Dual Asset Quality Ratings

The Next Generation

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••The current credit environment reinforces the need for a more granular and objective approach to assigning asset quality ratings.

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THE ESSENCE OF banking is assuming and managing risk. The old adage "You can't manage what you can't measure" has never been truer. Unfortunately, the conventional single-factor asset quality rating (AQR) framework in place at many banks has proven woefully inadequate to measure and manage credit risk.

The current credit environment reinforces the need for developing and applying a more granular and objective approach to assigning asset quality ratings. To obtain a comprehensive view of portfolio risk and understand how it changes over time, the industry needs to embrace a dual (two-factor) risk-rating framework focusing on probability of default and loss given default. Because such a framework differentiates between probability and loss given default criteria, its use broadens the objective recognition of risk across all types of loans making up the portfolio.

Background

The recent credit debacle has demonstrated the perils of relying on historical credit performance as a predictor of future credit performance. As pointed out in a previous *RMA Journal* article,[1] one of the best predictors is the distribution of asset quality ratings over time. Critical to tracking the distribution is a granular asset quality rating framework where AQRs are uniformly, timely, and accurately assigned. Unfortunately, many banks lack a robust AQR framework.

Significant deficiencies exist in the typical single-factor framework used by many banks:

- Often, it does not incorporate probability of default and loss given default.
- There is limited granularity—such as too few rating categories—especially in the "pass" categories.
- Narrative guidance generally incorporates only subjective factors to guide the lender in assigning the AQR.
- Subjective factors are not applied in a consistent way.
- There is too much reliance on a one-size-fits-all narrative description to assign the AQR regardless of loan type (commercial and industrial, commercial real estate, etc.).
- Heavy emphasis on debt service coverage in assigning the AQR fails to give adequate consideration to financial leverage, liquidity, external factors, and quality of management.
- Lack of training in how to assign AQRs is an issue.
- The single-factor framework uses a "watch" category one step above "criticized and classified."
- There are few if any incentives for timely and accurate assignment of AQRs.
- The single-factor AQR framework also limits its value as a portfolio management tool:
- AQRs are not timely and are not accurately assigned.
- Significant concentrations exist in one AQR (for example, more than 30%).
- One AQR is assigned across a range of borrowers, resulting in a "default" AQR.

- Disagreement occurs among lenders, credit administration, loan review, and third parties (such as regulators) about the appropriate AQR.

The combination of the above factors results in an incomplete or inadequate depiction of risk in the portfolio.

Dual Risk-Rating Framework

Banks of all sizes are discovering that the solution to single-factor AQR deficiencies is a dual risk-rating framework focusing on probability of default (PD) and loss given default (LGD).

PD addresses the risk presented by the borrower. The borrower rating is influenced by quantitative factors, qualitative factors, and borrower/sponsor factors. These factors vary by type of loan (such as commercial and industrial, commercial real estate, and agricultural).

A dual risk-rating framework significantly enhances the power of a traditional AQR framework.

LGD addresses the risk in the transaction and is a function of the type of collateral, the loan to value in the collateral, and the control exercised over the collateral. A borrower may have a PD characteristic of a 3-rated credit with two facilities. One facility is secured with cash and the other with uncontrolled receivables and inventory. These two facilities may have the same PD but very different LGDs. Therefore, each facility should have a unique rating.

Another consideration is the strength of a third-party guarantor. Note that the strength of the owner guarantor/sponsor should be reflected in the borrower rating. The LGD should reflect the strength of a third-party guarantor.

Some banks choose to integrate the borrower rating and the facility rating into a composite rating. The composite rating facilitates portfolio monitoring, risk-based pricing, and assessments of the adequacy of the allowance for loan and lease losses (ALLL). Other banks will construct a relationship rating reflecting the weighted average composite rating for each facility making up a borrower relationship.

An effective and comprehensive dual risk-rating (DRR) framework has the following characteristics:

- A subjective narrative description of the borrower rating.
- Matrices containing objective factors divided into quantitative, qualitative, and borrower/sponsor factors.
- Separate matrices for each major category of loans that make up the bank's total portfolio, which typically would include:
  - Commercial and industrial (C&I).
  - Commercial real estate.
  - Production agriculture.
  - Small business.
  - Acquisition, development construction.
  - Residential mortgages and consumer.
  - Other specialized types of lending (such as to nonprofits).
- Weights assigned to each factor to account for the relative importance among all the factors in the matrix.
- A matrix that assigns a separate rating to the facility.
- Periodically revalidated factors and weights that are contained in the matrices.

To ensure that it is easy to use and applied consistently, the DRR framework should be PC-based or available on the bank's Intranet. The process can be further standardized and simplified by using menu-driven matrices that, after the lender has made the appropriate selections, calculate the borrower rating, the facility rating, and the composite score (assuming the latter is desired).

A robust DRR framework provides many enhancements to portfolio risk management:

- It ensures timely and accurate assignment of AQRs.
- It provides a more precise quantification of risk in the portfolio.
- It monitors changes in portfolio risk (including the risk by loan type).
- It ensures that the assignment of AQRs is uniform across different loan types.
- It facilitates portfolio analysis that is more predictive of credit quality (for example, the migration of AQRs).
- It proactively manages portfolio risk.
- It assesses the adequacy of the ALLL.
- It rigorously determines differential capital allocations across lines of business based on risk.
- It facilitates risk-based pricing.
- It determines the potential impact of a changing economic environment on portfolio credit quality (such as stress testing and migration of AQRs).

Table 1 demonstrates the power of monitoring the dis-

Table 1
Distribution of Asset Quality Ratings (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1-3	68.6	66.6	66.3	63.9	68.5	68.7	65.7	63.9	62.3	60.7	54.2
4	22.2	25.2	23.8	25.7	22.9	20.9	30.1	26.0	26.3	26.5	26.9
5	5.5	4.4	5.4	4.9	4.7	4.4	4.8	5.7	6.5	6.2	9.7
6	1.8	1.7	2.1	2.1	1.8	2.0	4.7	2.4	2.4	3.6	4.1
7	1.4	1.8	2.09	2.7	1.8	1.0	1.4	1.6	1.8	2.6	4.5
8	.3	.3	.3	.3	.4	.2	.2	.2	.2	.5	.6

Table 2

C&I Borrower Rating Matrix

Risk Rating Factors	X	1	X	2	X	3	X	4	X	5	X	6	X	7	X	8
Quantitative-60%	X	1	X	2	X	3	X	4	X	5	X	6	X	7	X	8
Debt Service Coverage – EBITDA/Interest + CMLTD (10%)		Greater than or equal to 3.00		2.50 to 2.99		2.00 to 2.49		1.38 to 1.99		1.13 to 1.37		1.00 to 1.12		0.50 to 0.99		Less than 0.50
Qualitative - 25%	X	1	X	2	X	3	X	4	X	5	X	6	X	7	X	8
Years in Business (15%)		25+ Years		16 to 24 Years		10 to 15 Years		7 to 9 Years		5 to 6 Years		3 to 4 Years		2 Years		Less than 2 Years
Owner Support - 15%	X	1	X	2	X	3	X	4	X	5	X	6	X	7	X	8
Personal Cash Flow (30%)		Greater than or equal to 3.00		2.5 to 2.99		2.00 to 2.49		1.38 to 1.99		1.13 to 1.37		1.00 to 1.12		0.50 to 0.99		Less than 0.50

tribution of asset quality ratings as a measure of portfolio risk and a predictor of future portfolio performance. It depicts the composite distribution of asset quality ratings for banks attending one of the graduate schools of banking from 2000 through 2010. Note that the migration of asset quality ratings from categories 1 through 3 to category 4 and then category 5 predates the increase in the criticized and classified categories by three to four years.

More regulators are expecting banks to segment the portfolio by AQR for purposes of assessing the adequacy of the ALLL. A dual risk-rating framework significantly enhances the power of a traditional AQR framework.

Developing and Transitioning to a Dual Risk-Rating Framework

In implementing a DRR framework, many banks face the challenge of transitioning from the current framework. To implement a DRR framework effectively, banks should undertake the following steps:

1) Assemble a working team consisting of members of executive management, credit administration, line managers, lenders, and loan review. Ideally, these individuals will be "centers of influence" within their departments and respected by their peers. Involving them will enhance buy-in and acceptance across the organization.

2) Reach consensus on the major components of the DRR framework, including:

- Granularity—for example, six pass categories for community banks and 15 pass categories for larger banks plus the regulatory classifications.
- Subjective narrative.
- The number of loan categories for which objective matrices would be required.
- The groupings of factors for the borrower matrix. Typical groupings include:
  - Quantitative.
  - Qualitative.
  - Borrower/sponsor.
- The specific ratios or elements within the groups.
- The appropriate weights to assign to:
  - The groupings of factors.
  - The individual factors within the groups.
- The factors and ranges to be considered in the facility matrix. Typical factors include:
  - Quality of collateral (for example, cash).
  - Loan to value.
  - Control exercised over the collateral.
- Third-party guarantor matrix.
- The appropriate AQRs within the composite matrix.

3) Develop and review the borrower and facility matrices. Table 2 provides an example of a borrower matrix with hypothetical weights assigned to a sample factor for three groupings. Table 3 offers an example of a facility matrix, and Table 4 shows an example of a composite DRR matrix.

Table 3

Facility Rating Matrix

Class	Description
A – Superior	Cash held at ABC Bank.
B – Excellent	Cash held at other banks with collateral control agreement in place.
C – Above Average	ABC in senior position in relation to other debt positions.
D – Average	Collateral meeting policy standards for quality and coverage.
E – Below Average	Blanket lien or mixed collateral.
F – Weak	Unsecured; refer to judgmental adjustments.

*The class ascribed to a secured guaranty is determined by the quality of the collateral securing the guaranty.
Note: All liens are to be properly perfected and leases are to be assigned where appropriate.

Table 4

Composite Risk-Rating Matrix

Borrower Rating	Facility Rating A Superior	B Excellent	C Above Average	D Average	E Below Average	F Weak
1	1	1	1	1	1	2
2	1	1	2	2	2	3
3	1	2	3	3	3	4
4	2	3	3	4	5	6
5	2	3	4	5	6	7
6	2	4	5	6	7	8
7 - Special Mention	2	5	5	7	8	8
8 - Substandard	2	6	7	8	8	8
9 - Doubtful	9	9	9	9	9	9

Table 5

Consumer/Mortgage Borrower Rating Matrix — Less than $150K

FICO Score	760	730 to 759	700 to 729	670 to 699	650 to 669	630 to 649	600 to 629	< 600
Debt-to-Income								
Less than or equal to 20%	1	1	1	2	3	4	5	6
21% to 25%	1	1	2	2	3	4	5	6
26% to 30%	1	1	2	3	4	5	6	7
31% to 35%	1	2	3	4	5	6	7	7
36% to 40%	1	2	3	4	5	6	7	8
41% to 45%	2	3	4	5	6	7	8	8
46% to 50%	3	4	5	6	7	8	8	8
Greater than or equal to 51%	4	5	6	7	8	8	8	8

The lender must assure that the most current and correct financial information is being used in assigning the AQR.

4) Identify experienced lenders to apply the matrices to test cases and to validate the matrices.

5) Develop test cases for each borrower rating (such as "excellent," "average," and "management attention"). Validate the test cases by reaching consensus among lenders and personnel from credit administration and loan review on the appropriate borrower and facility rating.

6) Provide training to all lenders using the validated test cases. Ideally, lenders would be instructed to assign a DRR to the test cases prior to a facilitated training session.

Once the DRR has been developed and validated and the lenders have been trained on its proper application, the bank must have a process in place to migrate the portfolio to the new DRR framework. Often, banks will use the new framework to assign DRRs to new loans and renewals. Unfortunately, this approach takes too long and reduces the benefit of using the DRR.

A better approach is to provide lenders with a listing of loans in their portfolio at the conclusion of the training. The lenders should be given a defined period of time, generally 90 days, to review every loan in their portfolio and assign the appropriate DRR. To impose discipline on the process, lenders should be told that loan review will sample each lender's portfolio to ensure that DRRs have been timely and accurately assigned.

Assigning the Appropriate DRR

Commercial Borrowers

Assigning the AQR to a commercial borrower should be a four-step process.

The lender should read a narrative description of each AQR and assign a preliminary AQR on a "best fit" basis.

Step 2: The lender should refine the preliminary AQR using the DRR matrices and then select the appropriate matrix for the type of loan. The lender would then select the range within each factor in the matrix that best describes the borrower. The lender should calculate the appropriate borrower rating based on the weights assigned to each factor contained in the matrix. (This step can be automated if the DRR matrices are presented in a spreadsheet.) Each relationship should have only one borrower rating.

Step 3: The lender selects the appropriate facility rating for each facility using the facility matrix.

Step 4: The lender should have the ability to adjust the borrower rating up or down one grade to reflect information known to the lender but not captured in the matrix or not currently reflected in the financial statements. Obviously, the lender must document any adjustment to the assigned rating.

The lender must have ultimate responsibility for the timely and accurate assignment of the asset quality rating. The lender must assure that the most current and correct financial information is being used in assigning the AQR. And the lender must also promptly adjust the rating if he or she becomes aware of events that may impact the rating, such as a change in management or entrance of a new competitor.

Many banks use a "watch" category to identify the impact of those events. Unfortunately, the watch category is generally one rating above criticized and classified. A better approach may be to append a "W" (watch) to the assigned rating, indicating that the borrower requires more intensive monitoring until the impact of the event can be captured

in the AQR. This approach is comparable to that used by rating agencies like Moody's and Standard and Poor's.

Consumer Borrowers

Factors to be considered in assigning AQRs to consumer and mortgage transactions include the borrower's FICO score and debt-to-income ratio. These factors are a critical part of the underwriting process and can be easily captured to generate a borrower rating, as shown in Table 5. FICO scores can be refreshed periodically and used to adjust the borrower rating as appropriate. A separate facility matrix based on loan-to-value in the collateral can be developed for consumer and mortgage transactions.

Maximizing the Benefit of a DRR

To maximize the benefit of the DRR, ratings should be assigned to each commercial loan in a relationship as well as to small business, consumer, and mortgage transactions. To minimize the cost of assigning ratings to consumer and mortgage transactions, the matrices should mirror the criteria used in approving the loan and should be assigned at loan approval. Ideally, the assignment of the rating would be automated as part of the approval process.

Many banks also find it beneficial to construct a composite relationship DRR using a weighted average of the AQRs for loans that make up the relationship. The composite has relevance because each loan in the relationship has a unique AQR using a standard methodology and the same granular framework to assign the individual AQRs.

The value of the DRR as a portfolio management tool is only as good as the timely and accurate assignment of AQRs. The primary responsibility for assigning and changing AQRs must rest with the lender. A structured framework provides guidance to the lender, and training ensures that lenders can properly use the framework. Incentives and the lender's performance appraisal can ensure timely and accurate assignment of AQRs. Indeed, a portion of a lender's performance appraisal and incentive compensation should be at risk based on timely and accurate assignment of AQRs, focusing on misgrades rather than downgrades. The concept may be extended to the performance appraisals and incentives for senior lenders and senior credit officers.

The DRR is a static measure of portfolio risk unless it becomes the basis for comparison with the desired distribution of DRRs (model portfolio) and is tracked over time. Therefore, it is imperative to access and analyze that data routinely. It is also important to track the distribution of AQRs over time for subsets of the portfolio, such as different loan types, markets, and lender portfolios. Tracking the distribution of AQRs by subset will highlight portfolios that are becoming more risky. And this will potentially prompt portfolio managers to tighten underwriting guidelines, reduce exposures, provide additional training to lenders, terminate a rogue lender, or exit a type of lending.

The DRR also becomes the basis for risk-based pricing. Ideally, the bank develops a PD and an LGD based on the bank's historical default and loss experience by DRR. This becomes a valuable input into a pricing model.

The historical data can be used to develop appropriate provisions by loan type and DRR when assessing the adequacy of the ALLL. Regulators are more frequently requiring banks with loan portfolios greater than $500 million to segment the portfolio by AQR when assessing the adequacy of the FAS 5 (ASC 450) provision using actual historical default and loss experience for each AQR in the assessment.

A more granular view of risk in the portfolio provides the basis for more efficient allocation of capital that will enhance bank profitability. And efficient capital allocation is a key aspect of Based III and the Dodd-Frank Act.

Conclusion

In many instances, current asset quality rating frameworks lack granularity and objective criteria by loan type to appropriately assign asset quality ratings. The frameworks also fail to distinguish between probability of default and loss given default. As borrower relationships become larger and more complex, it is critical that banks be able to objectively assess the risk in individual transactions. Banks also must be able to apply the methodology across all types of lending making up a borrower relationship and the portfolio.

A structured framework provides guidance to the lender, and training ensures that lenders can properly use the framework.

A dual risk-rating framework supported with objective matrices provides a vehicle for ensuring consistency across lender portfolios and types of lending. The DRR framework becomes a powerful tool for measuring and monitoring portfolio risk. The framework also facilitates loan pricing, assessments of ALLL adequacy, and more efficient capital allocation. ❖

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Note

1. John Barrickman and Christine Corso, "Predicting Credit Portfolio Quality: Myth or Reality?" *The RMA Journal*, June 2010, pp. 40–46.