Bank & Bank Holding Company Global Rating Methodology

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Executive Summary

This global rating methodology describes the key credit and risk factors that Kroll Bond Rating Agency LLC and its rating affiliates' (collectively, "KBRA") consider when assigning deposit, debt, and other obligation ratings to banks and other depository institutions and bank holding companies. Ratings assigned to banks and bank holding companies involve separate processes as detailed below. The methodology was developed with the goal of producing and maintaining credit ratings that perform in accordance with KBRA's published rating definitions. For information on KBRA's rating scales, please see KBRA's Rating Scales and Definitions.

The Rating Approach

The rating determinants include both quantitative and qualitative risk assessments. The rating process begins with a quantitative fundamental credit analysis. This quantitatively based analysis incorporates the consideration of an institution's financial measures, related trend analysis, as well as an assessment of other financial data and operating characteristics. The analysis typically incorporates stress testing, centered on an institution's asset quality performance and capital profile during and following the global financial crisis. These institution-specific assessments are then evaluated in the context of an appropriate peer group, which is instrumental in determining an appropriate primary credit rating (PCR).

An important element of the rating process is KBRA's qualitative assessment. Qualitative determinants include an evaluation of an institution's market strategy and viability of business model, as well as careful consideration of overall risk management capabilities and execution. An assessment of an institution's localized as well as the general operating environment is similarly important to the development of a qualitative risk score based on these aggregate determinants. This qualitative risk score is applied to the PCR, resulting in the KBRA shadow rating. Importantly, KBRA may adjust typical weightings of both quantitative and qualitative factors on a case-by-case basis to account for different business models or when a rating determinant is particularly weak or strong. Other factors, such as KBRA's industry outlook and any potential implications of an institution's business plan, may also shift the weights.

Key Quantitative and Qualitative Rating Determinants	
Determinant	**Summary**
***Key Quantitative Rating Determinants* (Step 1)**	
Performance (25%)	This factor focuses on the trends, quality, and the predictability of revenues and earnings.
Asset Quality (25%)	This factor focuses on the quality and performance of a bank's assets as well as balance sheet risks.
Capital (25%)	This factor considers the capital cushion and leverage relative to the balance sheet and other risks taken.
Funding & Liquidity (25%)	This factor examines the ability of a bank to meet its liquidity needs, notably the funding of its lending activities, but also debt servicing/ repayment ability over the short to medium term.
***Key Qualitative Rating Determinants* (Subsequent Step)**	
Market Strategy (25%)	This factor examines the overall market positioning and future viability of a bank's business model. It also examines growth strategies, including revenue and business line diversification.
Risk Management (25%)	This factor assesses the overall quality of risk management, typically credit-related, though considers all disciplines, including corporate governance.
Liquidity Management (25%)	This factor evaluates the management of liquidity risk, including the quality of oversight and monitoring, measurement and control of liquidity risk, time-to-funding requirements, and diversification and stability of funding sources. An assessment of liquidity stress testing is also incorporated.
Operating Environment (25%)	This factor examines the strength and stability of the localized and broader economy and the regulatory/ legal environment.

After analyzing the quantitative and qualitative rating determinants, KBRA may adjust the final ratings based on external considerations such as potential credit support from governments, regional bodies or mutual groups, as well as from parent organizations. The ratings incorporate an assessment of the credit quality of host jurisdictions to reflect vulnerability to macroeconomic conditions as well as transfer and convertibility risk. To this extent, KBRA's ratings may be constrained.

The primary ratings produced by this methodology are senior long-term bank ratings and senior bank holding company ratings from which short-term ratings are derived. Summaries of the sequential steps followed to arrive at senior long-term debt and deposit ratings of banks and senior bank holding company ratings are presented below. Ratings for other classes such as subordinated debt and preferred stock are derived from these primary ratings as detailed later.

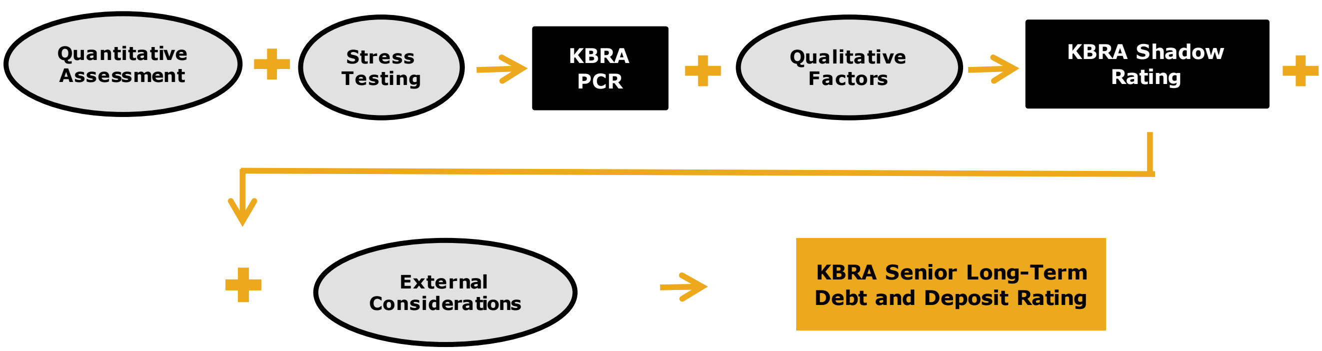
On a final note, KBRA employs judgment in the application of all our methodologies. This may result in situations where certain aspects of the methodology are not employed, de-emphasized, or modified to address additional considerations in the analytical process, where deemed appropriate.

Senior Long-Term Debt and Deposit Ratings

KBRA's ratings assigned to senior long-term debt and deposits at the bank level are based on the sequential incorporation of the following credit factors:

1. A quantitative assessment using key quantitative rating determinants to evaluate intrinsic financial strength and a peer analysis, which, after the application of stress testing, yields a PCR.
2. A qualitative score for factors not captured in financial statements, including key qualitative rating determinants such as market strategy, risk management, liquidity management, and the operating environment. The qualitative score is applied to the PCR and yields the shadow rating.
3. External considerations, including potential credit support from governments, regional bodies or mutual groups, as well as from parent organizations, and country risk. After external considerations are incorporated with the shadow rating, we arrive at the KBRA senior bank rating.

Diagram 1. The schematic diagram below illustrates the sequential steps KBRA follows to convert a bank's quantitative assessment to senior long-term debt and deposit ratings.

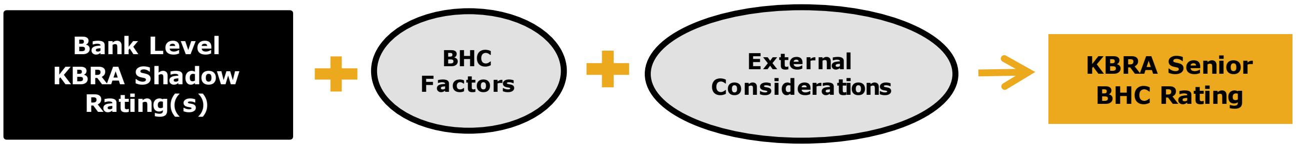


Senior Bank Holding Company Ratings

KBRA's debt ratings for bank holding companies are based on an analysis of the following credit factors, also applied sequentially:

1. Shadow ratings of bank(s) and other material subsidiaries (as depicted in Diagram 1),
2. Bank holding company (BHC) factors,
   - Structural subordination
   - Regulatory restrictions
   - Double leverage and debt service capacity
3. External considerations

Diagram 2. The diagram below describes the sequential steps KBRA follows to assign a KBRA senior bank holding company rating.



Key Quantitative Rating Determinants

The quantitative assessment is derived using a traditional, fundamental credit analysis of key quantitative rating determinants representing four key areas: performance, asset quality, capital, and funding & liquidity, each of which are further detailed below.

KBRA evaluates key ratios considering their absolute and relative strength, historical, current, and projected trends, as well as a relevant peer analysis. KBRA will typically analyze bank level financial statements as well as consolidated financial statements. Particularly, for larger banking groups with multiple subsidiaries, there may be material quantitative differences between bank level and consolidated financial statements. Peers may be selected based upon KBRA rating category, asset size, similarity of business model, loan portfolio mix, as well as geography, among other potential criteria deemed appropriate by KBRA. The peer analysis incorporates a comparative assessment of key financial metrics and ratios that offer a comprehensive view of a bank's overall creditworthiness. The key quantitative rating determinants of a bank are computed and compared with relevant peers, as well as averages for the KBRA rated universe, and each specific rating category. A description of the quantitative determinants is detailed below, along with the percentage weight generally applied to that overall determinant category. The weighted quantitative determinants are then aggregated to produce a quantitative assessment score, as shown in the table below.[1] This computed score represents the quantitative baseline, which follows the long-term rating scale. KBRA's analysis is intended to be forward-looking and may also include expectations surrounding prospective operating and balance sheet trends. The fundamental ratio analysis conducted by KBRA for the quantitative assessment of U.S. banks relies on regulatory filings and other financial information, while the quantitative assessment of non-U.S. banks is typically based on published financial reports, which may vary depending on the jurisdiction. Ratios may be adjusted depending on possible financial reporting differences among international jurisdictions and additional ratios may be used on a case by case basis.

Performance

To evaluate the performance of a bank, KBRA focuses on the trends of core operating performance. Core measures would exclude nonrecurring revenues/expenses, as well as other items that KBRA considers to be non-operating in nature. KBRA assesses key trends of core profitability and earnings capacity by examining the underlying drivers of a bank's business model, including, though not limited to, the quality, diversification and stability of revenue sources, while also evaluating the operating cost structure.

KBRA examines the quality and viability of each business line through an analysis of current and historical performance during various economic conditions and business cycles. All else equal, institutions with strong revenue diversification, incorporating a healthy balance of spread income with noninterest sources, are typically more likely to be able to withstand challenging macroeconomic conditions, evolving market dynamics, and potential credit events.

In assessing profitability, KBRA considers a bank's ability to manage rising funding costs, and the potential impact on net interest margin (NIM). In this regard, if funding cost pressures outpace loan and earning asset yield expansion, resulting NIM compression would weigh on a bank's overall profitability. Durability and consistency of core operating performance represent an institution's "first line of defense" in its ability to absorb potential future losses, and ultimately, the viability of the business model. In assessing the core profitability of an institution, KBRA typically reviews the following ratios, noting that the use of specific ratios can vary on a case by case basis:

- Return on Average Assets and Return on Average Equity
- Net Interest Margin
- Noninterest Income / Revenue
- Noninterest Expense / Revenue

[1] KBRA may adjust these weights on a case-by-case basis to account for different business models or when a rating determinant is particularly weak or strong.

Asset Quality

This quantitative determinant focuses on the quality of a bank's assets, including the loan and securities portfolios as well as off balance sheet risks. KBRA evaluates asset quality typically beginning with a bank's loan portfolio composition. Asset classes are analyzed by aggregate exposure, delinquencies, corresponding loan loss rates, and provisioning. Exposure to higher risk or niche lending segments, or geographic areas with heightened risk of loss, are also specifically evaluated. KBRA examines the historical performance of a bank's loan portfolio through various economic and business cycles and the migration of the loan book over time. In combination with key asset quality indicators and aggregate exposures, KBRA will also consider the risk management framework of an institution. Typical asset quality ratios are shown below, though use of specific ratios can vary by jurisdiction and on a case by case basis.

- Nonperforming Assets (NPA) / Loans + Other Real Estate Owned (OREO)
- Net Charge-Offs (NCO) / Average Loans
- Loan Loss Reserves / Loans
- Loan Loss Reserves / Nonperforming Loans (NPL)
- Provisions / NCOs

KBRA will typically review the composition and management of investment portfolios and whether a bank is focused on low risk, liquid securities or if investment portfolio decisions aim to generate an above average yield by potentially taking more risk. Analysts will assess portfolio duration and interest rate risk, as well as concentrated credit risks, among additional considerations. Analysts will examine exposure to more volatile activities, including the volume of securities trading, types of trading products, contribution to total revenue, the use of mitigants, key policies and monitoring to measure trading risk, exposure to changing market values, stress testing for severe market conditions, and level of trading risk versus capital.

Capital

Capital is assessed in combination with reserves and is reviewed in comparison to peers, historical allocation to support growth, and in the context of a bank's risk profile. Strong capital allows banks to absorb potential balance sheet risks, manage growth, and promote market confidence for better access to short and long-term financing sources. KBRA considers strong capitalization prudent for banks with higher risk business models, such as active acquirers, banks with elevated credit concentrations, or banks with exposure to higher risk business lines. Capital management and planning are evaluated based on the deployment of capital historically, in hand with the growth strategy, internally set capital thresholds, and ease of market access. While KBRA reviews all regulatory capital ratios, we view the tangible common equity to tangible assets (TCE) and Common Equity Tier 1 (CET1) ratios as key indicators. To assess the capital impact of acquisitions, KBRA will analyze pro forma capital measures, underlying assumptions, and apply stresses when deemed appropriate. Typical ratios analyzed may include:

- CET1 ratio
- TCE / Tangible Assets
- Leverage ratio
- Total Capital ratio

Funding & Liquidity

To assess funding and liquidity, KBRA examines the composition of the funding profile, including the balance of core deposits versus wholesale funds, capital market borrowings, and the ability of the bank to manage funding costs. Balance sheet liquidity and access to market funds are also reviewed in this assessment.

KBRA examines a bank's funding mix by reviewing the types of deposits a bank relies upon and the level and stability of core depository funding, as well as the granularity and diversity of the deposit base. Banks with strong deposit franchises and stable customer accounts are more likely to effectively manage rising funding costs and balance sheet growth with flexibility. Banks with deposits primarily comprised of relatively granular retail accounts, without significant reliance on large corporate accounts or jumbo deposits are typically more likely to have stable deposit bases. On the other hand, banks with significant reliance on generally more costly, wholesale funds are also more prone to the impact of rising interest rates and margin pressure that could limit earnings capacity. KBRA will analyze the level of liquid assets and how quickly those assets could be sold in the event of need, level of market access and borrowing capacity, and stress testing of liquidity and funding sources. KBRA may also analyze regulatory ratios such as a liquidity coverage ratio adopted under Basel III, when applicable. Use of specific ratios can vary on a case by case basis and may include:

- Loan-to-Deposit and Loan-to-Core Deposit Ratios
- Cost of Funds and Cost of Deposits
- Average Loan Yield

- Core Deposits / Total Funding
- Noncore Funding Dependence
- Liquid Assets / Total Assets
- Level of Short-Term Borrowings and Debt Maturities

Quantitative Scorecard Example

As illustrated in the table below, KBRA uses a scoring system to convert the following base set of quantitative rating determinants into an aggregate score. Each of the four determinant categories are scored and weighted (as outlined by the weights below) as part of the rating process. KBRA typically will analyze bank level financial statements as well as consolidated financial statements. KBRA evaluates key ratios considering their absolute and relative strength, including historical, current, and projected trends, as well as in comparison to relevant peers, the averages of the KBRA rated universe, and each specific rating category. While this process ensures a certain level of consistency and transparency, KBRA notes the quantitative assessment may include a level of judgment by analysts. In certain cases, purely quantitative metrics may be impacted by other factors, the implications of which may not be fully captured by financial ratios. The ratios in the scorecard may be adjusted depending on possible financial reporting differences among international jurisdictions and additional ratios may be used on a case by case basis. The sum of the scorecard will generally map to a quantitatively derived assessment that follows the long-term rating scale, as noted below. In this example, Bank XYZ's aggregate quantitative score is "0.51" using the quantitative scoring model below. This aggregate quantitative score is at the low end of the "A- and above" range and would typically correlate to an "A-" for purposes of deriving the PCR (potentially subject to stress testing as detailed below as well as analytical judgement). In another example, a score of "0.00" is at the mid-point of the "BBB+ to BBB-" range and would typically correlate to a "BBB" for purposes of deriving the PCR.

Quantitative Rating Determinants for Bank XYZ					Weights	Score
Performance	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.19**
ROAA	1	0	-1	-2		1
NIM	1	0	-1	-2		1
Noninterest Income / Revenue	1	0	-1	-2		1
Efficiency Ratio	1	0	-1	-2		0
Asset Quality	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
NPA / Loans + OREO	1	0	-1	-2		1
NCO Ratio	1	0	-1	-2		0
LLR / NPL	1	0	-1	-2		1
Provisions / NCO	1	0	-1	-2		0
Capital	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.06**
CET1	1	0	-1	-2		0
TCE	1	0	-1	-2		1
Tier 1 Leverage	1	0	-1	-2		0
Total Risk-Based Capital Ratio	1	0	-1	-2		0
Funding & Liquidity	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
Core Deposits / Total Funding	1	0	-1	-2		1
Cost of Deposits	1	0	-1	-2		1
Loan / Core Deposit	1	0	-1	-2		0
Liquid Assets / Total Assets	1	0	-1	-2		0
Quantitative Assessment					100%	**0.51**

A- and above	**1.00 to 0.50**
BBB+ to BBB-	**0.49 to -0.49**
BB+ to BB-	**-0.50 to -1.00**
B+ and below	**-1.01 to -2.00**

Stress Testing and the PCR

To derive the PCR, KBRA may apply a series of stress tests in order to incorporate potential, forward-looking risk scenarios, which are typically not factored into the quantitative assessment and, consequently, may adjust the quantitative assessment result. Any stress testing will typically involve a set of scenarios representing moderate-to-severe economic environments and an analysis of the impact on the bank's capital and earnings. In order to increase the accuracy of stress tests, KBRA will typically request additional data on the asset portfolio, including largest exposures and sector concentrations, as well as earnings by line of business. However, in the absence of such data, KBRA may rely on public information to estimate forward-looking scenarios. In addition, KBRA may adjust the quantitative assessment to incorporate unique risks, such as those facing banks with a significant focus on investment banking, trust services, or other non-traditional business models. In the event that a bank's capital and earnings are significantly impaired under stress scenarios, KBRA may apply a penalty to the results of the quantitative assessment. The PCR follows the long-term rating scale and reflects potential adjustments to the quantitative assessment of a bank following the application of stress testing. The PCR is largely quantitative rating that, in turn, is modified by the qualitative rating determinants, which are not captured by the quantitative assessment, as described below.

Key Qualitative Rating Determinants

KBRA's qualitative analysis focuses on four key rating determinants: market strategy, risk management, liquidity management, and the operating environment. KBRA will typically seek to engage in a dialogue with the bank's management to enhance our understanding of the following qualitative determinants. Each of these is described in detail below, along with the criteria governing scoring, as well as the percentage weight typically applied to that overall determinant category. The qualitative determinants are each weighted and aggregated to produce a rating adjustment or risk score as illustrated in the table below. The sub-determinants within each determinant category and factors within each sub-determinant as applicable are typically weighted equally.[2] This adjustment, or aggregate risk score, is then applied to the bank's PCR. The aggregate risk score can be neutral, can penalize, or can result in uplift to the bank's PCR. The result of the PCR plus the aggregate risk score determines the bank's shadow rating.

Key Qualitative Rating Determinants	
Determinant	**Sub-determinants**
Market Strategy (25%)	Business Lines Management Profile and Strategy Revenue Profile
Risk Management (25%)	Risk Oversight Risk Infrastructure and Quality of Management Information Systems (MIS) Risk Appetite Framework Governance Risk
Liquidity Management (25%)	Oversight and Monitoring Market Access, Diversification and Stress Testing
Operating Environment (25%)	Economy & Banking Infrastructure Regulatory Framework

Market Strategy (25%)

This factor encompasses the overall strength, scope, and viability of a bank's market strategy and franchise. KBRA analyzes a bank's business model and strategic growth plan, competitive position, the experience of the bank's management team, revenue stability, and quality of earnings to better understand the resilience of a bank's market position. KBRA evaluates a bank's market position based on its relative size as well as by business line. KBRA considers a bank's market position to be the cornerstone of its ability to remain competitive in an evolving market place.

Sub-Determinant: Business Lines

This sub-determinant examines a bank's product offerings, as well as concentrations to different businesses and geographies. In general, banks with diversified product sets and geographic footprints pose less risk as they are typically less sensitive to industry and market disruptions. With that said, banks that expand into new products or geographies outside of their key markets and expertise may weaken their franchise strength. Correlations among different businesses and geographies are also typically considered, as high correlations could weaken an otherwise strong market position.

[2] KBRA may adjust these weights on a case-by-case basis to account for different business models or when a rating determinant is particularly weak or strong.

Rating Determinant 1: Market Strategy				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Business Lines				
Diversification	Highly diversified by business line and product with significant market share in key geographies. Typically focused on retail businesses and most customers have multiple relationships with the bank.	Business line diversification is similar to peers. A considerable portion of earnings are generated from retail-oriented activity, with many customers having multiple product relationships with the bank.	Not very well diversified. May be reliant on a single business line for revenues. Customers may have a single banking relationship with the bank.	Business lines may be highly concentrated. May also be focused on only one or two business lines that are very vulnerable to declines with potentially significant negative impact on earnings. May also be particularly vulnerable to wholesale market dynamics.
Market Share and Franchise Strength	Highest or one of the highest market shares in its core markets. Brand is highly recognized. Market share is highly defensible. Customers are not very price sensitive and identify strongly with the bank's brand.	Solid market share in key geographies. Brand recognition is similar to peers. Customer price sensitivity is similar to peers and brand identity is not as strong as banks in the strong category.	Good market share in its core markets, but overall share of the national market is not significant. Bank's market share in its own core market may be threatened by larger, more entrenched names. More price-sensitive and are not as loyal as customers of banks in the average or strong category.	Bank's national market share is insignificant, though it may have higher market share in a smaller region. Market share in key geographies could be at risk of erosion or may have deteriorated with negative impact on earnings. Brand loyalty may be low and customers are very price sensitive.
Correlation	Low correlation among its different markets and/ or products.	Correlation among its different markets and/ or products is similar to its peers.	There is high correlation among the different markets and/ or products.	Markets and/ or products are very highly correlated.

Sub-Determinant: Management Profile and Strategy

This sub-determinant assesses the strength and stability of the bank's management team, as well as its strategic direction. Banks with deep and agile management teams have demonstrated a greater ability to withstand market challenges. The effectiveness of their strategies is a key determinant of their market strength and viability. For this factor, KBRA generally looks to past behavior and its resulting consequences, and considers the relevance of the bank's strategic plan. Consideration is given to management's risk appetite, track record of managing risk and demonstrated ability to effectively balance revenue goals against prudent risk management. KBRA may also weigh the bank's management quality and strategic direction relative to other banks of similar size and market position in order to assess competitive positioning.

Rating Determinant 1: Market Strategy				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Management Profile and Strategy				
Management Profile	Stable, experienced and conservative management team with proven track record in delivering long-term value to customers and investors.	Relatively stable and its track record of delivering to various stakeholders is similar to peers in their market.	Less stable management team.	Inconsistent or unstable management profile.
Management Risk Appetite	Risk appetite has been well thought out and generally conservative and accompanied with the right pricing.	Management's risk appetite is similar to peers.	Higher risk appetite with negative consequences for the bank's earnings, strategic direction and market position.	High-risk appetite with lack of experience or inappropriate pricing.
Management Track Record	Responses to market challenges have been well thought out and the execution of operational plans has proven effective and demonstrably stronger than peers; management's key strategic decisions have led to successful outcomes and their future plans are well positioned for their market dynamics.	Faced some challenges and responded to them with mixed results and outcomes similar to peers; overall operational effectiveness and future strategy seems to be similar to industry average.	The bank has responded to previous challenges with mixed results and a positive future outcome is less certain.	Decisions have led to costly acquisitions or poor product choices with a persistent negative impact on earnings.

Sub-Determinant: Revenue Profile

This sub-determinant is designed to assess the stability and quality of the bank's earnings stream, as well as its capacity to grow core earnings. Historical contributions of each business line to revenues and future projections are evaluated. In general, banks with granular assets and a retail-oriented product and customer base have demonstrated more resilience to financial stress. On the other hand, banks with significant wholesale businesses have typically experienced much higher earnings volatility. However, for this factor, KBRA also considers the bank's particular market position, size, and strategy for its footprint, reflecting the fact that not all retail-oriented banks fared well during the global financial crisis.

Rating Determinant 1: Market Strategy				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Revenue Profile				
Revenue Quality	Revenues have demonstrated durability and diversity, including a considerable and stable fee-based income component. Revenue generation is generally predictable and expected to be resilient through various cycles. Very low volatility in core earnings.	Composition of revenue streams is similar to peers. Certain components may demonstrate variability, yet are in line with the bank's market strategy and similar to peers. Volatility of core earnings is similar to peers and reflective of particular market dynamics.	Revenues may be spread reliant and have demonstrated increased sensitivity to broad-based economic factors relative to peers. Core earnings have been somewhat volatile, possibly due to a higher portion of earnings generated by wholesale activity.	Revenues are largely spread reliant, exposed to higher risk segments, or sensitive to market confidence. Revenues have demonstrated increased sensitivity to broad-based economic factors relative to peers and have low predictability. Very volatile core earnings, most likely due to a high proportion of earnings derived from wholesale businesses.
Earnings Capacity	Bank has ample opportunity to grow main business lines and generate positive operating leverage.	Opportunity to grow main business lines and generate positive operating leverage. May face market challenges, though expected to adequately respond.	Earnings growth appears limited.	Earnings capacity may be susceptible to decline.

Risk Management (25%)

KBRA evaluates the overall effectiveness of a bank's risk management framework to determine whether it adequately captures and addresses the plausible risks to which the institution is exposed. KBRA generally considers the roles and responsibilities of individuals involved in the risk management function and the scope of risks to be managed, as well as the processes, systems and procedures in place to manage those risks. KBRA will also review the organization's overall risk appetite and culture, the risks stemming from the complexity of the institution, and any related party risks. The risk management framework should be comprehensive, yet also dynamic and flexible enough to accommodate evolutions in business activity, industry or new products. Key areas of focus are risk oversight, risk infrastructure, quality of management information systems, risk appetite framework, and governance risk.

Sub-determinant: Risk Oversight

This sub-determinant encompasses the functioning of independent risk-oversight groups, risk management officers, and their reporting lines. The quality and frequency of risk-oversight group meetings as well as the effectiveness of the independent directors, in general, are typically considered. KBRA generally evaluates the independence and influence of risk management teams, as well as their involvement in strategic decisions for the bank, as these are key to effective risk management.

Rating Determinant 2: Risk Management				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Risk Oversight				
Risk Reporting Lines & Board Monitoring	Risk management function is experienced and independent with a separate reporting line to the CEO and the board. The board and the management team are closely involved in monitoring and establishing the risk appetite for the firm.	Risk management function has a direct reporting line to the board and CEO and the risk management function and responsibilities are similar to peers in the industry.	Risk governance function is either rudimentary or is undergoing an overhaul, but not yet appropriate for the level of the risks the bank takes.	Risk governance function is poorly defined with clear lapses.
Risk Framework & Independence	Risk policies, committees and regular risk meetings are very well established and a strong system of accountability for risk-taking is apparent throughout the entire firm. Risk management is empowered to be in very close contact with risk takers within the bank. It performs due diligence of new products. Risk managers have influence on product and market strategies.	Risk policies, committees and regular risk meetings are well established and a system of accountability for risk-taking is apparent throughout the entire firm. Some improvements are being implemented to strengthen risk framework and independence. Risk management is empowered to be in close contact with risk takers within the bank. It performs due diligence of new products.	Risk policies, committees and regular risk meetings exist, though are limited and need improvement. Accountability for risk-taking is not defined throughout the entire firm. Some improvements may be underway to strengthen risk framework and independence. Risk management is not in close contact with risk takers within the bank. Due diligence of new products may not be thorough.	The independence of the risk function cannot be verified and/or its ability to influence key decisions on risk products are undefined. The board and/or the risk group do not have the appropriate level of training.

Sub-Determinant: Risk Infrastructure & Quality of Management Information Systems (MIS)

This sub-determinant reflects the quality of the bank's risk measurement, monitoring and reporting systems, and MIS. KBRA typically evaluates the risk standards, policies, and procedures as well as the effectiveness of limits for credit and market risk. Analysis typically includes a review of underwriting guidelines, policy limits, credit administration, approval processes, loan collection and servicing, monitoring, and default resolution. KBRA may also review the presence and results of recent stress testing and scenario analysis. The quality of the operational risk management practices may also be evaluated – these should guard against inadequate or failed internal processes, people and systems, or shocks from external events. KBRA may also review the quality of procedures for the management of compliance risks, which arise from violations of or non-compliance with local and international regulations.

Rating Determinant 2: Risk Management				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Risk Infrastructure & Quality of Management Information Systems (MIS)				
MIS	Risk infrastructure encompasses high quality MIS reflective of the bank's business complexity.	Risk infrastructure encompasses an effective MIS reflective of the bank's business complexity.	MIS systems are adequate, though areas of improvement exist.	MIS systems do not capture the bank's business complexity.
Risk Reporting & Review Systems	The risk systems are advanced and facilitate timely review of risk positions and exceptions on a regular and formally scheduled basis and their impact on the bank's profitability and capital are determined and reviewed by the management and the board. This includes the risks of both individual transactions and portfolios as well as operational and compliance risks.	The risk systems are comprehensive and facilitate timely review of risk positions and exceptions on a regular basis and their impact on the bank's profitability and capital are determined and reviewed by management and the board. This includes the risks of both individual transactions and portfolios.	The risk systems are adequate though lack complexity. Timely review of risk positions and exceptions on a regular basis exists and their impact on the bank's profitability and capital are determined and reviewed by management and the board. This includes the risks of both individual transactions and portfolios.	Risk positions as well as exceptions are either not reviewed regularly or are reviewed on an ad-hoc basis. The impact of aggregate risk positions on profitability and capital cannot be clearly or easily determined or may take a long time to assess. Risk positions are reviewed on an individual basis or aggregate basis but not both.
Communication of Risk Limits & Exception Approval Processes	Risk limits and approval processes are very clearly defined and detailed in the bank's policies and procedures, and responsibilities and authorities of business units are well defined.	Limits and approval processes are indicated in the bank's policies and procedures, and responsibilities and authorities of business units are well defined.	Limits and approval processes are indicated in the bank's policies and procedures, though are not well defined, and responsibilities and authorities of business units lack clarity.	The bank's policies and procedures do not clearly define risk limits and/or approval processes seem limited. Responsibilities and authorities of business units are not well defined.
Stress Testing	The use of regular and meaningful stress testing is embedded in the risk management infrastructure.	The use of stress testing is comparable to peers.	Use of stress testing is limited or weak compared to peers.	Use of stress testing is either limited or non-existent.
Risk Mitigation Tools	Effective and are supported by the bank's strong performance within its peer group as well as lack of any regulatory warnings or penalties.	Effective and are evidenced by the bank's average performance within its peer group. There have been no regulatory warnings or penalties due to poor risk management tools or lack of compliance with regulations.	The bank has either had losses due to poor risk management tools, or has had few warnings or penalties arising from poor compliance risk management, though may be actively improving risk mitigation tools.	Risk mitigation tools are rudimentary. The bank has either had losses due to poor risk management tools, or has been given warnings or penalties arising from poor compliance risk management.

Sub-Determinant: Risk Appetite Framework

This sub-determinant assesses the bank's risk appetite framework, as expressed by its overall corporate strategy and how it compares to other banks of similar size and footprint. KBRA generally reviews the bank's credit and industry concentrations, as well as market risk limits, and compares them to peers. KBRA may also review any past strategic errors such as costly and/or high-risk acquisitions, or expansion into poorly understood products. In general, volatility or stability of earnings informs KBRA's view of a bank's risk appetite. Regulatory reprimands for poor risk management practices, as well as a highly concentrated balance sheet relative to a bank's equity, are additional inputs into the risk appetite analysis.

Rating Determinant 2: Risk Management				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Risk Appetite Framework				
Risk Tolerance	Embedded in the bank's strategic planning for an optimal risk/return strategy and a well-defined system of limits supports the bank's total risk tolerance.	Included in the bank's strategic planning and a system of limits supports the bank's total risk tolerance.	Included in the bank's strategic planning and a system of limits supports the bank's total risk tolerance, though limits have been exceeded at times.	Risk tolerance is not clearly defined and limit management is performed on an ad-hoc and individual exposure basis.
Record of Losses	No record of losses related to either excessive risk concentrations or due to lack of limits in individual or portfolio exposures.	No recent record of losses related to either excessive risk concentrations or due to lack of limits in individual or portfolio exposures, and its risk appetite framework is in line with peers in the industry.	Recent record of losses related to either excessive risk concentrations or due to lack of limits in individual or portfolio exposures, though the bank has taken steps to reduce risk and risk appetite framework is approaching industry peers.	A record of losses due to high concentrations in certain products or markets or due to moves by the bank into markets outside of their expertise.
Regulatory Warnings	No regulatory warnings or demands for higher capital due to high risk concentrations or exposures. Capital has been appropriately managed in the context of the risk profile.	No regulatory warnings or demands for higher capital due to high risk concentrations.	Past regulatory warnings or recommendations for higher capital due to increases in risk concentrations or exposures, which the bank has responded to.	Recent or current regulatory warnings or recommendations for higher capital due to sudden increases in risk concentrations or exposures.

Sub-Determinant: Governance Risk
This sub-determinant reflects the quality of corporate governance as well as the bank's corporate and legal structure. Board oversight, ownership structure, and the level of complexity in subsidiary structures are generally reviewed to determine the ease with which the board of directors can influence and/or understand the nature of risks within the overall group. It is also designed to reflect a bank's level of reliance on one or more key employees whose skills are viewed as critical to the viability and success of the institution.

Rating Determinant 2: Risk Management				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Governance Risk				
Corporate Governance	Strong corporate governance standards as well as organizational structures commensurate with their size, level of activity and geographic reach.	Sufficient corporate governance standards as well as organizational structures commensurate with similar peers.	Corporate governance standards are weaker when compared to peers and the organizational structure presents challenges.	Corporate governance standards are weak when compared to peers and the organizational structure is very complex, which makes it difficult for the board to exert influence over management of the bank and, consequently, transparency is lacking.
Management Accountability	The board of directors are active advisors to the bank's management and unnecessarily complex ownership or legal structures do not impede their influence or transparency of risks within such structures. The bank has a strong leadership team that is accountable to the board and is not overly dependent on one or more key individuals.	The board of directors are active advisors to the bank's management and unnecessarily complex ownership or legal structures do not impede their influence or transparency of risks within such structures. The bank has a strong leadership team that is accountable to the board. Key person risk is mitigated by a highly experienced executive team.	Management of conflicts of interest amongst the different stakeholders is difficult, possibly due to a few dominant shareholders or the presence of a single dominant manager.	Conflicts of interest amongst the different stakeholders are apparent.
Compensation Structures	Keenly focused on rewarding long-term value creation.	Reward long-term value creation.	Some reward for long-term value creation evident, but less than peers.	Reward short-term gains.

Liquidity Management (25%)

For this determinant, KBRA evaluates the management of liquidity risk, which is the potential for losses arising from either an inability to meet obligations as they fall due, or the need to fund increases in loans and other activities at high borrowing rates. Liquidity risk may also arise from an inability to manage unplanned disruptions in funding sources due to changes in market conditions or perceptions about the bank's solvency. It may also arise due to changes in the prices or marketability of certain assets held by the bank that were previously viewed as very liquid. As the global financial crisis demonstrated, sound liquidity risk management employed in measuring, monitoring, and controlling liquidity risk is critical to the viability of any financial institution. KBRA typically reviews the following factors to score a bank's liquidity management: the quality of management and board oversight in monitoring, measurement and control of liquidity risk, time-to-funding requirements, diversification and stability of funding sources, and stress testing.

Sub-Determinant: Oversight and Monitoring
For this sub-determinant, KBRA typically forms a general assessment of the effectiveness of the board and senior management with respect to liquidity risk management. This may include a review of the board's approval mechanisms for strategy and policies related to liquidity risk management, as well as the quality of senior management's implementation of such policies. In addition, KBRA may review reporting systems that measure, monitor, and control the bank's liquidity exposures. Management should be able to accurately identify and quantify the primary sources of an institution's liquidity risk in a timely manner and understand both existing as well as future risks to which the bank is exposed.

Rating Determinant 3: Liquidity Management				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Oversight & Monitoring				
Liquidity Risk Framework	The board and senior management are highly experienced in liquidity management and operate within a high quality MIS and a liquidity risk management framework that is highly reflective of the bank's level of complexity and business model.	The board and senior management have relevant expertise, efficient MIS and a liquidity risk management framework commensurate with the bank's level of complexity and business model.	The board and senior management have relevant expertise and adequate MIS, though liquidity risk management framework is limited and may require improvement.	The board oversight and approval mechanisms are not well-defined or are not adhered to regularly. The MIS is not capable of capturing liquidity risk in a timely and accurate manner. The liquidity risk management framework is not appropriate for the bank's level of complexity and business model.
Policy Approvals	The board approves key strategies and significant policies, provides guidance on the level of tolerance for liquidity risk, and appoints highly skilled senior managers who have the ability to implement and manage liquidity risk.	The board approves the strategy and significant policies, provides guidance on the level of tolerance for liquidity risk, and appoints senior managers who have the ability to implement and manage liquidity risk.	The board approves the strategy and significant policies. Guidance on the level of tolerance for liquidity risk exists, though may not be well managed.	Liquidity policy strategies and approvals have had lapses in the past with negative impact on earnings and/or policies are not well understood and adhered to by senior management or staff.
Limits & Monitoring	Liquidity limits, monitoring of positions and approval systems are clearly defined and well-understood by the staff and reflect the board's intent. Clear examples of strong monitoring in stress situations may be present.	Liquidity limits, monitoring of positions and approval systems are present and reflect the board's intent.	Liquidity limits, monitoring of positions and approval systems are generally adhered to.	Senior management has not implemented clear limits, monitoring and approval systems not reflective of the board's intent.

Sub-Determinant: Market Access, Diversification of Funding Sources & Stress Testing

For this sub-determinant, KBRA generally assesses time-to-funding requirements by assuming no access to market funding and no reliance on liquidation of less liquid assets. Availability of government liquidity lines, such as central bank funding, may also be an input to this analysis. KBRA may review a bank's diversification of funding sources as well as the ease of access to market sources of funding, such as unsecured debt or securitization vehicles. A review of stress testing frameworks, which should include contingency planning in the event of a sudden market disruption, may also be conducted to determine the bank's ability to withstand liquidity shocks.

Rating Determinant 3: Liquidity Management				
Sub-determinant	**Strong**	**Average**	**Weak**	**Very Weak**
Market Access, Diversification of Funding Sources and Stress Testing				
Liquidity	The bank has above peer liquidity and can fund all of its liquidity requirements for well over 12 months without access to market funding or liquidation of less liquid assets.	The bank can sufficiently fund all of its liquidity requirements for the next 12 months without access to market funding or liquidation of less liquid assets.	The bank appears able to fund all of its liquidity requirements for the next 12 months without access to other market funds, though liquidity measures may be below peer.	Inability to fund liquidity requirements for the next 12 months without access to other market funds.
Central Bank Funding	The bank has ample collateral designated for posting to the central bank for liquidity purposes.	Defined plan and significant available collateral for posting to the central bank for liquidity purposes.	No defined plan and/or limited level of available collateral for posting to central bank for liquidity purposes.	Central bank facilities may not be available at present or in the future.
Funding Profile	The bank has a strong core funding profile in addition to access to a diversified pool of funding sources and market funds.	The bank's diversification of funding sources is commensurate with its funding profile and it enjoys adequate access to market funds.	The bank's access to market funds is limited.	The bank's access to market funds is either limited or is questionable.
Stress Testing	Stress testing scenarios of available liquidity are conducted comprehensively and include very severe market disruptions and bank specific scenarios.	Meaningful stress testing of available liquidity is embedded in the bank's liquidity management framework.	Stress testing of available liquidity sources exists, but is limited.	Stress testing of available liquidity sources is inadequate and does not fully capture a reasonable range of plausible outcomes.
Liquidity Ratios	The bank has very strong liquidity ratios.	Liquidity ratios are average and in line with peers.	Some liquidity ratios may be moderately weaker than average for the type of activity in which the bank engages.	Liquidity ratios may be weaker than average for the type of activity in which the bank engages.

Operating Environment (25%)

This factor reflects the national and regional environment(s) in which the bank operates. The strength of the economy and its stability, the competitive landscape, and the nuances of each banking system's structure are important inputs into the risk assessment of banks in a given country or region. In addition, KBRA believes that effective banking regulation and a solid legal framework, accompanied by strong and timely supervisory enforcement, promote better capitalized, less leveraged, and thus less risky banking systems. Therefore, for this factor, KBRA's analysis broadly encompasses the overall impact of the economy and the structure of the banking system, as well as the effectiveness of its regulatory and legal regime.

Rating Determinant 4: Operating Environment				
	Strong	**Average**	**Weak**	**Very Weak**
Economy & Banking Infrastructure	Bank operates within an advanced economy with a well-developed and very effective legal and banking infrastructure.	Bank operates within an advanced economy with a developed legal and banking infrastructure. Economy may be subject to macroeconomic pressures.	Bank may operate in a strong or developing economy, but because of internal or external imbalances, the economy's performance has become more volatile and the operating environment has been weakened significantly with potentially notable impact on the banking system's performance.	Bank may operate in a volatile economy with a weak operating environment and uncertainties surrounding the banking system's performance are prevalent.
Regulatory Framework	Regulatory policies are comprehensive and reviewed regularly to keep pace with changes in the industry and are supplemented by highly effective supervision.	Regulatory policies and supervision of the banking sector appear adequate, but not as comprehensive and rigorous as those found in highly developed regulatory frameworks.	Regulatory polices may be very rudimentary with notable deficiencies when compared to the strong category.	Deficiencies are prevalent.

Following the qualitative assessment, the risk score derived by the qualitative scorecard is applied to the PCR. KBRA analysts will use this score as a guide to adjust the PCR. The adjustment may be upward, downward, or have a neutral impact. This process yields the shadow rating of the bank. KBRA will then incorporate external considerations, which may include potential credit support from governments, regional bodies or mutual groups, as well as from parent organizations, and country risk. After external considerations are incorporated with the shadow rating, we arrive at the KBRA senior bank rating.

External Considerations

Ownership

KBRA will analyze the strategic importance of a bank to its owner(s) as well as the ability and willingness of the owner(s) to financially support the bank when needed. This analysis could result in an upward adjustment of the shadow rating if a bank is affiliated with, or a subsidiary of, a strong owner. The level of support will depend on many factors, including strategic importance of the bank to its owner, the credit strength of the owner as determined by KBRA, and the owner's demonstrated commitment to the bank. On the other hand, KBRA may determine after a review that the owner presents additional risks that may preclude support and negatively impact the bank's risk profile. This situation could result in a downward adjustment of a bank's shadow rating depending on the perceived level of risk.

Sovereign Ratings and Banks

KBRA's credit ratings are intended to be globally comparable and incorporate country risk in the ratings process for financial institutions. KBRA's approach to rating sovereigns is outlined in our Sovereigns Rating Methodology, which explains our approach to rating governments and also highlights that sovereign ratings do not act as a ceiling for issuers domiciled in a country. KBRA evaluates each issuer on a case-by-case basis to determine its susceptibility to those same macro circumstances that influence a government's debt payment prospects.

We also evaluate an issuer's susceptibility to transfer and convertibility risk. This is the risk that the government would interfere with external payments of other economic agents in an economy. KBRA's assessment of this risk generally reflects the legal commitment of a country to the free movement of capital, the institutional strength of a country, and the likely cost-benefit calculation the government would conduct in deciding whether or not to impose exchange controls on the economy. Historically, some governments have chosen to impose restrictions on foreign currency flows to stem massive currency depreciation or to preserve foreign exchange for its own use. In recent years, transfer risk has generally fallen; in fact, there have been many examples when a government deep in debt crisis does not interfere with foreign currency payments by other economic actors in its country. This development broadly reflects governments' awareness of the value of access to international capital markets for the domestic economy.

In this context, the ratings incorporate an assessment of the credit quality of the host jurisdiction to reflect both the issuer's vulnerability to macroeconomic conditions as well as transfer and convertibility risk.

Qualitative Scorecard Example

As illustrated in the table below, KBRA uses a scoring system to convert each of the qualitative rating determinants into a rating adjustment for the PCR. Each of the four determinant categories are scored and weighted (as outlined by the weights below) as part of the rating process. KBRA will then assign an "Aggregate Risk Score," which will determine the number of notches of penalty or benefit (if any) to be applied to the PCR.

Qualitative Rating Determinants for Bank XYZ					Weights	Score
Market Strategy	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
Business Lines	1	0	-1	-2		0.5
Management Profile and Strategy	1	0	-1	-2		0.5
Revenue Profile	1	0	-1	-2		0.5
Risk Management	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.06**
Risk Oversight	1	0	-1	-2		0
Risk Infrastructure and Quality of MIS	1	0	-1	-2		0.5
Risk Appetite Framework	1	0	-1	-2		0.5
Governance Risk	1	0	-1	-2		0
Liquidity Management	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.00**
Oversight and Monitoring	1	0	-1	-2		0
Market Access, Diversification and Stress Testing	1	0	-1	-2		0
Operating Environment	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.25**
Economy & Banking Infrastructure	1	0	-1	-2		1
Regulatory Framework	1	0	-1	-2		1
Aggregate Risk Score					100%	**0.44**

Aggregate Score Ranges	Implied Notching
above 0.50	2 or more
0.26 to 0.50	1
0.25 to -0.25	0
-0.26 to -0.50	-1
below -0.50	-2 or more

In this example, the quantitative assessment derived an "A-" rating for Bank XYZ (see page 9), which then achieves a PCR of BBB+ following stress testing. Using the qualitative scoring model above, the bank is assigned an aggregate adjustment score of "0.44". KBRA analysts will use this score as a guide to adjust the PCR. Generally, a score ranging from -0.25 to 0.25 is considered neutral and would not result in a penalty or benefit to the PCR. Scores falling between -0.50 and -0.26 or 0.26 and 0.50 generally result in one notch of adjustment in either respective direction. Scores of below -0.50 or above 0.50 may be adjusted by two notches or more. Notching can also vary depending on additional information that may not be captured in the qualitative scoring tool. The table below illustrates how the aggregate adjustment score in the example of Bank XYZ incurs one notch of uplift following the qualitative analysis, which, in turn, yields the shadow rating of the bank.

Rating Sequence Example of Bank XYZ										
1		2		3		4		5		6
Quantitative Assessment	**+**	**Stress Test = Primary Credit Rating (PCR)**	**+**	**Qualitative Rating Determinants Score**	**=**	**KBRA Shadow Rating**	**+**	**External Considerations**	**=**	**KBRA Global Bank Senior Rating**
AAA		AAA				AAA				AAA
AA+		AA+				AA+				AA+
AA		AA				AA				AA
AA-		AA-				AA-				AA-
A+		A+				A+				A+
A		A				A				A
A-	+	A-		Aggregate Adjustment Score of 0.44	=	A-	+	0	=	A-
BBB+		BBB+	+			BBB+				BBB+
BBB		BBB				BBB				BBB
BBB-		BBB-				BBB-				BBB-
BB+		BB+				BB+				BB+
BB		BB				BB				BB
BB-		BB-				BB-				BB-
B+		B+				B+				B+
B		B				B				B
B-		B-				B-				B-
CCC+		CCC+				CCC+				CCC+
CCC		CCC				CCC				CCC
CCC-		CCC-				CCC-				CCC-

In the example, no adjustment is made on the basis of external considerations, therefore, the final global senior bank rating for Bank XYZ is A-. This rating is assigned to the bank's deposits, debt, and other senior obligations.

The process described above provides a basis for the assignment of debt and deposit ratings to banks while ensuring a certain level of consistency and transparency. However, the process of assigning credit ratings to banks is complex and often includes an element of judgment by analysts and rating committees. Therefore, in certain cases, particularly where the rating committee determines that purely quantitative metrics do not fully capture a bank's credit risk profile, KBRA may depart from the ratings suggested by the PCR.

Bank Holding Company Ratings

Many banking organizations are organized under a bank holding company (BHC) structure. A BHC is typically a financial services corporation that owns one or more banking subsidiaries and, possibly, one or more non-banking subsidiaries. In many cases, BHCs tend to act as central vehicles for the issuance of debt and/or equity to finance the operating subsidiaries.

KBRA views the general credit profile of a BHC as a function of the combined credit quality of the various operating subsidiaries. Therefore, the first step in assigning a rating to the debt and other senior obligations of a BHC includes an analysis of its subsidiaries and the assignment of a rating to the senior obligations of the subsidiaries. KBRA may utilize other rating methodologies (for example the Securities Firm Global Rating Methodology) to analyze non-bank subsidiaries of BHCs. KBRA will also analyze consolidated financial statements for the group and BHC only statements when available. While the starting point for the rating of a BHC may be the senior ratings of its core subsidiaries, such as a lead bank, KBRA may assign a lower rating to the senior debt and other senior obligations of the BHC because of a number of key credit factors specific to BHCs. These include structural subordination, regulatory restrictions or differential treatment vis-à-vis operating subsidiaries, weaker financial strength of the BHC as demonstrated by high double leverage or weak liquidity, and lower potential external support for the BHC versus its subsidiaries. Similar to bank ratings, KBRA's BHC ratings are intended to be globally comparable and incorporate country risk in the ratings process.

Structural Subordination
Structural subordination refers to a lower priority of claim for BHC debt versus similar obligations at its subsidiaries. BHCs typically rely on dividend cash flows from operating subsidiaries to service their debt. As dividend payments are optional and rank below other claims, a BHC's debt is subordinated to the senior obligations of its subsidiaries, and thus will typically have a lower credit rating than similar obligations at the subsidiary level.

Capital Instruments
Subordinated obligations typically will be rated below senior obligations with preferred instruments typically rated below subordinated debt obligations. Regarding preferred ratings for fundamentally sound, investment grade banks and BHCs, the KBRA approach typically keeps the notching comparatively compressed based on our fundamental view that deferral risk on preferred instruments of banks with strong credit quality is sufficiently remote and largely aligned with probability of default on more senior instruments. KBRA will likely widen the notching on preferred ratings if the instrument has specific characteristics which could significantly affect deferral risk and/or if a banking institution has a relatively risky business mix, a comparatively high proportion of debt and capital instruments, and/or faces sizeable financial challenges typically associated with non-investment grade institutions. KBRA may also widen notching depending on regulatory or other aspects in different jurisdictions.

Regulatory Restrictions
Regulators can have the means to prevent banking subsidiaries under financial stress from up-streaming cash flows to their BHC in order preserve cash and the capital at the subsidiary. Regulators may also require a BHC to come to the aid of its operating subsidiaries, if needed, particularly for bank subsidiaries where deposits may be at risk. In addition, in cases of imminent failure of the group, regulators may opt to support the operating subsidiaries, though not the BHC, in order to prevent a systemic crisis or to protect depositors. Therefore, in jurisdictions where such regulatory hurdles are present, KBRA may assign a lower rating to the senior obligations of the BHC relative to its core subsidiaries.

Double Leverage
Double leverage is defined as BHC investments in subsidiary equity divided by overall BHC shareholders' equity, and is a good indicator of the reliance of a BHC on up-streamed dividends from subsidiaries to service its own debt. A double leverage ratio greater than 100% indicates the BHC has used borrowings to invest in the equity of its subsidiaries, and therefore must rely on dividends to service the debt. KBRA generally looks for appropriate liquidity management at the BHC to ensure that it can meet its financial obligations in a timely manner. KBRA will typically examine the BHC's liquid assets relative to all short-term (thirteen months or less) obligations, under the assumption that the BHC will not have access to other funds. A weak net short-term liquidity position at the BHC may also contribute to KBRA assigning a lower rating to the BHC's senior obligations. KBRA also analyzes the capacity of subsidiaries to upstream dividends to the BHC.

External Considerations
In addition, to the above factors, to the extent any subsidiary ratings benefit from the incorporation of external support, KBRA may consider whether the BHC merits the same level of external support as its subsidiaries. As with banks, KBRA will analyze the strategic importance of a BHC to its owner(s) as well as the ability and willingness of the owner(s) to financially support the BHC when needed. Generally, government support of BHCs in the event of need is unlikely in KBRA's view. In cases of systemically important banks, regulators in many jurisdictions have been establishing a resolution plans whereby debt at BHCs is "bailed in" (converted to new equity to help recapitalize the subsidiary bank).

Short-Term Ratings
In addition to a long-term credit rating, KBRA will typically assign a short-term credit rating to each bank and bank holding company using KBRA's short-term rating scale (please see KBRA's Rating Scales and Definitions). KBRA's short-term ratings indicate an ability to meet obligations that typically have maturities of thirteen months or less when issued by corporate entities and financial institutions. As compared to long-term ratings, greater emphasis is placed on an obligor's liquidity profile and access to funding in determining short-term ratings.

Monitoring
KBRA monitors outstanding ratings on banks and bank holding companies on an ongoing basis. In addition to an in-depth annual review, analysts regularly monitor market information, publicly released financials and other disclosures in order to maintain current rating opinions. KBRA will include an analysis of the rating determinants as outlined above in ongoing reviews.

Rating Market-Linked Securities

KBRA will assign ratings to market-linked securities only if these securities are principal protected meaning that full repayment of principal is expected and repayment of principal is based on the credit risk of a banking, BHC or other financial institution. Market-linked securities have returns based on a market risk such as an equity index, foreign currency price, commodity price among other market risks. In cases involving a security issued by a special purpose vehicle (SPV), but fully guaranteed or fully secured by an obligation of a bank or other financial institution, legal analysis of the SPV and the bank obligation would take place as part of the rating process.

Appendix 1 – Case Studies

Case Study 1: Bank is a large and diversified financial institution operating in an advanced economy with significant international operations and the following attributes:

- Commands a leading nationwide market presence and strong global presence across many business lines
- Regulatory environment is considered strong with a solid legal framework
- Relatively stable management team that is highly experienced and considered capable with strong, independent risk management
- Business lines are diversified by product and geography, generating steady returns that are in line with similar peers
- Customers tend to utilize multiple products/services, brand loyalty appears high
- Risk management and governance appear to be in line with or superior to many global peers; the bank's risk appetite appears appropriately balanced against expectation of returns, and management's response to market challenges has been well executed
- While global capital markets represent a substantial percentage of total earnings, the institution avoided high trading losses and remained profitable during the global financial crisis
- Recent asset quality trends have demonstrated stability and metrics are commensurate with peers with similar business lines; exposure to some higher risk segments has resulted in moderate losses historically, though loss experience is comparable to peers; management has reduced exposure to historically challenged segments
- Profitability is considered average for the industry, though stable with historically low earnings volatility
- Capital ratios are generally strong relative to peers and appropriately reflect the institution's risk appetite
- Stable funding with access to multiple sources on an on-going basis and comfortable borrowing capacity
- Liquid balance sheet with comfortable ability to cover upcoming debt obligations
- The bank is operating primarily within a developed, highly rated country; emerging markets exposure is limited
- KBRA believes that the likelihood of systemic credit support for the bank is relatively high given the institution's importance to the financial system of the home country of operation, therefore, the senior bank rating is raised one notch for external considerations

Quantitative Rating Determinants- Case Study 1					Weights	Score
Performance	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.06**
ROAA	1	0	-1	-2		0
NIM	1	0	-1	-2		0
Noninterest Income / Revenue	1	0	-1	-2		1
Efficiency Ratio	1	0	-1	-2		0
Asset Quality	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
NPA / Loans + OREO*	1	0	-1	-2		0
NCO Ratio	1	0	-1	-2		1
LLR / NPL	1	0	-1	-2		0
Provisions / NCO	1	0	-1	-2		1
Capital	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
CET1	1	0	-1	-2		1
TCE	1	0	-1	-2		0
Tier 1 Leverage	1	0	-1	-2		0
Total Risk-Based Capital Ratio	1	0	-1	-2		1
Funding & Liquidity	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.19**
Core Deposits / Total Funding	1	0	-1	-2		1
Cost of Deposits	1	0	-1	-2		1
Loan / Core Deposit*	1	0	-1	-2		0
Liquid Assets / Total Assets	1	0	-1	-2		1
Quantitative Assessment					100%	**0.51**

***Comparable ratio used**

A- and above	**1.00 to 0.50**
BBB+ to BBB-	**0.49 to -0.49**
BB+ to BB-	**-0.50 to -1.00**
B+ and below	**-1.01 to -2.00**

Qualitative Rating Determinants- Case Study 1					Weights	Score
Market Strategy	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.17**
Business Lines	1	0	-1	-2		1.0
Management Profile and Strategy	1	0	-1	-2		0.5
Revenue Profile	1	0	-1	-2		0.5
Risk Management	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.09**
Risk Oversight	1	0	-1	-2		0.5
Risk Infrastructure and Quality of MIS	1	0	-1	-2		0
Risk Appetite Framework	1	0	-1	-2		0.5
Governance Risk	1	0	-1	-2		0.5
Liquidity Management	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
Oversight and Monitoring	1	0	-1	-2		0.5
Market Access, Diversification and Stress Testing	1	0	-1	-2		0.5
Operating Environment	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.25**
Economy & Banking Infrastructure	1	0	-1	-2		1
Regulatory Framework	1	0	-1	-2		1
Aggregate Risk Score					100%	**0.64**

Rating Sequence- Case Study 1										
1		2		3		4		5		6
Quantitative Assessment	**+**	**Stress Test = Primary Credit Rating (PCR)**	**+**	**Qualitative Rating Determinants Score**	**=**	**KBRA Shadow Rating**	**+**	**External Considerations**	**=**	**KBRA Global Bank Senior Rating**
AAA		AAA				AAA				AAA
AA+		AA+				AA+				AA+
AA		AA				AA		1	=	AA
AA-		AA-		Aggregate Adjustment Score of 0.64	=	AA-	+			AA-
A+		A+				A+				A+
A		A				A				A
A-	+	A-	+			A-				A-
BBB+		BBB+				BBB+				BBB+
BBB		BBB				BBB				BBB
BBB-		BBB-				BBB-				BBB-
BB+		BB+				BB+				BB+
BB		BB				BB				BB
BB-		BB-				BB-				BB-
B+		B+				B+				B+
B		B				B				B
B-		B-				B-				B-
CCC+		CCC+				CCC+				CCC+
CCC		CCC				CCC				CCC
CCC-		CCC-				CCC-				CCC-

The quantitative analysis suggests a rating of A- at the bank level. There is no penalty following stress testing, yielding a PCR of A- for the bank. The qualitative analysis suggests two notches of uplift. Given the scope of the bank's operations and global franchise value, KBRA applies an additional notch of uplift for this large and diversified institution, raising the shadow rating to AA-. Given the institution's importance to the banking system and economy of its home country of operation, KBRA believes the likelihood of systemic credit support in the unlikely event of need is relatively high and incorporates one notch of uplift for external considerations. The final bank senior debt rating is AA.

Case Study 2: BHC is a large and diversified financial institution operating in an advanced economy with the following attributes:

- Leading and defensible market share in key target geographies and a strong nationwide presence
- Regional economies are diversified with steady growth
- Regulatory environment is considered strong with a solid legal framework
- Stable and experienced management team with strong, independent risk management
- Business lines are diversified by product and geography, generating stable returns that are in line with similar peers
- Customers tend to utilize multiple products/services; share of wallet is above average
- Risk management and governance appear to be in line with peers; processes for managing credit risk are embedded in the bank's risk culture and in decision-making procedures, and management's response to market challenges has been well executed
- Recent asset quality trends have demonstrated stability and reflect improvement since the global financial crisis; metrics are commensurate with peers with similar business lines
- Profitability has been consistent and is considered average for the industry
- Capital ratios are considered appropriate in the context of the institution's risk appetite and are in line with peer averages
- Stable funding with access to multiple sources on an on-going basis and comfortable borrowing capacity
- Liquid balance sheet with comfortable ability to cover upcoming debt obligations
- The bank is operating within a developed, highly rated country

Quantitative Rating Determinants- Case Study 2					Weights	Score
Performance	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
ROAA	1	0	-1	-2		1
NIM	1	0	-1	-2		0
Noninterest Income / Revenue	1	0	-1	-2		1
Efficiency Ratio	1	0	-1	-2		0
Asset Quality	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
NPA / Loans + OREO	1	0	-1	-2		0
NCO Ratio	1	0	-1	-2		1
LLR / NPL	1	0	-1	-2		1
Provisions / NCO	1	0	-1	-2		0
Capital	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.06**
CET1	1	0	-1	-2		0
TCE	1	0	-1	-2		1
Tier 1 Leverage	1	0	-1	-2		0
Total Risk-Based Capital Ratio	1	0	-1	-2		0
Funding & Liquidity	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.25**
Core Deposits / Total Funding	1	0	-1	-2		1
Cost of Deposits	1	0	-1	-2		1
Loan / Core Deposit	1	0	-1	-2		1
Liquid Assets / Total Assets	1	0	-1	-2		1
Quantitative Assessment					100%	**0.57**

A- and above	**1.00 to 0.50**
BBB+ to BBB-	**0.49 to -0.49**
BB+ to BB-	**-0.50 to -1.00**
B+ and below	**-1.01 to -2.00**

Qualitative Rating Determinants- Case Study 2					Weights	Score
Market Strategy	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.08**
Business Lines	1	0	-1	-2		0
Management Profile and Strategy	1	0	-1	-2		1
Revenue Profile	1	0	-1	-2		0
Risk Management	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.06**
Risk Oversight	1	0	-1	-2		0
Risk Infrastructure and Quality of MIS	1	0	-1	-2		0
Risk Appetite Framework	1	0	-1	-2		0
Governance Risk	1	0	-1	-2		1
Liquidity Management	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
Oversight and Monitoring	1	0	-1	-2		0
Market Access, Diversification and Stress Testing	1	0	-1	-2		1
Operating Environment	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.25**
Economy & Banking Infrastructure	1	0	-1	-2		1
Regulatory Framework	1	0	-1	-2		1
Aggregate Risk Score					100%	**0.52**

Rating Sequence- Case Study 2										
1		2		3		4		5		6
Quantitative Assessment	**+**	**Stress Test = Primary Credit Rating (PCR)**	**+**	**Qualitative Rating Determinants Score**	**=**	**KBRA Shadow Rating**	**+**	**External Considerations**	**=**	**KBRA Global Bank Senior Rating**
AAA		AAA				AAA				AAA
AA+		AA+				AA+				AA+
AA		AA				AA				AA
AA-		AA-		Aggregate Adjustment Score of 0.52	=	AA-	+	0	=	AA-
A+		A+				A+				A+
A		A				A				A
A-	+	A-	+			A-				A-
BBB+		BBB+				BBB+				BBB+
BBB		BBB				BBB				BBB
BBB-		BBB-				BBB-				BBB-
BB+		BB+				BB+				BB+
BB		BB				BB				BB
BB-		BB-				BB-				BB-
B+		B+				B+				B+
B		B				B				B
B-		B-				B-				B-
CCC+		CCC+				CCC+				CCC+
CCC		CCC				CCC				CCC
CCC-		CCC-				CCC-				CCC-

The quantitative assessment suggests a rating of A- at the bank level. There is no penalty following stress testing, yielding a PCR of A- for the bank. The qualitative analysis suggests two notches of uplift. Considering the bank's strong nationwide presence and defensible market position, KBRA applies an additional notch of uplift for this large and diversified institution, raising the shadow rating to AA-. There is no notching for external considerations, resulting in a bank senior debt rating of AA-. The following chart depicts the process for rating the associated BHC. We begin with the lead bank(s) shadow rating. After incorporating one notch of penalty for BHC factors, including structural subordination, zero notches of uplift for external support, and zero notches for transfer risk, we arrive at the senior BHC rating of A+.

1		2		3		4		5
Lead Bank(s) KBRA Shadow Rating	**-**	**BHC Factors**	**+**	**External Support**	**+**	**Transfer Risk**	**=**	**KBRA Senior BHC Rating**
AAA								AAA
AA+								AA+
AA								AA
AA -	-							AA -
A+		1	+	0	+	0	=	A+
A								A
A-								A-
BBB+								BBB+
BBB								BBB
BBB-								BBB-
BB+								BB+
BB								BB
BB-								BB-
B+								B+
B								B
B-								B-
CCC+								CCC+
CCC								CCC
CCC-								CCC-

Case Study 3: BHC is a traditional community bank operating in an advanced economy with the following attributes:

- Solid market share in key target geographies, though limited market share on a nationwide level and no significant international activities
- Regional economy diversified with steady growth
- Regulatory environment is considered strong with a solid legal framework
- Stable and experienced management team with strong, independent risk management
- Business lines are diversified and include a considerable noninterest income component, supporting stable revenues and earnings
- Operations are regionally concentrated, similar to many peers
- Risk management framework is considered comprehensive and appears to sufficiently capture risks to which the institution is exposed; policies and procedures are well defined and adhered to
- Strong asset quality with historically minimal levels of impaired and nonperforming assets; low loss history, institution navigated global financial crisis profitably
- Profitability currently above average for the industry and has been favorable historically
- Capital ratios are in line with peer averages; capital management is considered appropriate in the context of the bank's risk appetite
- Stable funding with access to multiple sources on an on-going basis and comfortable borrowing capacity
- Liquid balance sheet with comfortable ability to cover upcoming debt obligations
- The bank is operating within a developed, highly rated country

Quantitative Rating Determinants- Case Study 3					**Weights**	**Score**
Performance	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.19**
ROAA	1	0	-1	-2		1
NIM	1	0	-1	-2		1
Noninterest Income / Revenue	1	0	-1	-2		1
Efficiency Ratio	1	0	-1	-2		0
Asset Quality	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.13**
NPA / Loans + OREO	1	0	-1	-2		1
NCO Ratio	1	0	-1	-2		1
LLR / NPL	1	0	-1	-2		0
Provisions / NCO	1	0	-1	-2		0
Capital	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.06**
CET1	1	0	-1	-2		0
TCE	1	0	-1	-2		1
Tier 1 Leverage	1	0	-1	-2		0
Total Risk-Based Capital Ratio	1	0	-1	-2		0
Funding & Liquidity	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.25**
Core Deposits / Total Funding	1	0	-1	-2		1
Cost of Deposits	1	0	-1	-2		1
Loan / Core Deposit	1	0	-1	-2		1
Liquid Assets / Total Assets	1	0	-1	-2		1
Quantitative Assessment					100%	**0.63**
				A- and above		**1.00 to 0.50**
				BBB+ to BBB-		**0.49 to -0.49**
				BB+ to BB-		**-0.50 to -1.00**
				B+ and below		**-1.01 to -2.00**
Market Access, Diversification and Stress Testing	1	0	-1	-2		0
Operating Environment	**Strong**	**Average**	**Weak**	**Very Weak**	25%	**0.25**
Economy & Banking Infrastructure	1	0	-1	-2		1
Regulatory Framework	1	0	-1	-2		1
Aggregate Risk Score					100%	**0.44**

Rating Sequence- Case Study 3										
1		2		3		4		5		6
Quantitative Assessment	**+**	**Stress Test = Primary Credit Rating (PCR)**	**+**	**Qualitative Rating Determinants Score**	**=**	**KBRA Shadow Rating**	**+**	**External Considerations**	**=**	**KBRA Global Bank Senior Rating**
AAA		AAA				AAA				AAA
AA+		AA+				AA+				AA+
AA		AA				AA				AA
AA-		AA-				AA-				AA-
A+		A+				A+				A+
A	+	A		Aggregate Adjustment Score of 0.44	=	A	+	0	=	A
A-		A-	+			A-				A-
BBB+		BBB+				BBB+				BBB+
BBB		BBB				BBB				BBB
BBB-		BBB-				BBB-				BBB-
BB+		BB+				BB+				BB+
BB		BB				BB				BB
BB-		BB-				BB-				BB-
B+		B+				B+				B+
B		B				B				B
B-		B-				B-				B-
CCC+		CCC+				CCC+				CCC+
CCC		CCC				CCC				CCC
CCC-		CCC-				CCC-				CCC-

The quantitative assessment suggests a rating of A at the bank level. A one notch penalty is applied following stress testing, yielding a PCR of A- for the bank. After the qualitative analysis, the bank receives one notch of uplift, resulting in a shadow rating of A. There is no notching for external considerations, resulting in a bank senior debt rating of A. After incorporating one notch of penalty for BHC factors, including structural subordination, zero notches of uplift for external support, and zero notches for transfer risk, we arrive at the senior BHC rating of A-.

1		2		3		4		5
Lead Bank(s) KBRA Shadow Rating	**-**	**BHC Factors**	**+**	**External Support**	**+**	**Transfer Risk**	**=**	**KBRA Senior BHC Rating**
AAA								AAA
AA+								AA+
AA								AA
AA -								AA -
A+								A+
A	-							A
A-		1	+	0	+	0	=	A-
BBB+								BBB+
BBB								BBB
BBB-								BBB-
BB+								BB+
BB								BB
BB-								BB-
B+								B+
B								B
B-								B-
CCC+								CCC+
CCC								CCC
CCC-								CCC-

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