CRA/02

BANK RATING METHODOLOGY

Practical guide to understanding concepts and evaluation techniques employed | 10 February 2015

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OVERVIEW

Goal

The methodology is intended to provide investors, issuers, analysts and other users of ratings with a reference tool that can be used when evaluating 'Bank credit risk'. This methodology is not an exhaustive treatment of every factor that is reflected in Credit Rating Agency's (CRA) ratings of banks. However, it should enable the reader to understand the key rating factors used by CRA in its rating determination for these types of entities. This methodology includes a list of key qualitative and quantitative factors that we use while analyzing banks. There are other factors that may not be included in this methodology that are reflected in our ratings of banks. However, the factors mentioned in this document are what we consider the most important and common aspect for the rating.

Purpose

CRA assigns two types of credit ratings--one to the financial strength of the bank and the other to specific debt obligations of the bank. The latter entails analyzing the specific terms and conditions of the debt obligation, which in turn could result in a final rating above or below the assigned Bank Financial Strength Rating (BFSR). The BFSR is our opinion on a bank's financial strength, likelihood of support and the overall capacity to pay its financial obligations. This opinion focuses on the entities ability and willingness to meet its financial commitments on a timely basis. This Rating Methodology's purpose is to provide an opinion on the bank's financial strength. CRA uses Bank Financial Strength Rating (BFSR) to assess the financial strength of a bank, which includes an assessment of franchise strength, management quality, and risk management adequacy.

Report Features

This rating criteria report covers:

- Definition of Banks (OR Deposit taking institutions)
- A detailed description of the Rating Criteria and key rating factors including the metrics (sub-factors) for measuring their relative impact with their corresponding weights and other rating factors that might influence the final assigned rating

The following Rating Criteria Report (RCR) details the methodology utilized by CRA in assessing the credit quality of the banks.

About This Rating Methodology

This report explains the methodology for bank rating in several steps, which are as follows:

1. Identification of Key Rating Factors

CRA adopts a four-step framework for assigning bank ratings:

1. Franchise Value and Regulatory Environment

2. Corporate Governance
3. Risk positioning
4. Financial Analysis

For the four key rating factors mentioned above, we list one or more metrics to explain how we assess this particular factor. Banks are deposit taking institutions and include all financial institutions in a category, such as commercial banks, bank holding companies, cooperative banks, government owned banks, and other deposit taking institutions. The ratings assigned to institution or entities cover a grade from A to E, with 'A' being the bank with the strongest financial strength and 'E' being the bank with the weakest financial strength (For more detail on the BFSR scale please refer to Appendix on Rating scale)

The bank credit risk evaluation is based on the CAMEL approach, which includes the analysis of capital, assets, management, earnings, and liquidity and is a reflection of the bank's intrinsic financial strength.

2. Measurement of Key Rating Factors

CRA ratings are forward-looking, but the rating process extensively uses historical financial data in order to understand patterns and trends for an entity's performance. The rating process includes both historical and anticipated results. The main data sources for the majority of the rating factors are the financial statements. A detailed study is conducted at the concern to provide more light on the management factors viz. management quality and strategy, organizational structure, corporate governance, risk management, and operational practice. We also look at the local regulatory structure prevailing in the country of operation. Average results of the past three financial years are what are typically applied.

3. Applying the Rating Criteria

After identifying the measurement for each factor, the potential outcomes for each of the sub-factors are mapped to a CRA rating category.

The rating score for a sub-factor may deviate from the overall indicative rating outcome for an entity. In those cases where the outcome of a sub-factor is more than two rating categories away from the indicative overall rating outcome, the specific BFSR rating report will provide a descriptive explanation as to the underlying factors which result in the exception. CRA assigns BFSR ratings to banks, including the subsidiaries or affiliates. Therefore there can be instances where a banking group can have multiple numbers of banks having different BFSRs.

To determine the overall rating, the rating range for each factor is converted into numeric values based on the following scale. Each metric's value is multiplied by the respective assigned sub-factor weighting.

A	B	C	D	E
3.5	6.5	9.5	12	16

Overall Grid Map

Rating Factors	Factor Weighting	Relevant Sub-Factor	Sub-Factor Weighting
Franchise Value and Regulatory Environment	20%	Market Share and Sustainability	2.5%
		Geographical diversification	2.5%
		Earning stability	2.5%
		Earning diversification	2.5%
		Regulatory and Operating Environment	10%
Corporate Governance	10%	Dividend Policy	3.3%
		Financial Transparency	3.3%
		Ownership and Organizational Complexity	3.3%
Risk Positioning	25%	Management Control and Efficiency	3%
		Borrower Concentration	5%
		Industry Concentration	5%
		Market Risk Appetite	5%
		Liquidity Management	7%
Financial Factors	45%	Liquidity	15%
		Asset Quality	10%
		Capital Structure	10%
		Profitability Analysis	5%
		Cost Control	5%

The factor values for each key rating factor are then added together to arrive at the final rating score, which is mapped back to an indicative rating outcome. For example, an aggregate factor score of 8 would map to an indicative rating outcome of C.

Indicated	Aggregated Factor
A+	X ≤ 1.50
A	1.50 < X ≤ 2.50
A-	2.50 < X ≤ 3.50
B+	3.50 < X ≤ 4.50
B	4.50 < X ≤ 5.50
B-	5.50 < X ≤ 6.50
C+	6.50 < X ≤ 7.50
C	7.50 < X ≤ 8.50

C-	8.50 < X ≤ 9.50
D+	9.50 < X ≤ 10.50
D	10.50 < X ≤ 11.50
D-	11.50 < X ≤ 12.50
E+	12.50 < X ≤ 13.50
E	13.50 < X ≤ 14.50
E-	14.50 < X ≤ 16.00

DEFINITION OF BANKS (OR DEPOSIT TAKING FINANCIAL INSTITUTIONS)

CRA defines the term 'bank' for the purpose of this report as a deposit-taking institution, which includes commercial banks, cooperative banks, government-owned banks, and deposit-taking microfinance institutions etc. We also consider mortgage and specialized banks, although they do not take deposits, since they are regulated as banks and obtain funding from the market.

METHODOLOGICAL APPROACH

CRA considers all relevant factors that have a bearing on the financial strength of the bank. These factors include: industry characteristics, competitive position, operational efficiency, management quality, risk management and funding policies. A detailed analysis of the past financial statements is made to assess performance. Estimates of future earnings under various stress scenarios are evaluated against the obligations that require servicing. Primarily, it is the relative comfort level on the institutions financial strength and the likelihood of support that determines the rating.

Factor 1: Franchise Value (20%)

CRA considers franchise value as one of the most important factor in determining the rating. Here we analyze whether the bank is a major institution with strong brand and national/regional franchise. We analyse the bank's position in the Industry and its dominance in a business line with very strong market position and pricing power. We also analyse the geographical and product diversification.

The Franchise value factor focuses on the following sub-factors:

1. Market Share and Sustainability
2. Geographical diversification
3. Earning stability
4. Earning diversification
5. Regulatory environment
6. Operating environment

Sub-Factor 1: Market Share and Sustainability

CRA evaluates an institution's market share and long-term sustainability with respect to the level of risk involved in a specific geography. Large market share or position with very strong brand name reflects high pricing power and the element of barrier to entry for other players. The institution's size is an advantage, when translated into economies of scale, or pricing advantages. This however happens when the industry leaders have relatively sizable market shares. If the market share is widely fragmented, the advantage of size is often diluted. CRA evaluates this sub-factor based on the positioning of the institution and the net income generation from a particular geography or product.

For major institutions with national and regional franchise or different lines of business, we estimate a weighted market share. We also factor in the fact that the market may also include non-bank competitors. We evaluate the non-bank franchise strength based on their position with subject to their position in their market.

It is worth noting that a bank need not be very large to have a dominant market share, as reflected in the SADC countries. Banks, though small on a global and regional basis, have a very dominant market share in their region of operation. CRA also evaluates the sustainability of market share in a changing economic scenario.

Sub-Factor 2: Geographical diversification

Under this sub-factor we analyse the institution's degree of geographic presence, internationally as well as nationally. In the SADC, a majority of the financial institutions operate as subsidiaries of international financial institutions. This can expose the institutions to economic volatility of the region, and specifically of the economic risks of their respective home countries. In general, excessive concentration on lending in an undiversified regional economy and a single geography heightens the institution's credit risk profile.

Sub-Factor 3: Earnings Stability

We analyse this sub-factor taking into account the sustainability of earnings for its main line of business. For most commercial banks, earnings are driven by interest income. However some banks may generate high proportion of earnings from investment activities in the pursuit of diversification. The investment income can prove highly volatile and if overly dependent on this source of earnings, a bank can face liquidity problems and capital erosion. The earnings stability is reflective of the risk profile of the institution, loan granularity and customer relationship. Banks with high proportion of retail lending compared to wholesale or corporate lending have a stable earning profile. We also evaluate the bank's line of business and sectorial diversification to determine the earning stability.

Sub-Factor 4: Earnings Diversification

In this sub-factor we analyse the institution's main business lines and the degree of diversification achieved. It is very important for institutions to have various lines of business generating interest, fee and investment income, in the absence of which the earnings will be highly reliant on the performance of one line of business. It is noted that excessive reliance on one business line can make an institution highly vulnerable to potential changes in market dynamics, which exposes the institution to market volatility with no offsetting earnings stream to protect the institution's economic solvency.

Sub-Factor 5: Regulatory Environment

Understanding of the local regulatory structure and proposed changes to it, if any, is an essential component of the analysis. Often a poor supporting institutional infrastructure exposes financial institutions to systemic risks related to institutional, legal and regulatory issues. This measures the stability of the regulatory environment for the proper development of these institutions. The most important aspect in evaluating the regulatory environment is the Independence of regulators and the standards established. We look into the important areas like licensing, capital adequacy, provisioning, and liquidity to assess the strength of the banking system. While it is important to have conservative regulatory standards, it has to be complimented by active supervision. We also evaluate the rule of law to assess the enforceability of the banking system. Overall we measure the regulatory and supervisory authorities' intention and ability to maintain soundness of the financial system. To be more specific, CRA looks into such matters as administrative measures to maintain soundness in normal times and prevent crises from occurring in the event of any crisis. We however believe that Institutional and financial measures though need to be in place, but they alone are not sufficient. The bank regulatory environment measure is based on purely subjective judgment. The benchmarks are set by CRA, by evaluating the applicable local regulatory environment and comparing it to other recognized regulatory regimes globally.

Sub-Factor 6: Operating Environment

CRA evaluates economic environment to determine the level of risk involved in a specific geography or region. The factors that we consider among many others include economic stability, Integrity, the presence of corruption, as well as the robustness of the legal system. In general, banks operating in high-risk countries will require more conservative financial policies to achieve the rating level than banks operating in countries with more favorable operating environment. We believe that favorable operating environment allows stronger institutions the possibility of better financial performance like adequate margins, profitability and asset quality.

Factor	Weight	Sub-factor	Weight	A	B	C	D	E
Franchise Value	10%	Market Share and Sustainability	25%	Dominant in a broad (multi-product) business line with very strong, largely unthreatened market position and Pricing power. Institutions should have a very high share of the customer's business	Important but not dominant institutions with a high share of the customer's business (typically 3-4 products per customer), OR dominant institutions in a niche product line. All banks in this rating category should enjoy strong	Good national or regional market positioning but neither dominant nor strategically important, OR important in a niche product line; OR institutions with a price- or service-sensitive customer base.	Marginal players nationally, regionally or in a niche product line; OR institutions with a highly price- or Service-sensitive customer base.	Institutions without recognized brand name; OR institutions with insignificant market share; OR institutions with unclear market positioning.

				(typically 4+ products per customer), enjoy strong brand name and display very high sustainability.	brand name and display very high sustainability.			
		Geographical diversification	25%	Significant operations in at least one major and at least two large economic markets. No major or large market constitutes > 50% of profits. Markets must also be lowly correlated and enjoy highly diversified economies.	Significant operations in (i) one major economic market or (ii) multiple large markets where >25% of profits from outside primary market. Markets must also be lowly correlated and enjoy highly diversified economies.	Significant operations in (i) one large economic market or (ii) multiple midsized markets where >25% of profits from outside primary market. Markets must also be lowly correlated and enjoy well-diversified economies.	Significant operations in one midsized economic market or multiple local markets. Markets must also be lowly correlated and enjoy reasonably diversified economies.	Significant operations in one midsized market that does not enjoy a diversified economy, or in one local market.
		Earnings stability	25%	Combined earnings from the Retail Banking/ Consumer Lending, Asset Management, and Fiduciary/Transaction Services business lines are > 80% of total profits.	Combined earnings from the Retail Banking/ Consumer Lending, Asset Management, and Fiduciary/Transaction Services business lines are 60% - 80% of total profits.	Combined earnings from the Retail Banking/ Consumer Lending, Asset Management, and Fiduciary/Transaction Services business lines are 40% - 60% of total profits.	Combined earnings from the Retail Banking/ Consumer Lending, Asset Management, andFiduciary/ Transaction Services business lines are 20% - 40% of total profits.	Combined earnings from the Retail Banking/ Consumer Lending, Asset Management, and Fiduciary/ Transaction Services business lines are less than 20% of total profits.
		Earnings diversification	25%	A monoline business is defined as single business or product line. Institutions are considered to be monoline if they derive more than 80% of net income from a single business activity or product. Examples include credit cards, mortgage banking, factoring, leasing, securities servicing, project financing, capital markets operations, municipal or public sector lending, ship finance, etc. Traditional retail banking which, by its nature, is diversified between lending and deposit-taking would not be considered a monoline business.			The bank is a monoline: More than 80% of net income is from a single business activity or product.	
Regulatory and Operating Environment	10%	Regulatory		Highly stable strong and predictable regulatory environment	Mostly Stable and predictable regulatory environment	Moderately Stable regulatory environment	Weak stability of regulatory environment	Highly unstable regulatory environment
		Economy		Standard deviation of GDP growth <2.3	Standard deviation of GDP growth 2.3-4.0	Standard deviation of GDP growth 4.0-7.0	Standard deviation of GDP growth 7.0-12.0	Standard deviation of GDP growth >12.0
		Corruption		WB Corruption Index > or = 2.00	WB Corruption Index between 1.20– 1.99	WB Corruption Index between 0.60– 1.19	WB Corruption Index between 0.35– 0.59	WB Corruption Index < -0.35

		Legal		Length of foreclosure on residential real estate < 1 yr	Length of foreclosure on residential real estate 1-2 yrs	Length of foreclosure on residential real estate 2-3 yrs	Length of foreclosure on residential real estate 3-5 yrs	Length of foreclosure on residential real estate > 5 yrs

Factor 2: Risk Positioning (35%)

CRA assessment of risk management incorporates an evaluation of the institutions risk appetite as well as the efficiency of the risk management system in place. We note that an institution derives majority of its revenue from taking calculated risks. The ability of a management to identify, measure, and monitor risk – be they credit, market, trading, reputation, or operational, is the key ingredient underpinning their strategic decisions and the chances of such decisions succeeding. We evaluate to what extent risk discipline is aligned with the institutions strategy. Our view is that the more integrated risk management is with the overall strategy, the more likely it is that different operating units will make the discipline an integral part of how operations are managed.

We use two sub-factors in assessing Risk Positioning, which then forms part of the qualitative assessment of the bank. They are as follows:

1. Corporate Governance & Financial Transparency

2. Risk Management

Sub-Factor 1: Corporate Governance & Financial Transparency

Corporate Governance is an important factor through which any outside party can assess the management's policies on dividend payment, ownership and organizational structure. Information disclosure through financial statements facilitates market discipline and enables different stakeholders to protect their own interests by allowing depositors to withdraw their funds, shareholders to sell their shares and regulators to take the necessary actions in case of any mismanagement or misconduct. This factor is measured by three sub-factors viz. Dividend Policy, Ownership & Organizational Complexity and Financial Reporting Transparency. Ownership & Organizational Complexity is a concern when the institution has 1) a complex organizational structure that is hard for the board or outside observers to understand and 2) if family shareholders or government officials dominate management. The Key Man Risk is where an individual or a few dominate the management structure and there exists no proper succession plans, this becomes a key concern when leading the institution through uncertain times. Most institutions with proper corporate governance structures exhibit a high level of financial reporting transparency, which help external parties to understand the institution's risk philosophy, strategies and financial operations.

This factor is measured as follows:

1. Dividend Policy – The dividend policy is judged by CRA on a mapping scale which starts from a less conservative policy to a conservative one.

2. Ownership and Organizational Complexity – This particular factor is judged by looking at the relevance of various factors viz. share cross-holdings, family shareholdings, related-party transactions, key-man risk, and the complexity of the ownership structure.

3. Financial Reporting Transparency – This factor is mapped to a subjective scale starting from a lowest disclosure of information in the financial statements to a high degree of clarity within the published statements.

Corporate Governance (Weighting 9%) Rating Grid Map

Sub-Factor		Low Category Factor Points: 2	Medium Category Factor Points: 5	High Category Factor Points: 8
Dividend Policy	*Characteristics:* - Past 3 years, prospective 2 years	*Less conservative:* x>50% of Distributable Income	*Moderate:* 20%≤x≤50% of Distributable Income	*Conservative:* x<20% of Distributable Income
Financial Reporting Transparency	*Characteristics:* - Public Information	No public transparency in financial reporting	Moderate public transparency in financial reporting	High public transparency in financial reporting
Ownership and Organizational Complexity	*Indicators:* a) Share cross holdings b) Family Shareholders c) Related party transactions d) Key man risk e) Complex ownership structure	Significance of 4-5indicators	Significance of 2-3indicators	Significance of 0-1indicators
Total Score		6	15	24

A	B	C	D	E
22≤x<24	18≤x<22	12≤x<18	6≤x<12	<6

Sub-Factor 2: Risk Management

The review of risk management examines the practices and procedures the institutions uses to manage business risks. Risk management function is a challenging task affecting the performance of banks and financial institutions. According to CRA, analyzing the following factors viz. borrower concentration, industry concentration, market risk appetite and liquidity management, helps in gaining a good understanding of the risk management policies adopted by the management. The majority of group's credit risk exposure should not be depended on a few borrowers, and there should not be a concentration in any industry. Market Risk appetite measures the percentage of Tier 1 Capital or equity which is at risk in the event of market volatility. CRA attaches importance to meeting with bank management to ascertain their strategies, risk appetite and risk controls. We also examine the adequacy of management information system (MIS) and its effectiveness in dealing with the bank's expanding business line and market area. While risk appetite is increasing in line with active business deployment, growing management risk will have a negative impact on creditworthiness.

This factor is measured as follows:

1. Borrower Concentration – CRA evaluates the top 20 group exposures and compare its percentage to Tier 1 capital and the PPI (Pre-tax Provision Income). In case of non availability of Tier 1 capital we use the Total Net worth (TNW)

2. Industry Concentration – In this case, we look at the largest single sector exposure as a percentage of the Tier 1 capital or TNW with the help of a mapping grid

3. Market Risk Appetite – This sub-factor is measured by comparing the portion of the Tier 1 capital or TNW which is at risk

4. Liquidity Management - This sub-factor focuses on how well a bank can manage a disruption of its funding. This could be the result of investor reaction to problems at similar institutions or to problems at the bank itself. While such disruptions may be unlikely, a highly rated bank is nonetheless expected to be able to survive a specific disruption without defaulting on its obligations (or requiring a bailout to avoid default). The focus is on how quickly and easily the bank will be able to access alternative liquidity to meet ongoing liquidity needs in the event the bank suffers a loss of access to unsecured funding.

5. Risk Management Control - We evaluate risk management by focusing on the bank's risk governance, risk management, risk measurement and risk infrastructure and systems. Banks by nature, take on risk as a normal part of their business. Certain key features should be present in an institution considered to have an excellent or very good risk management framework. CRA looks for independence in the risk function and the presence of an active and dominant Chief Risk Officer. Banks should present risk management information systems, measurement tools and practices consistent with and supporting of the institution's size, structure, risk appetite and profile.

Sub-Factor	Weight	A	B	C	D	E
Borrower Concentration	5%	Top 20 group exposures are worse of <50% of Tier 1/TNW OR <100% of pre-tax provision income	Top 20 group exposures are worse of <50%-80% of Tier 1/TNW OR <100%-200% of PPI	Top 20 group exposures are worse of <80%-100% of Tier 1/TNW OR <200%-350% of PPI	Top 20 group exposures are worse of <100%-200% of Tier 1/TNW OR <350%-750% of PPI	Top 20 group exposures are worse of >200% of Tier 1/TNW OR >750% of PPI
Industry Concentration	5%	Largest single sector exposure is <50% of Tier 1/TNW	Largest single sector exposure is 50%-200% of Tier 1/TNW	Largest single sector exposure is 200%-350% of Tier 1/TNW	Largest single sector exposure is 350%-500% of Tier 1/TNW	Largest single sector exposure is >500% of Tier 1/TNW
Market Risk Appetite	5%	<10% of Tier 1 capital/TNW is at risk due to market events	11%-20% of Tier 1 capital/TNW is at risk	21%-35% of Tier 1 capital/TNW is at risk	36%-50% of Tier 1 capital/TNW is at risk	>50% of Tier 1 capital/TNW is at risk
Liquidity Management	7%	Presented Below	Presented Below	Presented Below	Presented Below	Presented Below
Risk Management Control	3%	Presented Below	Presented Below	Presented Below	Presented Below	Presented Below

Sub-Factor – Liquidity Management

A	Excellent Liquidity Management Effective measurement, monitoring and control system for liquidity positions in the major currencies in which the bank is active. Effective board and senior management oversight underpinned by good MIS that provides timely and sufficiently detailed info. Limits are appropriate to the size, complexity and financial condition of the bank. Banks in this category should have positive net funding -- defined as Sources/Inflows (S) minus Uses/Outflows (U) > zero at every point in time over 12 months non-access to unsecured capital markets, with no reduction in business activities. Specifically, banks in this category should be able to pay all its liabilities as they fall due over the next 12 months with (i) no recourse to unsecured funding in the capital markets, (ii) no recourse to illiquid sources, and (iii) no reduction in business activity (eg: maturing loans would be rolled over or replaced with new lending). Also, the extent that banks in this category rely upon non-core funding, they should enjoy ample diversification of funding sources by type, nature of the provider of funds and geographic market and enjoy strong relationships with key providers of funding. Liquidity contingency planning is prudent, incorporating an analysis of net funding requirements under both bank-specific and market-related stress.
	Very Good Liquidity Management Effective measurement, monitoring and control system for liquidity positions in the major currencies in which the bank is active. Effective board and senior management oversight underpinned by good MIS that provides timely and

B	sufficiently detailed info. Limits are appropriate to the size, complexity and financial condition of the bank. As a general rule, banks in this category should have positive net funding -- defined as Sources/Inflows (S) minus Uses/Outflows (U) > zero at every point in time over 12 months non-access to unsecured capital markets, with only a modest reduction in business activities. Specifically, banks in this category can pay all its liabilities as they fall due over the next 12 months with (i) no recourse to unsecured funding in the capital markets, (ii) limited recourse to illiquid sources such as non-marketable assets, (iii) no recourse to liquidity sources from fixed asset sales, and (iii) only a modest reduction in business activity - any reduction in business activity limited to non-core, non-franchise businesses. Also the extent that banks in this category rely upon non-core funding, they should enjoy ample diversification of funding sources by type, nature of the provider of funds and geographic market and enjoy strong relationships with key providers of funding. Liquidity contingency planning is prudent, incorporating an analysis of net funding requirements under both bank-specific and market-related stress.
C	Satisfactory Liquidity Management Effective measurement, monitoring and control system for liquidity positions in the major currencies in which the bank is active. Effective board and senior management oversight underpinned by good MIS that provides timely and sufficiently detailed info. Limits are appropriate to the size, complexity and financial condition of the bank. As a general rule, banks in this category should have positive net funding -- defined as Sources/Inflows (S) minus Uses/Outflows (U) > zero at every point in time over 12 months non-access to unsecured capital markets, with only a modest reduction in business activities. Specifically, a bank in this category should be able to pay all its liabilities as they fall due over the next 12 months with (i) no recourse to unsecured funding in the capital markets, (ii) heavy reliance on its own Non-marketable investment liquidity sources, (iii) no recourse to liquidity from fixed asset sales, and (iv) only a modest reduction in business activity (no reduction in business activity that could permanently impair franchise value owing to a loss of customers or reputation). Modest diversification of funding sources by type, nature of the provider of funds and geographic market and questionable relationships with key providers of funding. Liquidity contingency planning is prudent, incorporating an analysis of net funding requirements under both bank-specific and market-related stress.
D	Questionable measurement, monitoring and control system for liquidity positions in the major currencies in which the bank is active. Questionable board and senior management oversight. MIS may not provide timely and sufficiently detailed info. Limits may not be appropriate to the size, complexity and financial condition of the bank. Questionable measurement, monitoring and control system for liquidity positions in the major currencies in which the bank is active. Questionable board and senior management oversight. MIS may not provide timely and sufficiently detailed info. Limits may not be appropriate to the size, complexity and financial condition of the bank.
E	Institutions that do not qualify for previous categories

Sub-Factor - Risk Management Control

A	Very high awareness of the key risks of the institution by both the board and senior executives that together, and on an annual basis, establish the firm's risk appetite and discuss all risk issues at least quarterly. Executives actively monitor and review firm-wide risk policies and activities. Risk management structure supported by a dedicated and active Chief Risk Officer (CRO), who reports independently to the board. Risk function is fully independent from business line management, is empowered with veto power, and proactive. Risk management is a key component of the decision-making process of the bank. Very high quality and robust information systems and practices, commensurate with the bank's risk appetite and profile. All risks, including credit, market (both trading and banking books), and operational risk are estimated both individually and using a measure of total aggregate risk (e.g. economic capital). Market risk exposures can be extracted real-time and credit risk exposures can be extracted the same day. Uniform credit and market risk limits in place and enforced throughout the institution; limit breaches reported the same day. Development of proprietary systems as additional support to risk control decisions. Quarterly credit portfolio reviews as well as topical customer or industry credit reviews conducted on a regular basis, including both portfolio exposures and assessments of expected loss and economic capital. Stress analyses done regularly on all the risks of the firm. Risk-adjusted performance measures (e.g. RAROC) are used throughout the firm.	
B	High awareness of the key risks of the institution by both the board and senior executives that together, and on an annual basis establish the firm's risk appetite and discuss all risk issues at least quarterly. Executives discuss risk issues including the largest credits and investment portfolios and their respective internal limits monthly and on an ongoing basis, e.g., through Asset/Liability and Credit Risk Committees. Effective governance structure supported by a dedicated and active Chief Risk Officer (CRO) that may report independently to the board. The risk management function is independent from business line management but may have more of an advisory role rather than being fully empowered with veto power. Risk management is a key component of the decision-making process of the bank. High quality information systems, measurement tools and practices that are commensurate with the bank's risk appetite and profile. Credit, market (both trading and banking books), and operational risk exposures are measured and reported to executives regularly. Market risk exposures can be extracted real-time and credit risk exposures can be extracted the same day. Uniform credit and market risk limits in place and enforced throughout the institution; limit breaches reported the same day. Semi-annual credit portfolio reviews as well as topical customer or industry credit reviews conducted regularly, including both portfolio exposures and assessments of expected loss and economic capital. Stress analyses and risk-adjusted performance measures (e.g. RAROC) are used for key business areas.	
C	The board is aware of the key risks of the firm but its role in establishing the bank's risk appetite may be limited. Board should discuss overall risk issues with senior executives on a formal basis at least twice a year. Executives discuss risk issues monthly and largest credits and investment portfolios and their respective internal limits quarterly, e.g., through an Asset Liability Committee (ALCO) and Credit Risk Committee. Good governance structure. Emerging, though not necessarily in place, role of Chief Risk Officer (CRO) encompassing credit, market and operational risks. Exposures are reported to executives regularly, and risk units have enforcement power delegated by senior management. Risk functions are independent from business line management; however, credit and market risk teams may have separate reporting lines. Operational risk management	

	structure and database may be just developing. Satisfactory information systems and practices, in line with bank's risk profile, but may need further integration or upgrade. Data available on largest exposures very good; less timely data available for smaller exposures. Quantitative credit and market risk limits exist, but may not have comprehensive limit per borrower, perhaps because lacking fully integrated systems. Extraction of information on current exposures subject to some delays or requiring some manual intervention. Credit portfolio reviews are conducted at least annually; largest credits and exposures reviewed more often. Escalation process for limit breaches in place, and enforced within reasonable period of time. Risk-adjusted performance measures (e.g., RAROC or equivalent) may be used. Stress testing may be used ad hoc for only the largest exposures.	
D	Modest awareness of the key risks of the firm by the they board and senior executives and less than adequate governance structure. Very limited involvement of board in establishing bank's risk appetite (senior executives' role). Risk issues may be discussed less than twice a year by the board; credit and market risks and limits discussed less than quarterly by executives at Asset/Liability (ALCO) and Credit Risk Committees. Have not addressed operational risks in a systematic way. Developing risk governance structure: no dedicated Chief Risk Officer (CRO) overseeing all business risks. Risk function not fully independent, and may report to business line management; credit and market risk teams may also have different reporting lines. No formally scheduled annual credit portfolio review. Developing information systems. Uneven quality, availability, and timeliness of risk data: weaknesses in measuring and monitoring risks. Current exposures only available with more than a week delay and needing manual intervention to remove inaccuracies. Ad hoc quantitative risk limits and significant weaknesses in escalation process (delay of a week or more). Slippage may occur from time to time. Risk-adjusted performance (e.g., RAROC or equivalent) measures are not used. Stress tests used in limited fashion.	
E	Poor awareness of the key risks of the firm by the board and senior executives and weak risk governance structure. Board not involved in establishing risk appetite or strategy of the bank. Executives may discuss risk issues ad hoc and discussion may be too superficial and/or infrequent to be effective (e.g., once a year or less). No dedicated Chief Risk Officer (CRO) overseeing all business risks. Risk function not independent from business line management. No formalized system of quantitative risk limits or regular credit portfolio reviews. Credit Risk Committee is ad hoc. No Asset/Liability Committee exists or lack of depth in risk management structure. Market risk and quantitative tools to measure it are undeveloped. Operational risk has probably not yet been addressed. Poor information systems, leading to weak quality, availability, and timeliness of risk data and limits escalation process and allows for limited corrective action. Extracting of risk exposure data is mainly a manual process that may take weeks or months to complete. Stress tests and risk-adjusted performance (e.g., RAROC or equivalent) measures are not used.	

Factor 3: Financial Analysis (45%)

A key determinant in the rating process is to assess the financial capability of an institution to service its debt and maintain regulatory capital requirements. The following financial factors are considered to measure the financial strength of an institution.

The Financial factor focuses on the following five sub-factors:

1. Capital Adequacy
2. Asset Quality
3. Profitability Analysis

4. Liquidity
5. Cost Control

Sub-Factor 1: Capital adequacy

When analyzing a bank's capital adequacy, CRA looks at its level or regulatory capital ratio requirements, given those capital adequacy regulations are a fundamental premise for all banks to be able to absorb unexpected losses and to weather extended downturns in economic activity. We therefore, attach high importance to the bank's ability to maintain its capital adequacy ratio above dictated regulatory levels, which CRA views as minimum requirements. CRA analyzes capital position with focus on a variety of factors, including management's strategy, the composition of the capital, the measurement of the capital base, and how capital is allocated internally. We try to understand how management decides on the appropriate level of capital, what management views as the appropriate methods for judging business risks requiring capital, such as credit risk, market risk, and off balance sheet exposure.

This factor is measured as follows:

1. Tier 1 ratio (%) – A strong ratio in this category is considered to be anything above 15% and weak as below 8%. In case of non availability of Tier 1 capital we use TNW. This ratio is arrived at by dividing the Tier 1 capital by RWAs.

2. Tangible Common Equity % RWA – A strong ratio in this category is considered to be anything above 7% and weak as below 2.5%. Anything above 4% falls under investment grade.

Sub-Factor 2: Asset quality

CRA evaluates the quality of assets based on characteristics of the credit portfolio, incidence patterns for past credit losses and non-performing loans, and due diligence on large borrowers' credit conditions. In the qualitative aspect, we examine the robustness and effectiveness of the internal rating system, criteria for write-offs and reserves, and collateral evaluations. Subsequently, credit costs are estimated in light of expected trends in the economy and asset prices.

1. Gross NPLs/Total Loans – A strong ratio in this category is considered to be anything below 0.8% and weak as above 12%. This ratio helps in assessing the quality of the loans and throws light on the effectiveness of the credit policy of the management.

2. Net NPLs/Net worth – A strong ratio in this category is considered to be anything below 10% and weak as above 50%. This ratio assesses the portion of equity cushion that is available to take on the losses.

3. Provisions/NPLs – A strong ratio in this category is considered to be anything above 140% and worst is below 60%. This ratio signifies adequate coverage in case of loss.

Sub-Factor 3: Profitability

CRA evaluates earnings from the view point that it is the first to absorb a loss when the loss is recognized, and should also be the major sustainable source for increasing a bank's equity capital. We take the view that the level of risk present impacts the sustainability of any source of earnings, and thus the evaluation of earnings potential would include a qualitative evaluation of the institution's business and risk profiles. It is also important to ascertain the institution's competitiveness and earning stability. To be more specific, the levels and stability of and trends in earnings are assessed for each of major business lines, divisions and regions. Nevertheless, this sub-factor is measured quantitatively via two principal ratios: The PPP as a percentage of average risk weighted assets and net income as a percentage of average risk weighted assets. While evaluating earnings CRA also focuses on earnings composition, the degree of diversification, volatility, and efforts to improve productivity.

1. PPP (Pre provision profitability) % of Average RWA – A strong ratio is considered to be anything above 3.5% of the average RWA and the worst in considered to be anything below 0.5%. This measure helps in assessing the bank's ability to generate profits from assets by allocating them in by risk weight.

2. Net Income% Average RWA - A strong ratio here is considered to be anything above 2% of average RWAs and weak as considered to be anything below 0.3%. This ratio while compared to the former provides valuable input on the quality of the banks' RWAs. The general expectation is, the higher the quality the lesser the provisioning required.

Sub-Factor 4: Liquidity

CRA views the assessment of liquidity as one of the most important aspects of its financial analysis. We see a strong liquidity position as being a key factor regarding the ongoing viability of a financial institution - even if asset quality deterioration is noted, or earnings generation is disrupted, an institution with a strong liquidity profile should generally be able to survive. An institution with a fragile liquidity profile is considerably more susceptible to event risk. In CRA's analysis process, we focus on the stability of fund raising and alternative methods of securing liquidity in the event of difficulties. High use of funding sources other than retail deposits, such as foreign interbank borrowing, commercial paper bonds and other market sensitive funds, can negatively limit an institution's rating.

This factor is measured as follows:

1. Loans/Deposits (LDR) – A strong ratio in this category is considered to be anything between 70%-90% and weak as above 100%.. Deposits usually are the low cost funding the banks have at their disposal.

2. Deposits/Funding Base – A strong ratio in this category is considered to be anything above 90% and worst is below 20%. A large portion of deposits in the funding base helps IFIs in reducing its cost of funding.

3. (Market funds-Liquid Asset) % Total Assets – A strong ratio in this category is considered to be anything less than negative 10% and weak if above 20%. For e.g. if the ratio is negative 10% it indicates that the institution has excess liquidity as compared to its market debt. This ratio shows the portion of liquid assets the bank has in order to cover its market dependent funds, while experiencing a period of stress.

Sub-Factor 5: Cost Control

The management control and efficiency is viewed as a crucial factor by CRA. Our analysis focuses on the bank's efforts to control and reduce costs as well as the results of those efforts. We recognize that the cost efficiency ratio can be distorted by the type of business lines offered by a bank and we attempt to adjust in such cases. Some banks demonstrate improving cost efficiency ratios due to lack of investment. Financial institutions need certain levels of capital expenditure and investment in order to maintain adequate growth. Our analysts do not incorporate into the overall rating an exceptional efficiency ratio, if it is believed to be due to lack of investment.

1. Cost/Income ration (3 year average). The ratio is measured as total non-interest expenses divided by total net interest income plus non-interest income. This a measure of a bank’s efficiency and its ability to generate incremental profits with added revenue. A strong ratio in this category would be anything less than 45% while a weak ratio would be over 80%.

Sub-Factor	Weight	A	B	C	D	E
Liquidity						
(Market Funds-Liquid Assets)% Total Assets	5%	X<-10%	-10%<=X <-5%	-5%<=X <10%	10%<=X <20%	X>=20%
Loans / Deposits	5%	80%>=X >70%	90%>=X >80%	1100%>=X >90%	130%>=X >110%	X>130%
Deposits/Funding Base	5%	X>90%	80%<=X <90%	60%<=X <80%	20%<=X <60%`	X<20%
Asset Quality						
Gross NPLs/Total Loans	3.3%	X<0.8%	0.8%<=X <2%	2%<=X <5%	5%<=X <10%	X>=10%
Net NPLs/Net Worth	3.3%	X<10%	10%<=X <15%	15%<=X <20%	20%<=X <30%	X>=30%
Provisions/NPLs	3.3%	X>=140%	120%<=X <140%	100%<=X <120%	80%<=X <100%	X<80%
Capital Adequacy						
Tier 1 ratio (%)	5%	X>=15%	12%<=X <15%	10%<=X <12%	8%<=X <10%	X<8%
Tangible Common Equity % RWA (%)	5%	X>=7%	5.5%<=X <7%	4%<=X <5.5%	2.5%<=X <4%	X<2.5%

Profitability						
PPP % of Avg RWA	2.5%	X>=3.5%	2.4%<=X <3.5%	1.4%<=X <2.4%	0.5%<=X <1.4%	X<0.5%
Net Income % Avg RWA	2.5%	X>=2%	1.7%<=X <2%	1%<=X <1.7%	0.3%<=X <1%	X<0.3%
Cost Control						
Cost/Income Ratio	5%	X<45%	45<=X<=55%	55<=X<=65%	65<=X<=80%	x>80%

DETERMINING THE FINAL RATING

While a thorough quantitative analysis is important, there exist qualitative characteristics that are taken into account in any fundamental analysis of creditworthiness. It is critically important to look "beyond the numbers" and to assess the strengths and weaknesses of the financial institution. At the core of CRA's analysis is understanding the strategic characteristics of an organization and the quality of management. Our emphasis is on determining how these strategic aspects will affect the flexibility and the ability of the organization to overcome adverse market conditions and continue to meet its financial obligations. As it is clear that no scorecard system can capture all the elements or factors that may impact the credit rating of a financial institution, we may find cases where the result of the scorecard is adjusted up or down to reflect factors that the scorecard cannot capture or that or where the listed weight distorts the final outcome.

CRA uses historical data to arrive at the key factors and sub-factors that characterize the industry and their respective weights. Once we determine the rating on a sub-factor, we look to the sub-factor's weighting on the mapping grid and assign its sub-factor score accordingly. The mapped score of each sub-factor will then be calculated as the sum of the weighted averages and mapped to the overall rating grid and thus arrive at a final rating. The BFSR rating derived is a tool to assist in arriving at a rating decision. However, as mentioned above, there can be instances where the BFSR rating does not provide a accurate reflection of CRA opinion on the bank. External factors not adequately captured by the scorecard, such as a weak accounting and reporting system, changing regulatory and market environments, could result in a final rating adjusted from the scorecard reported rating.

Overall, we believe that our Financial Institutions Rating Methodology provides a transparent and useful tool for analyzing and comparing a bank with its international, regional and local peers and provides investors with a guide for conducting or enhancing their own financial analysis of any financial institution.

APPENDIX: Rating Scale

Scale	Definition
A	Banks rated 'A' are classified as very strong banks. These banks possess *exceptional financial strength* and have significant strengths in other non-financial areas such as highly valuable and defensible business franchise in the country and outstanding management team. The operating environment is likely to be highly attractive and stable.
B	Banks rated 'B' are classified as strong banks. These banks possess *strong financial strength* and have considerable strengths in other non-financial areas such as valuable and defensible business franchise in the country and a strong management team. The operating environment is likely to be attractive and stable.
C	Banks rated 'C' are classified as adequate banks. These banks possess *good financial strength* and show slight weakness in other non-financial considerations such as limited franchise and an average management team. The operating environment may be unstable.
D	Banks rated 'D' are classified as weak banks. These banks possess *one or two major weakness in the financial strength* and other factors such as a vulnerable or a developing franchise may not be sufficient to provide strong protection from unexpected adversities. The operating environment is highly unstable.
E	Banks rate 'E' are classified as very weak banks. These banks possess *fundamental weakness in the financial strength* and other factors are unlikely to provide any protection from the unexpected adversities. The operating environment is highly volatile.

CRA maps BFSR rating to the Long term rating of the issuer. BSFR measures a bank's standalone default risk assuming there is no systematic support or other external support. If we consider systematic support from either the regulator or government, the LT (entity) rating is upgraded depending on the quality and strength of support expected. But in no case can the overall rating pierce the Country ceiling. Few bank's Individual rating can be strong enough to push them at a rating equal to sovereign rating, in such cases we don't provide any notching support.

Mapping BFSR to Long Term Rating

BFSR	LT Rating	Long Term Rating Definition
A+	AAA	Excellent: Extremely strong/exceptionally strong
A-	AA+	Excellent: Very strong

B+	AA	
B	AA-	
B-	A+	Good: Strong
C+	A	
C	A-	
C-	BBB+	Adequate
	BBB	
D+	BBB-	
	BB+	Questionable: Less vulnerable/speculative
D	BB	
D-	BB-	
E+	B+	Poor: More vulnerable/highly speculative
	B	
	B-	
	CCC+	Very poor: Currently vulnerable/high default risk

Long-Term Credit Ratings

Investment Grade	
AAA	An issuer/issue with an 'AAA' credit rating is classified as the *highest* rating by CRA when compared to its peers. The issuer/issue is highly unlikely to be affected by adverse changes in the environment and economic conditions*.
AA	An issuer/issue with an ‘AA’ credit rating is classified as a *very strong* rating by CRA when compared to its peers. The issuer/issue is slightly susceptible to the changes in the environment and economic conditions.
A	An issuer/issue with an ‘A’ credit rating is classified as a *strong* rating by CRA when compared to its peers. The issuer/issue is susceptible to adverse changes in the environment and economic conditions. These changes can affect the debt servicing capabilities to an extent that is rendered weaker than those rated ‘AA’ and ‘AAA’.
BBB	An issuer/issue with a ‘BBB’ credit rating is classified as *adequate* rating by CRA when compared to its peers. The issuer/issue is influenced by changes in the environment and economic conditions. These changes can affect the debt servicing capabilities to an extent that is rendered weaker than those rated ‘A’, ‘AA’ and ‘AAA’.
Speculative Grade	
BB	An issuer/issue with a ‘BB’ credit rating is classified as a *less than adequate* rating by CRA when compared to its peers. The issuer/issue is strongly influenced by changes in the environment and economic conditions. This could lead to

	deterioration in an issuer/issue's capacity to meet its financial obligation to an extent that is rendered relatively weaker than the ones rated under the Investment Grade.
B	An issuer/issue with a 'B' credit rating is classified as a *weak* rating by CRA when compared to its peers. The issuer/issue could suffer impairment in its debt service capacity due to changes in the environment and economic conditions. Their willingness to service debt obligations could also get subdued.
CCC	An issuer/issue with a 'CCC' credit rating is classified as a *very weak* rating by CRA when compared to its peers. The issuer/issue generally has lower tolerance towards unexpected swings in the environment and economic conditions. As a result, their debt servicing capacity is dependent upon favorable environment and economic conditions.
CC	An issuer/issue with a 'CC' credit rating is classified by CRA as a rating with a *very high default probability* when compared to its peers. The issuer/issue generally has fragile and uncertain cash flows, as well as other factors, making them very vulnerable to nonpayment.
C	An issuer/issue with a 'C' credit rating is classified as *on the verge of default* by CRA when compared to its peers. The issuer/issue is extremely susceptible to breaching its debt covenants and the likelihood of them filing for bankruptcy is very high. Hence, they become highly qualified for nonpayment.
R	An issuer is under *regulatory supervision* due to its financial situation. During the regulatory supervision, the regulators can favor some obligations over others or issue the payment of some obligations and not others. (Rating applicable to issuers only)
SD	An issuer has *selectively defaulted* due to failure in payment within the due date. (Rating applicable to issuers only)
D	An issuer/issue with a 'D' credit rating has *defaulted*. The issuer/issue failed to pay its obligation within the due date even if the applicable grace period has not expired. However, this does not apply if there is evidence that such payments will be made during the grace period. The 'D' rating would also be assigned to an issuer filing for bankruptcy or taking similar actions.
NR	An issuer/issue is *not rated* because either a rating wasn't requested, lack of sufficient information, or CRA does not rate the issuer/issue as a matter of policy.

* Environment and economic conditions, such as political, business, financial, commercial and demographic factors.

Short-Term Credit Ratings	
Investment Grade	
S-A1	An issuer/issue's capacity to meet its financial commitment is at its *highest*.

S-A2	An issuer/issue's capacity to meet its financial commitment is *strong*. It is, however, susceptible to adverse economic conditions.
S-A3	An issuer/issue's capacity to meet its financial commitment is *satisfactory* due to adverse economic conditions.
Speculative Grade	
S-B	An issuer/issue's capacity to meet its financial commitment is *weak*. It faces major ongoing uncertainties that could impact its financial commitment.
S-C	An issuer/issue's capacity to meet its financial commitment is *very vulnerable to non-payment*. It is dependent upon favorable business, financial and economic conditions to meet its financial commitments.
S-D	An issuer/issue is in payment *default*. Issue is not made on due date and grade period may not have expired. The rating is also used upon the filing of a bankruptcy petition.