

Basel Committee on Banking Supervision

OPE

Calculation of RWA for
operational risk

OPE25

Standardised approach

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First version in the format of the consolidated
framework.



BANK FOR INTERNATIONAL SETTLEMENTS

The Standardised Approach

- 25.1** In the Standardised Approach, banks' activities are divided into eight business lines: corporate finance, trading and sales, retail banking, commercial banking, payment and settlement, agency services, asset management, and retail brokerage. The business lines are defined in detail in [OPE25.16](#) to [OPE25.25](#).
- 25.2** Within each business line, gross income is a broad indicator that serves as a proxy for the scale of business operations and thus the likely scale of operational risk exposure within each of these business lines. The capital requirement for each business line is calculated by multiplying gross income by a factor (denoted beta) assigned to that business line. Beta serves as a proxy for the industry-wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line. It should be noted that in the Standardised Approach gross income is measured for each business line, not the whole institution, i.e. in corporate finance, the indicator is the gross income generated in the corporate finance business line.
- 25.3** The total capital requirement is calculated as the three-year average of the simple summation of the regulatory capital requirements across each of the business lines in each year. In any given year, negative capital requirements (resulting from negative gross income) in any business line may offset positive capital requirements in other business lines without limit.¹ However, where the aggregate capital requirement across all business lines within a given year is negative, then the input to the numerator for that year will be zero.²

Footnotes

¹ At national discretion, supervisors may adopt a more conservative treatment of negative gross income.

² As under the Basic Indicator Approach, if negative gross income distorts a bank's Pillar 1 capital requirement under the Standardised Approach, supervisors will consider appropriate supervisory action under Pillar 2.

- 25.4** The total capital requirement under the Standardised Approach, K_{TSA} , may be expressed as follows, where GI_{1-8} = annual gross income in a given year, as defined in the Basic Indicator Approach, for each of the eight business lines and β_{1-8} = a fixed percentage, set by the Committee, relating the level of required capital to the level of the gross income for each of the eight business lines.

$$K_{TSA} = \frac{\sum_{years 1-3} \max(\sum(GI_{1-8} \times \beta_{1-8}), 0)}{3}$$

Values of betas

Table 1

	Business lines	Beta factors
β_1	Corporate finance	18%
β_2	Trading and sales	18%
β_3	Retail banking	12%
β_4	Commercial banking	15%
β_5	Payment and settlement	18%
β_6	Agency services	15%
β_7	Asset management	12%
β_8	Retail brokerage	12%

Qualifying criteria for the Standardised Approach

25.5 In order to qualify for use of the Standardised Approach, a bank must satisfy its supervisor that, at a minimum:

- (1) Its board of directors and senior management, as appropriate, are actively involved in the oversight of the operational risk management framework;
- (2) It has an operational risk management system that is conceptually sound and is implemented with integrity; and
- (3) It has sufficient resources in the use of the approach in the major business lines as well as the control and audit areas.

25.6 Supervisors will have the right to insist on a period of initial monitoring of a bank's Standardised Approach before it is used for regulatory capital purposes.

25.7 A bank must develop specific policies and have documented criteria for mapping gross income for current business lines and activities into the standardised framework. The criteria must be reviewed and adjusted for new or changing business activities as appropriate. The principles for business line mapping are set out in [OPE25.16](#) to [OPE25.25](#).

25.8 As some internationally active banks will wish to use the Standardised Approach, it is important that such banks have adequate operational risk management systems. Consequently, an internationally active bank using the Standardised Approach must meet the following additional criteria:³

- (1) The bank must have an operational risk management system with clear responsibilities assigned to an operational risk management function. The operational risk management function is responsible for developing strategies to identify, assess, monitor and control/mitigate operational risk; for codifying firm-level policies and procedures concerning operational risk management and controls; for the design and implementation of the firm's operational risk assessment methodology; and for the design and implementation of a risk-reporting system for operational risk.
- (2) As part of the bank's internal operational risk assessment system, the bank must systematically track relevant operational risk data including material losses by business line. Its operational risk assessment system must be closely integrated into the risk management processes of the bank. Its output must be an integral part of the process of monitoring and controlling the bank's operational risk profile. For instance, this information must play a prominent role in risk reporting, management reporting, and risk analysis. The bank must have techniques for creating incentives to improve the management of operational risk throughout the firm.
- (3) There must be regular reporting of operational risk exposures, including material operational losses, to business unit management, senior management, and to the board of directors. The bank must have procedures for taking appropriate action according to the information within the management reports.
- (4) The bank's operational risk management system must be well documented. The bank must have a routine in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operational risk management system, which must include policies for the treatment of non-compliance issues.

- (5) The bank's operational risk management processes and assessment system must be subject to validation and regular independent review. These reviews must include both the activities of the business units and of the operational risk management function.
- (6) The bank's operational risk assessment system (including the internal validation processes) must be subject to regular independent review by internal or external auditors and/or supervisors.

Footnotes

- ³ *For other banks, these criteria are recommended, with national discretion to impose them as requirements.*

The alternative standardised approach

- 25.9** At national supervisory discretion a supervisor can choose to allow a bank to use the Alternative Standardised Approach (ASA) provided the bank is able to satisfy its supervisor that this alternative approach provides an improved basis by, for example, avoiding double counting of risks. Once a bank has been allowed to use the ASA, it will not be allowed to revert to use of the Standardised Approach without the permission of its supervisor. It is not envisaged that large diversified banks in major markets would use the ASA.
- 25.10** Supervisors allowing banks to use the ASA must decide on the appropriate qualifying criteria for that approach, as the criteria set forth in [OPE25.7](#) and [OPE25.8](#) may not be appropriate.
- 25.11** Under the ASA, the operational risk capital requirement/methodology is the same as for the Standardised Approach except for two business lines — retail banking and commercial banking. For these business lines, loans and advances — multiplied by a fixed factor “m” — replaces gross income as the exposure indicator. The betas for retail and commercial banking are unchanged from the Standardised Approach.

25.12 The ASA operational risk capital requirement, K_{RB} , for retail banking (with the same basic formula for commercial banking) can be expressed as follows, where β_{RB} is the beta for the retail banking business line, LA_{RB} is total outstanding retail loans and advances (non-risk weighted and gross of provisions), averaged over the past three years, and m is 0.035:

$$K_{RB} = \beta_{RB} \times m \times LA_{RB}$$

25.13 For the purposes of the ASA, total loans and advances in the retail banking business line consists of the total drawn amounts in the following credit portfolios: retail, small or medium-sized entities (SMEs) treated as retail, and purchased retail receivables. For commercial banking, total loans and advances consists of the drawn amounts in the following credit portfolios: corporate, sovereign, bank, specialised lending, SMEs treated as corporate and purchased corporate receivables. The book value of securities held in the banking book should also be included.

25.14 Under the ASA, banks may aggregate retail and commercial banking (if they wish to) using a beta of 15%. Similarly, those banks that are unable to disaggregate their gross income into the other six business lines can aggregate the total gross income for these six business lines using a beta of 18%, with negative gross income treated as described in [OPE25.3](#) and [OPE25.4](#).

25.15 As under the Standardised Approach, the total capital requirement for the ASA is calculated as the simple summation of the regulatory capital requirements across each of the eight business lines.

Business lines

25.16 All activities must be mapped into the eight level 1 business lines in Table 2 in a mutually exclusive and jointly exhaustive manner.

Level 1	Level 2	Activity groups
Corporate finance	Corporate finance	Mergers and acquisitions, underwriting, privatisations, securitisation, research, debt (government, high yield), equity, syndications, initial public offerings, secondary private placements
	Municipal / government finance	
	Merchant banking	
	Advisory services	
Trading and sales	Sales	Fixed income, equity, foreign exchanges, commodities, credit, funding, own position securities, lending and repos, brokerage, debt, prime brokerage
	Market-making	
	Proprietary positions	
	Treasury	
Retail banking	Retail banking	Retail lending and deposits, banking services, trust and estates
	Private banking	Private lending and deposits, banking services, trust and estates, investment advice
	Card services	Merchant / commercial / corporate cards, private labels and retail
Commercial banking	Commercial banking	Project finance, real estate, export finance, trade finance, factoring, leasing, lending, guarantees, bills of exchange
Payment and settlement ⁴	External clients	Payments and collections, funds transfer, clearing and settlement
Agency services	Custody	Escrow, depository receipts, securities lending (customers), corporate actions
	Corporate agency	Issuer and paying agents
	Corporate trust	
Asset management	Discretionary fund management	Pooled, segregated, retail, institutional, closed, open, private equity

	Non-discretionary fund management	Pooled, segregated, retail, institutional, closed, open
Retail brokerage	Retail brokerage	Execution and full service

Footnotes

⁴ *Payment and settlement losses related to a bank's own activities would be incorporated in the loss experience of the affected business line.*

- 25.17** Any banking or non-banking 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.
- 25.18** When mapping gross income, if an activity cannot be mapped into a particular business line then the business line yielding the highest requirement must be used. The same business line equally applies to any associated ancillary activity.
- 25.19** Banks may use internal pricing methods to allocate gross income between business lines provided that total gross income for the bank (as would be recorded under the Basic Indicator Approach) still equals the sum of gross income for the eight business lines.
- 25.20** The mapping of activities into business lines for operational risk capital purposes must be consistent with the definitions of business lines used for regulatory capital calculations in other risk categories, ie credit and market risk. Any deviations from this principle must be clearly motivated and documented.
- 25.21** The mapping process used must be clearly documented. In particular, written business line definitions must be clear and detailed enough to allow third parties to replicate the business line mapping. Documentation must, among other things, clearly motivate any exceptions or overrides and be kept on record.
- 25.22** Processes must be in place to define the mapping of any new activities or products.
- 25.23** Senior management is responsible for the mapping policy (which is subject to the approval by the board of directors).
- 25.24** The mapping process to business lines must be subject to independent review.

25.25 There are a variety of valid approaches that banks can use to map their activities to the eight business lines, provided the approach used meets the business line mapping principles. Nevertheless, the Committee is aware that some banks would welcome further guidance. The following is therefore an example of one possible approach that could be used by a bank to map its gross income:

- (1) Gross income for retail banking consists of net interest income on loans and advances to retail customers and SMEs treated as retail, plus fees related to traditional retail activities, net income from swaps and derivatives held to hedge the retail banking book, and income on purchased retail receivables. To calculate net interest income for retail banking, a bank takes the interest earned on its loans and advances to retail customers less the weighted average cost of funding of the loans (from whatever source – retail or other deposits).
- (2) Similarly, gross income for commercial banking consists of the net interest income on loans and advances to corporate (plus SMEs treated as corporate), interbank and sovereign customers and income on purchased corporate receivables, plus fees related to traditional commercial banking activities including commitments, guarantees, bills of exchange, net income (eg from coupons and dividends) on securities held in the banking book, and profits/losses on swaps and derivatives held to hedge the commercial banking book. Again, the calculation of net interest income is based on interest earned on loans and advances to corporate, interbank and sovereign customers less the weighted average cost of funding for these loans (from whatever source).
- (3) For trading and sales, gross income consists of profits/losses on instruments held for trading purposes (ie in the mark-to-market book), net of funding cost, plus fees from wholesale broking.
- (4) For the other five business lines, gross income consists primarily of the net fees/commissions earned in each of these businesses. Payment and settlement consists of fees to cover provision of payment/settlement facilities for wholesale counterparties. Asset management is management of assets on behalf of others.

Calculation of risk-weighted assets

25.26 The risk-weighted assets for operational risk under the standardised approaches are determined by multiplying the capital requirements calculated as set out in this chapter by 12.5.