Guidelines for the Measurement of Operational Risk Regulatory Capital of Commercial Banks

(September 18, 2008)

Chapter I General Provisions

Article 1 To regulate the measurement of operational risk regulatory capital of commercial banks, these Guidelines have been made in accordance with the Banking Supervision Law of the People’s Republic of China, the Law on Commercial Banks of the People’s Republic of China, and other laws and regulations.

Article 2 These Guidelines shall apply to the Basel II banks as determined in the Guiding Opinions on the Implementation of New Basel Capital Accord in the Banking Industry of China and other commercial banks voluntarily implementing the New Basel Capital Accord.

Article 3 The “operational risk” as mentioned in these Guidelines refers to the risk of loss resulting from inadequate or failed internal processes, people and information technology systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk.

Article 4 A commercial bank shall include the operational risk management as a major risk management function in the risk management system of the bank in accordance with the requirements of the Guidelines for the Operational Risk Management of Commercial Banks.

Article 5 A commercial bank shall choose one of the following methods for measuring the operational risk regulatory capital: (1) the Standardized Approach (TSA); (2) the Alternative Standardized Approach (ASA); and (3) the Advanced Measurement Approach (AMA).

Article 6 The measurement of operational risk regulatory capital of a commercial bank shall meet the conditions as set out in these Guidelines, and shall be implemented upon approval of the China Banking Regulatory Commission (CBRC). Without the approval of the CBRC, no commercial bank may modify the method for measuring operational risk regulatory capital.

Where the CBRC, according to the doctrine of prudential regulation, determines that a commercial bank has inadequate internal control or weak operational risk management, it may require the commercial bank to increase the operational risk regulatory capital on the basis of the result of measurement in the method as set out in these Guidelines.

Chapter II The Standardized Approach

Article 7 To use the standardized approach, a commercial bank shall meet the following conditions:

1. The board of directors of the commercial bank shall assume the ultimate accountability for the efficacy of supervision of the operational risk management, and the senior management of the commercial bank shall be responsible for executing the operational risk management strategies, overall operational risk management policies and operational risk management system approved by the board of directors.

2. The commercial bank shall have an operational risk management system which is suitable for the bank' s business nature and scale and product complexity. This management system shall be able to record and store data and operational risk event information related to the operational risk losses, be able to support the self-evaluation of operational risk and control measures and the monitoring of key risk indicators, and be able to help the commercial bank effectively identify, assess, monitor, control and mitigate operational risk. This management system shall be well documented, with provisions on the reasonable disposition of and remedy for noncompliance.

3. The commercial bank shall systematically gather, sort out, track and analyze the relevant operational risk data, including the amount and frequency of operational risk losses by business lines, conduct regular risk assessment based on the data of losses, and integrate the results of assessment into the monitoring and control of operational risk.

4. The commercial bank shall have a clear route of internal reporting of operational risk. The department responsible for operational risk management of the commercial bank shall regularly submit a bank-wide operational risk management report to the senior management and board of directors, covering the assessment results of operational risk and control measures, key risk indicators, major operational risk events, confirmed or potential material operational risk

losses and other information, and take effective actions according to the information in the management report.

5. The commercial bank shall input adequate human and material resources to support the operational risk management in the business lines, and ensure the efficacy of internal control and internal audit.

6. The commercial bank’s operational risk management system and processes shall be subject to validation and review which shall cover all business lines and the operational risk management of the whole bank.

7. The operational risk management system and validation of the commercial bank shall be subject to the supervisory inspection of the CBRC.

Article 8 The operational risk regulatory capital of a commercial bank measured in the standardized approach shall equal the average of the simple summation of the operational risk regulatory capital in the previous three years.

The operational risk regulatory capital in each year of the previous three years shall equal the simple summation of the regulatory capital for each of the following business lines in each year: corporate finance, trading & sales, retail banking, commercial banking, payment & settlement, agency services, asset management, retail brokerage and others. Where the aggregate capital for all business lines within a given year is negative, the operational risk regulatory capital for that year shall be indicated as zero.

The regulatory capital for each business line in each year shall be calculated by multiplying the gross income in that business line in the year by a factor (denoted beta) assigned to that business line.

The gross income in a business line shall be defined as net interest income plus net non-interest income in that business line. For details of the beta factors assigned to the business lines and calculation instructions for the standardized approach, please see Annex 1. For details of the scope of gross income and principles for categorization of business lines, please see Annex 2.

Article 9 The formula for calculating the operational risk regulatory capital of a commercial bank in the standardized approach shall be:

$$K_{TSA}=\{\Sigma_{years\ 1-3} \max[\Sigma(GI_{1-9} \times \beta_{1-9}),0]\}/3$$

K_{TSA} = the operational risk capital requirement for a commercial bank calculated in the standardized approach;

$\{\Sigma_{years\ 1-3} \max[\Sigma(GI_{1-9} \times \beta_{1-9}),0]\}/3$ = the average of the simple summation of operational risk regulatory capital in the previous three years;

$\max[\Sigma(GI_{1-9} \times \beta_{1-9}),0]$ means where the operational risk capital requirement in a given year is negative, it shall be indicated as zero;

GI_{1-9} = annual gross income in a given year for each of the business lines

β_{1-9} = a factor (denoted beta) assigned to each of the business lines.

Chapter III The Alternative Standardized Approach

Article 10 To use the alternative standardized approach, a commercial bank shall meet the conditions as set out in Article 7 of these Guidelines, and shall make a written certification to the CBRC on the degree of mitigating double counting of risks by using this alternative approach instead of the standardized approach.

Article 11 Except that the gross income for the retail banking and commercial banking is replaced by the average of outstanding loans in the previous three years multiplied by 3.5%, the business line classification principle, corresponding factors assigned (betas) and calculating method shall be the same as for the standardized approach. The respective formulas for the regulatory capital for retail banking and commercial banking shall be:

Regulatory capital for the retaining banking business line = 3.5% x average of the outstanding retail banking loans over the past three years x 12%

Regulatory capital for the commercial banking business line = 3.5% x average of the outstanding commercial banking loans over the past three years x 15%

The book value of securities held in the banking book shall also be included in the outstanding loans in the commercial banking business line.

Article 12 The regulatory capital for business lines other than the retail and commercial banking may be calculated in the standardized approach, or may be replaced by the aggregate of the total gross income for these other business lines multiplied by 18%. For details of the calculation instructions for the alternative standardized approach, please see Annex 3.

Chapter IV The Advanced Measurement Approach (AMA)

Article 13 The advanced measurement approach shall be the method for calculating the regulatory capital through a commercial bank's internal operational risk measurement system.

Article 14 To use the advanced measurement approach, in addition to the conditions as set out in Article 7 of these Guidelines, a commercial bank shall meet the following qualitative standards:

1. The commercial bank's operational risk measurement shall be integrated into the operational risk management processes of the bank as an important component, and the relevant measurement system shall be able to facilitate the commercial bank's improvement of the management of operational risk throughout the bank and in all business lines and support the allocation of relevant capital to each business line.

2. The operational risk measurement system of a commercial bank shall be subject to validation, and the validation standards and procedures shall be consistent with the relevant provisions of the CBRC.

Article 15 To use the advanced measurement approach, a commercial bank shall also meet the following quantitative standards:

1. The operational risk measurement system shall have considerable precision, with the frequency of occurrence of severe loss events and amount of losses having been well taken into account.

2. In the development of an operational risk measurement and management system, the commercial bank shall have and maintain strict procedures for model development and independent model validation.

3. Where a commercial bank is unable to satisfy the CBRC that it has adequately measured and accounted for its expected loss exposure in the current profits and looses, it shall fully take into account the sum of expected loss (EL) and unexpected loss (UL) when calculating its operational risk regulatory capital.

4. When summing up different operational risk regulatory capital, the commercial bank may be permitted to use internally determined correlations in operational risk losses across individual operational risk estimates, provided it can demonstrate in writing that its systems for determining correlations are sound.

5. The maintenance of the operational risk measurement system of the commercial bank shall be based on four fundamental elements: internal loss data, relevant external loss data, scenario analysis and factors reflecting the business environment and internal control systems.

6. The commercial bank shall well document the functions and weights of these four fundamental elements as mentioned in the preceding subparagraph in its overall operational risk measurement system.

Article 16 The internal loss data used by a commercial bank for its operational risk measurement shall meet the following conditions, at a minimum:

1. The commercial bank shall maintain a minimum five-year observation period of internal loss data. When the bank first moves to the advanced measurement approach, a three-year historical data window is acceptable.

2. The commercial bank shall document the methods, procedures and authority for the processing and adjustment of internal loss data.

3. The commercial bank shall set an appropriate de minimis gross loss threshold for internal loss data collection.

4. The commercial bank shall match its internal loss data used by its operational risk measurement system to the specified categorization of business lines in Annex 2 and categorization of loss event types in Annex 4 of these Guidelines.

5. The commercial bank’s internal loss data shall comprehensively capture all material business activities which have a material impact on the overall risk estimates of the bank.

6. Aside from information on loss amounts, the commercial bank shall collect information about the time of the loss event, causes of the loss event, and so on.

7. The commercial bank shall develop reasonable and specific criteria for assigning loss data arising from an event in a centralized functioning department (e.g. an information technology department) or an activity that spans more than one business line, as well as from related events over time.

8. The commercial bank shall continue treating the operational risk losses that are related to credit risk and have historically been included in the bank’s credit risk database (e.g. collateral management failures) as credit risk losses, and such losses shall not be counted into the operational risk regulatory capital. Nevertheless, such operational risk-related credit risk losses shall be highlighted and accounted for separately within the bank’s internal operational

risk loss database.

9. The commercial bank shall treat market risk losses resulting from operational risk loss events as operational risk within the bank’s internal operational risk loss database, and such losses shall be counted into the operational risk regulatory capital.

Article 17 The commercial bank’s operational risk measurement system shall use relevant external data, including public data and pooled banking industry data, and shall document the methods, procedures and authority for the processing and adjustment of external data. These external data shall include data on actual loss amounts, information on the scale of business operations where the event occurred, information on the causes and circumstances of the loss events, and other information.

The CBRC shall encourage the commercial banks adopting the advanced measurement approach to mutually share their internal data in a proper manner as a source of external data for operational risk measurement. The gathering, management and sharing of internal data among commercial banks shall adhere to the written rules determined in advance. The relevant rules and operating or management mechanisms shall be reported to the CBRC in advance.

Article 18 The collection and assessing results of internal operational risk loss data and the use of external data of a commercial bank shall be subject to the supervisory review of the CBRC.

Article 19 A commercial bank shall use the scenario analysis of expert opinion in conjunction with external data to estimate its exposure to high-severity loss events. Scenario analysis shall also be used by a commercial bank for the correlation assumptions embedded in the bank’s operational risk measurement system.

A commercial bank shall timely compare such scenario analysis with the actual loss experience to ensure the reasonableness of scenario analysis.

Article 20 In addition to using internal and external loss data and scenario analysis in the operational risk measurement, a commercial bank shall take into account the key business environment and internal control factors that may change its operational risk profile, and translate these factors into quantitative measures that lend themselves to verification in the operational risk measurement system.

Article 21 A commercial bank may recognize the risk mitigating impact of insurance in the measures of operational risk used for regulatory minimum capital requirements. The recognition of insurance mitigation shall be limited to 20% of the total operational risk regulatory capital. The criteria for recognition of the mitigating impact of insurance shall be made separately by the CBRC.

Article 22 A commercial bank may choose the operational risk measurement model according to its business nature and scale, complexity of products and risk management level, including the loss distribution model, scoring model, and so on. The confidence interval for the operational risk measurement model shall be 99.9%, and the holding period shall be one year.

Article 23 With the approval of the CBRC, a commercial bank may use an advanced measurement approach for most of its business lines and the standardized approach for the rest, provided that the following conditions are met:

1. All material operational risks of the bank’s global operations are captured.

2. All of the bank’s operations that are covered by the advanced measurement approach meet the requirements of the advanced measurement approach, while those parts of its operations that are using the standardized approach meet the requirements of the standardized approach.

3. The bank provides the CBRC with a plan specifying the timetable for rolling out the advanced measurement approach in the bank, and ensures its feasibleness.

Chapter V Supplementary Provisions

Article 24 Annexes 1-4 shall constitute an integral part of these Guidelines.

Article 25 The power to interpret these Guidelines shall remain with the CBRC.

Article 26 These Guidelines shall come into force on October 1, 2008. The calculation rules for the relevant regulatory capital requirements shall come into force on the day when an approval is obtained from the CBRC to implement the New Basel Capital Accord.

Annex 1 Betas Assigned to Business Lines and Calculation Instructions for the Standardized Approach

Annex 2 Scope of Gross Income and Categorization of Business Lines

Annex 3 Calculation Instructions for the Alternative Standardized Approach

Annex 4 Types of Operational Risk Loss Events and Principles for Loss Data Collection and Statistics