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Quantitative Metrics For Rating Banks Globally: Methodology And Assumptions

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Table Of Contents

Criteria | Financial Institutions | Banks:

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*(**Editor's Note:** We originally published this criteria article on July 17, 2013. We're republishing this article following our periodic review completed on Feb. 2, 2017.)*

1. Standard & Poor's Ratings Services is providing further details on its methodology for deriving the common quantitative metrics used in analyzing banks globally. For a broader understanding of our bank criteria that refer to the metrics described here, see "Banks: Rating Methodology And Assumptions," published Nov. 9, 2011, and "Bank Capital Methodology And Assumptions," published Dec. 6, 2010. This criteria article is consistent with our general criteria, "Principles Of Credit Ratings," published Feb. 16, 2011.

2. This article supersedes "Quantitative Metrics For Rating Banks Globally: Methodology And Assumptions," published Feb. 26, 2013, to expand table 1 to include descriptions of quantitative metrics for banks' funding and liquidity and add table 2 regarding assumptions used to compute "stable funding needs" and "broad liquid assets."

SCOPE OF THE CRITERIA

3. The criteria apply to ratings on retail, commercial, and corporate and investment banks. The definition of a bank is broad and includes the larger broker-dealers, mortgage lenders, trust banks, credit unions, building societies, and custody banks. The criteria do not apply to ratings on finance companies, asset managers, exchanges, clearinghouses, and regional securities brokers.

SUMMARY OF THE CRITERIA

4. Standard & Poor's makes analytical adjustments to the amounts that rated banks report in their financial statements and regulatory filings to arrive at quantitative metrics used in our criteria. These quantitative metrics (see tables 1 and 2) factor into the following areas of our analysis: business position, capital and earnings, risk position, and funding and liquidity.

5. This paragraph has been deleted.

6. This paragraph has been moved to the appendix.

METHODOLOGY AND ASSUMPTIONS

7. Standard & Poor's has a long-standing practice of making analytical adjustments to the amounts that rated companies report in their financial statements and regulatory filings. The objective in making adjustments is to generate measures that are consistent with our criteria, to more meaningfully reflect the economic reality of financial risks, and to level the

reporting differences between companies and jurisdictions (i.e., to arrive at measures that better facilitate peer and period-over-period comparisons). We believe these adjustments improve the analytical relevance and consistency of the quantitative metrics in our credit analysis and enhance forecast comparability.

8. These quantitative metrics fall under the business position, capital and earnings, risk position, and funding and liquidity sections of the bank criteria. The table provides further details on the methodology to derive certain of these metrics, subject to the specific items or definitions a bank discloses in its financial statements and regulatory filings. The analysis reflects our understanding of banks' activities based on their financial statements, including footnotes, other financial and reporting disclosures, regulatory filings, and information that banks may provide to Standard & Poor's. When no specific firm-reported figures are available, the analysis uses estimates.

9. As a general principle, we base our analysis of banks on consolidated financial statements prepared under accounting regimes used for general reporting purposes, such as U.S. generally accepted accounting principles (GAAP) and International Financial Reporting Standards (IFRS).

10. In some instances, our analysis uses financial statements and information prepared for regulatory purposes because this information provided is superior (e.g., more granular) than that provided under U.S. GAAP or IFRS. In addition, the information provided on a regulatory basis (such as Y9-C and related schedules in the U.S.) can often be more comparable across banks because it has a standardized reporting format.

Table 1

Bank Metrics Criteria

Metric name	**Metric description**
Earnings	
1. Core earnings	Net income (before noncontrolling interest) (-) Nonrecurring/special income (+) Nonrecurring/special expense (+) Goodwill and M&A-related intangibles impairment or amortization (+) Allocation to funds for general banking risk (-) Distributions due on all equity hybrid instruments accounted for as equity (+/-) Other adjustments (+/-) Tax impact of all adjustments above = Core earnings
2. Total revenue(s)	All revenues net of interest expense and nonrecurring income
3. Fees and commissions	Fees and commission income earned, net of commissions paid where those commissions are closely related to commissions earned
4. Other market-sensitive income	Income from appreciation of financial assets sold, such as gains or losses on private equity holdings, realized gains or losses on nontrading securities, gains or losses on loan sales, or securitizations that are from ongoing business lines. Other gains on sale of fixed assets or business lines are categorized as nonrecurring income.
5. Cost-income ratio	Salaries and general administrative expenses before any nonrecurring expenses, divided by total revenue(s)
6. Net operating income before loan loss provisions/assets	Revenues net of all expenses except provisions, before any nonrecurring gains/losses, divided by average assets
7. Core earnings/assets	Core earnings divided by average assets
8. Other revenues/total revenues	Revenues other than net interest income, fees and commissions, trading gains and other market-sensitive income, divided by total revenue(s)
Funding	
9. Loan-to-deposit ratio (%)	Customer loans (net), divided by customer deposits
Customer loans (net)	Customer loans (gross) net of loan loss reserves and net of reverse repurchase agreements and net of securities borrowing
Customer deposits	Customer deposits net of repurchase agreements and net of securities lending
10. Long-term funding ratio (%)	Available stable funding divided by the sum of the funding base and total equity net of intangibles

Table 1

Bank Metrics Criteria (cont.)	
Metric name	**Metric description**
Available stable funding	The sum of total equity net of intangibles, customer deposits, and long-term interbank and debt market funding including hybrid instruments with minimal equity content maturing after one year
Funding base	The sum of customer deposits, interbank and debt market funding including hybrid instruments with minimal equity content, repurchase agreements and securities lending, nonderivative trading liabilities and acceptances
Total equity	The sum of common shareholders' equity, minority interest-equity, and hybrid instruments with “high” or “intermediate” equity content
11. Short-term wholesale funding/funding base (%)	Short-term wholesale funding divided by funding base
Short-term wholesale funding	The sum of short-term interbank and debt market funding maturing within one year, repurchase agreements and securities lending, acceptances, and nonderivative trading liabilities
12. Stable funding ratio (%)	Available stable funding (as defined in No. 10) divided by stable funding needs
Stable funding needs	The sum of customer loans(net), short-term reverse repurchase agreements and securities borrowing with nonbanks maturing within one year net of haircut*, long-term interbank loans and reverse repurchase agreements and securities borrowing maturing after one year, securities holdings net of haircut*, restricted cash (see table 2), all other assets net of haircut*, and off-balance sheet credit equivalents net of haircut*
Liquidity	
13. Broad liquid assets to short-term wholesale funding (%)	Broad liquid assets divided by short-term wholesale funding (as defined in metric No. 11 above.)
Broad liquid assets	The sum of: cash, short-term interbank loans and reverse repurchase agreements and securities borrowing with banks maturing within one year, short-term reverse repurchase agreements and securities borrowing with nonbanks net of haircut* maturing within one year, and securities holdings net of haircut* less restricted cash (see table 2)
14. Net broad liquid assets/short-term customer deposits (%)	Broad liquid assets less short-term wholesale funding, divided by short-term customer deposits net of repurchase agreements and net of securities lending maturing within one year
15. Short-term wholesale funding/total wholesale funding (%)	Short-term wholesale funding (as defined in ratio No. 11 above) divided by the difference between the funding base and customer deposits
16. Liquid assets to wholesale funding (%)	Broad liquid assets divided by total wholesale funding

*For haircuts, see table 2. M&A--Mergers and acquisitions.

Table 2

Haircut Assumptions To Compute “Stable Funding Needs” and "Broad Liquid Assets"	
	Proportion that requires stable funding (%)
STABLE FUNDING NEEDS	
Loans to banks (net) maturing within one year	0%
Loans to banks (net) maturing above one year	100%
Customer loans (net) (all maturities)	100%
Reverse repurchase agreements (and securities borrowing) with banks maturing within one year	0%
Reverse repurchase agreements (and securities borrowing) with banks maturing above one year	100%
Reverse repurchase agreements (and securities borrowing) with nonbanks maturing above one year	100%
Reverse repurchase agreements (and securities borrowing) with nonbanks maturing within one year	50%

Table 2

Haircut Assumptions To Compute “Stable Funding Needs” and "Broad Liquid Assets" (cont.)

	Proportion that requires stable funding (%)
Illiquid portion of securities owned (unencumbered and encumbered)	
Home sovereign and government agencies	0%
Subsovereign	0%
Certificates of deposit or commercial paper	0%
Foreign government	0%
Government-sponsored MBS, policy banks	0%
Covered bonds excluding own covered bonds	0%
Bank debt	50%
Corporate debt	50%
MBS other and mutual funds	50%
Other debt securities	50%
Equities and gold	50%
Loans	100%
ABS (other than MBS such as CDO, CLO, CMBS)	100%
Commodities (exclude gold if disclosed)	100%
Other (for example, equity stakes; not listed equities)	100%
Cash	0%
Restricted cash = % of customer deposits depending on geographic region*	1%-5%
Derivative assets	0%
Insurance assets	0%
Intangibles	0%
All other assets	100%
Off-balance-sheet commitments, guarantees, letters of credit	5%
AVAILABLE STABLE FUNDING	
Customer deposits (all maturities)	100%
Deposits due to banks maturing within one year	0%
Deposits due to banks maturing above one year	100%
Repurchase agreements (and securities lending) (all maturities)	0%
Debt issued maturing above one year	100%
Nonderivative trading liabilities (for example, short positions)	0%
Total equity net of intangibles	100%
BROAD LIQUID ASSETS	
Cash	100%
Loans to banks (net) maturing within one year	100%
Reverse repurchase agreements (and securities borrowing) with banks maturing within one year	100%
Reverse repurchase agreements (and securities borrowing) with nonbanks maturing within one year	50%
Securities owned net of illiquid portion of securities owned (unencumbered and encumbered):	100%
Net of restricted cash = % of customer deposits depending on geographic region*	1%-5%

Table 2

Haircut Assumptions To Compute “Stable Funding Needs” and "Broad Liquid Assets" (cont.)

	Proportion that requires stable funding (%)
SHORT-TERM WHOLESALE FUNDING	
Deposits due to banks maturing within one year	100%
Deposits due to banks maturing above one year	0%
Debt issued maturing within one year	100%
Repurchase agreements (and securities lending) (all maturities)	100%
Acceptances	100%
Nonderivative trading liabilities (for example, short positions)	100%
TOTAL WHOLESALE FUNDING	
Deposits due to banks (all maturities)	100%
Debt issued (all maturities)	100%
Repurchase agreements (and securities lending) (all maturities)	100%
Acceptances	100%
Nonderivative trading liabilities (for example, short positions)	100%
Hybrid capital instruments	100%
FUNDING BASE	
Total wholesale funding net of hybrid capital instruments	100%
Customer deposits (all maturities)	100%

*The proportion of restricted cash that requires stable funding is: 1% if no regulatory minimum exists; and if one exists, the regulatory one, floored at 1% and capped at 5%.

RELATED CRITERIA AND RESEARCH

- Banks: Rating Methodology And Assumptions, Nov. 9, 2011
- Bank Capital Methodology And Assumptions, Dec. 6, 2010

APPENDIX

Revision History

11. We republished this article following our periodic review completed on Feb. 2, 2017. We updated contact information and the editor's note, and we made additions to the revision history. We also deleted text that is no longer relevant.

12. We previously republished this article following our review completed on Feb. 9, 2016. We updated contact information and moved text that previously appeared in paragraphs 5 and 6 to the revision history in the appendix because this text relates to the initial publication of these criteria and is no longer relevant.

13. Text from paragraph 5 that related to the initial publication of the criteria on July 17, 2013, and is no longer relevant: "We do not anticipate any ratings changes as a consequence of these criteria."

14. Text from paragraph 6 that related to the initial publication of the criteria on July 17, 2013: "These criteria are effective immediately for all ratings on banks globally."

15. Following our review on June 24, 2015, we updated contact information.

Effective Date

16. These criteria are effective on July 17, 2013.

These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as Standard & Poor's Ratings Services' assessment of the credit and, if applicable, structural risks for a given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment.