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Level of application: All institutions

Consultation Paper 35

Consultation paper on the management of operational risks in market-related activities

1. Introduction

1. In accordance with Article 22 of Directive 2006/48/EC (CRD), *“home Member States shall require that every credit institution have robust governance arrangements which include a clear organisational structure with well defined transparent and consistent lines of responsibility, effective processes to identify and manage, monitor and report the risks it is or might be exposed to, and adequate internal control mechanisms, including sound administrative and accounting procedures. These arrangements, processes and mechanisms shall be comprehensive and proportionate to the nature, scale and complexity of the credit institution’s activities”*.
2. As with any type of business, appropriate governance mechanisms and internal control systems are crucial for preventing the occurrence of operational risk events in the context of market-related activities and for mitigating their impact on the institution’s books. Most market-related operational risk events are associated with rogue trading, unauthorized or leverage operations or are inherent in the complexity of instruments, new products, model risks and the rapid increase in the number of operations. Institutions have focused their attention on market risk and, as a result, have overlooked the importance of operational risks.
3. Past and recent cases show that when institutions do not adhere to basic principles of sound internal governance, the severity of operational risk events in market-related activities can be very high, jeopardising the institution’s earnings, the existence of the particular business area or even the existence of the whole institution. As an example, the failure of internal governance mechanisms, at multiple levels, was the main cause of the rogue trading event discovered at SocGen in early 2008¹.

¹ The stock-take carried out by the CEBS in the first half 2008 across the main EU firms on the effects of the SocGen event identified the following elements of sound internal

4. Against this backdrop, the high level principles on Internal Governance set out in Section 2 of the "Guidelines on the Application of the Supervisory Review and Evaluation Process (SREP) under Pillar 2" (CEBS GL3, issued in January 2006), the "High-level principles for Risk Management" (CEBS CP24, released for consultation in April 2009) and the "High-level principles for Remuneration Policies" (CEBS paper issued in April 2009)², are the primary reference tools institutions should consider at a general level to prevent and mitigate operational risks in market-related activities.
5. The objective of this paper is to complement this framework of high-level guidelines with more specific principles and implementation measures for the identification, assessment, control and monitoring of operational risks in market-related activities.
6. In particular, this paper aims to highlight supervisory expectations relating to specific arrangements, procedures, mechanisms and systems in trading areas that could prevent or mitigate operational risk events. The subject is addressed from three different angles, described in the following sections - Governance mechanisms (Section 2), Internal controls (Section 3) and Reporting systems (Section 4).
7. The content of the paper is limited to the management of operational risks in market-related activities and is not intended to cover the management of the other types of risk that usually characterise this kind of business³.
8. While these guidelines are relevant to all institutions, the principle of proportionality should be taken into account in their application. Accordingly, the level of sophistication of governance mechanisms, internal controls and reporting systems for the management of operational risks in market-related activities should be commensurate with the complexity and magnitude of these activities within the individual institution.

governance as the main firewall against such types of events: four eyes principles, segregation of functions and responsibilities, IT based controls, transparent and consistent reporting lines, high management awareness of the types of business and risks in trading areas, sound culture and appropriate incentive mechanisms at all levels of organization. The results of the stock-take can be downloaded at <http://www.c-ebs.org/getdoc/60a5f02c-1649-4fbd-9b2e-6b5410ba2cfb/20080718survey.aspx>

² The GL03, CP24 and the paper on remuneration policies can be downloaded at <http://www.c-ebs.org/getdoc/00ec6db3-bb41-467c-acb9-8e271f617675/GL03.aspx>, http://www.c-ebs.org/getdoc/0861a22e-0eb8-4449-9b3a-f4b1959267c7/CP24_High-level-principles-for-risk-management.aspx and <http://www.c-ebs.org/getdoc/34beb2e0-bdff-4b8e-979a-5115a482a7ba/High-level-principles-for-remuneration-policies.asp>

³ For instance, core principles of market risk management require firms to set appropriate limits on their net positions and to strictly monitor the "utilisation" and compliance with these limits. The internal governance elements and needs that stem from these principles (e.g. the definition of appropriate risk monitoring and risk control systems) fall out of the scope of this document.

9. CEBS expects its members to implement the guidelines on the management of operational risks in market-related activities by 31 December 2010 CEBS is aware that their implementation will encompass not only the amendment of national guidelines but also supervisory processes. An implementation review will be undertaken by the CEBS secretariat in the first quarter of 2011.
10. The public consultation on the proposed guidelines runs until **31 March 2010**. Comments received will be published on CEBS's website unless otherwise requested by respondents. Please send your comments by electronic mail to: cp35@c-eps.org. A public hearing will be held on 9 March 2010 at CEBS's premises in London.

2. Governance mechanisms

Principle 1. The management body⁴ should have full awareness of the operational risks, actual or potential, affecting market-related activities. It should develop and maintain an organisational structure, internal controls and a reporting system suitable for the identification, assessment, control and monitoring of operational risks in market-related activities.

11. Consistent with paragraph 602 of the CEBS 's GL10, the management body may, where appropriate, establish specific Committees and delegate to them certain aspects of the framework for the management of operational risks in market-related activities. These Committees should have:
 - The material and human resources necessary to carry out the required tasks. In particular, members of the "control functions" (see paragraph 12 below) should be pivotal to these Committees - either due to the number of their representatives or due to their roles in the committee - so as to be able to effectively challenge the activities undertaken by the front office.
 - Widely drawn scope to allow them to consider all the issues that are pertinent to ensuring the effectiveness of the management of operational risks in market-related activities. This scope should extend to examining the institution's policies relating to recruiting, assignments, ethics codes and compensation – including bonuses.
 - Access to the output of reporting and internal control systems, including any alerts transmitted to supervisory authorities.
 - Responsibility for supporting the management body in its decisions on identifying, assessing, controlling and monitoring operational risk.
12. The organization structure should guarantee adequate segregation of duties between the front office and the functions in charge of supporting, verifying and monitoring transactions (e.g. back office, middle office, finance, risk

⁴ The term '**management body**', which represents the top management level of an institution, is used in this document to embrace different structures, such as unitary and dual boards (see also CEBS Guidelines on the Application of the Supervisory Review Process under Pillar II (GL03))

management, compliance and internal audit, hereafter called “control functions”). Within each function it should be ensured that, in handling business transactions, activities which are mutually incompatible are carried out by different persons.

13. The fragmentation between several units of controls over market-related activities should be minimised and, where it cannot be avoided, its impact in terms of effectiveness and transparency of controls should be assessed and properly managed. To this end:
 - The integration of key procedures related to the processing and accounting treatment of transactions and cross-unit cooperation may increase the level of surveillance and control of the trading activities.
 - Control functions organised by business lines may lead to the emergence of questionable practices (e.g. in the confirmation process and margining areas) that might be better challenged if entrusted to a wider unit. In particular, special consideration should be given to the organisation of key post-trade processes, notably in the back office and accounting area.

Principle 2. The management body should promote a front office culture designed to mitigate operational risks in market-related activities.

14. High professional standards should be fostered in the front office, for example by issuing a code of conduct for relations between traders⁵ and their counterparts.
15. Appropriate policies and procedures relating to leave requirements and staff movements should be developed, implemented and regularly monitored. In particular:
 - a policy establishing at least two consecutive weeks’ leave for traders (via a vacation or “desk holiday”) represents sound practice, so that traders are physically unable to mark or value their own books, this responsibility being carried out by a different person during those periods; and
 - staff movements between front, middle and back-office and IT should be subject to close monitoring, especially if they occur within the same activity or product line.

Principle 3. Senior management should ensure that they and the staff in the control functions have the appropriate understanding, skill, authority and incentive to provide effective challenge to traders’ activities.

16. Senior management should have a good understanding of the potential and actual operational risks that could occur or have occurred within the

⁵ The term “trader” also refers to other staff involved in front office market-related activities such as “structurers” or “dealers”.

institution, including of the settlement processes and exposures within market-related activities. This also includes operational risks within new products and processes.

17. To support the effective implementation of control processes and procedures staff in control functions should be appropriately qualified. Senior management should demonstrate their commitment to recruiting and retaining quality staff in control functions, as well as to providing the appropriate training for them.
18. Senior management should ensure that the use of technical accounts (e.g. suspense accounts) is understood by middle and back offices and challenged when used inappropriately by the front office. Any suspicious activity across these accounts should be escalated to, and acted on, by senior management.
19. Consideration should be given to the possibility of introducing incentive mechanisms at the level of the control functions to ensure that the oversight of traders' activities is promoted and rewarded. In particular, remuneration of personnel in control functions should reflect the risk-reducing role that they fulfil and, more generally, be based on different drivers from those used for traders' remuneration so as to avoid commonalities of interests and scope.

Principle 4. Operational risk losses should be taken into account in setting objectives for, and assessment of, an individual's or business unit's performance in market-related activities.

20. Institutions should find the appropriate balance between the profitability drivers and operational risk culture or risk tolerance at the different levels of the hierarchy, starting from the front office.
21. For example, institutions may set objectives for business managers and traders in terms of a maximum acceptable level of operational risk exposure and/or take into account such exposure in the attribution of their variable remuneration. However, this should not violate regulations on the protection of personal data and other relevant legislation.

Principle 5. The fight against fraudulent behaviour in market-related activities should be a pivotal element of internal controls and reporting systems.

22. The increased complexity of institutions' activities, particularly in the area of market-related activities, has increased the risk of being exposed to internal or external fraud events.
23. Scenarios should be used to increase understanding of how fraud might occur at various levels within the organisation and the institution's ability to detect and manage fraudulent activity.
24. The following examples of fraud prevention and detection, while referring to market-related activities, could be valid and applicable to any business of an institution:

- regular fraud testing;
 - a specific programme for identifying the risk of fraud, and developing a mapping of risks of fraud - this specific programme can be a part of the integrated framework of risk management that is coherent with the risk assessment used for operational risk;
 - measures to increase staff's fraud awareness;
 - integrated and effective alerts/warning systems to cover sensitive processes, businesses and product lines allowing management to quickly identify and limit the size of any fraudulent activity; and
 - a description in the annual report of the internal controls and due diligence efforts conducted in this area.
25. A duty to notify the appropriate level of management should be instituted for incidents exceeding pre-determined risk tolerance levels.
26. The supervisory authority should be notified of cases of fraud exceeding a given threshold or having certain characteristics (making use of ad hoc templates required by the supervisory authority or adopting COREP templates where they have been introduced) .

3. Internal controls

Principle 6. Traders should initiate transactions only when these are compliant with their set terms of reference. Minimum standards for the initiation and conclusion of transactions should be followed.

27. The existence of precise terms of reference circumscribing the activity of each trader is an essential prerequisite for the sound management of market-related operations. It gives to each of the parties involved – traders, managers at all levels and controllers - the means of verifying that the nature and number of the financial instruments used are within the limits and strategy defined by the institution's management.
28. One objective of an authorized trading framework for the front office should be to formalize rules for traders enabling them to ensure they operate within a clear framework. Examples of deliverables could include traders' duties and mandates. The rules should be updated on an on-going basis. Institutions should also consider whether mandates are used as the basis for monitoring the activities of the trader by both the front office and the control functions and whether a proper process of escalation and challenge is in place to investigate any breach of parameters.
29. Trades which are not in line with market conditions (e.g. deals concluded with roll-overs of historical rates) should in general be limited in number and notional amounts and adhere to internal rules governing the type, scale and structure of the trades and the characteristics of, and the communication to, the counterparts. The deviation from market conditions

should be clearly visible from the documentation and reported to the relevant control functions and, if necessary, to senior management.

30. The terms of reference and minimum standards for the initiation and execution of trades should be subject to strict monitoring by the control functions. In particular, immediately after the conclusion of the trades, the relevant data and documentation should be passed to the control functions for their proper verification, confirmation, settlement and reconciliation.
31. Traders' conversations relating to transactions should be taped and the recordings retained for an appropriate period.

Principle 7. Documentation requirements for trading activities should be properly defined. Legal enforceability of the contracts should be assured.

32. Institutions should determine their document requirements in advance of trading. In particular, if a counterparty requires special arrangements – such as third party payments or prime brokerage services – those arrangements should be agreed upon and documented in advance of trading.
33. Where a master agreement is used with a counterparty it should contain legally enforceable provisions for “closeout” netting and settlement netting.

Principle 8. As a general rule, transactions should be initiated and concluded in the trading room and during trading hours.

34. Trading outside the business premises should only be permissible within the scope of internal rules that specify, in particular, the authorised individuals, the scope of permitted trading and the recording of trades. These trades should be marked and reported as soon as possible by the trader in a suitable form to the relevant control functions.
35. Trades concluded after the cut-off time for settlement (late trades) should be marked as such and included in that day's positions (including subsequent settlement) if they result in substantial changes. The transaction data and documentation relating to late trades should be reported immediately to the relevant control functions.

Principle 9. Each cash flow associated with a transaction should be clearly recorded in the institution's accounting system, with a documented audit trail.

36. The audit trail makes it possible to trace cash flows both downstream and upstream, starting with the trader who initiated the transaction and going all the way to the external party who received or paid for the transaction. The accounting for the cash flows requires very strict monitoring and control.
37. Extended audit trails to identify the transaction from the point of origin by each trader is necessary for the institution's systematic ex-post control and

reconciliation, both by internal controllers and external auditors, of the operations carried out.

Principle 10. Institutions should ensure that they have an appropriate framework of controls and procedures applicable to the relationships between traders and their market counterparts.

38. Institutions should define and implement appropriate controls and procedures from the opening of the relationship to the daily follow-up and monitoring of traders and associated counterparts, and also of internal counterparts (for intra-group deals), dormant portfolios (i.e. portfolios that are no longer monitored by the front office) and dummy counterparts (that are pending allocation).
39. A review of the relationships between market counterparties and front office staff should be undertaken regularly. In particular, the fact that the relationship is managed by the front office may mean that institutions do not react with the necessary scrutiny and diligence to alerts coming, for instance, from the middle or back offices of their counterparties. Commercial issues, trade and settlement queries as well as error and claims management should be directed to and carried out by the control functions.

Principle 11. Confirmation, settlement and reconciliation processes should be correctly designed and properly executed.

40. Confirmation, settlement and reconciliation processes should be defined to prevent gaps and significant points of weakness and to help identify and resolve breaks. These processes should be carried out directly among the control functions without involving the front office.
41. Institutions should have a rigorous and reliable process for confirming the terms and conditions of transactions that they have entered into with external counterparts in a timely manner (i.e. usually a few hours after the conclusion of the transactions and, at the latest, before the end of the day) and with unambiguous meaning⁶, so as to avoid the accumulation of unreconciled transactions which represent a major source of risk.
42. Pending the completion of full documentation and confirmation processes, consideration could also be given to the use of oral affirmation processes - e.g. additional telephone confirmations between the control functions of two institutions - that can be a useful short term control tool.
43. All transactions should be confirmed, including those that will be netted and those conducted through third party advices, such as Reuter's logs, EBS trade tickets and voice broker advices.

⁶ This can be achieved, for instance, by resorting to standard confirmation formats or electronic confirmation matching.

44. Processes, procedures and conditions for the settlement of transactions should be developed in order to effectively mitigate the possible operational risks connected with back office activities. Amongst others, elements that serve this purpose are the authorization of inputs by the back office and payment/settlement systems carried out against independent documents, reconciliation between front office and back office systems by a business unit independent of both functions, reconciliation procedures independent of the processing functions and usage of back office key risk indicators.
45. Nostro⁷ balance projections should be made on a real-time basis and should incorporate the latest trades, cancellations and amendments.
46. Institutions should establish a real-time communication mechanism with their nostro institutions to process the cancellation and amendment of payment instructions.
47. The full reconciliation of nostro accounts should be completed in a timely manner while, on a daily basis, all the transactions should be reconciled with the general ledger.
48. Internal trades should be subject to the same procedures and conditions as those in place for external counterparts. In particular, internal counterparts should confirm trades as if they had transacted with external counterparties.
49. For over-the-counter transactions (OTC) in particular close attention should be paid to the following points:
 - The use of contracts that are as standardised as possible, using model contracts developed by professional associations.
 - The availability of a specific process, internal to each institution, which would trigger the intervention of the appropriate unit, outside the front office, if clauses of a contract deviate from the clauses of the model contract or if unamended model contracts are used for bespoke transactions.
 - The existence of teams with adequate numbers of sufficiently qualified staff to verify that the contracts conform to the originally negotiated terms and that those conditions are drawn up and signed. Any change, cancellation or reaction by the counterpart should give rise to a suitable review process. This particularly concerns novations that involve the intervention of third parties who were not parties to the original contract.
 - The use of secure commercial trading platforms capable of preserving a copy of each contract, for the purpose of establishing authenticity in the event of litigation.

⁷ Nostro reconciliation occurs at the end of the trade settlement process to ensure that a trade has been settled properly and that all expected cash flows have occurred.

- Frequent review of the number and duration of unsettled, amended and cancelled transactions, and the establishment of a process to ensure all transactions are confirmed within an appropriate timeframe. Specific consideration should be given to certain unconfirmed OTC trades which contain characteristics that pose greater risks (such as OTC trades with no near term cash flow with a counterparty with whom there are no collateral arrangements in place).
- Reporting of an exhaustive list of unsettled transactions, adapted to the activities of the institution with warning systems alerting the relevant control functions of the people directly involved in the transactions.
- The control system for OTC shall take into account any operational risks stemming from outsourcing.
- Any anomalies discovered by the control system should be reported to the appropriate control function.

Principle 12. Institutions should ensure that their margining processes are working properly and that any changes are reconciled with the relevant positions on their books.

50. Large positions require large margin or collateral calls. Therefore, institutions control functions should reconcile margin and collateral calls to a trader or a book to help ensure that the margin calls are correct and that the positions on the book are accurate.
51. As far as possible, institutions should have in place real-time credit systems able to calculate credit lines and usage information as trades are initiated, to aggregate exposures globally across all trading desks and to accurately reflect the effect of netted transactions.
52. In the derivatives trading environment, substantial changes in positions are usually executed through either listed products or collateralised OTC contracts. Any significant inconsistency between the amounts and/or the direction of OTC mark-to-market and collateral calls can therefore be a sign of inappropriate trading book management or maintenance. A close coordination between the control function (responsible for P&L and independent price verification) and the collateral management functions is necessary.
53. Consideration should be given to the analysis of subsequent gross and net cash flows, on the one hand, and whether these can be understood in the context of the trader mandate, positions and reported P&L, on the other hand.

Principle 13. Sources of operational risks in market-related activities should be properly identified and monitored with the appropriate level of scrutiny, intensity and timeliness.

54. Institutions should understand where every aspect of their P&L is coming from. P&L attribution is a key control for understanding the risk in a trading

operation, especially where more complex products or basis risks are traded. Moreover, institutions should ensure that any large positions in the P&L and large P&L amounts are adequately analysed from day one, including those which have been cancelled or amended.

55. Unusual and remarkable transactions, anomalies in confirmation and reconciliation processes, errors in recording, processing and settling transactions, along with cancellations, amendments, late trades and off-market rates should be monitored with sufficient granularity by the relevant control functions and reported to the appropriate levels in the hierarchy. The monitoring procedures and their effectiveness should be reviewed periodically.
56. Furthermore, institutions should review and implement appropriate controls enabling the follow-up of sensitive accounts (e.g. pending accounts), collateral and collateralised counterparty risk controls and the capture of operational risk losses in the treasury activities.
57. Institutions should determine the appropriate frequency of monitoring for each market-related activity. Introducing only monthly controls on trading books (e.g. funding cost allocation, cross-platform trade reconciliations, provisions and reserves validation) may lead to an undue delay in the detection of anomalies. Institutions should employ daily P&L and position reconciliations or random checks or key risk indicators analysis depending on the complexity of the business. In order for controls to have a deterrent effect and to allow for remedial action to be taken early, monitoring should, in all cases, be performed with the frequency necessary to detect inappropriate activity as soon as possible.

Principle 14. In addition to the monitoring of net amounts and sensitivity measures, the gross notional amounts of transactions should be kept under strict control for monitoring operational and counterparty risks, through the definition of pertinent limits and/or participation in initiatives for the novation of contracts.

58. The traditional monitoring of the net amounts of transactions should be supplemented with specific controls focusing on the gross amounts before any netting, since monitoring net amounts does not necessarily identify all material transactions that commit the institution.
59. Regardless of the nature of the counterpart (i.e. internal or external), ceilings on gross notional amounts for each category of instrument should be set and reviewed periodically at a granular level. Where appropriate, limits in terms of "Greeks" should be established and used together with those on notional amounts. Computation of limits should be updated in real time so that controllers can continuously monitor compliance with the limits assigned to traders.
60. In some jurisdictions, participation in schemes for the novation or "tear-up" of contracts may be useful to reduce the notional position and the operational and counterparty risk exposures of the institution without significantly changing its market risk position.

Principle 15. Information systems in the trading area should be appropriately designed and implemented so as to guarantee a high level of protection in market-related activities⁸.

61. Generally, access to information technology resources should be controlled by a procedure that has been formally endorsed by the senior management. This procedure should include a periodic review of access requirements, and should itself be updated as often as necessary to keep up with advances in the information systems technology used by the institution. Compliance with these rules should ensure that assigned functions match authorised access and should also prevent access to information systems for fraudulent purposes.
62. The level of security of these systems should be regularly tested and monitored in order to prevent identity usurpation and non-authorized access.

4. Internal reporting system⁹

Principle 16. The operational risk reporting system for market-related activities should be designed to generate appropriate warnings and should alert management when suspicious operations or material incidents are detected.

63. Whistle-blowing and alert-monitoring may help to detect abnormal trading patterns and to assist in the investigation of incidents detected by the internal control system. These should also include escalation of warnings and concerns expressed by exchanges, brokers, clearers and custodians and procedures ensuring that all questions from external entities are thoroughly investigated.
64. Operational risk management systems should set criteria, indicators and thresholds enabling the identification of material incidents detected by internal control procedures. These elements should be adapted to the activity of the institution and should cover potential losses even when they have not yet materialized. Material incidents should be reported to the senior management without delay.

Principle 17. Institutions should ensure the quality and consistency of their internal reports and that they are appropriate to the needs of the recipients for which they are intended.

65. Different levels of management and/or control have information needs that vary in both content and frequency. Business units should produce documents to meet their own management and control needs and for

⁸ The management of operational risk in the context of IT systems is an area that could be part of the future work of the CEBS.

⁹ This Section, while drafted for market-related activities, is generally valid and applicable to any other business area of a firm.

reporting to other units. These documents can be standardised or they can respond to specific needs which may evolve over time.

66. Institutions should ensure sufficient quality and adequate articulation of the internal reports to the different levels of the hierarchy to make them a key element of a robust internal control system. For example, the reports aiming to detect operational risks in market-related activities should be produced by the control functions. In addition, these reports should make use, to the maximum extent possible, of alternative inputs and sources adopted by the front office for initiating and concluding trades.
67. The quality of the reports transmitted to the various recipients is of key importance. It is essential that the information circulating between different departments is well-structured, particularly in complex organizations, in order to avoid delays or alterations in the communication of crucial information caused by the filtering role played by intermediate layers. A consolidated approach to risk management is imperative. For example, a trader who trades different products and/or markets may be subject to monitoring by different middle office teams. Thus, it is important that institutions consider the monitoring of key operational performance indicators at a trader level and that these indicators are appropriately escalated and aggregated to enable control functions and the front office to assess a trader's activity across different areas.
68. Reports should be understandable and should contain well-articulated and relevant calls for corrective actions to be implemented at all levels of the organization. This is a subject that should receive more attention from the risk management and audit divisions.
69. In any event, it is imperative that the reports provided to the different levels of the hierarchy be adapted to the needs of the recipients.