



**Financial Services  
Commission**

# **Guidance Note**

## **Capital Requirements Directive**

### **Operational Risk**

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V4

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## 1. Operational Risk

1.1 This Guidance Note applies to all locally incorporated credit institutions and investment firms to assist them in calculating operational risk for the purposes of the Directive Capital Adequacy Directive, comprising Directive 2006/48/EC and Directive 2006/49/EC which have been implemented in Gibraltar via the Banking (Capital Adequacy of Credit Institutions) Regulations, 2007 and Financial Services (Capital Adequacy of Investment Firms) Regulations 2007. The aim of the Guidance Note is to supplement the Regulations in setting the standards for the measurement of operational risk and how firms must calculate this.

1.2 The purpose of this Guidance Note is:

- 1) to detail the requirement to hold capital to cover operational risk losses and have appropriate systems and controls in place to manage operational risk; and
- 2) to explain how to calculate the operational risk capital requirement (ORCR).

1.3 The definition of operational risk as per the Banking Consolidation Directive Article 4(22) is:

“the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, including legal risk.”

## 2. Methodologies and systems

### Definition of ORCR

2.1 The ORCR for a firm is an amount calculated in accordance with:

- 2.1.1 the basic indicator approach (see section 3); or
- 2.1.2 the standardised approach (see section 4).

2.2 The simplest method of calculating the ORCR is the basic indicator approach and a firm should use this approach if it does not, or is not permitted to, use another approach.

2.3 A firm needs to notify the Commission to use the standardised approach. However, there are eligibility conditions that a firm should satisfy if it is to use this approach. If it does not satisfy them, it should not use this approach.

2.4 A firm may apply to the FSC for permission to adopt its own advanced measurement approach for the calculation of its ORCR (see section 5). In doing so, it may apply for a waiver from paragraph 2.1 and if the exception is granted, the ORCR will be an amount determined in accordance with such exception.

### Systems and controls

2.5 A firm calculating ORCR must:

- 2.5.1 meet general risk management standards (i.e. general requirements for systems and controls); and
- 2.5.2 implementation policies and procedures to evaluate and manage the exposure to operational risk, including low frequency events.

2.6 Without prejudice to the definition of operational risk (see paragraph 1.3), a firm must articulate what constitutes operational risk for the purposes of the policies and procedures referred to in paragraph 2.5.2.

2.7 A firm must have contingency and business continuity plans in place to ensure the firm's ability to operate on an ongoing basis and limit its losses in the event of severe business disruption.

## Restrictions on changing the approach used for calculating ORCR

2.8 A firm that calculates its ORCR using the standardised approach must not change to calculating its ORCR using the basic indicator approach.

2.9 A firm may apply to the FSC for an exception from paragraph 2.8 where it can demonstrate good cause for changing to the basic indicator approach.

2.10 A firm that calculates its ORCR using an advanced measurement approach (AMA) must not change to calculating its ORCR using the standardised approach or the basic indicator approach.

2.11 A firm may apply to the FSC for an exception from paragraph 2.10 where it can demonstrate good cause for changing to the standardised approach or the basic indicator approach, as the case may be.

## Combination of different methodologies

2.12 Without prejudice to any other conditions that may be imposed by a firm's AMA permission in accordance with paragraph 2.13, where a firm's AMA permission allows it to use an advanced measurement approach in combination with either the basic indicator approach or the standardised approach, the firm must comply with the following conditions:

2.12.1 all operational risks of the firm are captured;

2.12.2 the firm must be able to satisfy the FSC with respect to the methodology used to cover different activities, geographical locations or other relevant divisions determined on an internal basis; and

2.12.3 paragraph 4.1 and 5.6 must be complied with for the part of the activities covered by the standardised approach and advanced measurement approaches respectively.

2.13 On a case by case basis the FSC, through a firm's AMA permission, may impose additional conditions on the combination of different methodologies described in paragraph 2.12 as follows:

2.13.1 on the date of implementation of an advanced measurement approach, a significant part of the firm's operational risks are captured by the advanced measurement approach; and

2.13.2 the firm is obliged to roll out the advanced measurement approach to a material part of its operations within a time schedule set out in its AMA permission.

2.14 A firm applying for an AMA permission to use a combination of different methodologies as described in paragraph 2.12 must be able to show that:

2.14.1 at the date of implementation of the advanced measurement approach, approximately 50% of the firm's operational risk is captured under the AMA; and

2.14.2 the firm has committed to roll out the advanced measurement approach for around 85% of its operational risks, subject to the remaining percentage not being concentrated in a single operation, within a given timescale set out in its AMA permission.

2.15 For the determination of its ORCR, a firm must not use any of the following combinations of methodologies:

- 2.15.1 the basic indicator approach with the standardised approach;
- 2.15.2 the basic indicator approach with the alternative standardised approach; or
- 2.15.3 the standardised approach calculated under paragraph 4.3 with the alternative standardised approach calculated under paragraph 4.18 for the same business line.

2.16 A firm may apply to the FSC for an exception from paragraph 2.15.1 and paragraph 2.15.2 in exceptional circumstances, such as the recent acquisition of a new business, which requires a transition period for the roll out of the standardised approach (or the alternative standardised approach). In this event, the firm should make a commitment to roll out the standardised approach (or the alternative standardised approach) within a time schedule with the FSC.

### 3. Basic indicator approach

3.1 The ORCR under the basic indicator approach is equal to 15% of the relevant indicator as defined in paragraph 3.2.

3.2.

3.2.1 The relevant indicator is the three year average of the sum of:

3.2.1.1 a firm's net interest income; and

3.2.1.2 a firm's net non-interest income.

3.2.2 The three year average in 3.2.1 must be calculated on the basis of the last three yearly observations at the end of the financial year. When audited figures are not available, business estimates may be used.

3.2.3 If for any given observation under 3.2.2, the sum in 3.2.1 of a firm's net interest income and net non-interest income is negative or equal to zero, this figure must be excluded from both the numerator and denominator when calculating the three year average. The relevant indicator must be calculated as the sum of the positive yearly figures divided by the annualised number of the positive observations.

#### An example calculation

3.3 An example of the relevant indicator calculation is as follows. A firm has 2 positively yearly relevant indicator observations of £20 each. The final yearly observation shows a negative figure of £5. The relevant indicator is calculated as £40 (the sum of positive figures) divided by 2 years (annualised number of positive observations) = £20.

#### Insufficient income data

3.4 A firm that does not have sufficient income data to meet the three-year requirement set out in paragraph 3.2 (e.g. a start-up) may use its forecasted gross income projections for all or part of the three year time period when calculating its relevant indicator.

#### Application of accounting categories

3.5

3.5.1 This paragraph applies to a firm that is subject to the Bank Accounts Directive as transposed into Gibraltar law by The Banking (Accounts Directive) Regulations 1997.

3.5.2 Based on accounting categories for the profit and loss account of credit institutions under Article 27 of the Bank Accounts Directive, the relevant indicator in paragraph 3.2 must be expressed as the sum of the elements listed in the table in paragraph 3.6.

3.5.3 Each element in the table in paragraph 3.6 must be included in the sum with its positive or negative sign.

### 3.6 Relevant Indicators

1	Interest receivable and similar income
2	Interest payable and similar charges
3	Income from shares and other variable/fixed-yield securities
4	Commissions/fees receivable
5	Commissions/fees payable
6	Net profit or net loss on financial operations
7	Other operating income

3.7 For the purposes of paragraph 3.5, income from a participation held in an undertaking by the firm or a subsidiary undertaking of the firm is not to be included in the relevant indicator calculations. This is to ensure that intra-group dividends and other intra-group income flows are not double counted.

3.8 In the case of income received under an operating lease, this income should be included for the purposes of paragraph 3.5 as gross income less depreciation not as gross rental income.

## Qualifications

### 3.9

3.9.1 The relevant indicator referred to in paragraph 3.2 must be calculated before the deduction of any provisions for operating expenses.

3.9.2 Operating expenses must include fees paid for outsourcing of services rendered by third parties which are not a parent undertaking or subsidiary undertaking of the firm, or a subsidiary undertaking of a parent undertaking which is also the parent undertaking of the firm. Expenditure on the outsourcing of services rendered by third parties may reduce the indicator if the expenditure is incurred by an undertaking subject to supervision under, or equivalent to, the Banking Consolidation Directive.

3.10 The definition of outsourcing for the purposes of paragraph 3.9.1 and paragraph 3.9.2 is set out in detail in a Joint Forum paper of the Basel Committee on Banking Supervision entitled "Outsourcing of Financial Services" dated February 2005 and can be summarised as meaning a firm's use of a third party to perform activities on a continuing basis that would normally be undertaken by the firm, now or in the future, and can be the initial transfer of an activity (or part of that activity) from the firm to a third party or a further transfer of an activity (or part thereof) from one third party service provider to another.

3.11 The following elements must not be used in the calculation of the indicator referred to in paragraph 3.2:

3.11.1 realised profits/losses from the sale of non-trading book items;

3.11.2 income from extraordinary or irregular items; and

3.11.3 income derived from insurance.

3.12 When revaluation of trading items is part of the profit and loss statement, revaluation may be included in the calculation of the relevant income indicator referred to in paragraph 3.2.

3.13 When Article 36.2 of the Bank Accounts Directive is applied, revaluation booked in the profit and loss account must be included in the calculation of the relevant income indicator referred to in paragraph 3.2.

3.14 When a firm is subject to an accounting framework different from the one established by the Bank Accounts Directive, it must calculate the relevant income indicator on the basis of internal data that best reflects the definition as referred to in paragraph 3.2.

## 4. Standard approach

### 4.1

4.1.1 To be eligible for the standardised approach, a firm must meet the qualifying criteria set out in this section, in addition to those set in paragraph 2.5.

4.1.2 A firm must have a well-documented assessment and management system for operational risk with clear responsibilities for the system assigned within the firm. The system must identify the firm's exposures to operational risk and track relevant operational risk data, including material loss data.

4.1.3 A firm's operational risk assessment and management system must be subject to regular independent review.

4.1.4 A firm's operational risk assessment system must be closely integrated into the firm's risk management processes. Its output must be an integral part of the process of monitoring and controlling the firm's operational risk profile.

4.1.5 A firm must implement a system of management reporting that provides operational risk reports to relevant functions within the firm. A firm must have procedures in place for taking appropriate action in response to the information contained in such reports.

4.2 A firm must comply with the criteria in paragraph 4.1 having regard to the size and scale of its activities and to the principle of proportionality.

### ORCR calculated using the standardised approach

4.3 The ORCR under the standardised approach is equal to the sum of the individual capital requirements calculated for each of the business lines in the table in 4.14.

4.4 In each year, a negative capital requirement in one business line, resulting from a negative gross yield, may be imputed to the whole. However, where the aggregate capital charge across all business lines within a given year is negative, then the input to the numerator for that year must be zero.

4.5 The individual capital requirement for each of the business lines in the table in paragraph 4.14 is equal to the corresponding percentage applied to the relevant indicator (see paragraphs 4.6 to 4.7).

## Relevant indicator

### 4.6

4.6.1 The relevant indicator referred to in paragraph 4.5 is calculated individually for each business line in the table in 4.14.

4.6.2 For each business line, the relevant indicator is the three-year average of the sum of annual net interest income and net non-interest income calculated using the same methodology as used for calculating the relevant income indicator (as referred to in paragraph 3.2) under the basic indicator approach.

4.7 The three year average in paragraph 4.6.2 must be calculated on the basis of the last three twelve monthly observations at the end of the financial year. When audited figures are not available, business estimates may be used.

## Principles for business line mapping

4.8 A firm must develop and document specific policies and criteria for mapping the relevant indicator for current business lines and activities as referred to in paragraph 4.6 into the standardised approach framework. The criteria must be reviewed and adjusted for new or changing business activities and risks as appropriate.

4.9 The principles for business line mapping that a firm must meet are set out in this section.

4.9.1 All activities must be mapped into the business lines in a mutually exclusive and jointly exhaustive manner.

4.9.2 Any activity which cannot be readily mapped into the business line framework, but which represents an ancillary function to an activity included in the framework, must be allocated to the business line it supports. If more than one business line is supported through the ancillary activity, an objective mapping criteria must be used (e.g. proportional allocation of the indicators).

4.9.3 If an activity cannot be mapped into a particular business line then the business line yielding the highest charge for the firm must be used. The same business line equally applies to any associated ancillary activity.

4.9.4 A firm may use internal pricing methods to allocate the relevant indicator between business lines.

4.9.5 The mapping of activities into business lines for operational risk capital purposes must be consistent with the definitions of business lines used by the firm for both credit and market risks.

4.9.6 Senior management must be responsible for the mapping policy.

4.9.7 The mapping process to business lines must be subject to independent review.



4.10 A firm that is mapping activities to a business line should, subject to complying with the general principles in paragraph 4.9, and categories established as business lines in paragraph 4.14, take into account, in respect of each business line:

4.10.1 The activities listed in paragraph 4.14; and

4.10.2 The organisation of the firm’s business.

4.11 For the purposes of paragraphs 4.8 to 4.9, a firm should take into account its own business and organisation when mapping activities to the business lines in the table in paragraph 4.14.

4.12 For the purposes of paragraph 4.9.4, costs generated in one business line which are importable to a different business line may be reallocated to the business line to which they pertain, for instance by using a treatment based on internal transfer costs between two business lines.

4.13 The list of activities in paragraph 4.14 is not a comprehensive explanation of the activities within a business line and it may be possible for an activity to be allocated to a business line other than the business line it is attributed to in paragraph 4.14.

4.14 Percentages applying to the income indicator of individual business lines:

Business line	List of activities	Percentage
Corporate finance	<ul style="list-style-type: none"> <li>• Underwriting of financial instruments and/or placing of financial instruments of a firm commitment basis</li> <li>• Services related to underwriting</li> <li>• Investment advice</li> <li>• Advice to undertakings on a capital structure, industrial strategy and related matters and advice and services relating to the mergers and the purchase of undertakings</li> <li>• Investment research and financial analysis and other forms of general recommendation relating to transactions in financial instruments</li> </ul>	18%
Trading and sales	<ul style="list-style-type: none"> <li>• Dealing on own account</li> <li>• Money broking</li> <li>• Reception and transmission or orders in relation to one or more financial instruments</li> <li>• Execution of orders on behalf of clients</li> <li>• Placing of financial instruments on a best efforts basis</li> <li>• Operating of multilateral trading facilities</li> </ul>	18%

Retail brokerage (activities with individual physical persons or with a retail SME as defined under the standardised approach to credit risk)	<ul style="list-style-type: none"> <li>• Reception and transmission of orders in relation to one or more financial instruments</li> <li>• Execution of orders on behalf of clients</li> <li>• Placing of financial instruments without a firm commitment basis</li> </ul>	12%
Commercial banking	<ul style="list-style-type: none"> <li>• Acceptance of deposits and other repayable funds</li> <li>• Lending</li> <li>• Financial leasing</li> <li>• Guarantees and commitments</li> </ul>	15%
Retail banking (activities with individual physical persons or with a retail SME as defined under the standardised approach to credit risk)	<ul style="list-style-type: none"> <li>• Acceptance of deposits and other repayable funds</li> <li>• Lending</li> <li>• Financial leasing</li> <li>• Guarantees and commitments</li> </ul>	12%
Payment and settlement	<ul style="list-style-type: none"> <li>• Money transmission services</li> <li>• Issuing and administering means of payment</li> </ul>	18%
Agency services	<ul style="list-style-type: none"> <li>• Safekeeping and administration of financial instruments for the account of clients including custodianship and related services such as cash/collateral management</li> </ul>	15%
Asset management	<ul style="list-style-type: none"> <li>• Portfolio management</li> <li>• UCITS management and other forms of asset management</li> </ul>	12%
SME – Small to Medium size Enterprise		

## The alternative standardised approach

4.15 Under the alternative standardised approach, a firm using the standardised approach may use alternative indicators for retail banking and commercial banking business lines subject to compliance with paragraphs 4.8 to 4.14.

4.16 To be eligible to use the alternative standardised approach, a firm must meet the following conditions, in addition to general risk management standards:

4.16.1 the firm must meet the criteria in paragraph 4.1;

4.16.2 the firm must be overwhelmingly active in retail and/or commercial banking activities, which must account for at least 90% of its income indicator; and

4.16.3 the firm must be able to demonstrate that a significant proportion of its retail and/or commercial banking activities comprise of loans associated with a high probability of default, and that the alternative standardised approach provides an improved basis for assessing the operational risk.

4.17 In relation to paragraph 4.16.3, the FSC's view is that a high probability of default is equal to or greater than 3.5%.

## ORCR calculated using the alternative standardised approach

4.18

4.18.1 The indicators under the alternative standardised approach are the same as referred to in paragraph 4.6 except for the two following business lines:

4.18.1.1 retail banking; and

4.18.1.2 commercial banking.

4.18.2 For the business lines in 4.18.1.1 and 4.18.1.2, the ORCR must be calculated as the three-year average of the total nominal amount of loans and advances multiplied:

4.18.2.1 by 0.035, and then

4.18.2.2 by the appropriate business line percentage set out in paragraph 4.14.

4.19 For the retail and commercial banking business line, the loans and advances must consist of the total drawn amounts in the corresponding credit portfolios.

4.20 For the commercial banking business line, the securities held in the non-trading book must also be included.

## 5. Advanced measurement approaches

5.1 This section applies to a firm with an AMA permission.

5.2 A firm that wishes to use an advanced measurement approach, based on a firm's own operational risk measurement systems, for the calculation of its ORCR should apply to the FSC to use the advanced measurement approach.

5.3 The FSC will not allow a firm to use the advanced measurement approach, if the firm does not meet the standards as set out in paragraph 5.5.

5.4 A firm allowed to use an AMA approach will generally modify paragraph 2.1 (Calculation of ORCR) by amending, to the extent set out in the letter from the Commission, the calculation of the ORCR of the firm to be calculated in accordance with this section.

5.5 A firm must be able to satisfy the FSC that it meets:

5.5.1 the general risk management standards set out in paragraph 2.3;

5.5.2 the qualitative standards set out in paragraph 5.6; and

5.5.3 the quantitative standards set out in paragraphs 5.11 to 5.26.

## Qualitative standards

5.6

5.6.1 This sets out the qualitative standards that a firm's operational risk measurement system must meet.

5.6.2 A firm's internal operational risk measurement system must be closely integrated into its day to day risk management process.

5.6.3 A firm must have an independent risk management function for operational risk.

5.6.4 There must be regular reporting of operational risk exposures and loss experience. The firm must have procedures for taking appropriate corrective action.

5.6.5 A firm's risk management system must be well documented. The firm must have a system in place for ensuring compliance and policies for the treatment of non-compliance.

5.6.6 A firm's operational risk management process and measurement systems must be subject to regular reviews performed by internal and/or external auditors.

5.6.7 A firm must ensure that in respect of its operational risk measurement system:

5.6.7.1 its internal validation processes are operating in a satisfactory manner; and

5.6.7.2 the data flows and processes associated with the risk measurement system are transparent and accessible.

5.7 For the purposes of paragraph 5.6.2, a firm should be able to show that:

5.7.1 its operational risk measurement systems and processes are not limited to determining regulatory capital and provide benefits to the firm's business;

5.7.2 the operational risk measurement system and framework forms part of the systems and controls a firm has in place; and

5.7.3 the operational risk measurement system and framework are capable of adapting to the changes in the business of the firm and evolve as the firm gains experience of risk management techniques.

5.8 For the purposes of paragraph 5.6.3, a firm should be able to show that the independent risk management function is sufficiently separate from the business units of the firm to allow its professional judgement and recommendations to be effective and impartial.

5.9 For the purposes of paragraph 5.6.4, a firm should ensure that:

- 5.9.1 its governing body or designated committee (where one is used) possesses a general understanding of the firm's AMA; and
  - 5.9.2 its senior management possess a good understanding of the firm's AMA and its operation.
- 5.10 For the purposes of paragraph 5.6.7, a firm should develop and adopt an internal validation methodology of its operational risk measurement system and management processes that:
- 5.10.1 is proportionate and appropriate to the business of the firm;
  - 5.10.2 is clearly documented;
  - 5.10.3 takes into account changing market and operating conditions of the firm;
  - 5.10.4 encompasses both quantitative and qualitative methods of the firm's operational risk measurement system;
  - 5.10.5 is subject to regular independent review to ensure effective implementation of the internal validation methodology; and
  - 5.10.6 is periodically assessed by the firm to ensure appropriateness of the internal validation methodology.

## Quantitative standards: process

### 5.11

- 5.11.1 This section sets out the quantitative standards that a firm's operational risk measurement system must meet with respect to process.
- 5.11.2 A firm must calculate its capital requirement as comprising of both expected loss and unexpected loss, unless the firm can demonstrate that expected loss is adequately captured in its internal business practices.
- 5.11.3 The operational risk measurement of a firm must capture potentially severe tail events, achieving a soundness standard comparable to a 99.9% confidence interval over a one year period.
- 5.11.4 The operational risk measurement system of a firm must have certain key elements to meet the soundness standard as set out in 5.11.2 and 5.11.3. These elements must include the use of internal data, external data, scenario analysis and factors reflecting the business environment and internal control systems as set out in paragraphs 5.22 to 5.25.
- 5.11.5 A firm must have a well documented approach for weighting the use of the four elements in 5.11.4 in its overall risk measurement system.
- 5.11.6 A firm's risk measurement system must capture the major drivers of risk affecting the shape of the tail of the loss estimates.
- 5.11.7 A firm must only recognise correlations in operational risk losses across individual operational risk estimates to the extent they are set out in its AMA permission. The firm must validate its correlation assumptions using appropriate quantitative and qualitative techniques.
- 5.11.8 A firm's risk measurement system must be internally consistent and must avoid the multiple counting of qualitative assessment of risk mitigants recognised in other areas of the capital adequacy framework.

5.12 For the purposes of 5.11.7, the firm must be able to show that its system for measuring correlations is sound, implemented with integrity, and takes into account the uncertainty surrounding any such correlation estimates, particularly in periods of stress.

5.13 A firm should be able to demonstrate to the FSC that its operational risk measurement systems are sound, clearly documented and has been implemented with integrity.

5.14 A firm should be able to satisfy the FSC that it has considered the following with respect to its operational risk measurement systems:

5.14.1 whether the choice of distributions used provides both a good fit with the data and an ability to adequately account for rare events;

5.14.2 the robustness of estimated parameters and capital numbers used for the simulated inclusion or exclusion of unusually large losses;

5.14.3 the co-dependency, or independency, of assumptions governing the relationships between risk types and between business lines;

5.14.4 the number of simulations or iterations required during model execution to provide reasonably stable capital results;

5.14.5 the emergence of different data types, such as the combination of internal and external loss data, based on different degrees of credibility; and

5.14.6 the methodologies used for the purposes of achieving a soundness standard comparable to a 99.9% confidence interval.

5.15 For the purposes of paragraph 5.11.2, a firm should be able to show that its operational risk measurement systems that capture expected loss are:

5.15.1 conceptually sound, have been implemented with integrity and consistently applied, and take into account uncertainty surrounding expected loss;

5.15.2 subject to regular reviews by the firm of the reasonableness of the expected loss estimates and comparisons with subsequent outcomes; and

5.15.3 based on justifiable assumptions for capturing and reviewing the reasonableness of the expected loss.

5.16 For the purpose of paragraph 5.15, the firm should use the business management definition it uses for the purposes of identifying an expected loss.

5.17 Where a firm is using budgeting and pricing for the purposes of the operational risk measurement system for capturing expected loss, a firm should be able to show that:

5.17.1 the process is transparent, repeatable and provides support to the firm's management of its business;

5.17.2 budgeted expected losses are covered with a reasonable degree of certainty over the next one year by budgeted resources;

5.17.3 the forecasting by the firm takes into account both historic performance and forward looking drivers which may effect the future trends; and

5.17.4 the forecasting in 5.17.3 is monitored on a periodic basis and adjusted as appropriate.

5.18 For the purposes of Schedule 11, part 3, regulation 8 of the BCACI Regulations, a firm should be able to show that in respect of its operational risk measurement system:

5.18.1 the methodology for obtaining a soundness standard comparable to a 99.9% confidence level is practical, plausible and appropriate to the operational risk measurement system of the firm; and

5.18.2 the methodology in 5.18.1 is reviewed by the firm on an ongoing basis.

5.19 Where a firm is using scaling for the purposes of the operational risk measurement system, a firm should be able to show that the methodology used for any scaling is robust, with assumptions that are meaningful and credible.

5.20 For the purposes of paragraph 5.18, a firm should be able to show that, in respect of the methodologies the firm has considered for the purpose of obtaining a soundness standard comparable to a 99.9% confidence level, the firm has considered the use of the following:

5.20.1 stress testing;

5.20.2 sensitivity analysis;

5.20.3 scenario analysis;

5.20.4 back testing; and

5.20.5 boot-strapping techniques.

5.21 In addition to paragraph 5.20, a firm should be able to show that an assessment of the overall robustness of its model outputs through a comprehensive approach to internal validation and data quality measurement has been carried out.

## Quantitative standards: internal data

### 5.22

5.22.1 This section sets out the quantitative standards that a firm's operational risk measurement system must meet with respect to internal data.

5.22.2 A firm's internally generated operational risk measures must be based on a minimum historical observation period of five years. When a firm first moves to the advanced measurement approach, a three year historical observation period may be used.

5.22.3 A firm must be able to map its historical internal loss data into the business lines as defined in paragraph 4.8 and into the event types defined in paragraph 5.26, and must be able to provide this data to the FSC upon request. Loss events which affect the entire institution may be allocated to an additional business line "corporate items" due to exceptional circumstances. There must be documented, objective criteria for allocating losses to the specified business lines and event types. The operational risk losses that are related to credit risk and have historically been included in the internal credit risk databases must be recorded in the operational risk databases and be separately identified. Such losses shall not be subject to the operational risk charge, as long as they continue to be treated as credit risk for the purposes of calculating minimum capital requirements. Operational risk losses that are related to market risks shall be included in the scope of the capital requirement for operational risk.

5.22.4 A firm's internal loss data must be comprehensive in that it captures all material activities and exposures from all appropriate sub-systems and geographical locations. A firm must be able to demonstrate that any excluded activities or exposures, both individually and in combination, would not have a material impact on the overall risk estimates. A firm must define appropriate minimum loss thresholds for internal loss data collection.

5.22.5 In addition to information on gross loss amounts, a firm must collect information about the date of the event, any recoveries of gross loss amounts, as well as some descriptive information about the drivers or causes of the loss event.

5.22.6 A firm must have specific criteria for assigning loss data arising from an event in a centralised function or an activity that spans more than one business line, as well as from related events over time.

5.22.7 A firm must have documented procedures for assessing the ongoing relevance of historical loss data, including those situations in which judgment overrides, scaling or other adjustments may be used, to what extent they may be used and who is authorised to make such decisions.

## Quantitative standards: external data

### 5.23

5.23.1 This section sets out the quantitative standards that a firm's operational risk measurement system must meet with respect to external data.

5.23.2 A firm's operational risk measurement system must use relevant external data, especially when there is reason to believe that the firm is exposed to infrequent, yet potentially severe, losses. A firm must have a systematic process for determining the situations for which external data should be used and the methodologies used to incorporate the data in its measurement system. The conditions and practices for external data use should be regularly reviewed, documented and subject to periodic independent review.

## Quantitative standards: scenario analysis

### 5.24

5.24.1 This section sets out the quantitative standards that a firm's operational risk measurement system must meet with respect to scenario analysis.

5.24.2 A firm must use scenario analysis of expert opinion in conjunction with external data to evaluate its exposure to high severity events. Over time, such assessments must be validated and re-assessed through comparison to actual loss experience to ensure their reasonableness.

## Quantitative standards: business environment and internal control factors

### 5.25

5.25.1 This section sets out the quantitative standards that a firm's operational risk measurement system must meet with respect to business environment and internal control factors.



5.25.2 A firm’s comprehensive risk assessment methodology must capture key business environment and internal control factors that can change its operational risk profile.

5.25.3 A firm must be able to justify the choice of each factor as a meaningful driver of risk, based on experience and involving the expert judgement of the affected business areas.

5.25.4 The sensitivity of risk estimates to changes in the factors and the relative weighting of the various factors must be well reasoned. In addition to capturing changes in risk due to improvements in risk controls, the framework must also capture potential increases in risk due to greater complexity of activities or increased business volume.

5.25.5 A firm must document this framework and make it subject to independent review within the firm and make it available for review by the FSC.

5.25.6 Over time, a firm must validate and re-assess the process and the outcomes through comparison to actual internal loss experience and relevant external data.

### Loss event classification

5.26 Loss event type classification:

Event-Type Category	Definition
Internal fraud	Losses due to acts of a type intended to defraud, misappropriate property or circumvent regulations, the law or company policy, excluding diversity/discrimination events, which involves at least one internal party.
External fraud	Losses due to acts of a type intended to defraud, misappropriate property of circumvent the law, by a third party.
Employee Practices and Workplace safety	Losses arising from acts inconsistent with employment, health and safety laws or agreements, from payment of personal injury claims, or from diversity/discrimination events.
Clients, Products & Business Practices	Losses arising from an unintentional or negligent failure to meet a professional obligation to specific clients (including fiduciary and suitability requirements), or from the nature of design of a product.
Damage to Physical Assets	Losses arising from loss or damage to physical assets from natural disaster or other events.
Business disruption and system failures	Losses arising from disruption of business or system failures.
Execution, Delivery & Process Management	Losses from failed transaction processing or process management, from relations with trade counterparties and vendors.

### Impact of insurance and risk transfer mechanisms

5.27

5.27.1 A firm may recognise the impact of insurance for the purposes of its operational risk measurement system subject to the conditions set out in this section and paragraph 5.28.

5.27.2 The provider must be authorised to provide insurance or re-insurance.

5.27.3 The provider must have a minimum claims paying ability rating by an eligible ECAI associated with credit quality step 3 or above in accordance with the risk weighting of exposures to firms in the Guidance Note on Credit Risk Standardised Approach.

## 5.28

5.28.1 A firm must ensure that its insurance and its insurance framework meet the conditions in this section.

5.28.2 The insurance policy must have a minimum initial term of one year. For policies with a residual term of less than one year the firm must make appropriate haircuts to reflect the declining residual term of the policy, up to a full 100% haircut for policies with a residual term of 90 days or less.

5.28.3 The insurance policy must have a minimum notice period for cancellation of the contract of 90 days.

5.28.4 The insurance policy must contain no exclusions or limitations based upon supervisory actions or, in the case of a failed firm, that preclude the firm, its receiver or liquidator from recovering for damages suffered or expenses incurred by the firm, except in respect of events occurring after the initiation of receivership or liquidation proceedings in respect of the firm. The insurance policy may exclude coverage for any fine, penalty or punitive damages resulting from actions by a competent authority or third country competent authority.

5.28.5 The risk mitigation calculations must reflect the insurance coverage in a manner that is transparent in its relationship to, and consistent with, the actual likelihood and impact of loss used in the overall determination of the ORCR.

5.28.6 The insurance must be provided by a third party entity. In the case of insurance through captives and affiliates, the exposure must be laid off to an independent third party entity, for example through reinsurance that meets the eligibility criteria.

5.28.7 The framework for recognising insurance must be well reasoned and documented.

5.28.8 The methodology for recognising insurance must capture the following elements through discounts or haircuts in the amount of insurance recognition:

5.28.8.1 the residual term of a policy, where less than one year, as noted in 5.28.2;

5.28.8.2 a policy's cancellation terms, where less than one year;

5.28.8.3 mismatches in coverage or insurance policies; and

5.28.8.4 the uncertainty of payment.

5.28.9 The capital alleviation arising from the recognition of insurance must not exceed 20% of the capital requirement before the recognition of risk mitigation techniques.

5.29 For the purposes of paragraph 5.28.9, a firm should be able to clearly outline the basis for its conclusion on the level of capital alleviation arising from the recognition of insurance including any assumptions made by the firm, an assessment of the appropriateness of the level of capital alleviation and how the insurance has been factored into the firm's risk measurement system.

5.30 For the purposes of paragraph 5.28.7, a firm should be able to demonstrate the appropriateness and relevance of the mitigation arising from the insurance to the firm's business.

5.31 A firm may recognise a risk transfer mechanism, other than insurance, to the extent that a noticeable risk mitigating effect is achieved and the risk transfer mechanism is set out in the firm's AMA permission.

### **Application to use an advanced measurement approach on a group wide basis.**

5.32 Where an EEA parent institution and its subsidiary undertakings or an EEA parent financial institution and its subsidiary undertakings use an advanced measurement approach on a unified basis for the parent undertaking and its subsidiary undertakings, the qualifying criteria set out in section 5 may be met by the parent undertaking and its subsidiary undertakings considered together where permitted by the AMA permission.