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Risk-Adjusted Capital Framework Methodology

September 13, 2018

(Editor's Note: On Sept. 7, 2021, we republished this guidance to reflect changes in table 1. See the "Revisions And Updates" section for details.)

OVERVIEW AND SCOPE

This article is a guidance document related to our methodology for calculating globally consistent risk-adjusted capital (RAC) ratios for banks and other financial institutions ("Risk-Adjusted Capital Framework Methodology", published July 20, 2017). It provides additional information and guidance related to the analytical application of our risk-adjusted capital framework (RACF) methodology. It is intended to be read in conjunction with those criteria. According to the framework, we compare our measure of capital--total adjusted capital (TAC)--to the risks a firm takes, as measured by S&P Global Ratings' risk-weighted assets (RWAs). In applying certain aspects of the criteria, we use a number of parameters that can change over time depending on regulatory developments and other factors; these are outlined in the criteria. This article gives the current values of those parameters.

KEY PUBLICATION INFORMATION

- Published as a guidance document on Sept. 13, 2018, to include an updated section on Banking Industry Country Risk Assessments (BICRAs) and economic risk proxies or estimates, as well as the updated parameters used in our risk-adjusted capital ratio calculations.
- Originally published on July 20, 2017 ("The Application Of Key Aspects Of The Risk-Adjusted Capital Framework Criteria").
- We may revise this guidance from time to time when regulatory developments and other factors (as outlined in the criteria) warrant re-evaluating some parameters we use in our risk-adjusted capital ratios calculations.

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GUIDANCE

Equity Market Groups

In paragraph 125 of the RACF criteria, we detail the treatment of exposures to listed and unlisted securities, and outline the factors typically used to classify equity investments into four groups, by country. The four equity market groups are listed in table 1. We apply a different capital charge to each of the four groups, reflecting our view of the degree of riskiness (least risky=group 1, most risky=group 4).

Table 1

Equity Market Groups Classification By Country

Equity market group	Countries
Group 1	Switzerland, U.K., U.S.
Group 2	Australia, Austria, Belgium, Canada, Chile, Colombia, Denmark, France, Germany, Hong Kong, Israel, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, Singapore, South Korea, Spain, Sweden
Group 3	Bahrain, Brazil, China, Czech Republic, Finland, Hungary, India, Ireland, Kuwait, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Poland, Qatar, Saudi Arabia, Slovenia, Slovakia, South Africa, Taiwan, Turkey, United Arab Emirates
Group 4	All other countries

Paragraph 151 of the RACF criteria details our approach to deriving the overall equity market group when we don't have the equity exposures broken down by country. We classify them by region or subregion and then calculate a GDP-weighted average of the equity market group for the countries included. Table 2 shows the classification of some of the main regions or groups of countries in the four equity market groups.

Table 2

Equity Market Groups Classification By Region Or Group Of Countries

Regions or group of countries	Equity bucket
Northern America	1
Europe or EU	2
Asia-Pacific; Europe, the Middle East, and Africa; Gulf Cooperation Council; Latin America; and World	3
Africa; Central America; and Caribbean	4

BICRA And Economic Risk Proxies Or Estimates

In paragraph 12 of the RACF criteria, we describe the steps we take where a full Banking Industry Country Risk Assessment (BICRA) is not available, to determine a country's BICRA proxy or estimate. Although we assign BICRAs to all countries where rated banks are domiciled, many rated banks have exposures to countries and banking systems that have no rated banks.

If the aggregate credit exposures to countries and banking systems on which no BICRA exists are


significant, or if we otherwise determine these exposures to be relevant to our analysis, we perform a standard, but simplified, BICRA analysis to produce a BICRA estimate for the purpose of computing RAC ratios. If rated banks' aggregate exposure is not significant, we use a BICRA proxy for the same purpose, based on our foreign currency sovereign rating on the country. Countries that have foreign currency sovereign ratings of 'B' and lower are assigned an economic risk score proxy of '10' and a BICRA group proxy of '10'. For a country that we rate at 'B+' or above, we derive the BICRA proxy as follows:

- First, we estimate the anchor for the country's banking system by deducting one notch from the foreign currency sovereign rating. The one-notch deduction is based on the average number of notches observed between anchors and the corresponding foreign currency sovereign ratings over multiple years for countries in which we have assigned BICRAs. The "anchor" concept is discussed in more detail in paragraphs 42 to 47 of "Banks: Rating Methodology And Assumptions" (the bank criteria).
- Table 2 in the bank criteria enables us to derive an anchor from the industry and economic risk scores. Here, we reverse that process, using the estimated anchor and the diagonal of table 2 to infer proxies for the economic and industry risk scores. We can then use those to derive the BICRA proxy. Thus, an estimated anchor of 'bb+' is associated with economic and industry risk proxies of '6', and thus a BICRA proxy of '6' (see chart 1 and table 3). The 'b' anchor does not appear on the diagonal, but we associate it with an economic risk proxy of '10', industry risk proxy of '9', and BICRA proxy of '10'.
- We set a floor for industry and economic risk proxies of '5', which in turn means that the BICRA proxy cannot be better than '5'.

Chart 1

Determining The Economic Risk And Industry Risk Proxy From The Estimated Anchor

		Economic risk									
		1	2	3	4	5	6	7	8	9	10
Industry risk	1	a	a	a-	bbb+	bbb+	bbb				
	2	a	a-	a-	bbb+	bbb	bbb	bbb-			
	3	a-	a-	bbb+	bbb+	bbb	bbb-	bbb-	bb+		
	4	bbb+	bbb+	bbb+	bbb	bbb	bbb-	bb+	bb	bb	
	5	bbb+	bbb	bbb	bbb	bbb-	bbb-	bb+	bb	bb-	b+
	6	bbb	bbb	bbb-	bbb-	bbb-	bb+	bb	bb	bb-	b+
	7		bbb-	bbb-	bb+	bb+	bb	bb	bb-	b+	b+
	8			bb+	bb	bb	bb	bb-	bb-	b+	b
	9				bb	bb-	bb-	b+	b+	b+	b
	10					b+	b+	b+	b	b	b-



 To the left of this line, we assign economic and industry risk proxies of '5'

Note: This chart is based on Table 2 in "Banks: Rating Methodology And Assumptions," published on Nov. 9, 2011. We associate an estimated anchor of 'b' with an economic risk proxy of '10' and an industry risk proxy of '9'. Copyright © 2018 by Standard & Poor's Financial Services LLC. All rights reserved.

Table 3

Determining The Proxy BICRA From The Economic And Industry Risk Proxies

Economic risk proxy	+	Industry risk proxy	→	BICRA group proxy
5		5		5
6		6		6
7		7		7
8		8		8
9		9		9
10		9		10
10		10		10

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In our monthly article "Banking Industry Country Risk Assessment Update", we publish a selected list of BICRA and economic risk estimates (for which we perform a standard, but simplified, BICRA analysis in order to compute RAC ratios). We also include a list of the updated BICRA and economic risk scores assigned to regions or group of countries (e.g., Latin America, Africa, or Asia-Pacific), calculated according to paragraph 151 of the RACF criteria.

RACF Risk Weights Associated With Certain Types Of Exposures In The U.S.

Paragraph 83 of the RACF criteria explains the weighting applied to the separate counterparty risks associated with securities lending, sale and repurchase agreements (repos), reverse repos, and Lombard (margin) loans. The risk weights reflect the collateralization we typically observe for these kinds of exposure in the U.S. (see table 4). We also apply risk weights and normalized losses for subprime mortgages in the U.S., as described in paragraphs 78 and 193 of the RACF criteria. Normalized losses for subprime mortgages in the U.S. are currently 130 basis points.

Table 4

RACF Risk Weights For Counterparty Risks Associated With Certain Types Of Exposures In The U.S.

Type of counterparty risk exposure	Risk weight (%)
U.S. securities lent	11
U.S. repos	3
U.S. reverse repos	8
U.S. margin loans	15
U.S. subprimes	189

RACF Risk Weights For Pass-Through Securities

Paragraph 101 of the RACF criteria currently applies only to the Federal National Mortgage Assn. (known as Fannie Mae) and Federal Home Loan Mortgage Corp. (known as Freddie Mac). The

current RACF risk weight applicable to pass-through securities issued by these entities in the U.S. is 20%.

RACF Credit Valuation Adjustment Charge In Jurisdictions With No Exempted Counterparties

The RACF criteria targets a one-year 99.9% confidence level (see paragraph 86 of the RACF criteria). Because the most commonly used regulatory credit valuation adjustment (CVA) approach (the "standardized CVA" approach) uses a one-year, 99% confidence level, we apply a multiplier of 1.3 to the CVA charge (see paragraphs 85-86). Thus, in jurisdictions where no counterparties have been exempted from computation of the regulatory CVA charge, the RACF CVA charge is 1.3x the regulatory CVA charge.

RACF CVA Charge In The EU

In the EU, sovereign and nonfinancial corporate entities are currently exempted from the regulatory CVA charge, but financial institutions are not.

The current value of the add-on described in paragraph 88 of the RACF criteria, which represents the incremental risks posed by the generally lower creditworthiness of exempted counterparties in the EU, compared with financial institutions--is 64%. For example, for an entity with financial institutions exposures representing 45% of total over-the-counter (OTC) derivatives exposures, the second multiplier described in paragraph 87 is: $(1 + (1 + 64\%) \times (1 - 45\%) / 45\%) = 3.0$. Overall, the RACF CVA charge for this entity would be $(1.3 \times 3.0) = 3.9$ x the regulatory charge.

When we do not get the breakdown of OTC derivatives exposures by types of counterparties, we currently assume that nonexempted counterparties represent 45% of total derivatives counterparties. In these cases, the default value of the multiplier applied to the regulatory CVA charge (as defined in paragraph 89) is 3.9.

RACF CVA Charge When The Regulatory CVA Charge Is Not Available

In paragraphs 92-94 of the RACF criteria, we define our approach for entities that meet the materiality thresholds, but for which the regulatory CVA charge is not available. We compute the RAC CVA charge as a percentage of derivatives receivables, with percentages calibrated on a set of representative banks. We use two percentages, one for entities in jurisdictions for which derivatives are presented on a gross basis (as in International Financial Reporting Standards [IFRS]) and one for entities in jurisdictions for which derivatives are presented on a net basis (as in U.S. generally accepted accounting principles [GAAP]). The current value of the two multipliers is:

- 11% of derivatives receivables for entities reporting under U.S. GAAP or equivalent, and
- 2% of derivatives receivables for entities reporting under IFRS or equivalent.

Computing The RAC Central Counterparties Charge, For Entities Reporting Under Basel III Standards Only, When Certain Information Is Not Available

For entities reporting under Basel III standards, we apply a RAC central counterparty (CCP) charge,

reflecting capital allocation to trade exposures, initial margins, and guarantee fund contributions, as part of the RACF criteria. When information on one or more of these three types of exposure is not available, paragraphs 66-67 in the RACF criteria detail how we use either regulatory risk-weighted assets or the available accounting information to determine the level of these exposures.

The criteria describe how we determine trade exposures or initial margins at CCPs as a percentage of derivative receivables--the percentage differs, according to whether the derivative receivables are reported gross or net--and CCP guarantee fund contributions as a flat percentage of trade and initial margin exposures:

- When guarantee fund contributions are not disclosed separately, we assume that they represent 6.5% of trade and initial margin exposures (consistent with the current average guarantee fund contributions of a representative sample of rated banks).
- When trade exposures and initial margin are not disclosed, we assume that they represent 25% of derivatives receivables for entities under IFRS (or local GAAP equivalent) and 150% of derivatives receivables for entities under U.S. GAAP. These are conservative estimates based on representative samples of rated banks.

Computing The Counterparty Risk Charge On Derivatives Exposures (Cleared Or OTC) For Entities That Do Not Report Exposures According To Basel Standards

For entities that do not report counterparty risk exposures according to Basel standards, the criteria include, in paragraph 82, the determination of exposures to derivatives (OTC and listed) as a percentage of derivative receivables (different depending whether reported gross or net), based on a sample of representative banks. These multipliers are defined as follows:

- When a firm reports derivatives under U.S. GAAP rules (or equivalent), counterparty risk exposure on derivatives is assumed to be equal to 475% of derivatives receivables. Exposures are assumed to be OTC and split 50/50 between financial institutions and corporate entities, unless a majority of derivative activity is in exchange-settled products, in which case we assume that 100% of the derivative exposure is with clearinghouses.
- When a firm reports derivatives under IFRS (or local GAAP equivalent for the accounting treatment of derivatives), counterparty risk on derivatives is assumed to be equal to 55% of derivatives receivables. Exposures are assumed to be OTC and split 50/50 between financial institutions and corporate entities, unless a majority is in exchange-settled products, in which case we assume that 100% of derivatives are with clearinghouses.

Credit Conversion Factors

As explained in paragraph 148 of the RACF criteria, whenever banks do not report Basel exposures, we apply the Basel III standardized approach credit conversion factors (CCFs) to off-balance-sheet commitments (except for credit card commitments). For example, commitments that will mature in less than a year (except retail commitments that are unconditionally cancellable) are assigned a 20% CCF. Commitments that have a maturity of more than one year are assigned a 50% CCF.

Revisions And Updates

This article was originally published on Sept. 13, 2018.

Changes introduced after original publication:

- On Sept. 7, 2021, we republished this guidance document to make updates to table 1, due notably to observed volatility in stock indices among countries on a relative basis and to revisions in the BICRA capital markets assessments in some countries over the last three years.

Related Criteria And Research

Related Criteria

- Risk-Adjusted Capital Framework Methodology, July 20, 2017

Related Research

- S&P Global Ratings Definitions, Jan. 5, 2021
- Calibrating the Risk-Adjusted Capital Framework, July 20, 2017

This report does not constitute a rating action.

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