange-traded derivatives activities of larger banks and securities firms, and other major derivatives dealers will be collected and aggregated. Coordination between

supervisors and central banks on the data to be evaluated helps to reduce duplication of efforts and thus limits the reporting burden for the banking and securities industry.⁶

11. For the purpose of this overall information framework, the mechanism for supervisory data analysis is not specified, allowing for flexibility in the collection and the assessment of information. Specifically, information may be obtained and assessed through various channels such as on-site examinations, discussions with institutions, special surveys or standard reports routinely submitted to supervisors and audited financial statements and other reports submitted by external auditors. The appropriate method for gathering information depends upon the nature of the data, the institutions under review and the relevant supervisory authority. Certain information may be appropriate for all institutions whereas other types of data may be meaningful only for larger dealers.

(b) Basic principles

12. In developing an overall supervisory information framework for banks' and securities firms' derivatives activities, the two Committees have been guided by a number of basic principles. In particular, the data should be comprehensive. It should cover all types of derivative instruments and their major related risks and facilitate the supervisor's analysis of how derivatives contribute to an institution's overall business and risk profile. The two Committees recognise that derivatives activities constitute only a part of the overall activities of banks and securities firms. Consequently, derivatives should not be evaluated in isolation from the overall risks of an institution. This implies, for example, that for purposes of assessing an institution's market risk and earnings profile, a portfolio approach incorporating related cash and derivatives positions - and, thereby, also the impact of hedging and other risk management transactions - is required for meaningful interpretation. Moreover, quantitative information on derivatives activities needs to be seen in the context of qualitative information on an institution's overall risk profile and its ability to manage this risk.

13. Comprehensive evaluation of the risks of derivatives generally implies the aggregation, consolidation and assessment of information across a number of activities and legal entities. Where institutions undertake business activities which fall under the jurisdiction of different

⁶ The G-10 central bank Governors in January 1997 approved, for implementation from June 1998, a proposal by the Euro-currency Standing Committee (ECSC) for the regular collection of statistics on derivatives markets through reporting by leading market participants. The reporting framework is based on a July 1996 ECSC report entitled "*Proposals for improving Global Derivatives Statistics*" and is closely linked to the joint Basle Committee/IOSCO supervisory information framework.

supervisors, or where certain affiliates are not supervised, supervisors should discuss with regulated firms how best to assess information that provides a comprehensive, timely picture of the risks associated with their overall derivatives and related activities. Bank supervisors should attempt to obtain information about these activities on a consolidated basis, while recognising the legal distinctions among subsidiaries.

14. Data on trading and derivatives activities should be assessed with sufficient frequency and timeliness to give a meaningful picture of an institution's risk profile. Derivatives activities may change dramatically due to changes in the types of derivatives products involved and whether institutions are end-users of such products to manage their risks or are acting as dealers. Changes in derivatives products and the role of an institution as an end-user or dealer can affect the impact of derivatives on an institution's risk profile and profitability. Therefore, it is important for supervisors to be aware of new derivative instruments in a timely manner (particularly about higher risk and more complex instruments), how they are being used by institutions and how institutions' risk management systems are being enhanced to address these new developments. Moreover, it is important for supervisors to be aware in a timely manner of significant increases in the derivatives exposures of banks and securities firms.

15. The two Committees are aware of the potential costs associated with requests by supervisors for additional information on institutions' derivatives activities and recognise that additional information requirements should only arise where there is a clear supervisory need. To limit the regulatory burden, supervisors are encouraged to draw on information that banks and securities firms generate for internal purposes, where appropriate, for assessing the impact of derivatives activities on financial condition and performance. Moreover, there should be as much consistency as is possible between information obtained for reporting purposes and data that institutions must already compile to comply with other supervisory requirements. The overall information framework should be sufficiently flexible to permit the incorporation of new market innovations without requiring frequent updating of the framework itself. The two Committees recognise that different institutional, accounting and public policy approaches to supervision require that each supervisory authority has flexibility to implement the common minimum framework in a manner best suited to its regulatory environment. Each supervisor would apply the common minimum framework to internationally active institutions with significant derivatives operations, with flexibility also to extend the framework to other institutions with significant involvement in derivatives or material exposure to market risks.

16. The common minimum information framework has been constructed with the aim of achieving the assessment of understandable and meaningful information about the trading and derivatives activities of banks and securities firms that could facilitate comparisons across

institutions and, where possible, across countries. In this regard, it is intended that the overall information framework contributes to simplifying the regulatory reporting environment for banks and securities firms operating internationally. To the extent that the information is used for aggregation purposes, the Committees recognise the importance of ensuring that the process of aggregation not prejudice the confidentiality of information obtained on individual institutions by their supervisory authorities.

II. Catalogue of information for supervisory purposes

17. In monitoring the activities of a financial institution involved in derivatives, supervisors need to be satisfied that the firm has the ability to measure, analyse and manage these risks. In order to achieve these objectives, supervisors should seek to ensure that the firm has both quantitative and qualitative information on its derivatives activities.

18. *Quantitative information.* Quantitative information about derivatives activities should address the following broad areas:

- credit risk
- liquidity risk
- market risk of trading and derivatives activities
- effect on earnings

Recognising that exchange-traded and OTC derivatives generally differ in their credit risk, liquidity risk and the potential for complexity, the overall reporting framework distinguishes between exchange-traded and OTC derivatives in identifying information needed for supervisory assessment. Each of the four broad areas is discussed in greater detail in sections 1 to 4 below.

19. In addition, quantitative information about derivatives activities should enable institutions and their supervisors to monitor the volume of these activities and identify broad trends in how derivatives are used by the organisation. For example, when properly categorised, summary information on notional amounts of derivatives can be helpful in identifying trends in an institution's involvement with various types of derivatives (e.g., swaps, futures, forwards, and options), whether derivatives are exchange-traded or over-the-counter (OTC), the broad risk categories with which they are associated (e.g., interest rate risk, foreign exchange risk,

commodities risk, equity risk), and their maturity.⁷ Moreover, notional amounts can be used to identify broad purposes for derivatives activity, such as whether derivatives are held for trading or other purposes. Since exchange-traded derivatives, such as futures and options, may not have market values disclosed in financial statements due to the frequency of settlement of exposures and variation margin payments required by the exchange clearing houses, information on the notional amounts of these derivatives can be particularly helpful in identifying a build-up in such contracts. Information on market values provides supervisors with an alternative to notional amounts for gauging an institution's involvement in OTC derivatives markets.

20. In assessing the risk categories mentioned above, supervisors should consider the impact of internal deals on the risk profile and profitability of institutions.

21. *Qualitative information.* In order to effectively evaluate banks' and securities firms' derivatives activities and related risks, supervisors should assess qualitative information about institutions' systems, internal controls, policies and practices for measuring and managing the risks of derivatives. This includes, for example, information on the risk limits that banks and securities firms use to manage their exposures and any changes in these limits. The risk management guidelines for derivatives, which were issued by the two Committees in July 1994 and which highlight key attributes of the risk management systems of banks and securities firms, may be used as a guide in requesting information on institutions' systems, policies and practices.⁸ In addition, in September 1997 the Basle Committee issued principles for the management of interest rate risk. This guidance may be helpful to bank supervisors in requesting information on institutions' systems, policies, and practices for managing interest rate risk and their use of derivatives for this purpose.

22. The quality of the institution's risk management processes and internal controls for derivatives activities (including the quality of related regulatory reports) may be evaluated in reports prepared by the institutions' independent risk management/control units, internal auditors, external auditors, consultants and other experts. Supervisors can gain important insights into the quality of risk management and internal controls, and reported information about risk profiles by reviewing reports on these topics.

⁷ While helpful for these purposes, aggregate notional amounts are not measures of the derivatives' risk exposures.

⁸ "Risk Management Guidelines for Derivatives", Basle Committee on Banking Supervision, July 1994 and "Operational and Financial Risk Management Control Mechanisms for Over-the-Counter Derivatives Activities of Regulated Securities Firms", Technical Committee of IOSCO, July 1994.

23. The following sections describe in greater detail the different elements of the framework for supervisory information about derivatives activities. The narrative discussion is summarised in tabular form in Annex 1. In Annex 1, two columns are provided for each of the major risk categories. The first column identifies a supervisory concern or use, and the second column describes the information that could be applicable to that use. Explanations follow that summarise how each data item might be used or why it is important from a supervisory perspective. In general, the data and related explanations reflect widely accepted concepts and techniques for measurement of risk exposure that are based on new developments in practice. Some information elements address multiple supervisory uses listed in the first column of Annex 1. To summarise such overlaps, Annex 2 cross-references the information elements with the supervisory uses that have been identified.

1. Credit risk

24. Credit risk is the risk that a counterparty may fail to fully perform on its financial obligations. With respect to derivatives, it is appropriate to differentiate between the credit risk of exchange-traded and OTC instruments. Owing to the reduction in credit risk achieved by organised exchanges and clearing houses, supervisors may need to evaluate less information on exchange-traded derivatives for credit risk purposes than on OTC instruments. Accordingly, the following discussion on credit risk pertains primarily to OTC contracts.⁹

25. The Committees recognise that the notional amount of OTC derivative contracts does not reflect the actual counterparty risk. Credit risk for an OTC contract is best broken into two components, current credit exposure to the counterparty and the potential credit exposure that may result from changes in the market value underlying the derivative contract.

26. To the extent possible, credit risk from derivatives should be considered as part of an institution's overall credit risk exposure. This should include exposure from other off-balance-sheet credit instruments such as standby letters of credit as well as the credit risk from on-balance-sheet positions. Moreover, since organisations are increasingly using credit derivatives

⁹ Credit risk is of most concern in the case of OTC derivative contracts since exchange clearing houses for derivatives employ risk management systems that substantially mitigate credit risks to their members. Both futures and options exchanges typically mark exposures to market each day. In the case of futures exchanges, members' exposures to the clearing house are eliminated each day, and often intra-day, through variation margin payments. In the case of options exchanges, clearing house exposures to written options are fully collateralised.

to adjust their credit risk exposures, supervisors should be aware of the involvement of institutions with credit derivatives and their impact on institutions' overall credit risk exposure.

(a) Current credit exposure

27. Current credit exposure is measured as the cost of replacing the cash flow of contracts with positive mark-to-market value (replacement cost) if the counterparty defaults. Legally enforceable bilateral netting agreements can significantly reduce the amount of an institution's credit risk to each of its counterparties. These netting agreements can extend across different product types such as foreign exchange, interest rate, equity-linked and commodity contracts. Therefore, an institution's current credit exposure from derivative contracts is best measured as the positive mark-to-market replacement cost of all derivative products on a counterparty by counterparty basis, taking account of any legally enforceable bilateral netting agreements.

28. For individual institutions, breaking out the gross positive and negative market values of contracts may have supervisory value by providing an indication of the extent to which legally enforceable bilateral netting agreements reduce an institution's credit exposure.

(b) Potential credit exposure

29. In light of the potential volatility of replacement costs over time, prudential analysis should not only focus on replacement cost at a given point in time but also on its potential to change. Potential credit exposure can be defined as the exposure of the contract that may be realised over its remaining life due to movements in the rates or prices underlying the contract. Since legally enforceable bilateral netting agreements can significantly reduce the amount of an institution's credit risk to each of its counterparties, measures of potential credit exposure can take account of these agreements. For banks, under the requirements of the 1988 Basle Capital Accord, potential exposure is captured through a so-called "add-on", which is calculated by multiplying the contract's gross or effective¹⁰ notional principal by a conversion factor that is based on the price volatility of the underlying contract. Bank supervisors should therefore evaluate information on the add-ons that banks must already compile for their risk-based capital calculations. Such information could include notional amounts by product category (i.e. interest rate, foreign exchange, equities, precious metals and other commodities) and by remaining maturity (i.e. one year or less, over one year to five years and more than five years). The Basle Accord defines remaining maturity as the maturity of the derivative contract. However,

¹⁰ Effective notional principal is obtained by adjusting the notional amount to reflect the true exposure of contracts that are leveraged or otherwise affected by the structure of the transaction.

supervisors could also take into account information on the instrument underlying the derivative contract.

30. Some banks and securities firms have developed sophisticated simulation models that may produce more precise estimates of their potential credit exposures than under the add-ons approach, and supervisors may wish to take account of the results of these models. These models are generally based on probability analysis and techniques modelling the volatility of the underlying variables (exchange rates, interest rates, equity prices, etc.) and the expected effect of movements of these variables on the contract value over time. Estimates of potential credit exposure by simulations are heavily influenced by the parameters used (a discussion of the major parameters that can influence simulation results is included in the market risk section below). Supervisors and firms should discuss the parameters and other aspects of the models to ensure an appropriate level of understanding and confidence in the use of such models.

(c) Credit enhancements

31. Information on credit enhancements used in connection with OTC derivative transactions is important to an effective supervisory assessment of the credit risk inherent in an institution's derivatives positions. Collateral can be required by an institution to reduce both its current and potential credit risk exposure. Collateral held against the current exposure of derivative contracts with a counterparty effectively reduces credit risk and, therefore, merits supervisory attention. However, supervisors need to consider the legal enforceability of netting agreements and the quality and marketability of collateral.¹¹ For supervisory analysis purposes, collateral held by an institution in excess of its netted credit exposure to a counterparty would not reduce current credit exposure below zero but could reduce potential credit exposure. Supervisors could obtain a better understanding of how collateral reduces credit risk by collecting information separately on collateral with a market value less than or equal to the netted current exposure to the counterparty and collateral with market values in excess of the netted current exposure and of the nature of that collateral.

32. OTC contract provisions that require a counterparty to post initial collateral (or additional collateral as netted current exposure increases) may be used to reduce potential credit exposure. An OTC contract that is subject to a collateral or margin agreement may have lower potential

¹¹ For example, supervisors could obtain additional insights through information on OTC contracts with collateral recognised under the Basle Capital Accord (for banks) and OTC contracts with other readily marketable, high quality securities as collateral.

exposure, since collateral would be required in the future to offset any increase in credit exposure. Accordingly, information about the notional amount and market value of OTC contracts subject to collateral agreements could enhance supervisory understanding of an institution's potential credit risk.

(d) Concentration of credit risk

33. As with loans, an identification of significant counterparty OTC credit exposures relative to an institution's capital is important for an evaluation of credit risk. This information should be evaluated together with qualitative information on an institution's credit risk controls. To identify significant exposures and limit reporting burden, supervisors could focus on those counterparties presenting netted current and potential credit exposure above a certain threshold. As a minimum, supervisors could identify the ten largest counterparties to which an institution is exposed, subject to the minimum threshold used.

34. Since counterparty exposure may stem from different instruments, overall risk concentrations with single counterparties or groups of counterparties cannot be measured accurately if the analysis is limited to single instruments (e.g., swaps) or classes of instruments (e.g., OTC derivatives). For this reason, institutions should aim to monitor counterparty exposures on an integrated basis, taking into consideration both cash instruments and off-balance-sheet relationships. Supervisors could also consider information on exposure to counterparties in specific business sectors or to counterparties within a certain country or region. Since credit derivatives may be used to adjust a company's credit risk concentration, supervisors should consider how the institution reflects the impact of credit derivatives when evaluating exposures to counterparties, including those in specific business sectors, countries or regions.

35. Supervisors could also analyse information on aggregate exposures to various exchanges, both on- and off-balance-sheet, and on exposures to certain types of collateral supporting derivative instruments. Overexposure to specific issues or markets can lead to additional credit concerns, particularly in the case of banks and securities firms with significant activity in securities markets. Some securities supervisors address this concentration risk by deducting from capital all positions above a certain level of market turnover or by applying some other suitable benchmarks. Supervisors without such provisions should ensure that they are at least informed about these concentrations, whether in the form of holdings of the underlying security itself or in the form of OTC derivatives positions which require the firm to deliver or receive such concentrated positions.

36. Many financial institutions are developing or purchasing credit risk models. These models, once validated and fully integrated into the risk management process of the financial

institution, can be used to conduct stress testing or scenario analysis. Scenarios can reflect past historical credit cycles, periods of market distress, or forward-looking analysis of current vulnerabilities, especially those which could impact the financial institution. The results of such stress testing/scenario analysis, especially when based on a thoughtful assessment of the model's underlying assumptions, could be helpful in identifying concentrations, especially complex concentrations involving multiple sectors or risk factors.

(e) Counterparty credit quality

37. Credit risk is jointly dependent upon credit exposure to the counterparty and the probability of the counterparty's default. Information on the current and potential credit exposure to counterparties of various credit quality would increase supervisory insights into the probability of credit loss. Information indicative of counterparty credit quality includes total current and potential credit exposure - taking into account legally enforceable bilateral netting agreements - to counterparties with various characteristics, e.g., Basle Capital Accord risk weights (for banks), credit ratings assigned by rating agencies, or the institution's internal credit rating system. Information on guarantees, standby letters of credit, or other credit enhancements may also enhance supervisory understanding of credit quality. Aggregate information on past-due status and past-due information by major counterparties, together with information on actual credit losses, may be of particular interest for identifying pending counterparty credit quality problems in the OTC derivatives markets.

38. As financial institutions employ credit risk models, measures of credit risk and analyses of credit derived from these models may be useful to supervisors (together with other information on the credit risk of the institution's positions and activities), such as analyses of the relationship of risk and return in the overall credit portfolio, the marginal contribution to overall risk of business lines or credit portfolios, and other measures.

2. Liquidity risk

39. As with cash instruments, there are two basic types of liquidity risk that can be associated with derivative instruments: market liquidity risk and funding risk.

(a) Market liquidity risk

40. Market liquidity risk is the risk that a position cannot be eliminated quickly by either liquidating the instrument or by establishing an offsetting position. Information that breaks out exchange-traded and OTC derivatives could further *enhance* supervisory understanding of an institution's market liquidity risk. Although exchange-traded and OTC markets both contain liquid and illiquid contracts, the basic differences between the two markets give an indication of

the comparative difficulty of offsetting exposures using other instruments.¹² Among both OTC and exchange-traded products, information on broad risk categories (i.e., interest rate, foreign exchange, equities and commodities) and types of instrument would be useful in judging the market liquidity of an institution's positions. Accordingly, notional amounts and market values of exchange-traded and OTC instruments by type (and perhaps by maturity and by product) could enhance a supervisor's understanding of an institution's market liquidity risk. In addition, supervisors could gain important insights into an institution's market liquidity by taking into account the availability of alternative hedging strategies and closely substitutable instruments.

41. To understand the market liquidity risk arising from an institution's derivatives activities, supervisors would benefit greatly from a picture of the aggregate size of the market in which the institution is active. This is particularly important for OTC derivatives, which are generally tailored to the specific needs of customers and for which marking to market is more difficult than for standardised products with liquid markets. As a result, it may be difficult to unwind *or offset* a position in an appropriate time frame because of its size, the availability of suitable counterparties, or the narrowness of the market. Currently available information on notional values of derivative instruments provides, at best, an incomplete indication of the aggregate size of the market for a particular derivative instrument or of an institution's participation in that market. An alternative, yet still imperfect, measure of market size would be the gross positive and gross negative market values of contracts by risk category or product. Such data would provide an indication of the economic or market value of the derivative instruments held by banks and securities firms in a particular market at a point in time and an institution's concentration in that market.

(b) Funding risk

42. Funding risk is the risk of derivatives activities placing adverse funding and cash flow pressures on an institution. Funding risk stemming from derivatives alone provides only a partial picture of an institution's liquidity position. In general, funding risk is best analysed on an institution-wide basis across all financial instruments. However, it is also important for supervisors to understand the impact of derivatives on an institution's overall liquidity position. In unusual circumstances, some derivatives activity can be indicative of underlying funding pressures. Unusual increases in the volumes of options written and the presence of swaps

¹² Market illiquidity may stem from the customised nature of some OTC contracts which can include fundamental elements of market risk in combinations that may not be easily replicated using standardised exchange-traded contracts or other OTC instruments.

structured to generate a net cash inflow at inception can be, but are not at all necessarily, signs of an unusual or urgent need for cash.

43. Separate analysis of notional contract amounts of exchange-traded and OTC instruments (as described earlier) should augment supervisory awareness of funding risks, particularly given the requirements for margin and daily cash settlement of exchange-traded instruments and the resulting demands for liquidity that large positions in these instruments may entail. For example, significant positions in OTC contracts hedged with exchange-traded instruments could result in liquidity pressures arising from the daily margin and cash requirements of the exchange-traded products. Data on OTC contracts with collateral or other "margin-like" requirements may also be necessary for assessing liquidity risk. In addition, information about the notional amounts and expected cash flows of derivatives according to specified time intervals would be helpful in assessing funding risk.

44. Information on OTC contracts subject to "triggering agreements" provides further information about funding risk. Triggering agreements generally entail contractual provisions requiring the liquidation of the contract or the posting of collateral if certain events, such as a downgrade in credit rating, occur. Substantial positions in contracts with triggering agreements could increase funding risk by requiring the liquidation of contracts or the pledging of collateral when the institution is experiencing financial stress. Accordingly, information on the total notional amount and replacement cost of OTC contracts (aggregated across products) with triggering provisions provides supervisors with important information about liquidity risk.

45. Supervisors should also consider evaluating information based on institutions' sensitivity analyses of the effect of adverse market developments on their funding requirements. This information would shed light on the potential for additional margin or collateral calls associated with exchange-traded and OTC derivatives positions due to changes in market variables such as interest rates and exchange rates.

3. Market risk

46. Market risk is the risk that the value of on- or off-balance-sheet positions will decline before the positions can be liquidated or offset with other positions. Supervisors should assess information on market risk by major categories of risk, such as interest rates, foreign exchange rates, equity prices and commodity prices. The market risk of derivatives is best assessed for the entire institution and should combine cash and derivatives positions. The assessment should cover all types of activities generating market risks. Supervisors may also consider breakdowns of positions at the level of individual portfolios, including, in the case of banks, trading and non-trading activities.

47. Supervisors will be interested in some or all of the following data: (a) position data that would allow independent supervisory assessment of market risk through the use of some supervisory model or monitoring criteria and (b) data derived from an institution's own internal estimates of market risk. To minimise burden, supervisory assessment of market risks based on position data or internal models should start with and draw as much as possible on the information that institutions must collect for supervisory capital purposes. For example, in the case of the banking sector, information that banks use to determine their compliance with the Basle Committee's market risk capital requirements should be considered by supervisors when assessing banks' market risks. In addition, supervisors should assess the position information and internal estimates of market risk that institutions use for other risk management purposes that go beyond information related to market risk capital requirements.

48. The collection of position data could be carried out at various levels of detail, depending on the nature and scope of the institution's trading and derivatives activities. The detail can range from a broad measure of exposure at the portfolio level to a finer disaggregation by instrument and maturity. For certain institutions, particularly those that are not major dealers, it may be appropriate to obtain position data (e.g., equities, debt securities, foreign exchange and commodities), which could be drawn from the framework of the Basle Committee's standardised approach for market risk,¹³ or from other approaches adopted by national banking and securities supervisors.

49. For example, banking organisations using the Basle Committee's standardised approach to determine their minimum market risk capital charge typically would develop the following position data:¹⁴

¹³ "Amendment to the Capital Accord to incorporate market risks", Basle Committee on Banking Supervision, January 1996.

¹⁴ In evaluating this type of position data, supervisors should understand the qualitative criteria underlying these reported amounts and implications for the comparability of position information across institutions, and should adapt their reporting requirements accordingly. For example, under the Basle Accord's standardised approach, national supervisors may allow either full offsetting of positions or restrict offsetting of positions between different entities within a banking organisation. In assessing this information, supervisors should understand whether the market risk capital information is presented by the institution on a group-wide, consolidated basis and the extent of off-setting between entities within the group.

Interest rate risk positions

- General market risk - long and short positions broken down by time-bands according to residual maturity or to duration; breakdown of positions by currency (main currencies relative to the activity of the firm [for supervisory purposes] or all G-10 currencies [for G-10-wide aggregation exercise]).
- Specific risk - breakdown of positions according to issuer (government, qualifying, other) and, to some extent, maturity.

Equity risk positions

- Long and short positions broken down by major markets; breakdown by issuer types; futures-related and index-based arbitrage strategies.

Foreign exchange risk positions

- Net long or net short position by currency (including gold).

Commodities risk positions

- Net long or short position by commodity type.

Options Risk (for all risk categories)

- Delta equivalents of portfolios of options.
- Gamma and vega risk.

This information is used by banks to determine their minimum capital charge for general and specific market risk under the standardised approach. This information is illustrated further in Annex 5.

50. As an alternative or supplement to assessing position data, supervisors could evaluate available information on an institution's internal estimates of market risk. For some institutions, this information could be derived from their internal value-at-risk methodology, which involves the assessment of potential losses due to adverse movements in market prices of a specified probability over a defined period of time. As an alternative to value-at-risk, supervisors may find it useful on a case-by-case basis to assess internally-generated information on earnings-at-risk,¹⁵ duration analysis, stress scenario analyses, or any other appropriate approach that sheds light on

¹⁵ Under mark-to-market accounting, value-at-risk will equal earnings-at-risk because changes in value are reflected in earnings. If accrual accounting is applied to certain positions, value-at-risk and earnings-at-risk will differ because all changes in value are not reflected in earnings.

an institution's market risk. Whatever the approach taken, supervisors should consider the measure of market risk exposure in the context of the institution's limit policies.

(a) Value-at-risk estimates

51. If a firm uses value-at-risk models for measuring market risks, the supervisor should evaluate in detail the methodology used, including its main parameters, for both market risk capital purposes and other risk management purposes. Key parameters for evaluating value-at-risk estimates include: (1) position sensitivities, (2) the market risk volatility and correlation assumptions of the underlying model (using historical volatilities), (3) the holding period over which the change in portfolio value is measured, (4) the confidence interval used to estimate exposure, (5) the historical sample period over which risk factor prices are observed, (6) the method of estimation, (7) the approach to nonlinear risk, and (8) the approach to specific risk.

52. Value-at-risk measured solely at a point in time may not provide appropriate insights about market risk due to the speed with which positions in derivatives and other instruments can be altered. Such difficulties may be addressed by the use of summary statistics for the period over which the institution is reporting. For example, supervisors could assess information on the highest value-at-risk number measured during the reporting period, together with monthly or quarterly averages and related ranges of value-at-risk exposures. By comparing end-of-period value-at-risk with these other measures, supervisors can better understand the volatility which has occurred in these measures during the period. However, time series of daily value-at-risk estimates are more informative than averages or ranges.

53. Supervisors could also encourage or require institutions to convey comparisons of daily value-at-risk estimates with daily changes in actual portfolio value over a given period.¹⁶ Internal models should be validated by comparing past estimates of risk with actual results and by assessing the models' major assumptions (often referred to as "backtesting"). For example, an institution could periodically compare its one-day, 99 percent confidence interval value-at-risk estimates with the daily profits and losses for the entire trading portfolio. Institutions should also periodically evaluate the major assumptions underlying their internal models used for market risk capital purposes and other risk management purposes. Time series of value-at-risk estimates, histograms of daily trading profits and losses, and other internally-produced backtesting results

¹⁶ The report of the Euro-currency Standing Committee, a discussion paper entitled, "*Public Disclosure of Market and Credit Risks by Financial Intermediaries*", issued in September 1994 (Fisher Report), discusses factors to consider in interpreting value-at-risk measures, among other topics.

can be very useful to supervisors in assessing the accuracy of value-at-risk estimates used for market risk capital purposes and other risk management purposes.¹⁷

54. Value-at-risk estimates may be provided on an aggregate basis for the entire trading portfolio. In addition, value-at-risk estimates are particularly informative when provided on the basis of major trading risk categories (e.g., interest, foreign exchange, equity or commodity) or business line of the institution. Moreover, some institutions supplement their value-at-risk estimates for trading activities with those for their end-user activities, as well as a consolidated measure for the entire institution.

(b) Stress test information

55. Institutions with significant trading activities should subject their portfolios on a regular basis to stress tests using various assumptions and scenarios.¹⁸ Institutions' stress scenarios need to cover a range of factors that can create extraordinary losses or gains in trading portfolios, or make the control of risk in those portfolios very difficult. These factors include low-probability events in all major types of risks. Stress scenarios should provide insights into the impact of such events on positions that have both linear and non-linear price characteristics.

56. These analyses of the portfolio under "worst-case" scenarios should preferably be performed on an institution-wide basis and should include an identification of the major assumptions used. Quantitative information on the results of stress scenarios, which could be specified by supervisors or institutions themselves (or a combination of both approaches), coupled with qualitative analyses of the actions that management might take under particular scenarios, would be very useful for supervisory purposes. Examples of scenarios for interest rate risk include a parallel yield curve shift of a determined amount, a steepening or flattening of the yield curve, or a change of correlation assumptions. Simulations could include testing the current portfolio against past periods of significant disturbance, such as those involving the largest one-

¹⁷ For banking organisations, the Basle Committee's discussion paper entitled, "*Supervisory Framework for the use of "Backtesting" in Conjunction with the Internal Models Approach to Market Risk Capital Requirements*", issued in January 1996, explains issues related to the use of backtesting in assessing the accuracy of model-generated risk measures.

¹⁸ Banks that use the internal models approach for meeting the Basle Committee's market risk capital requirements must have in place a rigorous and comprehensive stress testing programme. Stress testing is a key component of a bank's assessment of its capital position. Under the Basle Committee's market risk capital requirements, supervisors may ask banks using the internal models approach to provide information on stress testing in three broad areas: (a) supervisory scenarios requiring no simulations by the bank, (b) scenarios requiring a simulation by the bank, or (c) scenarios developed by the bank itself to capture the specific characteristics of its portfolio.

day, five-day, and 30-day gains and losses, significant past “events” (e.g., the 1987 major stock market decline, the ERM crises of 1992 and 1993, and the 1997 Asian financial crises), and other stress events.

(c) Information on the quality of market-risk information processes

57. The quality of the processes and models that generate value-at-risk estimates, stress scenarios, and other measures of market risk, including the adequacy of related internal controls, may be evaluated in reports prepared by the institutions’ independent risk management/control units, internal auditors, external auditors, consultants and other experts. Supervisors can gain important insights into the quality of market risk information by reviewing reports on these topics (and, when available, supporting documentation for these reports).

4. Earnings

58. As with cash market instruments, the profitability of derivatives activities and related on-balance-sheet positions are of interest to supervisors. The separate effects on income of trading activities and activities other than trading would also be of interest.

59. Accounting standards and valuation techniques differ from country to country and many member supervisors have little or no legal authority in this area. The Committees therefore recognise that earnings information identified under this framework may not be fully comparable across member countries.

(a) Trading purposes

60. Many sophisticated market participants view cash and derivative instruments as ready substitutes; their use of derivatives is complementary to cash instruments and positions in financial instruments are often managed as a whole. For supervisors to consider information that concentrates solely on derivatives and to omit similar data on cash instruments could be misleading. In this context, the decomposition of trading revenues (from cash and derivative instruments) according to broad risk classes - interest rate risk, foreign exchange risk, commodities and equities exposures, or other risks to the firm - without regard to the type of instrument that produced the trading income, may better describe the outcome of overall risk-taking by the organisation.

61. The systems of some banks or securities firms may not decompose trading revenues by broad categories of risk. Under these circumstances, simplifying assumptions can be used to approximate this categorisation of income. For example, if a particular department of an institution typically handles domestic bonds and related derivatives, it may be appropriate to consider trading gains and losses on these instruments as interest related income. Further, the

income from complex instruments that are exposed to both foreign exchange and interest rate risk could be classified according to the primary attribute of the instrument (e.g., either as a foreign currency or an interest rate instrument).

62. Finer disaggregation of trading revenue within risk categories, for example, by origination revenue, credit spread revenue and other trading revenue could be useful in evaluating an organisation's performance relative to its risk profile.¹⁹ However, even those dealers with sophisticated information systems may not now be able to differentiate income beyond broad risk categories. As the analytical abilities and systems of market participants evolve, it may be desirable to consider supervisory information that differentiates between revenue earned from meeting customer needs and that earned from other sources. Furthermore, as market participants' systems evolve, it may be desirable for supervisors to evaluate information that differentiates between trading revenue earned from cash and derivatives positions in each broad risk category. As with cash instruments, a rapid build-up of material trading losses on derivative instruments may indicate deficiency in an institution's risk management systems and other internal controls that it should promptly evaluate and correct.

(b) Purposes other than trading

63. Information about derivatives held for purposes other than trading (end-user derivatives holdings) can also be useful to supervisors. For example, quantitative information that includes the effect on reported earnings of off-balance-sheet positions held by the organisation to manage interest rate and other risks would be useful. When combined with information on other factors affecting net interest margins and interest rate sensitivity, this could provide insight into whether derivatives were being used to reduce interest rate risk or to take positions inconsistent with this objective.

(c) Identifying unrealised or deferred losses

64. As with cash instruments, any material build-up of unrealised losses or losses that have been realised but deferred by the institution may be an area of supervisory interest. At a minimum, the detection of such losses, and particularly, an accumulation of such losses, should prompt supervisory inquiry. Derivative contracts with unrealised losses or deferred losses may reduce future earnings and capital positions when these losses are reflected in profits and losses

¹⁹ As industry participants have recognised, trading revenue components may include: (1) origination revenue that results from the initial calculation of the market value of new transactions; (2) credit spread revenue that results from changes during the period in the unearned credit spread; and (3) other trading revenues resulting from changes in the value of the portfolio due to market movements and the passage of time.

for accounting purposes. Therefore, when unrealised losses or deferred amounts are material, it is important for supervisors to consider an institution's plans for reflecting these losses in their reported profits and losses for accounting purposes. Moreover, a rapid build-up of material unrealised or deferred losses may indicate a deficiency in an institution's internal controls and accounting systems that it should promptly evaluate or correct.

(d) Derivatives valuation reserves and actual credit losses

65. Supervisors should assess information on the valuation reserves that an institution has established for its derivatives activities and on any credit losses on derivative instruments that the institution has experienced during the period. In assessing these valuation reserves and any credit losses, it is important to understand the institution's risk management policies and valuation practices regarding derivatives. In addition, supervisors should determine how the institution reflected valuation reserves and credit losses in its balance sheet and income statement. Information on valuation reserves and the treatment of credit losses is useful in understanding how adverse changes in derivatives risks can affect an institution's financial condition and earnings.

III. Common minimum information framework

(a) Overview

66. The two Committees recommend that member supervisors have available to them a minimum subset of the catalogue of data items listed in the above section for large internationally active banks and securities firms with significant derivatives activities. This common minimum framework is presented in Annex 3 and focuses primarily on information relating to credit risk, market liquidity risk and overall market activity. Annex 6 provides common definitions for the concepts used in the common minimum reporting framework.

67. The common minimum framework represents a baseline of information that the Committees have identified as important for supervisors to begin assessing the nature and scope of an institution's derivatives activities and how derivatives contribute to an institution's overall risk profile. Based on considerations such as an institution's size and business activities, supervisors may wish to supplement the information of the common minimum framework with other information drawn from the catalogue presented in the previous section. It is expected that supervisors would revisit the common minimum framework periodically to ensure that it is in line with activities of banks and securities firms, market innovations and the state of supervisory reporting at the level of individual member countries.

68. For instance, credit derivatives are an example of a market innovation that is increasingly used by institutions to adjust their credit risk exposure. The footnotes to the common minimum framework have been revised to reflect the possibility that supervisors may wish to obtain summary information on new forms of derivative instruments, such as credit derivatives. This may be helpful in monitoring the growth of new forms of derivative instruments.

69. In addition, the common minimum framework presented in the original report issued in May 1995 did not include information on the market risk of trading and derivatives activities. However, the original report recognised that supervisory capital standards for market risks could serve as a basis for assessing comparable information on these risks. Therefore, this update presents examples of information useful for assessing market risk of trading and derivatives activities (including information developed by institutions in response to market risk capital requirements) in Annexes 4 and 5. Annex 4 presents examples of this information for banks and securities firms under an internal models approach and Annex 5 presents examples of this information for institutions under a standardised approach.

70. As anticipated in the May 1995 report, the development of the common minimum framework of information has also supported the efforts of the Euro-currency Standing Committee of G-10 central banks to collect, on a regular basis, aggregate market data on the derivatives activities of financial institutions.²⁰ Compilation and disclosure of aggregate market data on derivatives activities can serve a useful supervisory function. For example, disclosure of aggregate market data could give supervisors a better picture of how concentrated an institution's activities are in a particular product. Such coordination of data collection initiatives between banking and securities supervisors and central banks also can contribute to limiting the reporting burden for the banking and securities industries.

(b) Description of minimum framework tables

71. The elements of the common minimum framework are summarised in Tables 1 through 5 of Annex 3. The tables are intended to illustrate the information under the minimum framework and do not reflect required reporting forms.

72. Table 1 provides information for understanding the scope and nature of an institution's involvement in the derivatives markets. The table provides notional amounts by broad category of risk (interest rate, exchange rate, precious metals, other commodities and equities) and by

²⁰ As previously mentioned, the Euro-currency Standing Committee is implementing in June 1998 a regular reporting framework to obtain aggregate market data on derivatives, as announced on 27 January 1997.

instrument type (forwards, swaps and options). The table also gives supervisors a picture of whether the institution is primarily involved in OTC derivatives or exchange-traded contracts. Finally, the information helps supervisors understand whether derivatives are being used for trading purposes or for purposes other than trading such as hedging, which is particularly relevant for banking institutions. As indicated in footnote number 1, supervisors are also encouraged to obtain separate information on certain instruments, particularly on leveraged and other high-risk derivative instruments, and summary information to monitor the development of innovative instruments, such as credit derivatives.

73. Table 2 summarises the minimum information for assessing the market values (gross positive and gross negative) by broad risk categories, including a distinction between contracts that are held for trading purposes and those held for purposes other than trading (generally, this distinction is of more relevance to banking supervisors). The information on market values provides supervisors with an alternative to notional amounts for gauging an institution's involvement in the derivatives markets. In addition, information on positive and negative market values enables supervisors to determine if an institution is a net creditor or borrower. Identifying market values for contracts other than trading can shed light on an institution's risk management strategy and the extent to which it may be exposed to a significant build-up of unrealised losses. Finally, in addition to market values, Table 2 illustrates that information on potential credit exposure by major category of risk should be considered an element of the minimum framework.

74. Table 3 identifies information on the notional amounts of derivatives by broad category of risk and by maturity (one year or less, over one year through five years, over five years). Given the importance of maturity information for assessing the risks of options, these are broken out in a separate line item for each of the broad risk categories.

75. Table 4 focuses on counterparty credit risk taking into account the credit quality of the counterparty. The counterparty credit quality categories are sufficiently flexible to allow for the application of the Basle Capital Accord risk-weighting framework for banks, as well as an approach based on either rating agency grades or on the equivalent internally generated ratings of an institution. The measurement of counterparty credit exposure incorporates the impact of legally enforceable netting agreements as well as the use of collateral and guarantees. Furthermore, the table provides extra information on the quality and value of collateral and guarantees associated with derivative instruments.

76. Table 5 supplements the information on credit quality contained in Table 4 by focusing on instruments that are past-due by 30-89 days and by 90 days or more, and on actual credit losses. The information in the over 90-day category could also include information on derivatives that in the institution's assessment will not be fully collectible though they are currently

performing. The table indicates the flexibility for supervisors to apply different maturity breakdowns if their national reporting systems do not use the time intervals presented in the minimum framework. In addition, information on the credit losses arising from derivatives activities is included as part of the minimum framework.

77. Annexes 4 and 5 present examples of information useful for assessing market risk for both the standardised approach and internal models approach often used by global institutions. Annex 4 presents examples of this information for banks and securities firms under an internal models approach and Annex 5 presents examples of this information for institutions under a standardised approach.

Annex 1: Framework for Supervisory Information on Derivatives and Trading Activities

<i>Use</i>	<i>Description</i>
I. Credit Risk (OTC Contracts)	Risk of loss (aggregated across all activities) due to counterparty default. To the extent possible, credit risk from on- and off-balance-sheet instruments should be considered together.
(A) Current Credit Exposure	Positive Replacement Cost: <ol style="list-style-type: none"> 1. Netted to reflect legally enforceable bilateral netting agreements (also consider average and range of values over reporting period). 2. Gross by type - interest rate, foreign exchange, equity, precious metals and other commodities.
(B) Potential Credit Exposure Data allowing independent supervisory assessment of exposure.	Gross Notionals <ol style="list-style-type: none"> 1. By type - interest rate, foreign exchange, equity, precious metals and other commodities. 2. Maturity - one year or less, over one year through five years, over five years.
Data reflecting institution's assessment using internal models.	Internally-generated estimates of potential credit risk calculated by counterparty and summed. Utilise model specifications and parameters that are either designated by the supervisor, or currently employed by the individual institutions in the risk management process.
(C) Credit Enhancements Collateral - How much of credit exposure is collateralised?	Market value of collateral held against netted current and potential exposure.
Collateral Agreements - How much of potential exposure is subject to collateral agreements?	Notional amount and market value of contracts with agreements to provide additional collateral, should credit exposure increase.
(D) Concentrations of Credit	Number of counterparties with current and potential credit exposures greater than a specified minimum level of the reporter's capital. Total exposure to these counterparties (positive net replacement cost and potential credit exposure). Counterparty credit exposure is better evaluated by taking into consideration both cash-instrument and off-balance-sheet relationships. Supervisors may also wish to obtain information on an institution's aggregate exposures to various exchanges and on their exposures to certain types of collateral.
(E) Counterparty Credit Quality	Total positive net replacement cost and potential credit exposure by counterparty credit quality (by Basle Capital Accord risk-weights, by rating agency grades, or by internal ratings). Information on past-due status and actual credit losses, by major counterparties and in the aggregate.

Framework for Supervisory Information on Derivatives and Trading Activities

<i>Use</i>	<i>Description</i>
II. Liquidity Risk	<p>Market liquidity risk - risk that position cannot be liquidated or hedged.</p> <p>Funding risk - insufficient cash-flow or liquid assets to meet cash-flow requirements. (In addition to information below, information about the notional amounts and expected cash flows of derivatives according to specified time intervals.)</p>
(A) Identify potential market liquidity exposures.	<p>Notional amounts and market values for exchange-traded and OTC derivatives by market and product type:</p> <ul style="list-style-type: none"> - OTC <ul style="list-style-type: none"> • Interest Rate - forwards, swaps, amortising swaps, option products • Foreign Exchange - forwards, swaps, option products • Equities • Commodities and other - Exchange-Traded Futures and Options <ul style="list-style-type: none"> • Interest rate • Foreign exchange • Equity • Commodity and other <p>Notional amounts and expected cash in and outflows by maturities.</p>
(B) Identify OTC contracts with triggering provisions.	<p>Notionals and positive and negative market value of contracts with triggering provisions (this information combined gives a picture of the net flows, in and out, resulting from contracts with triggers):</p> <ul style="list-style-type: none"> - that require the institution to liquidate or post collateral in the wake of adverse events affecting it; - that the institution can require its counterparty to liquidate or post collateral in the wake of adverse events affecting that counterparty.
(C) Market activity	<p>Notional amounts and gross positive and gross negative market value of derivatives by risk category and contract type. This data could be aggregated across institutions to provide information on total market size.</p>

Framework for Supervisory Information on Derivatives and Trading Activities

<i>Use</i>	<i>Description</i>
III. Market Risk of Trading and Derivatives Activities	<p>Risk of loss from adverse changes in market prices - data will need to be collected separately for trading and non-trading portfolios.</p> <p>Data could be collected by broad risk category (i.e., interest rate, foreign exchange, equities, commodities, etc.).</p> <p>Market risk best assessed from a portfolio context.</p>
Position data allowing independent supervisory assessment using the standardised approach.	<p>For example:</p> <ul style="list-style-type: none"> - Net open positions (longs minus shorts) by risk category (interest rate, foreign exchange, equities, commodities). - For equity contracts, net open positions by individual issues. - For interest rate and commodities contracts, net open positions by maturities. Duration information on interest rate positions. - Options could be included on a delta-equivalent basis. <p>Other data for alternative supervisory models or screening criteria.</p>
Data on institution's internal assessment of market risk. (internal models approach)	<p>Internally generated estimate of market risk through a value-at-risk (VaR) methodology, earnings-at-risk, duration or gap analysis, or some other methodology. For information on VaR, can use model specifications and parameters that are either designated by supervisors or currently employed by individual institutions in the risk management process. These include:</p> <ol style="list-style-type: none"> 1. Position sensitivities 2. Market risk factor volatilities 3. Market risk factor correlations 4. Historical sample period and holding period 5. Confidence interval <p>Information on the average and range of VaR estimates over the reporting period more informative than point in time estimates.</p> <p>Internal model validation information:</p> <ol style="list-style-type: none"> 1. Comparisons of estimated risk vs. actual results - back-testing 2. Major assumptions underlying models
Results of stress tests. The stress test could be specified by supervisors, the institution itself, or by a combination of both.	<p>Analysis of likelihood of "worst case" scenarios, preferably on an institution-wide basis.</p> <p>Identification of major assumptions.</p> <p>Qualitative analysis of actions management might take under particular scenarios.</p>

Framework for Supervisory Information on Derivatives and Trading Activities

Use

Description

IV. Earnings	
(A) Trading purposes	Revenues from trading activities (derivatives and cash instruments) by risk type (interest rate, foreign exchange, equities, commodities and other) or by major trading desks (bonds, swaps, FX, equities, etc).
(B) Purposes other than trading	Impact on net income: net increase (decrease) in interest income, net increase (decrease) in interest expense and other (non-interest allocations).
(C) Identify unrealised or deferred losses	Notional amounts, market values and unrealised losses of derivatives held on an accrual basis. Amount of realised losses on derivatives that have been deferred. Could be collected either by instrument or in total.
(D) Derivatives valuation reserves and actual credit losses	Amount of valuation reserves or provisions and actual credit losses, and their earnings impact.

Annex 2: Derivatives data elements and their uses

Element	Use
1. Gross or Effective Notionals: OTC by Contract Type Exchange-Traded by Contract Type Position (Long and Short)	Credit and Liquidity Risks Credit and Liquidity Risks Market Risk
2. Positive Net Replacement Cost	Credit Risk
3. Gross Positive Market Value by Broad Risk Category	Market Activity, Credit Risk and Liquidity Risk
4. Gross Negative Market Value by Broad Risk Category	Market Activity and Liquidity Risk
5. Collateral	Credit Risk (Current and Potential Credit Exposure)
6. Contracts with Collateral Agreements	Potential Credit Exposure and Liquidity Risk
7. Counterparty Exposures Identified by Risk Weight or Investment Rating (Positive Net Replacement Cost and Potential Credit Exposure)	Credit Risk (Counterparty Credit Quality)
8. Notional Amounts for Broad Risk Categories of Derivatives by Maturities	Potential Credit Exposure, Market Risk, Liquidity Risk
9. Internal Estimate of Potential Credit Exposure	Credit Risk (Potential Exposure)
10. Counterparties with Significant Netted Credit Exposure	Concentration of Credit Risk

Element	Use
11. Contracts with Triggering Provisions	Liquidity Risk
12. Market Value of Contracts Held for Other than Trading	Earnings, Credit Risk
13. Internal "Value-at-Risk" Estimates by Broad Risk Categories (Including Interest Rates, Foreign Exchange Rates, Commodity and Equity Prices)	Market Risk
14. Position Data (Longs and Shorts) for Debt Securities, Equities, Foreign Exchange and Commodities	Market Risk
15. Trading Revenues (Cash and Derivative Instruments) by Risk Type (Includes Interest Rate, Foreign Exchange, Equity, Commodity, etc.)	Earnings
16. Impact on Net Income (Net Interest Income, Net Interest Expense and Other Non-interest Allocations) of Derivatives Held for Purposes Other Than Trading	Earnings
17. Unrealised and Deferred Losses	Earnings
18. Valuation Reserves and Credit Losses	Earnings, Credit Risk

Annex 3: Common minimum information framework

Table 1: Notional amounts by underlying exposures

Notional amounts¹	Interest rate contracts	Foreign exchange and gold contracts²	Precious metals (other than gold) contracts	Other commodity contracts	Equity-linked contracts
OTC contracts					
Forwards					
Swaps					
Purchased options					
Written options					
Exchange-traded contracts					
Futures - long positions					
Futures - short positions					
Purchased options					
Written options					
Total contracts held for trading³					
Total contracts held for other than trading					

1. While included in this table's aggregate information, supervisors may wish to obtain separate information on certain categories of higher risk derivative instruments *or summary information on new forms of derivatives (e.g., credit derivatives)*, as appropriate.
2. This does not include spot foreign exchange, which may be assessed as a separate item. While included in the aggregate information in this column, for securities firms, information on the notional amounts of gold contracts should be evaluated separately.
3. For purposes of these totals, all derivative instruments of securities firms will be considered to be in the "contracts held for trading" category.

Common minimum information framework

Table 2: OTC Notional amounts, market values and potential credit exposure

Total notionals, market values and potential credit exposure¹	Interest rate contracts	Foreign exchange and gold contracts²	Precious metals (other than gold) contracts	Other commodity contracts	Equity-linked contracts
Total notional amounts³					
Contracts held for trading purposes⁴					
(a) Gross positive market value					
(b) Gross negative market value					
Contracts held for other than trading					
(a) Gross positive market value					
(b) Gross negative market value					
Potential credit exposure⁵					

1. While included in this table's aggregate information, supervisors may wish to obtain separate information on certain categories of higher risk derivative instruments, as appropriate.
2. This does not include spot foreign exchange, which may be assessed as a separate item. While included in the aggregate information in this column, for securities firms, information on the notional amount, market value and potential future exposure of gold contracts should be evaluated separately.
3. The "total notional amounts" reflected on this line are the sum of the notional amounts of the OTC contracts summarised in Table 1.
4. For purposes of these totals, all derivative instruments of securities firms will be considered to be in the "contracts held for trading" category.
5. For banks, information on potential credit exposure should be in accordance with the Basle Capital Accord. Securities firms should use approaches acceptable to their regulator in estimating these amounts.

Common minimum information framework

Table 3: OTC derivative contracts' notional amounts by time intervals

OTC Contracts ¹	One year or less	Over one year through five years	Over five years
(a) Interest rate contracts			
Purchased options			
(b) Foreign exchange and gold contracts ²			
Purchased options			
(c) Precious metals (other than gold) contracts			
Purchased options			
(d) Other commodity contracts			
Purchased options			
(e) Equity-linked contracts			
Purchased options			

1. While included in this table's aggregate information, supervisors may wish to obtain separate information on certain categories of higher risk derivative instruments, as appropriate.
2. This does not include spot foreign exchange, which may be assessed as a separate item. While included in the aggregate information in this column, for securities firms, information on the notional amounts (by time intervals) of gold contracts should be evaluated separately.

Note: The information in this table is based on the remaining maturity of the derivative instrument. Supervisors may also want to evaluate information about options (by the broad risk categories noted above) based on the maturity of the underlying.

Common minimum information framework

Table 4: Information on credit quality of OTC derivative contracts

Counterparty credit quality*	Exposure before collateral and guarantees			Credit equivalent amount after collateral & guarantees
	Gross positive market value	Current credit exposure	Potential credit exposure	
1				
2				
3				
Total				

Credit quality*	Collateral	Guarantees
1		
2		
3		

*** Credit quality categories would be defined as follows**

1. For banks, category 1 identifies counterparties given a 0% risk weight under the Basle Capital Accord.
For securities firms, category 1 identifies counterparties rated AA and above.
2. For banks, category 2 identifies counterparties given a 20% risk weight under the Basle Capital Accord.
For securities firms, category 2 identifies counterparties rated BBB and above.
3. For banks, category 3 identifies counterparties given a 50% risk weight under the Basle Capital Accord.
For securities firms, category 3 identifies counterparties rated below BBB.

Note: When basing the above categories on ratings, an institution's equivalent internal credit grade ranking may be used when investment ratings are not available. Moreover, in addition to using the credit quality categories based on Basle Accord risk weights, bank supervisors may wish to assess the above information by credit ratings assigned by external rating agencies or by an institution's internal credit grade rankings.

Common minimum information framework

Table 5: Information about past-due OTC derivatives and credit losses¹

Book value of derivatives past-due 30-89 days	
Book value of derivatives past-due 90 days or more ²	
Gross positive market value of derivatives past due 30-89 days	
Gross positive market value of derivatives past-due 90 days or more ²	
Credit losses on derivative instruments during the period	

1. Certain countries may apply different maturity breakdowns when assessing past-due derivatives.

Also, supervisors may wish to consider information on derivatives that have been restructured due to deterioration in counterparty credit quality or past-due status, together with information on collateral and guarantees supporting these exposures.

While included in this table's aggregate information, supervisors may wish to obtain separate information on certain categories of higher risk derivative instruments, as appropriate.

2. Information about derivatives that are past due 90 days or more should also include information about derivatives that, while not technically past-due, are with counterparties that are not expected to pay the full amounts owed to the institution under the derivative contracts.

Annex 4: Examples of market risk information under an internal models approach²¹

1. Examples of Value-at-Risk (VaR) information

The channels for collecting summary information, such as the type of information shown below, should be flexible, as discussed in the catalogue section. The risk management reports of well-managed institutions provide timely and accurate information on the main sources of risk within each broad category (e.g., showing the interest rate risk which arises from positions in specific types of securities and derivatives). Moreover, comprehensive risk management reports (consistent with information that institutions use to manage their risks) usually can provide more complete and relevant market risk information than fixed-format regulatory reports.

This annex presents examples of VaR information that are routinely developed by internationally active banks and securities firms under an internal models approach.

- (a) Broad VaR data for the trading and derivatives activities of the entire bank or securities firm - at the reporting date, and the average, minimum, and maximum for the period.**

- (b) VaR information for each category below – at the reporting date, and the average, minimum, and maximum for the period. Further VaR information should be provided by risk factors or business lines or other relevant sub-categories based on the risk management structure of the banks or securities firms.**
 - Interest Rate (1)
 - Equity (1)
 - Foreign Exchange

²¹ For banks: Under the Basle Committee's guidance on market risk capital requirements (January 1996 and September 1997 amendments to the Basle Capital Accord).

- Commodities
- Correlated Risk Factors

- (1) Under the Basle Committee's September 1997 amendment to the Capital Accord, these elements could be further refined to present information on specific risk associated with these risk categories when an institution is able to model specific risk separately.

2. Background information on parameters for estimating VaR

The model review process undertaken by supervisors will serve as the main source of qualitative and quantitative information about the assumptions underlying the institution's internal models and related VaR estimates. This type of information is primarily needed at the time of model validation or on-site examination, or when significant changes in modelling techniques occur. The quantitative information must be assessed in the context of qualitative information about the institution's risk management and internal control process.

1. Confidence interval.²²
2. Holding period.²³
3. Type of risk measurement model used (e.g., variance/covariance, historical simulation, Monte-Carlo simulation).
4. The risk factors and the method of aggregation across risk factor categories (e.g., ranging from simple-sum aggregation to full recognition of correlations).
5. Method for calculating the n-day price shock (e.g., VaR based on one-day price moves scaled up to n-days or full n-day price moves).
6. Calendar dates that the historical observation period covers.
7. For interest rate risk, the number of risk factors (maturity buckets) used and the method of capturing spread risk.
8. For equity risk, the method of modelling equity risk (e.g., broad market indices, beta equivalents, or a separate risk factor for each equity).

²² For internationally active banks, the confidence interval is 99 per cent.

²³ For internationally active banks, the holding period is 10 days.

9. The treatment of options:
- Full n-day price shock or 1 day VaR scaled up by the square root of n.
 - Method of determining change in price of underlying (e.g., Monte Carlo simulation or variance/covariance approach).
 - Method of revaluation (e.g., full revaluation model or Taylor Series expansion).
 - Method of measuring volatility risk and how aggregated with other risk factors.

3. Example of stress testing information

- Basic information on scenarios applied and their impact on earnings.

4. Example of back testing information

- Supervisors may require prompt reporting about significant exceptions from backtesting programmes.
- Chart of daily VaR or daily trading income compared to daily VaR.
- Numbers of times VaR was exceeded by actual results (based on static or dynamic backtesting).

Annex 5: Examples of market risk information under a standardised approach

Describe the type of aggregation across the bank or securities firm

INTEREST RATE POSITION	Zone 1 (1)		Zone 2 (1)		Zone 3 (1)	
	Long positions	Short positions	Long positions	Short positions	Long positions	Short positions
General Risk						
Major currency 1						
Major currency 2						
...						
Major currency N						
TOTAL						
Please describe the methodology (maturity method or duration method). If different methods are used for different entities of the group, or for different portfolios, please provide separate tables.						

INTEREST RATE POSITION (2)	Government	Qualifying elements	Standard 8%	Others
Specific Risk				

EQUITY POSITIONS	Net Long Positions	Net Short Positions
Major market 1		
Major market 2		
...		
Major market N		
TOTAL		

FOREIGN EXCHANGE POSITIONS	Net Long Positions	Net Short Positions
Currency 1		
Currency 2		
Currency 3		
...		
Total Net Position		
Gold		

COMMODITIES POSITIONS	Long Positions	Short Positions
Precious Metals (excluding Gold)		
Other Commodities		

- (1) These positions should be broken down by their residual maturity or their sensitivity, according to relevant time horizons (e.g., for banks, under the Basle Committee capital rules, short-term, medium-term, or long-term time horizons may be used, with the possibility of finer time breakdowns aligned with the structure of the yield curve).
- (2) Sum of net long and net short positions

**Example of the estimation of market risk capital allocation
according to a standardised approach**

- For banks, this information relates to the capital charge under the market risk amendment to the Basle Capital Accord.
- For securities firms, this information may refer to the internally allocated capital or to the regulatory capital charge, when applicable.

RISK CATEGORY	CAPITAL ALLOCATION
INTEREST RATE	
General market risk	
- Net position (parallel shift)	
- Horizontal disallowance (curvature)	
- Vertical disallowance (basis)	
- Options (1)	
Specific risk	
EQUITY	
General market risk	
Specific risk	
Options	
FOREIGN EXCHANGE	
Options	
COMMODITIES	
TOTAL (Standardised Approach)	

(1) Additional charge for Gamma and Vega risk under Delta-Plus approach of charge for carved-out options and underlying exposure - under simplified and scenario approach.

Annex 6: Definitions for elements of the common minimum information framework

I. Introduction

This set of definitions refers to items identified in the common minimum information framework for derivative instruments. These definitions are intended to assist supervisors when analysing information about institutions' derivatives activities by improving the consistency and comparability of this information. The information presented below is intended as supplemental guidance to the notes in Tables 1-5 of the common minimum information framework *in annex 3*.

II. General concepts

(a) Broad risk categories (Tables 1 - 3)

For supervisory analysis purposes, five broad risk categories for derivative contracts are used in the common minimum information framework. Derivative contracts with multiple risk characteristics should be categorised based on the predominant risk characteristics at the origination of the contract. These five broad risk categories are summarised below.

1. ***Interest rate contracts***: Interest rate contracts are contracts related to an interest-bearing financial instrument or whose cash flows are determined by referencing interest rates or another interest rate contract (e.g., an option on a futures contract to purchase a domestic government bond). These contracts are generally used to adjust the institution's interest rate exposure or, if the institution is an intermediary, the interest rate exposure of others. Interest rate contracts include single currency interest rate swaps, basis swaps, forward rate agreements, futures contracts committing the institution to purchase or sell financial instruments with the predominant risk characteristic being interest rate risk, and interest rate options, including caps, floors, collars and corridors.

Excluded are contracts involving the exchange of one or more foreign currencies (e.g., cross-currency swaps and currency options) and other contracts whose predominant risk characteristic is foreign exchange risk, which should be evaluated as foreign exchange contracts.

Excluded are commitments to purchase and sell when-issued securities from interest rate contracts. Supervisors may wish to evaluate these separately.

2. ***Foreign exchange contracts***: Foreign exchange contracts are contracts to purchase or to sell foreign currencies or contracts whose cash flows are determined by reference to foreign

currencies. Foreign currency contracts include forward foreign exchange, currency futures, currency options, currency warrants and currency swaps. Such contracts are usually used to adjust an institution's foreign currency exposure or, if the institution is an intermediary, the foreign exchange exposure of others. Spot foreign exchange contracts can be excluded from this definition, as they are not derivative instruments. All amounts reflected as foreign exchange contracts should be translated into the institution's base (or functional) currency.

For the purpose of supervisory analysis, only one side of a foreign currency transaction should be reported. In those transactions where foreign currencies are bought or sold against an institution's base currency, include only that side of the transaction which involves the foreign currency. For example, if a US institution with a base currency of US dollars enters into a futures contract in which it purchases US dollars against Deutsche Marks, then the amount of Deutsche Marks sold would be reflected as a foreign exchange contract (in US dollar equivalent values). Consistent with this approach, in cross-currency transactions, which involve the purchase and sale of two foreign currencies, only the purchase side should be reflected in the information about foreign exchange contracts.

For purposes of this analysis, bank supervisors should evaluate gold contracts together with foreign exchange contracts. Supervisors of banks and securities firms may also wish to evaluate information about gold contracts separately.

3. ***Precious metals (other than gold) contracts:*** All contracts that have a return, or portion of their return, linked to the price of silver, platinum or palladium contracts, or to an index of precious metals other than gold, should be reflected in this broad risk category.
4. ***Other commodity contracts:*** Other commodity contracts are contracts that have a return, or a portion of their return, linked to the price of or to an index of a commodity such as petroleum, lumber, agricultural products, or to non-ferrous metals such as copper or zinc. Other commodity contracts also include any other contracts that are not appropriately categorised as interest rate, foreign exchange and gold, other precious metals or equity derivative contracts.
5. ***Equity-linked contracts:*** Equity-linked derivative contracts are contracts that have a return, or a portion of their return, linked to the price of a particular equity or to an index of equity prices, such as the Standard and Poor's 500 or the Nikkei.

(b) Purposes for holding derivative instruments (Tables 1-2)

1. ***Contracts held for trading purposes:*** Contracts held for trading purposes include those used in dealing and other trading activities accounted for at market value (or at lower of

cost or market value) with gains and losses recognised in earnings. Derivative instruments used to hedge trading activities should also be reflected as derivatives held for trading purposes.

Derivative trading activities include (a) regularly dealing in interest rate contracts, foreign exchange contracts, equity derivative contracts and other off-balance-sheet commodity contracts; (b) acquiring or taking positions in such items principally for the purpose of selling in the near term or otherwise with the intent to resell (or repurchase) in order to profit from short-term price movements; or (c) acquiring or taking positions in such items as an accommodation to customers.

2. ***Contracts held for purposes other than trading:*** Derivative contracts that are held for purposes other than trading include (a) off-balance-sheet contracts used to hedge debt and equity securities not in the institution's trading accounts; (b) foreign exchange contracts that are designated as, and are effective as, economic hedges of items not in trading accounts; and (c) other off-balance-sheet contracts used to hedge other assets or liabilities not held for trading purposes. Included in this information is the notional amount or par value of contracts such as swap contracts intended to hedge interest rate risk on commercial loans that are accounted for on a historical cost basis.

(c) Notional amounts (Tables 1 - 3)

1. ***General concepts:*** Notional amounts reflect the gross par value (e.g., for futures, forwards and option contracts) or the notional amount (e.g., for forward rate agreements and swaps), as appropriate, for all off-balance-sheet contracts. These contracts should be evaluated under the broad risk categories summarised in II.(a). Furthermore, these notional amounts should be stated in local currency.

For purposes of the common minimum information framework, the notional amount or par value for an off-balance-sheet derivative contract with a multiplier component is the contract's *effective* notional amount or par value. For example, a swap contract with a stated notional amount of \$1,000,000 whose terms call for quarterly settlement of the difference between 5% and LIBOR multiplied by 10 has an effective notional amount of \$10,000,000.

2. ***Special considerations for gold contracts, precious metals (other than gold) contracts and other commodity contracts:*** The contract amount for commodity and other contracts should be the quantity, i.e. number of units, of the commodity or product contracted for purchase or sale multiplied by the contract price of a unit.

The notional amount for a commodity contract with multiple exchanges of principal is the contractual amount multiplied by the number of remaining payments (or exchanges of principal) in the contract.

3. ***Special considerations for equity-linked contracts:*** The contract amount for equity derivative contracts is the quantity, i.e. number of units, of the equity instrument or equity index contracted for purchase or sale multiplied by the contract price of a unit.
4. ***Notional amounts of OTC derivatives by time intervals (Table 3):*** Table 3 summarises the notional amounts or par value of OTC off-balance-sheet contracts included in Tables 1 and 2 that are subject to credit risk. (For banks, these OTC contracts are subject to risk-based capital requirements.) Such contracts include swaps, forwards and OTC purchased options. The notional amounts and par values should be presented in the column corresponding to the contract's remaining term to maturity from the evaluation date. For supervisory analysis purposes, the remaining maturities are (1) one year or less; (2) over one year through five years; and (3) over five years. Supervisors may also want to evaluate information about purchased options based on the maturity of the underlying.

This information on notional amounts should not reflect the notional amount for single currency interest rate swaps in which payments are made based upon two floating rate indices, so-called floating/floating or basis swaps; foreign exchange contracts with an original maturity of fourteen days or less; and futures contracts.

The notional amount for an amortising off-balance-sheet derivative contract is the contract's current (or, if appropriate, effective) notional amount. This notional amount should be reflected in the column corresponding to the contract's remaining term to final maturity.

(d) Gross positive and negative market values (Tables 2, 3 and 5 present information on gross positive market values; Table 2 presents information on gross negative market values)

1. The market value of an off-balance-sheet derivative contract is the amount at which a contract could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. If a quoted market price is available for a contract, the market value for that contract is the product of the number of trading units of the contract multiplied by that market price. If a quoted market price is not available, the institution's best estimate of market value could be used, based on the quoted market price of a similar contract or on valuation techniques such as discounted cash flows. Market values should be reflected in the local currency of the institution.

2. Gross positive market values represent the loss that an institution would incur in the event of a counterparty default, as measured by the cost of replacing the contract at current market rates or prices. (This measure does not reflect reductions in credit exposure that would occur under legally enforceable netting arrangements.)

(e) Current credit exposure (Table 4)

1. Current credit exposure (sometimes referred to as the replacement cost) is the market value of a contract when that value is positive. Current credit exposure amounts for OTC off-balance-sheet derivative contracts reflect consideration of the effects of applicable legally enforceable bilateral netting agreements.
2. For banks, current credit exposure amounts should be consistent with the risk-based capital standards. The current credit exposure is zero when the market value is negative or zero. Current credit exposure should be derived as follows: determine whether a legally enforceable bilateral netting agreement is in place between the institution and a counterparty. If such an agreement is in place, the market values of all applicable contracts with that counterparty that are included in the netting agreement are netted to a single amount. Next, for all other contracts covered by the risk-based capital standards that have positive market values, the total of the positive market values is determined. Then, current credit exposure is the sum of (i) the net positive market values of applicable contracts subject to legally enforceable bilateral netting agreements and (ii) the total positive market values of all other contracts covered by the risk-based capital standards.

The definition of a legally enforceable bilateral netting agreement for purposes of this item is the same as that set forth in the risk-based capital rules.

(f) Information on credit quality of OTC derivative contracts (Table 4)

1. Gross positive market value and current credit exposure have been defined in II.(d) and II.(e) above.
2. Potential credit exposure is the exposure of the derivative contract that may be realised over its remaining life due to movements in the rates or prices underlying the contract.

For banks, under the Basle Capital Accord, potential credit exposure is reflected through a so-called "add-on", which is calculated by multiplying the contract's gross or effective notional value by a conversion factor based on the price volatility of the underlying contract. There are separate factors for interest rate contracts, foreign exchange and gold contracts, precious metals (other than gold) contracts, other commodities contracts and equity-linked contracts - distinguishing between the remaining maturity of the contract (i.e.

one year or less, over one year to five years and more than five years). The add-ons may also take account of the effects of legally valid netting agreements. For banks, information on potential credit exposure should be consistent with bank supervisory guidelines, including risk-based capital standards.

Securities firms should use approaches acceptable to their regulators in estimating potential credit exposure.

3. For banks, information on the manner in which collateral and guarantees reduce current and potential credit exposure should be consistent with the Basle Capital Accord. For securities firms, information on the effects of collateral and guarantees should reflect approaches that are acceptable to their regulators.

(g) Information about past-due derivatives (Table 5)

1. The "book value" of past-due derivatives is the amounts, if any, that are recorded as assets by the institution in its balance sheet. These amounts may include amounts accrued as receivable for interest rate swaps, the unamortised amount of the premium paid for an interest rate cap or floor, or the market value of a derivative contract in a gain position that has been recorded as an asset (e.g., in a trading account) on the balance sheet.
2. The "gross positive market value" of past-due derivatives is consistent with the definition of "gross positive market value" presented above (II.(d)). These gross positive market values should be evaluated regardless of whether they have been recorded as assets on the balance sheet. This information should not include the market value of derivative instruments with negative market values.
3. Credit losses include declines in positive market values for derivatives that are associated with deteriorating counterparty credit quality, when the mark to market values of these derivatives have been recorded on the balance sheet. Credit losses may also include write-offs of the book value of derivatives - taking these write-offs against provisions (allowances) for credit losses.

III. Definitions of specific types of derivatives

(a) Futures contracts

Futures contracts represent agreements for delayed delivery of financial instruments or commodities in which the buyer agrees to purchase and the seller agrees to deliver, at a specified future date, a specified instrument at a specified price or yield. Futures contracts

are standardised and are traded on organised exchanges where the exchange or a clearing house acts as the counterparty to each contract.

(b) Forward contracts

Forward contracts represent agreements for delayed delivery of financial instruments or commodities in which the buyer agrees to purchase and the seller agrees to deliver, at a specified future date, a specified instrument or commodity at a specified price or yield. Forward contracts are not traded on organised exchanges and their contractual terms are not standardised.

(c) Option contracts

1. Option contracts convey either the right or the obligation, depending upon whether the institution is the purchaser or the writer, respectively, to buy or sell a financial instrument or commodity at a specified price on or before a specified future date. Some options are traded on organised exchanges. Also, options can be written to meet the specialised needs of the counterparty to the transaction. These customised option contracts are known as over-the-counter (OTC) options. Thus, over-the-counter option contracts include all option contracts not traded on an organised exchange.
2. The buyer of an option contract has, for compensation (such as a fee or premium), acquired the right (or option) to sell to, or purchase from, another party some financial instrument or commodity at a stated price on or before a specified future date. The seller of the contract has, for such compensation, become obligated to purchase or sell the financial instrument or commodity at the option of the buyer of the contract. A put option contract obligates the seller of the contract to purchase some financial instrument or commodity at the option of the buyer of the contract. A call option contract obligates the seller of the contract to sell some financial instrument or commodity at the option of the buyer of the contract.
3. In addition, swaptions, i.e. OTC options to enter into a swap contract, and OTC contracts known as caps, floors, collars and corridors, should be reflected as options for supervisory analysis purposes.
4. Generally, options such as a call feature that are embedded in loans, securities and other on-balance-sheet assets and commitments to lend are not included in the supervisory analysis reflected in Tables 1 - 5. Supervisors may wish to evaluate these embedded options separately in certain situations.
5. *Purchased options*: When assessing information on purchased options in Table 1, this information should reflect the aggregate notional or par value of the financial instruments

or commodities which the institution has, for a fee or premium, purchased the right to either purchase or sell under exchange-traded or OTC option contracts that are outstanding as of the evaluation date. Also, include in OTC purchased options an aggregate notional amount for purchased caps, floors and swaptions and for the purchased portion of collars and corridors.

6. *Written options*: When evaluating information on written options for Table 1, this information should reflect the aggregate notional or par value of the financial instruments or commodities that the institution has, for compensation (such as a fee or premium), obligated itself to either purchase or sell under exchange-traded or OTC option contracts that are outstanding as of the evaluation date. Also reflect as written options the aggregate notional amount for written caps, floors and swaptions and for the written portion of collars and corridors.

(d) Swaps

Swaps are OTC transactions in which two parties agree to exchange payment streams based on a specified notional amount for a specified period. Forward starting swap contracts should be evaluated as swaps. The notional amount of a swap is the underlying principal amount upon which the exchange of interest, foreign exchange or other income or expense is based. The notional amount for a swap contract with a multiplier component is the contract's effective notional amount. In those cases where the institution is acting as an intermediary, both sides of the transaction should be reflected in the information in Table 1.

(e) Credit Derivatives

1. For purposes of the common minimum framework, credit derivatives are arrangements that allow one party (the "beneficiary") to transfer the credit risk of a "reference asset," which it may or may not actually own, to another party (the "guarantor"). These instruments allow the guarantor to assume the credit risk associated with a reference asset without directly purchasing it.
2. Under some credit derivative arrangements, the beneficiary may pay the total return on a reference asset, including any appreciation in the asset's price, to a guarantor in exchange for a spread over funding costs plus any depreciation in the value of the reference asset (a "total rate-of-return swap"). Alternatively, a beneficiary may pay a fee to the guarantor in exchange for a guarantee against any loss that may occur if the reference asset defaults (a

"credit default swap"). Other types of on-balance-sheet instruments exist with features that are similar to the credit derivatives discussed above.