6. Asset Quality, Credit Risk, and Internal Credit Risk Rating Systems (ICRRS)

Asia Pacific Economic Cooperation Forum
– *Financial Regulators Training Initiative* –
Bank Analysis and Supervision Seminar

Manila, Philippines May 2014

Credit Risk in Banks

Credit Risk is the inherent risk to earnings or capital arising when a borrower or counterparty fail to meet the terms of a contract or do not fully perform as agreed by provision of contracts.

Credit risk is the greatest risk factor for most banks!

Asset Quality / Credit Risk Assessment

- Considers the level of risk in bank's assets
- Considers risk management of assets and off-balance sheet items
- Strongly influenced by level, distribution, severity, and trend of **classifications** and the adequacy of **reserves**
- Other factors: concentrations, administrative processes, violations of laws and regulations

Credit Risk Analysis Tasks

- Assess credit risk (existing and potential)
  - Loans, investments, and other assets
  - Commitments and contingent liabilities
- Evaluate the allowance for loan losses
- Assess credit risk management issues
- Consider concentrations, related party transactions, and country/transfer risks

[BCP 18] [BCP 17] [BCP 19] [BCP 20] [BCP 21]

Credit Risk in Banks

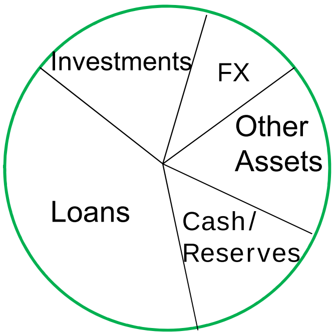
- **What are common kinds of credit risk?**
  - Default risk
  - Counterparty risk
  - Country risk
    - Transfer risk
    - Sovereign risk

Credit Risk in Banks

- **Where does credit risk arise?**
  - Wholesale or commercial loans and advances
  - Retail credit (e.g., credit cards, installment loans)
  - Commitments and guarantees
  - Due from correspondent bank balances
  - Investments (bond or equity)
  - Settlement of a transaction
  - Trading products (e.g., FX and derivatives)

Credit Risk: Start with Asset Mix

Consider balance sheet, asset categories!



- Common-sized balance sheet (% of total assets)
- Consider risks in each broad category
- Consider risks in each specific group: loans and investments by type

Which is more risky? Why?

- Loan Portfolio 1
  - Commercial 20%
  - Government 15%
  - Agriculture 15%
  - Home loans 20%
  - Individuals 30%
    - Credit cards 15%
    - Installment 15%
- Loan Portfolio 2
  - Commercial 15%
  - Government 10%
  - Agriculture 10%
  - Home loans 20%
  - Individuals 45%
    - Credit cards 25%
    - Installment 20%

Both loan portfolios have the same delinquency attributes.

Additional credit risk

- Off-balance sheet items
  - Commitments
  - Contingencies
  - Guarantees

Managing Credit Risk

- **How do banks manage their credit risk?**
  - Strategy and goals for credit risk
  - Setting exposure limits
  - Internal rating systems (ICRRS)
  - Terms and pricing
  - Regular monitoring of obligors and exposures
  - Collateralization and guarantees
  - Risk transfer (e.g., participation, securitization)
  - Sound internal controls for whole process

Managing Credit Risk

- **What is an Internal Credit Risk Rating System (ICRRS)?**
  - An assessment of a borrower's creditworthiness
  - A number or letter assigned to represent ability and willingness of borrower to meet its financial obligations
  - An indicator of borrower's default risk
  - Ratings are a type of relative ranking of risk
- **Does every bank need an ICRRS?**

Credit Risk and ICRRS

- Expected losses (EL)
  - Known with reasonable certainty
  - Generally covered by reserves / provisions
  - Example: expected default rate on a certain borrower or portfolio
- Unexpected losses (UL)
  - Associated with unforeseen events
  - Capital is normally a buffer to absorb such losses

Credit Risk and ICRRS

- A note on expected loss (EL):

EL = Probability of Default x Loss Given Default

or

PD x LGD = EL

Because both PD and LGD can vary in response to economic conditions….

…this causes EL to fluctuate within a range (distribution) over time.

May 2014 *APEC-FRTI: BASS* 13

Credit Risk and ICRRS

- Consider the following:
  - Traditional *de facto* **supervisory rating system**…
    - Special Mention, Substandard, Doubtful and Loss
    - Pass: all other exposures

…**may be problematic** in certain cases:

- Implicitly assumes all 'Pass' credits share same PD
- Mandatory reserve percentages (specific or general) may not accurately reflect bank's own portfolio
- Tends to be backward-looking and does not consider *expected* default behavior

May 2014 *APEC-FRTI: BASS* 14

Why Have Rating Systems? (1/5)

- What is an **internal credit risk rating system**?
  - Number or letter grade represents an assessment of creditworthiness / default risk
    - By individual obligors for wholesale credit
    - Either by obligor or pool level for retail exposures
  - Differentiation of risk allows management to optimize returns
  - Effectively embodies EL/UL concept since ratings should be a proxy for *expected performance*

Why Have Rating Systems? (2/5)

- Uses of internal ratings
- Facility pricing and terms
    - What return do we expect for taking on exposure to a borrower rated 'X'?
  - Approval authorities and limits
    - Who can approve a loan to a borrower rated 'X'?
    - How much can be approved to borrowers rated 'X'?
  - Relationship management / credit admin.
    - Does a borrower rated 'X' require more attention?

Why Have Rating Systems? (3/5)

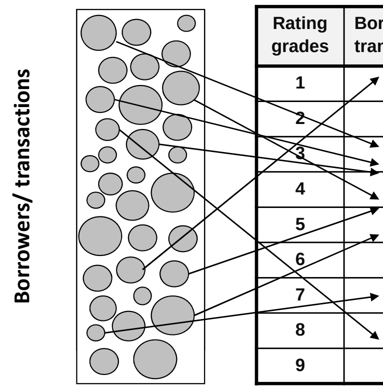
- More uses of internal ratings
  - Capital **adequacy**, **reserving** and **profitability**
    - Are reserves adequate to cover expected losses on borrowers like those rated 'X'?
    - Is capital adequate to cover unexpected losses on borrowers like those rated 'X'?
  - Validation of the rating system
    - How timely and accurate is the rating for 'X'?
    - Does the methodology need to be changed (i.e., does the system need recalibration)?

Why Have Rating Systems? (4/5)

- More uses of internal ratings
  - **Portfolio management and reporting**
    - What is our overall exposure to borrowers rated 'X'?
    - is any concentration of exposure to borrowers rated 'X' within our risk appetite?
  - **Migration analysis and stress testing**
    - What further loan loss provisions would be needed if all borrowers rated 'X' migrate to 'Y'?

Why Have Rating Systems? (5/5)

- How ratings are used in the IRB approach



1. Internal Rating

Rating grades	Borrowers/ transactions
1	
2	
3	
4	
5	
6	
7	
8	
9	

2. PD estimation

PD (LGD) estimate
0.03
0.05
0.08
0.10
0.20
0.50
1.00
2.00
5.00

3. Risk Weight Function

Capital charge (and RWA amount)
12,305
30,992
142,537
833,665
320,181
278,337
51,003
19,263
3,500

Rating System Design (1/3)

- High-level aspects of good ICRRS design
  - Integration with major phases of credit risk management ("use test") Pricing
    - Provisioning
    - Credit management
    - Performance measurement (e.g., RAROC)
    - Portfolio management and reporting
    - Stress testing and scenario analysis

Rating System Design (2/3)

- High-level design aspects
  - Sound governance
    - Board approval
    - Clear responsibility for design, maintenance, etc.
    - Independent validation of methodology and ratings
    - Adequate information for Board to monitor implementation by management
  - Includes all material credit exposures
    - Loans (incl. interbank exposures) and investments
    - Derivatives and structured products

Rating System Design (3/3)

- High-level design aspects
  - Adequate number of ratings to meaningfully differentiate risk
  - Ratings must be accurate and timely
    - Dynamic to reflect changes in underlying risk drivers
    - Well supported and documented to credit file
    - Independent confirmation (credit review function)
    - Consequences if these criteria are not met
  - Ratings are consistent and replicable

Managing Credit Risk

- **How are internal ratings used? (2/2)**
  - Relationship management / credit admin.
    - Does a borrower rated ‘X’ require more attention?
  - Capital adequacy, provisioning, and profitability
    - Are reserves adequate to cover expected losses on borrowers like those rated ‘X’?
    - Is capital enough to cover unexpected losses on borrowers like those rated ‘X’?
  - Validation of the system
    - How timely and accurate is the rating for ‘X’?
    - Does the rating system need to be recalibrated?

Managing Credit Risk

- **What are key attributes of a rating system?**
  - **Transparent:** assumptions, methodologies, policies and procedures are well documented and understood
  - **Consistent:** system is fully implemented, used consistently across business lines, and covers all material credit exposures
  - **Replicable:** system results in the same rating assigned when different individuals review the same credit

Credit Risk: How much?
Adverse Classifications

Typical classification rules might include:			
Assets and Contingent Liabilities			
Past due	**Category**	**"Weight"**	**Reserve**
current	*1-Pass*	0%	0%*
0-29	*2-Spec.Mention*	0%	5%
30-89	*3-Substandard*	20%	20%
varies	*4-Doubtful*	50%	50%
90+	*5-Loss*	100%	100%
		Weighted	
	Classified Assets		

Credit Risk: How much?
Classification Ratios

- **Sample Classification Ratios:**
  - Total classified (3+4+5) assets / Core Equity Tier 1 Capital + Reserves
  - Weighted classified (20%(3)+ 50%(4) +5) assets / Core Equity Tier 1 Capital + Reserves
  - Total classified assets / Total Assets

← Beware of this ratio
It's not as useful as it looks

- **Severity and Trend of Classifications**

Credit Risk: Trends?

Past Due, Nonperforming (3,4,5) and Restructured

- Total delinquencies by type (which loans have more risk? Remember slide 8?)
- Nonperforming loans/gross loans
- Market trends of collateral (e.g. loans secured by real estate in a "down market")
- Restructured loans/gross loans

Credit Risk: Other Factors

- **Concentrations of Credit [BCP 19]**
  - Level and Trend based on internal reports
  - Compliance with large exposure limits (example)
    - Single borrower – 15% typical limit (more if real estate secured)
    - Group of related borrowers – 50% of capital
    - Industry limits – bank's own, regulations, laws
  - Investment limits (non government)
    - Single company, project, or bank ≤ 10% capital;
    - Total of all investments ≤ xx% capital
- **Insider Transactions [BCP 20]**
    - Arm's length; specific approval requirements for directors, senior officers, and principal shareholders; limits on loans;

Mitigating Credit Risk

- **How can credit risk be mitigated?**
  - Mitigants basically fall into three types
    - Collateral: cash, gold, pledge of securities, receivables, inventory, real estate, etc.
    - Guarantees: personal guarantees, standby letters of credit, etc.
    - Risk transfer: insurance, securitization, credit derivatives
  - Be aware of differing treatment for capital adequacy calculations

Mitigating Credit Risk

- **What are limitations of these tools?**
  - Mitigants should not substitute for obligor <u>performance</u>
  - Their use often increases other risks (market, liquidity, operational, etc)
  - Practical difficulties of use (e.g., support of legal system, limitations of bank infrastructure)
  - Measuring credit risk can be imprecise, which reduces the effectiveness of mitigants

Allowance for Loan & Lease Losses

or (Credit reserves) or (Allowance for Probable Losses) or (Loan Loss Reserve) or ?

- A reserve set aside to absorb expected loan losses
- **Is the "ALLL" sufficient?** **[BCP 18]**
- General reserves (as an example)
  - 0.50% of outstanding loans in groups 1 to 4
  - Note that only 1.25% of risk-weighted assets counts toward regulatory capital
- Specific reserves (as an example)
  - e.g. 5% / 20% / 50% / 100%

Analyzing the ALLL
Factors to Consider (1/2)

- Level, trend, and severity of delinquencies
- Underwriting standards
- Adequacy of lending policies
- "Loan review" function and timely identification of problem loans

Analyzing the ALLL
Factors to Consider (2/2)

- Historical level and severity of loan losses and recoveries
- Prevailing economic conditions

- <u>Process for determining and documenting adequacy of the ALLL</u> <u>[BCP 18]</u>

Risk Management

- **What is it, and what does it do?**
  - A <u>process</u> to identify, measure, evaluate, monitor, report, and control (or mitigate) risk on a *continuous* basis
  - Does not minimize risk, but seeks to optimize the inherent risk-reward tradeoff
  - Not a compliance exercise

Risk Management

- **What are other key elements of the credit risk management process? (1/7)**
  - Credit origination
    - Purpose of credit and source(s) of repayment
    - Assessment of industry and economic factors
    - Proposed terms, conditions and covenants
    - Adequacy and enforceability of collateral / guarantees
    - Approval by appropriate authority

[BCP 17]

May 2014 *APEC-FRTI: BASS* 35

Risk Management

- **Discussion: credit risk management process**

  - You are a credit officer at a local bank
  - You have been asked to identify the primary repayment source for the following types of credit exposure:
    - Commercial real estate
    - Mortgage loan to purchase a home
    - Commercial letter of credit to finance export of goods
    - Due from correspondent bank balance

May 2014 *APEC-FRTI: BASS* 36

Risk Management

- **Credit risk management process (2/7)**
  - Limit setting [BCP 19]
    - For single and groups of connected obligors
    - Size based on credit strength of obligor, need for credit, economic conditions and risk tolerance
    - By industry, economic or geographic sector to control concentration risk
    - Inclusive of country risk and transfer risk [BCP 21]
    - Reviewed regularly but at least annually or upon facility renewal

May 2014 *APEC-FRTI: BASS* 37

Risk Management

- **Credit risk management process (3/7)**
  - Rule setting for **related party transactions**
    - Arm's length / monitor / mitigate [BCP 20]
  - Credit administration
    - Documentation
    - Disbursement
    - Exposure monitoring
    - Processing payments
    - Collateral monitoring
    - Maintenance of credit files

May 2014 *APEC-FRTI: BASS* 38

Risk Management

- **Credit risk management process (4/7)**
  - Measuring credit risk
    - Bank should establish a risk rating system for all types of credit activities
    - Should consider both business risk and financial risk factors
    - Ratings philosophies: point-in-time vs through-the-cycle
    - Independent review: validation of ratings, rating system design and practice

Risk Management

- **Credit risk management process (5/7)**
  - Credit risk monitoring and control
    - Credit policy should define standards
    - Financial position and business conditions
    - Conduct of accounts
    - Adherence to loan covenants
    - Collateral valuation
    - **Rules for handling delinquent accounts, including maintaining sufficient reserves**

[BCP 18]

Risk Management

- **Credit risk management process (6/7)**
  - Independent review of risk profile
    - Reported to Board and properly documented
    - Performed at least annually -- more frequently for problem credits and new relationships
    - May be done on portfolio basis for certain kinds of exposures (e.g., retail)

To be effective, review staff must be knowledgeable, have adequate resources to do their job, and enjoy the support and confidence of management and the Board of Directors.

Risk Management

- **Credit risk management process (7/7)**
  - Problem credits
    - Bank should have a remedial process defined by policy as to how these are managed
    - The process should include:
      - Negotiation and follow-up
      - Remedial / exit strategies
      - Review of collateral and security documentation
      - Regular exposure reviews and status updates

[BCP 18]

Risk Management

- **Discussion: managing credit risk (1/2)**
  – You are a bank that wishes to start offering credit cards
  – You discover there are basically three patterns of behavior clients for this product have:
    - Those who payoff their balance every month
    - Extended borrowers who eventually repay
    - High-risk and distressed borrowers who often fail to repay

May 2014 *APEC-FRTI: BASS* 43

Risk Management

- **Discussion: managing credit risk (2/2)**
  – How would this client mix affect loss expectations?
  – What limits would be appropriate for this product?
  – How might risk be measured and managed?
  – How might this affect terms and pricing offered to clients?
  – Could other mitigants be used? Why?
  – What are some other kinds of risk besides credit that might affect this type of lending activity?

May 2014 *APEC-FRTI: BASS* 44

[BCP 17]

Credit Risk Management

- Lending policies and procedures (BO, P3L)
- Credit underwriting standards (P3L)
- Credit monitoring & administration (P3L)
- Loan review function (IC/IA)
- Management Information Systems (MIS)
- Process for managing problem assets (P3L)

[BCP 18]

Other Asset Quality Factors

- Influence of Market Risks
- Continuity of management
- Historical lending experience
  - E.g. Net losses by type
  - E.g. Past due by type
- Growth rates (all loans, loans by type)
- Economic conditions

S

M

AQ

Effect on Earnings E

- Additional provisions required to increase the ALLL?
- Nonaccrual assets reduce interest income

Effect on Capital C

- High and/or unexpected losses erode capital levels
- High losses increase the potential for regulatory action again the bank

Effect on Liquidity L

- Unpaid loans and investments provide no liquidity inflow
- Large loan (or other) losses can lead to reputation risk and make liquidity challenges worse

May 2014 *APEC-FRTI: BASS* 49

Additional criteria

1. For non-internationally active banks, capital requirements, including the definition of capital, the risk coverage, the method of calculation, the scope of application and the capital required, are broadly consistent with the principles of the applicable Basel standards relevant to internationally active banks.

2. The supervisor requires adequate distribution of capital within different entities of a banking group according to the allocation of risks.[61]

Principle 17: Credit risk[62]

The supervisor determines that banks have an adequate credit risk management process that takes into account their risk appetite, risk profile and market and macroeconomic conditions. This includes prudent policies and processes to identify, measure, evaluate, monitor, report and control or mitigate credit risk[63] (including counterparty credit risk[64]) on a timely basis. The full credit lifecycle is covered including credit underwriting, credit evaluation, and the ongoing management of the bank's loan and investment portfolios.

(Reference documents: *Sound practices for backtesting counterparty credit risk models*, December 2010; FSB *Report on Principles for Reducing Reliance on CRA Ratings*, October 2010; *Enhancements to the Basel II framework*, July 2009; *Sound credit risk assessment and valuation for loans*, June 2006; and *Principles for the management of credit risk*, September 2000.)

Essential criteria

1. Laws, regulations or the supervisor require banks to have appropriate credit risk management processes that provide a comprehensive bank-wide view of credit risk exposures. The supervisor determines that the processes are consistent with the risk appetite, risk profile, systemic importance and capital strength of the bank, take into account market and macroeconomic conditions and result in prudent standards of credit underwriting, evaluation, administration and monitoring.

2. The supervisor determines that a bank's Board approves, and regularly reviews, the credit risk management strategy and significant policies and processes for assuming,[65] identifying, measuring, evaluating, monitoring, reporting and controlling or mitigating credit risk (including counterparty credit risk and associated potential future exposure) and that these are consistent with the risk appetite set by the Board. The supervisor also determines that senior management implements the

---

[61] Please refer to Principle 12, Essential Criterion 7.

[62] Principle 17 covers the evaluation of assets in greater detail; Principle 18 covers the management of problem assets.

[63] Credit risk may result from the following: on-balance sheet and off-balance sheet exposures, including loans and advances, investments, inter-bank lending, derivative transactions, securities financing transactions and trading activities.

[64] Counterparty credit risk includes credit risk exposures arising from OTC derivative and other financial instruments.

[65] "Assuming" includes the assumption of all types of risk that give rise to credit risk, including credit risk or counterparty risk associated with various financial instruments.

credit risk strategy approved by the Board and develops the aforementioned policies and processes.

3. The supervisor requires, and regularly determines, that such policies and processes establish an appropriate and properly controlled credit risk environment, including:

   (a) a well documented and effectively implemented strategy and sound policies and processes for assuming credit risk, without undue reliance on external credit assessments;

   (b) well defined criteria and policies and processes for approving new exposures (including prudent underwriting standards) as well as for renewing and refinancing existing exposures, and identifying the appropriate approval authority for the size and complexity of the exposures;

   (c) effective credit administration policies and processes, including continued analysis of a borrower's ability and willingness to repay under the terms of the debt (including review of the performance of underlying assets in the case of securitisation exposures); monitoring of documentation, legal covenants, contractual requirements, collateral and other forms of credit risk mitigation; and an appropriate asset grading or classification system;

   (d) effective information systems for accurate and timely identification, aggregation and reporting of credit risk exposures to the bank's Board and senior management on an ongoing basis;

   (e) prudent and appropriate credit limits, consistent with the bank's risk appetite, risk profile and capital strength, which are understood by, and regularly communicated to, relevant staff;

   (f) exception tracking and reporting processes that ensure prompt action at the appropriate level of the bank's senior management or Board where necessary; and

   (g) effective controls (including in respect of the quality, reliability and relevancy of data and in respect of validation procedures) around the use of models to identify and measure credit risk and set limits.

4. The supervisor determines that banks have policies and processes to monitor the total indebtedness of entities to which they extend credit and any risk factors that may result in default including significant unhedged foreign exchange risk.

5. The supervisor requires that banks make credit decisions free of conflicts of interest and on an arm's length basis.

6. The supervisor requires that the credit policy prescribes that major credit risk exposures exceeding a certain amount or percentage of the bank's capital are to be decided by the bank's Board or senior management. The same applies to credit risk exposures that are especially risky or otherwise not in line with the mainstream of the bank's activities.

7. The supervisor has full access to information in the credit and investment portfolios and to the bank officers involved in assuming, managing, controlling and reporting on credit risk.

8. The supervisor requires banks to include their credit risk exposures into their stress testing programmes for risk management purposes.

Principle 18: Problem assets, provisions and reserves[66]

The supervisor determines that banks have adequate policies and processes for the early identification and management of problem assets, and the maintenance of adequate provisions and reserves.[67]

(Reference documents: *Sound credit risk assessment and valuation for loans*, June 2006 and *Principles for the management of credit risk*, September 2000.)

Essential criteria

1. Laws, regulations or the supervisor require banks to formulate policies and processes for identifying and managing problem assets. In addition, laws, regulations or the supervisor require regular review by banks of their problem assets (at an individual level or at a portfolio level for assets with homogenous characteristics) and asset classification, provisioning and write-offs.

2. The supervisor determines the adequacy of a bank's policies and processes for grading and classifying its assets and establishing appropriate and robust provisioning levels. The reviews supporting the supervisor's opinion may be conducted by external experts, with the supervisor reviewing the work of the external experts to determine the adequacy of the bank's policies and processes.

3. The supervisor determines that the bank's system for classification and provisioning takes into account off-balance sheet exposures.[68]

4. The supervisor determines that banks have appropriate policies and processes to ensure that provisions and write-offs are timely and reflect realistic repayment and recovery expectations, taking into account market and macroeconomic conditions.

5. The supervisor determines that banks have appropriate policies and processes, and organisational resources for the early identification of deteriorating assets, for ongoing oversight of problem assets, and for collecting on past due obligations. For portfolios of credit exposures with homogeneous characteristics, the exposures are classified when payments are contractually in arrears for a minimum number of days (eg 30, 60, 90 days). The supervisor tests banks' treatment of assets with a view to identifying any material circumvention of the classification and provisioning standards (eg rescheduling, refinancing or reclassification of loans).

6. The supervisor obtains information on a regular basis, and in relevant detail, or has full access to information concerning the classification of assets and provisioning. The supervisor requires banks to have adequate documentation to support their classification and provisioning levels.

---

[66] Principle 17 covers the evaluation of assets in greater detail; Principle 18 covers the management of problem assets.

[67] Reserves for the purposes of this Principle are "below the line" non-distributable appropriations of profit required by a supervisor in addition to provisions ("above the line" charges to profit).

[68] It is recognised that there are two different types of off-balance sheet exposures: those that can be unilaterally cancelled by the bank (based on contractual arrangements and therefore may not be subject to provisioning), and those that cannot be unilaterally cancelled.

7. The supervisor assesses whether the classification of the assets and the provisioning is adequate for prudential purposes. If asset classifications are inaccurate or provisions are deemed to be inadequate for prudential purposes (eg if the supervisor considers existing or anticipated deterioration in asset quality to be of concern or if the provisions do not fully reflect losses expected to be incurred), the supervisor has the power to require the bank to adjust its classifications of individual assets, increase its levels of provisioning, reserves or capital and, if necessary, impose other remedial measures.

8. The supervisor requires banks to have appropriate mechanisms in place for regularly assessing the value of risk mitigants, including guarantees, credit derivatives and collateral. The valuation of collateral reflects the net realisable value, taking into account prevailing market conditions.

9. Laws, regulations or the supervisor establish criteria for assets to be:

   (a) identified as a problem asset (eg a loan is identified as a problem asset when there is reason to believe that all amounts due, including principal and interest, will not be collected in accordance with the contractual terms of the loan agreement); and

   (b) reclassified as performing (eg a loan is reclassified as performing when all arrears have been cleared and the loan has been brought fully current, repayments have been made in a timely manner over a continuous repayment period and continued collection, in accordance with the contractual terms, is expected).

10. The supervisor determines that the bank's Board obtains timely and appropriate information on the condition of the bank's asset portfolio, including classification of assets, the level of provisions and reserves and major problem assets. The information includes, at a minimum, summary results of the latest asset review process, comparative trends in the overall quality of problem assets, and measurements of existing or anticipated deterioration in asset quality and losses expected to be incurred.

11. The supervisor requires that valuation, classification and provisioning, at least for significant exposures, are conducted on an individual item basis. For this purpose, supervisors require banks to set an appropriate threshold for the purpose of identifying significant exposures and to regularly review the level of the threshold.

12. The supervisor regularly assesses any trends and concentrations in risk and risk build-up across the banking sector in relation to banks' problem assets and takes into account any observed concentration in the risk mitigation strategies adopted by banks and the potential effect on the efficacy of the mitigant in reducing loss. The supervisor considers the adequacy of provisions and reserves at the bank and banking system level in the light of this assessment.

Principle 19: Concentration risk and large exposure limits

The supervisor determines that banks have adequate policies and processes to identify, measure, evaluate, monitor, report and control or mitigate concentrations of risk on a timely basis. Supervisors set prudential limits to restrict bank exposures to single counterparties or groups of connected counterparties.[69]

(Reference documents: Joint Forum *Cross-sectoral review of group-wide identification and management of risk concentrations*, April 2008; *Sound credit risk assessment and valuation for loans*, June 2006; *Principles for managing credit risk*, September 2000; and *Measuring and controlling large credit exposures*, January 1991.)

Essential criteria

1. Laws, regulations or the supervisor require banks to have policies and processes that provide a comprehensive bank-wide view of significant sources of concentration risk.[70] Exposures arising from off-balance sheet as well as on-balance sheet items and from contingent liabilities are captured.

2. The supervisor determines that a bank's information systems identify and aggregate on a timely basis, and facilitate active management of, exposures creating risk concentrations and large exposure[71] to single counterparties or groups of connected counterparties.

3. The supervisor determines that a bank's risk management policies and processes establish thresholds for acceptable concentrations of risk, reflecting the bank's risk appetite, risk profile and capital strength, which are understood by, and regularly communicated to, relevant staff. The supervisor also determines that the bank's policies and processes require all material concentrations to be regularly reviewed and reported to the bank's Board.

4. The supervisor regularly obtains information that enables concentrations within a bank's portfolio, including sectoral, geographical and currency exposures, to be reviewed.

5. In respect of credit exposure to single counterparties or groups of connected counterparties, laws or regulations explicitly define, or the supervisor has the power to define, a "group of connected counterparties" to reflect actual risk exposure. The supervisor may exercise discretion in applying this definition on a case by case basis.

---

[69] Connected counterparties may include natural persons as well as a group of companies related financially or by common ownership, management or any combination thereof.

[70] This includes credit concentrations through exposure to: single counterparties and groups of connected counterparties both direct and indirect (such as through exposure to collateral or to credit protection provided by a single counterparty), counterparties in the same industry, economic sector or geographic region and counterparties whose financial performance is dependent on the same activity or commodity as well as off-balance sheet exposures (including guarantees and other commitments) and also market and other risk concentrations where a bank is overly exposed to particular asset classes, products, collateral, or currencies.

[71] The measure of credit exposure, in the context of large exposures to single counterparties and groups of connected counterparties, should reflect the maximum possible loss from their failure (ie it should encompass actual claims and potential claims as well as contingent liabilities). The risk weighting concept adopted in the Basel capital standards should not be used in measuring credit exposure for this purpose as the relevant risk weights were devised as a measure of credit risk on a basket basis and their use for measuring credit concentrations could significantly underestimate potential losses (see "*Measuring and controlling large credit exposures*, January 1991).

6. Laws, regulations or the supervisor set prudent and appropriate[72] requirements to control and constrain large credit exposures to a single counterparty or a group of connected counterparties. "Exposures" for this purpose include all claims and transactions (including those giving rise to counterparty credit risk exposure), on-balance sheet as well as off-balance sheet. The supervisor determines that senior management monitors these limits and that they are not exceeded on a solo or consolidated basis.

7. The supervisor requires banks to include the impact of significant risk concentrations into their stress testing programmes for risk management purposes.

Additional criterion

1. In respect of credit exposure to single counterparties or groups of connected counterparties, banks are required to adhere to the following:

   (a) ten per cent or more of a bank's capital is defined as a large exposure; and

   (b) twenty-five per cent of a bank's capital is the limit for an individual large exposure to a private sector non-bank counterparty or a group of connected counterparties.

   Minor deviations from these limits may be acceptable, especially if explicitly temporary or related to very small or specialised banks.

Principle 20: Transactions with related parties

In order to prevent abuses arising in transactions with related parties[73] and to address the risk of conflict of interest, the supervisor requires banks to enter into any transactions with related parties[74] on an arm's length basis; to monitor these transactions; to take appropriate steps to control or mitigate the risks; and to write off exposures to related parties in accordance with standard policies and processes.

(Reference document: *Principles for the management of credit risk*, September 2000.)

Essential criteria

1. Laws or regulations provide, or the supervisor has the power to prescribe, a comprehensive definition of "related parties". This considers the parties identified in

---

72 Such requirements should, at least for internationally active banks, reflect the applicable Basel standards. As of September 2012, a new Basel standard on large exposures is still under consideration.

73 Related parties can include, among other things, the bank's subsidiaries, affiliates, and any party (including their subsidiaries, affiliates and special purpose entities) that the bank exerts control over or that exerts control over the bank, the bank's major shareholders, Board members, senior management and key staff, their direct and related interests, and their close family members as well as corresponding persons in affiliated companies.

74 Related party transactions include on-balance sheet and off-balance sheet credit exposures and claims, as well as, dealings such as service contracts, asset purchases and sales, construction contracts, lease agreements, derivative transactions, borrowings, and write-offs. The term transaction should be interpreted broadly to incorporate not only transactions that are entered into with related parties but also situations in which an unrelated party (with whom a bank has an existing exposure) subsequently becomes a related party.

the footnote to the Principle. The supervisor may exercise discretion in applying this definition on a case by case basis.

2. Laws, regulations or the supervisor require that transactions with related parties are not undertaken on more favourable terms (eg in credit assessment, tenor, interest rates, fees, amortisation schedules, requirement for collateral) than corresponding transactions with non-related counterparties.[75]

3. The supervisor requires that transactions with related parties and the write-off of related-party exposures exceeding specified amounts or otherwise posing special risks are subject to prior approval by the bank's Board. The supervisor requires that Board members with conflicts of interest are excluded from the approval process of granting and managing related party transactions.

4. The supervisor determines that banks have policies and processes to prevent persons benefiting from the transaction and/or persons related to such a person from being part of the process of granting and managing the transaction.

5. Laws or regulations set, or the supervisor has the power to set on a general or case by case basis, limits for exposures to related parties, to deduct such exposures from capital when assessing capital adequacy, or to require collateralisation of such exposures. When limits are set on aggregate exposures to related parties, those are at least as strict as those for single counterparties or groups of connected counterparties.

6. The supervisor determines that banks have policies and processes to identify individual exposures to and transactions with related parties as well as the total amount of exposures, and to monitor and report on them through an independent credit review or audit process. The supervisor determines that exceptions to policies, processes and limits are reported to the appropriate level of the bank's senior management and, if necessary, to the Board, for timely action. The supervisor also determines that senior management monitors related party transactions on an ongoing basis, and that the Board also provides oversight of these transactions.

7. The supervisor obtains and reviews information on aggregate exposures to related parties.

[75] An exception may be appropriate for beneficial terms that are part of overall remuneration packages (eg staff receiving credit at favourable rates).

Principle 21: Country and transfer risks

The supervisor determines that banks have adequate policies and processes to identify, measure, evaluate, monitor, report and control or mitigate country risk[76] and transfer risk[77] in their international lending and investment activities on a timely basis.

(Reference document: *Management of banks' international lending*, March 1982.)

Essential criteria

1. The supervisor determines that a bank's policies and processes give due regard to the identification, measurement, evaluation, monitoring, reporting and control or mitigation of country risk and transfer risk. The supervisor also determines that the processes are consistent with the risk profile, systemic importance and risk appetite of the bank, take into account market and macroeconomic conditions and provide a comprehensive bank-wide view of country and transfer risk exposure. Exposures (including, where relevant, intra-group exposures) are identified, monitored and managed on a regional and an individual country basis (in addition to the end-borrower/end-counterparty basis). Banks are required to monitor and evaluate developments in country risk and in transfer risk and apply appropriate countermeasures.

2. The supervisor determines that banks' strategies, policies and processes for the management of country and transfer risks have been approved by the banks' Boards and that the Boards oversee management in a way that ensures that these policies and processes are implemented effectively and fully integrated into the banks' overall risk management process.

3. The supervisor determines that banks have information systems, risk management systems and internal control systems that accurately aggregate, monitor and report country exposures on a timely basis; and ensure adherence to established country exposure limits.

4. There is supervisory oversight of the setting of appropriate provisions against country risk and transfer risk. There are different international practices that are all acceptable as long as they lead to risk-based results. These include:
   (a) The supervisor (or some other official authority) decides on appropriate minimum provisioning by regularly setting fixed percentages for exposures to each country taking into account prevailing conditions. The supervisor reviews minimum provisioning levels where appropriate.
   (b) The supervisor (or some other official authority) regularly sets percentage ranges for each country, taking into account prevailing conditions and the banks may decide, within these ranges, which provisioning to apply for the

[76] Country risk is the risk of exposure to loss caused by events in a foreign country. The concept is broader than sovereign risk as all forms of lending or investment activity whether to/with individuals, corporates, banks or governments are covered.

[77] Transfer risk is the risk that a borrower will not be able to convert local currency into foreign exchange and so will be unable to make debt service payments in foreign currency. The risk normally arises from exchange restrictions imposed by the government in the borrower's country. (Reference document: *IMF paper on External Debt Statistics – Guide for compilers and users*, 2003.)

individual exposures. The supervisor reviews percentage ranges for provisioning purposes where appropriate.

(c) The bank itself (or some other body such as the national bankers association) sets percentages or guidelines or even decides for each individual loan on the appropriate provisioning. The adequacy of the provisioning will then be judged by the external auditor and/or by the supervisor.

5. The supervisor requires banks to include appropriate scenarios into their stress testing programmes to reflect country and transfer risk analysis for risk management purposes.

6. The supervisor regularly obtains and reviews sufficient information on a timely basis on the country risk and transfer risk of banks. The supervisor also has the power to obtain additional information, as needed (eg in crisis situations).

Principle 22: Market risk

The supervisor determines that banks have an adequate market risk management process that takes into account their risk appetite, risk profile, and market and macroeconomic conditions and the risk of a significant deterioration in market liquidity. This includes prudent policies and processes to identify, measure, evaluate, monitor, report and control or mitigate market risks on a timely basis.

(Reference documents: *Revisions to the Basel II market risk framework*, February 2011; *Interpretive issues with respect to the revisions to the market risk framework*, February 2011; *Guidelines for computing capital for incremental risk in the trading book*, July 2009; *Supervisory guidance for assessing banks' financial instrument fair value practices*, April 2009; and *Amendment to the Capital Accord to incorporate market risks*, January 2005.)

Essential criteria

1. Laws, regulations or the supervisor require banks to have appropriate market risk management processes that provide a comprehensive bank-wide view of market risk exposure. The supervisor determines that these processes are consistent with the risk appetite, risk profile, systemic importance and capital strength of the bank; take into account market and macroeconomic conditions and the risk of a significant deterioration in market liquidity; and clearly articulate the roles and responsibilities for identification, measuring, monitoring and control of market risk.

2. The supervisor determines that banks' strategies, policies and processes for the management of market risk have been approved by the banks' Boards and that the Boards oversee management in a way that ensures that these policies and processes are implemented effectively and fully integrated into the banks' overall risk management process.

3. The supervisor determines that the bank's policies and processes establish an appropriate and properly controlled market risk environment including:

(a) effective information systems for accurate and timely identification, aggregation, monitoring and reporting of market risk exposure to the bank's Board and senior management;

(b) appropriate market risk limits consistent with the bank's risk appetite, risk profile and capital strength, and with the management's ability to manage