

Unofficial Translation
With courtesy of the Association of International Banks
This translation is for the convenience of those unfamiliar with the Thai language.
Please refer to the Thai text for the official version.

Notification of the Bank of Thailand

No. SorNorSor. 95/2551

Re: Regulation on Minimum Capital Requirement for Operational Risk

1. Rationale

Whereas the Bank of Thailand issued the Notification of the Bank of Thailand Re: Regulation on Capital Adequacy for Commercial Banks which stipulates that commercial banks must maintain capital charge which is proportional to risk-weighted assets for credit risk, market risk, and operational risk at a level no lower than the level prescribed by the Bank of Thailand,

The Bank of Thailand thereby stipulates calculation approaches for calculating value equivalent to operational risk-weighted asset according to this Notification, thus allowing commercial banks to adopt these calculation approaches to assess a minimum level of capital charge for operational risk. Accordingly, commercial banks can choose a calculation approach for calculating value equivalent to operational risk-weighted asset which is suitable for their business complexity, risk exposure, and operational risk management system. In this Notification, the guidelines on minimum capital requirement for operational risk refer to some portion of "The First Pillar – Minimum Capital Requirements" in the International Convergence of Capital Measurement and Capital Standards – A Revised Framework (Comprehensive version: June 2006) which was issued by the Basel Committee on Banking Supervision (BCBS).

After commercial banks calculate the value equivalent to operational risk-weighted asset, they shall calculate an aggregate of such amount and risk-weighted assets for market risk and credit risk to further assess their capital adequacy in accordance with the Notification of the Bank of Thailand Re: Regulation on Capital Adequacy for Commercial Banks.

2. Statutory Authority

By virtue of Sections 29, 30 and 32 of the Financial Institutions Businesses Act B.E. 2551 (2008), the Bank of Thailand hereby issues guidelines on minimum capital requirement for operational risk for compliance by commercial banks.

3. Scope of Application

This Notification shall apply to all commercial banks in accordance with the laws governing financial institutions businesses.

4. Repealed Notification and Circular

Circular No. Thor.Por.Thor. ForNorSor. (22)Wor.421/2549 Re: Delivery of Draft Supervisory Guidelines According to Basel II's Pillar 1 Re: Guidelines on Minimum Capital Requirements (Final Draft), dated 27 March 2006

5. Contents

5.1 Definitions

In this Notification,

“Operational risk” is defined as the risk of loss resulting from inadequacy or failure of a commercial bank’s internal control processes, people, and systems or from external events, including legal risk (e.g. prosecutorial or litigation risk or authority-imposed fine as well as any loss stemming from out of court settlement agreement, etc.) However, this type of risk excludes strategic risk and reputational risk.

“Gross income” is defined as an income from normal business operations of a commercial bank, combining of two elements –net interest income and net non-interest income (see details in Attachment 1).

“Outstanding amount” is defined as loan amount plus accrued interest receivable and book value of investment funds in debt and equity instruments in banking book (excluding off-balance sheet items) before deducting provisions, except in case a full amount of provisions has been set aside whereby the Bank of Thailand permits the bank to deduct such provisions from the outstanding amount. When calculating the outstanding amount each year, a commercial bank shall use an average value of outstanding amount which is derived from two six-month accounting periods.

“Minimum capital base for operational risk” is defined as a value input in the calculation of value equivalent to operational risk-weighted asset. The value of minimum capital base for operational risk is not equal to minimum capital charge for operational risk which a bank must maintain to meet a legal requirement because it is a value calculated from a minimum capital ratio of eight percent, and this ratio differs from a statutory minimum capital ratio prescribed by the Bank of Thailand for each type of commercial banks.

“Value equivalent to operational risk-weighted asset” is defined as an amount that indicates a level of operational risk which is calculated according to the Bank of Thailand’s guideline. Such value is calculated with risk-weighted assets for credit risk and market risk to derive at a minimum capital charge which a commercial bank must maintain to meet statutory requirements. Since operational risk does not arise from a

bank's assets similar to credit and market risks, operational risk-weighted asset does not truly exist and such value constitutes only an equivalent amount.

5.2 Principles

Pursuant to this Notification, the guideline on calculation of value equivalent to operational risk-weighted asset stipulates two alternative calculation approaches, that is, the Basic Indicator Approach (BIA) and the Standardised Approach (SA-OR), whereby a commercial bank must choose a suitable approach that is commensurate with its business complexity, risk exposure, and operational risk management system. Both approaches use gross income as a proxy in the calculation of value equivalent to operational risk-weighted asset, implying that a commercial bank with high gross income shall have high operational risk. Thus, a commercial bank shall have high value equivalent to operational risk-weighted asset and shall thereby maintain high capital charge for minimum requirement against high operational risk.

The Bank of Thailand stipulates an alternative approach under the SA-OR, i.e. the Alternative Standardised Approach (ASA). Under the ASA, a commercial bank has an option to use outstanding amount as a proxy, instead of gross income, in the calculation of value equivalent to operational risk-weighted asset of commercial banking and retail banking business lines. This is because the outstanding amount may be a better proxy than gross income in such business lines.

However, a commercial bank must adhere to Policy Statement Re: Operational Risk Management and those that choose SA-OR or ASA must also satisfy the Bank of Thailand's minimum requirements prescribed in 5.6.

5.3 Guidelines on calculation of value equivalent to operational risk-weighted asset and relevant criteria

5.3.1 A commercial bank shall calculate value equivalent to operational risk-weighted asset by using one of the following approaches:

- (1) Basic Indicator Approach (BIA) as prescribed in 5.4
- (2) Standardised Approach (SA-OR) and Alternative Standardised Approach (ASA) as prescribed in 5.5

Nevertheless, a commercial bank must choose an approach to calculate value equivalent to operational risk-weighted asset which is commensurate with its business operation's nature and complexity.¹ In this regard, the Bank of Thailand anticipates that a full-fledged commercial bank² chooses to use SA-OR as a minimum

¹ If the Bank of Thailand discerns that the calculation of value equivalent to operational risk-weighted asset of a commercial bank is unreliable, it will order the commercial bank to take action where appropriate in accordance with the Notification of the Bank of Thailand Re: Regulation on Capital Adequacy for Commercial Banks.

² A Full-fledged commercial bank refers to a commercial bank pursuant to the Financial Institutions Businesses Act B.E. 2551 (2008), excluding retail banks.

standard while a retail bank whose scope of business operations is more limited than a commercial bank may use BIA.

5.3.2 To meet a minimum standard, a commercial bank that uses Internal Ratings-Based Approach (IRB) in the calculation of credit risk-weighted asset is required to use SA-OR in the calculation of value equivalent to operational risk-weighted asset.

5.3.3 If a commercial bank intends to change an approach to calculate value equivalent to operational risk-weighted asset, it shall seek approval from the Bank of Thailand to proceed as follows:

(1) In case of changing from a simpler approach to a more sophisticated approach, that is, changing from BIA to ASA, from BIA to SA-OR, from ASA to SA-OR, a commercial bank shall seek for approval by submitting a request and supporting documents that indicate classification of gross income and/or outstanding amount based on types of business lines according to either SA-OR or ASA, together with an evaluation form on bank's readiness to comply with the Bank of Thailand's minimum requirements set out for calculation of value equivalent to operational risk-weighted asset by using SA-OR and ASA (see details in Attachment 2). Accordingly, a commercial bank that intends to change from BIA to SA-OR or ASA must completely fill out every items on the evaluation form on bank's readiness. Moreover, a commercial bank that intends to change from ASA to SA-OR must fill out only Item 4 on the evaluation form on bank's readiness and submit the completed form to the Financial Institution Applications Department, Supervision Group, Bank of Thailand along with other relevant documents (if any). A commercial bank shall submit a request for such approval at least three months before an accounting period that it intend to start using a new calculation approach.

(2) In case of changing from a more sophisticated approach to a simpler approach, that is, changing from SA-OR to ASA, from SA-OR to BIA, or from ASA to BIA, a commercial bank shall seek approval from the Bank of Thailand on case-by-case basis. Such request must have a reasonable ground to qualify as an exceptional case.

5.3.4 Where a commercial bank receives a consent from the Bank of Thailand to use either SA-OR or ASA before this Notification becomes enforceable, it deems as if the consent to use such approach was granted under this Notification, and such commercial bank is not required to seek for another approval again.

5.3.5 In an exceptional case whereby a commercial bank fails to comply with the Bank of Thailand's minimum requirements prescribed in 5.6.2; for examples, there is an incident that induces a significant change in the bank's compliance with the Bank of Thailand's minimum requirements for calculation of value equivalent to operational risk-weighted asset; merger and acquisition occurs; or the operational risk management system has changed significantly; a commercial bank shall seek for the Bank of Thailand's approval on case-by-case basis.

5.4 Basic Indicator Approach (BIA)

A commercial bank shall calculate minimum capital base for operational risk equal to the average over the previous three years of a fixed percentage (a constant risk value at 15 percent) of positive annual gross income. If the annual gross income for any given year is negative or equal to zero, such income must be excluded from the numerator and such year must be subtracted from the total number of years in the denominator. Then, a commercial bank shall calculate value equivalent to operational risk-weighted asset by multiplying 12.5 with minimum capital base for operational risk according to the formula below:

$$ERWA_{BIA} = 12.5 \times K_{BIA}$$

$$K_{BIA} = \frac{\sum (GI_{1...n} \times \alpha)}{n}$$

Where,

$ERWA_{BIA}$ = Value Equivalent to operational risk-weighted asset under BIA

K_{BIA} = Minimum capital base for operational risk under BIA

$GI_{1...n}$ = Annual gross income, (where positive), over the previous three years

α = Constant risk value, under BIA, equals to 15%

N = Number of years for which gross income is positive

5.5 Standardised Approach (SA-OR)

5.5.1 A commercial bank shall calculate value equivalent to operational risk-weighted asset by using SA-OR as follows:

(1) A commercial bank shall allocate gross income into each business line as prescribed by the Bank of Thailand

- Business line classification based on attributes of business activity comprises eight types of business (see details in Attachment 3). A commercial bank shall adhere to business line classification guidelines as stipulated by the Bank of Thailand (see details in Attachment 4). Where a commercial bank has already used an internal system for business line classification, its classification may differ from what the Bank of Thailand prescribed if a constant risk value (β value) of such business line is higher than or equal to what prescribed in the Bank of Thailand's guidelines.

- Allocate gross income into the aforesaid eight business lines. The Bank of Thailand attaches examples of gross income allocation in order to ensure suitable and consistent allocation of gross income in each business line (see details in Attachment 5).

(2) A commercial bank shall calculate minimum capital base for operational risk of each business line by multiplying gross income with a constant risk value (β value) as prescribed by the Bank of Thailand for each business line (see details in

Attachment 3). Then, each business line's multiplication result shall be summed up to derive at the bank's minimum capital base for operational risk in that particular year. However, if minimum capital base of a business line is negative, the bank can offset negative minimum capital base of such business line with positive minimum capital base of other business lines in the same year.

(3) A commercial bank shall average results in (2) of minimum capital base for operational risk of the entire bank over the previous three years. However, in any given year, where the aggregate minimum capital base across all business lines of a bank is negative, it shall be deemed the minimum capital base for that year is zero while the denominator still remains three years.

(4) A commercial bank shall calculate value equivalent to operational risk-weighted asset by multiplying 12.5 with minimum capital base for operational risk derived from (3).

The calculation of value equivalent to operational risk-weighted asset by using SA-OR can be summarized in the formula below:

$$ERWA_{SA-OR} = 12.5 \times K_{SA-OR}$$

$$K_{SA-OR} = \frac{\sum_{year1-3} \max[\sum(GI_{1-8} \times \beta_{1-8}), 0]}{3}$$

Where,

- $ERWA_{SA-OR}$ = Value equivalent to operation risk-weighted asset under SA-OR
- K_{SA-OR} = Minimum capital base for operational risk under SA-OR
- GI_{1-8} = Annual gross income for each of eight business lines
- β_{1-8} = Constant risk value under SA-OR which is assigned a different value for each type of eight business lines

5.5.2 A commercial bank can choose to use Alternative Standardised Approach (ASA) in the calculation of value equivalent to operation risk-weighted asset as follows:

A commercial bank shall calculate minimum capital base and value equivalent to operational risk-weighted asset of the entire bank by using SA-OR as described in 5.5.1 (1) – 5.5.1 (4). However, there is some difference, that is, a commercial bank shall calculate minimum capital base for retail banking¹ and commercial banking²

¹ Outstanding amount of retail banking business line comprises outstanding amount of (1) retail borrowers and (2) housing loans

² Outstanding amount of commercial banking business line comprises outstanding amount of (1) government sector and central bank borrowers (2) regional government or local authorities, state organization, and state enterprises (PSEs) borrowers (3) multilateral development bank (MDBs) borrowers (4) financial institution borrowers (5) securities company borrowers and (6) private enterprise borrowers.

business lines each year by multiplying average annual outstanding amount with a fixed value “*m*” of 0.035. Then, the result is multiplied by an assigned β value of each business line, applying the formula used for calculation of minimum capital base for retail banking and commercial banking businesses as follows:

$$K_{RB} = \beta_{RB} \times m \times LA_{RB} \text{ (for retail banking)}$$

$$K_{CB} = \beta_{CB} \times m \times LA_{CB} \text{ (for commercial banking)}$$

Where,

$$K_{RB}, K_{CB} = \text{Minimum capital base required for retail banking and commercial banking business lines under ASA}$$

$$\beta_{RB}, \beta_{CB} = \text{Constant risk value } (\beta \text{ value}) \text{ of retail banking and commercial banking business lines under ASA}$$

$$LA_{RB}, LA_{CB} = \text{Average annual outstanding amount over the previous 3 years of retail banking and commercial banking business lines}$$

$$m = \text{Fixed value equals to 0.035}$$

In case ASA is chosen and gross income or outstanding amount cannot be allocated by following the above procedure, a commercial bank shall choose one of the following calculation methods to calculate minimum capital base of a business line or business group.

- Calculate minimum capital base for operational risk of a business group by multiplying the aggregate outstanding amount of commercial banking and retail banking business lines by *m* value. Then, the result is further multiplied by a higher β value of these two business lines, which equals to 15%. Finally, total gross income of the remaining business lines is multiplied by the highest β value of six business lines, which equals to 18%.

- Calculate minimum capital base for operational risk of a business group or business line by multiplying the aggregate outstanding amount of commercial banking and retail banking business lines by *m* value. Then, the result is further multiplied by a higher β value of these two business lines, which equals to 15%. Finally, gross income of each of the remaining six business lines is multiplied by β value of each business line.

- Calculate minimum capital base for operational risk of a business line or business group by multiplying outstanding amount of commercial banking and retail banking business lines by *m* value. Then, the result is further multiplied by β value of each business line. Finally, the aggregate amount of gross income of the remaining six business lines is multiplied by the highest β value of the six business lines, which equals to 18%.

Commercial banks can refer to definition of each type of borrower from the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Standardised Approach (SA) for Commercial Banks.

5.6 Risk management guidelines and minimum requirements

5.6.1 A commercial bank must have a good operational risk management by following an approach set out in the Bank of Thailand's Policy Statement Re: Operational Risk Management.

5.6.2 A commercial bank that choose to adopt SA-OR and ASA in calculation of value equivalent to operational risk-weighted asset must satisfy minimum requirements stipulated by the Bank of Thailand as follows:

(1) The board of directors and senior management of a commercial bank must participate in formulation of policy framework and oversight of operational risk management.

(2) A commercial bank must have and implement a sound operational risk management system with clear responsibilities assigned to operational risk management function, whose key responsibilities should include

(2.1) Develop strategies to identify, assess, monitor, control, and mitigate operational risk;

(2.2) Codify policies and relevant procedures concerning operational risk management and controls;

(2.3) Design and implement the operational risk assessment methodology;

(2.4) Design and implement the operational risk-reporting system.

(3) A Commercial bank must have sufficient resources for adoption of SA-OR or ASA in each business line and in internal control and audit areas.

(4) A commercial bank must have written policies and documented criteria for allocating gross income for each business line based on SA-OR (or outstanding amount for retail banking and commercial banking businesses based on ASA) and also review and adjust such criteria whenever business activity changes occur or a new business activity is introduced.

(5) A commercial bank must have data storage system to collect relevant actual loss data arising from operational risk by each business line. This system must be an element of the bank's operational risk assessment system which must be well integrated into the bank's risk management processes. For instance, risk assessment output must be an integral prominent part in a risk report submitted to the management and must be used in risk analysis, monitoring, and control.

(6) A commercial bank must prepare an operational risk report that also presents information on regular losses. Such report should describe appropriate

actions taken by the bank in dealing with incurred losses so operating unit management, senior management, and the board of directors are well informed.

(7) A commercial bank must prepare all relevant documents concerning operational risk management system and ensure compliance with implementation of established procedures, control, and processes concerning the operational risk management system. This also includes treatment of non-compliance issues.

(8) A commercial bank's operational risk management procedures and operational risk assessment system must be subject to regular independent review at least once a year or whenever there are material changes in business operation and risk management procedures or system. Accordingly, a commercial bank must also review both operating business units and operational risk management units.

(9) The operational risk management system of a commercial bank must be reviewed by external auditors whenever the Bank of Thailand deems appropriate.

6. Effective date

This Notification shall come into force from 31 December 2008 onwards.

Announced on the 27th day of November 2008

Tarisa Watanagase
Governor
Bank of Thailand

Gross income calculation method

Gross income is defined as a sum of net interest income and net non-interest income of a commercial bank as detailed below:

Gross income
+ 1. Net interest income
+ 1.1 Total interest and dividend incomes from both a) Positions in trading book ¹ and b) Positions in banking book
- 1.2 Interest expenses and related fees pertaining to procurement of fund for income generated under 1.1, such as expenses pertaining to cost of fund stemming from deposit-taking, issuance of bond, interbank lending or borrowing via money market, remittance to Financial Institution Rehabilitation and Development Fund or Deposit Insurance Agency, specific business tax, etc.
+ 2. Net non-interest income
+ 2.1 Total fee and service income, e.g. L/C fee, ATM and credit card usage fees, etc. (including income from insourcing fee)
- 2.2 Service fees paid out directly only in case where the bank is an intermediary in service provision under 2.1, such as fund transfer fee paid to the Bank of Thailand for Bathnet transactions, and credit card-related fee paid to a settlement bank, etc.
+ 2.3 Profit (loss) arising from sales and fair valuation of the positions in trading book, including profit (loss) arising from sales and fair valuation of foreign exchange transactions and commodity products in both trading book and banking book.
- 2.4 Interest expenses and related fees pertaining to procurement of fund for income generated under 2.3 (whereby interest expenses and related fees used as a deduction under 1.2 shall not be deducted again)

¹ To arrange classification of various positions, commercial banks shall adhere to the Notification of Bank of Thailand Re: Guidelines on Supervision of Market Risk and Capital Requirement for Market Risk of Financial Institutions.

However, the aforementioned gross income

(1) Shall not deduct provisions and impairment of assets such as allowance for doubtful accounts;

(2) Shall not deduct all types of operating expense, such as employee-related expenses; building, premise, and equipment expenses; expenses and remuneration of committees' members; consultation expenses; professional fee; outsourcing and agent appointment expenses; expenses relating to appointment of other bank as a paying agent²; expenses relating to the bank's printed materials and commercial papers; advertising expenses, brokerage fee, value-added tax, corporate income tax, and land and property taxes for business premise.

(3) Shall exclude profit (loss) from sale and fair valuation of the positions in banking book.³

(4) Shall exclude any incomes or expenses which do not arise from the bank's normal business operations (non-core business), for instance

- Compensation from insurance companies or redress from the government, e.g. expropriation fee
- Rental from foreclosed assets
- Profit (loss) from sales of foreclosed assets or other assets
- Loss from impairment of foreclosed assets or other assets
- Extraordinary or irregular items, e.g. office renovation expense due to flooding, expenses relating to fire, flooding, or other natural disasters, etc.

² Outsourcing and agent appointment expenses as well as expenses relating to appointment of other bank to act as a paying agent shall be referred to the Notification of the Bank of Thailand Re: Regulation Regarding Outsourcing in Financial Services.

³ In case the Bank of Thailand observes that a commercial bank intentionally transfers investments portfolio from trading book to banking book and intentionally avoids to recognize profit from sales of its position in trading book as income for capital arbitrage purposes, the Bank of Thailand shall take action against the bank where appropriate in accordance with the Notification of the Bank of Thailand Re: Regulation on Capital Adequacy Requirement for Commercial Banks.

Gross income used in calculating value equivalent to operational risk-weighted asset includes **gross income from the previous half-year accounting period over the past three years (or 6-month accounting periods)**. Half-year accounting period is defined as the reporting period ended June and December for Thai commercial banks and foreign bank branches that have closed their accounts on these particular months. For foreign bank branches whose accounting period differs from such timing, the Bank of Thailand allows reporting period to coincide with month end of such accounting period. For example, a foreign branch bank having a headquarter in Japan is allowed to use accounting periods ended March and September.

Evaluation form on bank's readiness to comply with the Bank of Thailand's minimum requirements set out for calculation of value equivalent to operational risk-weighted asset by using SA-OR and ASA

Name of financial institution: _____

Name of managing director: _____ **Signature:** _____

Name and position of the person responsible for filling out information whom the Bank of Thailand can contact with phone number

Evaluation date: _____

No.	Minimum requirements	Pass level				Details on how the bank meets the requirements	Supporting documents for compliance	
		Pass	Most criteria pass	Most criteria fail	Fail		Document title	Ref. No.
1.	The board of directors and senior management of the bank must participate in formulation of policy framework and oversight of operational risk management.							
2.	The bank must have and implement a sound operational risk management system with clear responsibilities assigned to operational risk management function, whose key responsibilities should include 1) Develop strategies to identify, assess, monitor, control, and mitigate operational risk;							

No.	Minimum requirements	Pass level				Details on how the bank meets the requirements	Supporting documents for compliance	
		Pass	Most criteria pass	Most criteria fail	Fail		Document title	Ref. No.
	2) Codify policies and relevant procedures concerning operational risk management and control; 3) Design and implement the operational risk assessment methodology; 4) Design and implement the operational risk reporting system.							
3.	The bank must have sufficient resources for adoption of SA-OR or ASA in each business line and in internal control and audit areas.							
4.	The bank must have written policies and documented criteria for allocating gross income for each business line based on SA-OR (or outstanding amount for retail banking and commercial banking businesses based on ASA) and also review and adjust such criteria whenever business activity changes occur or a new business activity is introduced.							

No.	Minimum requirements	Pass level				Details on how the bank meets the requirements	Supporting documents for compliance	
		Pass	Most criteria pass	Most criteria fail	Fail		Document title	Ref. No.
5.	The bank must have data storage system to collect relevant actual loss data arising from operational risk in each business line. This system must be an element of the bank's operational risk assessment system which must be well integrated with the bank's risk management processes. For instance, risk assessment output must be an integral prominent part in a risk report submitted to the management and must be used in risk analysis, monitoring, and control.							
6.	The bank must prepare an operational risk report that also presents information on regular losses. Such report should describe appropriate actions taken by the bank in dealing with incurred damages so operating unit management, senior management, and the board of directors are well informed.							

No.	Minimum requirements	Pass level				Details on how the bank meets the requirements	Supporting documents for compliance	
		Pass	Most criteria pass	Most criteria fail	Fail		Document title	Ref. No.
7.	The bank must prepare all relevant documents concerning operational risk management system and ensure compliance with implementation of established procedures, control, and processes concerning the operational risk management system. This also includes treatment of non-compliance issues.							
8.	Operational risk management procedures and operational risk assessment system must be subject to regular independent review at least once a year or whenever there are material changes in business operation and risk management procedure or system. Accordingly, the bank must also review both operating business units and operational risk management units.							
9.	The operational risk management system of the bank must be reviewed by an external auditor whenever the Bank of Thailand deems appropriate.							

Note: A commercial bank shall arrange an evaluation of its readiness in compliance with the Bank of Thailand's guidelines concerning operational risk management which constitutes an element of minimum requirements set out by the Bank of Thailand. The financial institution examiner will request findings of such evaluation from the bank on case-by-case basis.

Business line classification and constant risk value table

Business line	β	Type of business	Example of activities
1. Corporate finance	18%	1) Corporate and government financing management 2) Merchant banking 3) Financial advisory services	<ul style="list-style-type: none"> ■ Advice on merger and acquisition ■ Issuing, offering, or underwriting debt instruments and unit trust as well as firm underwriting and best efforts ■ Advice on initial public offering ■ Financial advisory e.g. loan procurement or loan syndication, securitisation, privatization of state enterprise, or feasibility study of investment projects
2. Trading and sales	18%	1) Sales 2) Market making 3) Proprietary positions 4) Treasury	<ul style="list-style-type: none"> ■ Buying/selling financial assets in trading book (e.g. debt instruments, equities, derivatives, foreign currency, and commodity) as the bank's investment and in case the bank is a market maker and engages in transactions to manage its market risk. ■ Engaging in other forms of the bank's fund management, e.g. repo-style transactions with the Bank of Thailand and private sector, etc. ■ Securities borrowing and lending where the bank acts as a counterparty ■ Acting as a unit trust brokerage for major clients ■ Acting as a unit trust and debt instrument dealer

Business line	β	Type of business	Example of activities
3. Retail banking	12%	1) Retail banking 2) Private banking 3) Card services	<ul style="list-style-type: none"> ■ Lending (guarantee, endorsement, aval, and hire purchase) to retail borrowers (retail lending)¹ ■ Banking services offered to retail customers, e.g. fees related to deposit account, and safe deposit box service , etc. ■ Fund transfer, payment of goods and services within the same bank and within the country ■ Credit card, debit card, and ATM card services. Issuing bank cards jointly with other companies (private labels) ■ Engaging in derivative transactions to hedge against risk exposure from loan portfolio of retail lending.
4. Commercial banking	15%	Commercial banking	<ul style="list-style-type: none"> ■ Lending (endorsement, aval, and L/C letter of guarantee) to wholesale borrowers (commercial lending)² ■ Project finance, export finance and trade finance ■ Factoring and leasing businesses ■ Securities investment in banking book ■ Engaging in derivative transactions to hedge against risk exposure from loan portfolio of commercial lending.

¹ Retail borrowers include

- (1) retail borrowers and (2) home loan according to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Standardised Approach (SA) for Commercial Banks

- (1) home loan (2) revolving credit for retail customers (3) other types of retail lending and (4) purchased retail borrowers according to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Internal Ratings-Based Approach (IRB) for Commercial Banks

² Wholesale borrowers include

- (1) government and central bank borrowers (2) local administrative organization, state organization, and state enterprise (PSE) borrowers (3) multilateral development bank (MDB) borrowers according to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Standardised Approach (SA) for Commercial Banks

- (1) public sector borrowers (2) financial institution borrowers (3) private business borrowers (general private borrowers and lending to special groups) and (4) purchased private business borrowers to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Internal Ratings-Based Approach (IRB) for Commercial Banks

Business line	β	Type of business	Example of activities
5. Payment and settlement	18%	Payment and settlement	<ul style="list-style-type: none"> ■ Fund transfer and payment of goods and services between banks and overseas, including fund transfer via a central network e.g. Bathnet, SMART, Swift, or Western Union, etc. ■ Bill for collection (B/E, promissory note) e.g. ECS (electronic cheque clearing services) ■ Returned cheque, buying/selling draft, selling traveler's cheque and cheque ■ Cash management ■ Card acquirer and credit card settlement which the bank owns and oversees the system ■ Providing support services (e.g. Insourcing of, back office services), pertaining to fund transfer and payment
6. Agency services	15%	1) Custody and trust 2) Corporate agency	<ul style="list-style-type: none"> ■ Escrow account services ■ Acting as securities registrar ■ Safekeeping and servicing of securities, certificate of deposit, debt instrument, property right document and other documents (custodian services) ■ Acting as an agent for debenture holder and a trustee of mutual fund ■ Acting as an agent or broker in securities borrowing and lending business ■ Acting as a agent in debt collection ■ Providing back office services which may not be classified into any business lines, e.g. services pertaining to accounting and finance, compliance, etc. ■ Acting as an agent of an instrument issuer to facilitate payment to instrument holder (issuer and paying agent)

Business line	β	Type of business	Example of activities
7. Asset management	12%	Asset management	<ul style="list-style-type: none"> ■ Managing all types of fund, e.g.. provident fund etc. ■ Managing non-performing assets (in case where the Bank of Thailand permits to do so)
8. Retail brokerage	12%	Retail brokerage	<ul style="list-style-type: none"> ■ Acting as a selling agent of equity, government/state enterprise bond, and unit trust ■ Acting as a broker to buy/sell unit trust to retail customers ■ Distributing leaflets and acting as an agent of life/non-life insurance companies. ■ Introducing broker service

**Business line classification guidelines
(for commercial bank using SA-OR or ASA)**

A commercial bank using SA-OR and ASA as a calculation approach of value equivalent to operational risk-weighted asset shall adhere to business line classification guidelines prescribed by the Bank of Thailand as follows:

1. A commercial bank must classify all types of business activity into one of the eight business lines prescribed by the Bank of Thailand in the business line classification table (see Attachment 3)

2. For any activity that cannot readily be classified into any business line but has certain attributes which are ancillary to and supports a key business line, a commercial bank shall classify such activity in the key business line it supports.¹ If any activity supports several key business lines, a commercial bank must have clearly written criteria for business line classification.

3. In case a commercial bank cannot classify activity into any particular business line, such activity should be included in a business line with the highest β value.

4. A commercial bank may use an internal pricing method to allocate gross income to each business line. However, the sum of gross income of eight business lines under SA-OR must be equal to total gross income of the entire bank in case business lines are not classified (under BIA).

5. The classification of a commercial bank's activities into each business line so as to maintain capital requirement for operational risk must be consistent with the definition of business lines adopted by a commercial bank to maintain capital requirement for other types of risk, such as credit and market risks. If any discrepancy arises, a commercial bank must be able to explain reasons and shall record such reasons in writing.

6. The business line classification procedure used by a commercial bank must be clearly documented. Particularly, the definitions of each type of business line must be detailed enough for others to follow. Moreover, a commercial bank must also document exceptions and changes that may occur.

7. The business classification procedure used by a commercial bank must encompass any new activity and product.

¹ For instance, in case of internet banking services, if income receipt comes from fund transfer via internet from another bank, such income should be classified into payment and settlement business line.

8. Senior executives must be held accountable to the bank's business line classification policy and such policy must be endorsed by the bank's board of directors.

9. A commercial bank must review on the business line classification procedure whenever there is any significant business change or new business activities.

**Examples of gross income allocation
(For commercial bank using SA-OR or ASA)**

A commercial bank using SA-OR or ASA may consider allocation of gross income to business lines by following the examples below even though, in practice, there may be a number of suitable approaches that can be used, including internal pricing method of which guideline shall be further issued by the Bank of Thailand.

1. Gross income of retail banking business line includes

- Net interest income¹ and fees relating to lending services offered to retail borrowers² and
- Net income from derivative transactions to hedge against risk exposures from loan portfolio granted to retail borrowers

2. Gross income of commercial banking business line includes

- Net interest income,³ including fees relating to lending services (e.g. guarantee, obligations, bill of exchange) offered to wholesale borrowers⁴ and
- Net income from derivative transactions to hedge against risk exposure from loan portfolio granted to wholesale borrowers
- Total interest income and dividend from securities investment in the bank's banking book

¹ Commercial bank may calculate interest income receipt from lending to retail borrowers by deducting weighted average cost of fund of such loan, regardless whether such fund derives from retail customer's deposit or other types of deposit.

² Retail borrowers include

- (1) retail borrowers and (2) home loan according to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Standardised Approach (SA) for Commercial Banks
- (1) home loan (2) revolving credit for retail customers (3) other types of retail lending and (4) purchased retail borrowers according to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Internal Ratings-Based Approach (IRB) for Commercial Banks

³ Commercial banks may calculate from interest income receipt from commercial lending which is deducted with weighted average cost of fund of such loan, regardless whether such fund derives from business establishment's deposit or other types of deposit.

⁴ Wholesale borrowers include

- (1) government and central bank borrowers (2) local administrative organization, state organization, and state enterprise (PSE) borrowers (3) multilateral development bank (MDB) borrowers according to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Standardised Approach (SA) for Commercial Banks
- (1) public sector borrowers (2) financial institution borrowers (3) private business borrowers (general private borrower and lending to special groups) and (4) purchased private business borrowers to the Notification of the Bank of Thailand Re: Regulation on Credit Risk-weighted Asset Calculation under the Internal Ratings-Based Approach (IRB) for Commercial Banks

3. Gross income of trading and sales business line includes profit (loss) from sales and fair valuation (mark to market) of securities in trading book which is deducted with interest expense and fees relating to procurement of such fund, then added with wholesale broking fee.

4. Gross income of the remaining business lines mainly include net fee income and service fees from brokerage transactions. For payment and settlement business line, gross income also includes fee income from fund transfer and payment to wholesale counterparties. For asset management business line, gross income also includes fee for managing asset for customers.

Disclaimer: The Association of International Banks, its directors, members and employees take no responsibility, accept no liability from any use or misuse of the information in these pages and do not attest to the correctness of the translation, if any. This translation contains privileged information. It is intended for the named recipients only. No portion of this translation may be transmitted by any means without prior written permission from the Association of International Banks. All rights reserved.