Basel III: Proposed Revisions to Standardized Approach to Credit Risk

Seminar for Senior Bank Supervisors from Emerging Economies

October 30, 2017
The views expressed in this presentation are our own, and do not necessarily represent the views of the Federal Reserve Board of Governors or the Federal Reserve System.
The standardized approach (SA) for credit risk is only one component of Basel III reform package.

Additional aspects of Basel III reforms include:

- Replacing advanced measurement approach (AMA) with a SA for operational risk.
- Constraining internal ratings-based (IRB) parameters and migrating certain asset classes to the SA.
  - E.g., equity exposures would be subject to SA RWs.
- Simplifying the credit valuation adjustment (CVA) framework for non-modeled approaches.
Timing within Context of Basel III Reform Package

- Initial SA for credit risk proposal published in December 2014
- Current SA proposal published in December 2015; comment period ended in March 2016
- Finalized SA expected to be published upon finalization of others aspects of Basel III reforms, including the SA output floor
  - Output floor would assess total RWA as the higher of: (a) the RWA amount, or percentage of that amount, calculated for exposures using only SAs, and (b) the RWA amount for exposures using internal models-based approaches
  - Output floor would: (a) promote sufficient and comparable capital standards across the banking system; (b) reduce unwarranted RWA variability; and (c) address incentive-compatibility issues
Key Objectives for revising the SA

- Output floor raises importance of a more accurate SA
- Reduce reliance on credit ratings (as mandated by FSB)
- Simplify by reducing optionality and improving comparability
- Improve risk sensitivity by introducing better risk drivers
- Update calibrations to better reflect exposures’ credit risk
- Increase comparability between SA and IRB treatment
- Generally maintain overall risk weight (RW) calibration
SA Exposure Categories under Review

- Sovereign exposures
- Banks exposures
- Corporate exposures
  - Loans and senior debt
  - Specialized lending
  - Equity exposures and subordinated debt
- Retail exposures (non-mortgages)
- Residential real estate
- Commercial real estate
- Off-balance-sheet exposures
- Credit risk mitigation
Sovereign Exposures

- **Current SA:**
  - RW based on the sovereign’s credit rating
  - National discretion to set lower risk weights for local exposures

- **Task Force on Sovereign Exposures (TFSE):**
  - Initiated in 2014 to review the capital treatment of sovereigns
  - Separate timetable from other Basel 3 reforms

- **TFSE deliberations include**:
  - Should any sovereign exposures receive a 0% risk weight?
  - What risk drivers should be considered for differentiating sovereign exposures?
  - Should there be any constraints on concentrations in exposures to certain sovereigns?
  - Should public sector entities (PSEs) also benefit from lower sovereign RW and under what conditions?
**Claims on Banks**

- **Current SA:** RW based on bank’s credit rating or linked to the credit rating of its sovereign

- **2014 consultative paper (CP):** replace ratings with bank’s CET1/RWA ratio and net non-performing assets (net NPA) ratio
  - US bank failure data dating back to 1986 suggested CET1 and NPA better predicted bank failure than credit ratings
  - Challenge was determining international thresholds/definitions

<table>
<thead>
<tr>
<th>Net NPA ratio</th>
<th>CET1 ratio ≥ 12%</th>
<th>12% &gt; CET1 ratio ≥ 9.5%</th>
<th>9.5% &gt; CET1 ratio ≥ 7%</th>
<th>7% &gt; CET1 ratio ≥ 5.5%</th>
<th>5.5% &gt; CET1 ratio ≥ 4.5%</th>
<th>CET1 ratio &lt; 4.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 1%</td>
<td>30%</td>
<td>40%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>1% &lt; Net NPA ratio ≤ 3%</td>
<td>45%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td>120%</td>
<td>300%</td>
</tr>
<tr>
<td>≥ 3%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td>120%</td>
<td>140%</td>
<td></td>
</tr>
</tbody>
</table>
2015 CP: introduces two options based on whether claim on bank is rated; RW based on credit risk of bank, but potentially floored at the RW of the bank’s sovereign

- **External credit risk assessment approach:** similar to current approach, with more explicit due-diligence requirements
- **Standardized credit risk assessment approach:** for unrated bank claims (and those jurisdictions who don’t use ratings), divided between three buckets based primarily on whether regulatory minimums & buffers are met
Claims on Banks: Risk Weights

External credit risk assessment approach (ECRA)

<table>
<thead>
<tr>
<th>External Credit Risk Assessment Approach</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>External rating of counterparty</td>
<td>AAA to AA–</td>
</tr>
<tr>
<td>&quot;Base&quot; risk weight</td>
<td>20%</td>
</tr>
<tr>
<td>Risk weight for short-term exposures</td>
<td>20%</td>
</tr>
</tbody>
</table>

Standardized credit risk assessment approach (SCRA)

<table>
<thead>
<tr>
<th>Standardised Credit Risk Assessment Approach</th>
<th>Table 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit risk assessment of counterparty</td>
<td>Grade A</td>
</tr>
<tr>
<td>&quot;Base&quot; risk weight</td>
<td>50%</td>
</tr>
<tr>
<td>Risk weight for short-term exposures</td>
<td>20%</td>
</tr>
</tbody>
</table>
Current SA: RW based on credit ratings

2014 CP: replace ratings with a measure of corporate obligor’s leverage and total revenue (i.e., a proxy for size);

- Analysis suggested that a corporate entity’s size and revenue were meaningful determinants for credit risk
- However, leverage without considering industry became less meaningful; size introduced political concerns (i.e., larger firms benefit relative to smaller firms)

<table>
<thead>
<tr>
<th>Leverage</th>
<th>Revenue ≤ €5m</th>
<th>€5m &lt; Revenue ≤ €50m</th>
<th>€50m &lt; Revenue ≤ €1bn</th>
<th>Revenue &gt; €1bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x–3x</td>
<td>100%</td>
<td>90%</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>3x–5x</td>
<td>110%</td>
<td>100%</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>&gt; 5x</td>
<td>130%</td>
<td>120%</td>
<td>110%</td>
<td>90%</td>
</tr>
<tr>
<td>Negative equity(*)</td>
<td>300%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) Note: Negative equity means that a corporate’s liabilities exceed its assets.
2015 CP: Jurisdiction rather than firm-based approach; compromise achieved for countries that don’t use ratings

- Ratings-based approach (RBA): similar to current approach
- Non-RBA: unlike approach for claims on banks, only jurisdictions not applying credit ratings can implement
  - Introduces “investment-grade” concept which serves as a proxy for ratings
- Corporate SMEs: introduced in SA with beneficial RW
Corporate Exposures: Risk Weights

Ratings-based approach

<table>
<thead>
<tr>
<th>External rating of counterparty</th>
<th>AAA to AA−</th>
<th>A+ to A−</th>
<th>BBB+ to BBB−</th>
<th>BB+ to BB−</th>
<th>Below BB−</th>
<th>Unrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Base” risk weight</td>
<td>20%</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
<td>150%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Jurisdictions that do not apply ratings
- 75% RW for “investment grade” corporates
- 100% RW for all other

Small and medium sized entities (SMEs) receive 85% RW
Corporate Exposures: Specialized Lending

- **Current SA:** No specific designation in SA (though defined in the IRB); general corporate treatment – 100% RW or varies based on ratings

- **2014 CP:** Flat RWs proposed for five subcategories of specialized lending:
  - Project, object, and commodities finance: 120% RW
  - Income-producing real estate (IPRE): 120% RW
  - Land acquisition, development, or construction (ADC): 150% RW

- A corporate exposure is categorized as specialized lending if:
  - Exposure to entity (e.g., SPE) is created specifically to finance/operate physical assets
  - Primary source of repayment of the obligation is income generated by the asset (borrower has limited independent capacity to repay obligation)
  - Terms of obligation give lender substantial control of assets and income generated by project
2015 CP: Retains all conditions from 2014 CP for specialized lending, except ADC and IPRE are re-classified as real estate exposures and subject to different risk drivers

- For specialized lending with issue-specific external ratings, apply RBA
- When not applying RBA:
  - Object and commodities finance subject: 120% RW
  - Project finance in pre-operational phase: 150% RW
  - Project finance in operational phase: 100% RW
Equity and Subordinated Debt Exposures

- **Current SA**: Equities and most other capital instruments receive a flat 100% RW; can apply RBA for rated sub-debt

- **2014 CP**:
  - Equity exposures received 250% or 400% RW depending on whether publicly traded
  - Subordinated debt received was proposed at 250% RW, but could vary if rated under RBA

- **2014 CP**:
  - All equity exposures: 250% RW
  - Subordinated debt: 150% RW; would no longer vary by rating
Retail Exposures (Non-Mortgage)

- **Current SA:** 75% RW for the majority of retail exposures (including credit cards, auto loans, and small business loans)
- **2014 CP:** No meaningful change
- **2015 CP:** “Consultative document on reducing variation in credit RWAs” introduces potential for further granularity regarding revolving exposures
  - **Transactors (lesser RW):** balance has been repaid in full at each scheduled repayment date over a certain period of time (yet TBD)
  - **Revolver (higher RW):** Any revolving exposure that does not qualify as a transactor
Current SA: Most residential mortgages receive 35% RW

2014 CP: RWs based primarily on LTV ratio and, secondarily, on debt service coverage (DSC) ratio

- LTV and DSC are meaningful risk drivers
- DSC introduced definitional issues given accounting differences
- Appropriate DSC threshold also raised questions

<table>
<thead>
<tr>
<th>LTV &lt; 40%</th>
<th>40% ≤ LTV &lt; 60%</th>
<th>60% ≤ LTV &lt; 80%</th>
<th>80% ≤ LTV &lt; 90%</th>
<th>90% ≤ LTV &lt; 100%</th>
<th>LTV ≥ 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans to individuals with [DSC ≤ 35%]</td>
<td>25%</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
</tr>
<tr>
<td>Other loans</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>70%</td>
<td>80%</td>
</tr>
</tbody>
</table>
2015 CP: LTV is retained as primary risk driver but DSC removed; income producing real estate (IPRE) concept introduced in real estate (taken from SL category)

RW approach depends on:
- Whether an exposure is materially dependent on the cash flow generated by the property (IPRE)
- An exposure’s LTV ratio
Residential Real Estate Exposures: Risk Weights

### Non-IPRE

<table>
<thead>
<tr>
<th>LTV ≤ 40%</th>
<th>40% &lt; LTV ≤ 60%</th>
<th>60% &lt; LTV ≤ 80%</th>
<th>80% &lt; LTV ≤ 90%</th>
<th>90% &lt; LTV ≤ 100%</th>
<th>LTV &gt; 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk weight</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
<td>45%</td>
<td>55%</td>
</tr>
</tbody>
</table>

### IPRE

<table>
<thead>
<tr>
<th>LTV ≤ 60%</th>
<th>60% &lt; LTV ≤ 80%</th>
<th>LTV &gt; 80%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk weight</td>
<td>70%</td>
<td>90%</td>
</tr>
</tbody>
</table>
Commercial Real Estate Exposures

- **Current SA**: Almost all CRE exposures receive 100% RW
- **2014 CP**: Introduced CRE sub-categories
  - IPRE: 120% RW
  - ADC: 150% RW
- **2015 CP**: Removes IPRE/ADC from specialized lending section and introduces under the real estate treatment; introduces additional granularity
  - LTV ratio and counterparty considered as risk drivers for both IPRE and non-IPRE CRE
## Commercial Real Estate Exposures: Risk Weights

### Non-IPRE

Risk weight table for commercial real estate exposures
(Repayment is not materially dependent on cash flows generated by property)

<table>
<thead>
<tr>
<th>Risk weight</th>
<th>LTV ≤ 60%</th>
<th>LTV &gt; 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min (60%, RW of Counterparty)</td>
<td>RW of Counterparty</td>
<td></td>
</tr>
</tbody>
</table>

### IPRE

Risk weight table for commercial real estate exposures
(Repayment is materially dependent on cash flows generated by property)

<table>
<thead>
<tr>
<th>Risk weight</th>
<th>LTV ≤ 60%</th>
<th>60% &lt; LTV ≤ 80%</th>
<th>LTV &gt; 80%</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>100%</td>
<td>130%</td>
<td></td>
</tr>
</tbody>
</table>

**ADC: 150% RW**
Off-Balance Sheet Items

- **Current SA:** Range of CCFs ranging from 0% for unconditionally cancellable commitments (UCCs) to 100%; CCFs for commitments differed by maturity

- **Proposals:** Considered UCC CCFs of 10%-20% & commitments as high as 75%; removed maturity distinction for commitments

<table>
<thead>
<tr>
<th>Off-balance sheet exposure types that receive CCF &lt; 100%</th>
<th>Current SA</th>
<th>Foundation IRB</th>
<th>Proposal for revised SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitments that are unconditionally cancellable at any time without prior notice, or that effectively provide automatic cancellation due to deterioration in borrower’s creditworthiness; retail only</td>
<td>0%</td>
<td>0%</td>
<td>[10-20%]</td>
</tr>
<tr>
<td>Commitments, except retail unconditionally cancellable</td>
<td>-</td>
<td>75%</td>
<td>[50-75%]</td>
</tr>
<tr>
<td>Commitments with maturity ≤ 1 year, except retail unconditionally cancellable</td>
<td>20%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Commitments with maturity &gt; 1 year, except retail unconditionally cancellable</td>
<td>50%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Note issuance facilities (NIFs) and revolving underwriting facilities (RUFs)</td>
<td>50%</td>
<td>75%</td>
<td>[50-75%]</td>
</tr>
<tr>
<td>Certain transaction-related contingent items</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Short-term self-liquidating trade letters of credit arising from the movement of goods</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>
Credit Risk Mitigation

- **Current SA**: Banks may apply range of models-based approaches, or a supervisory haircut approach, to securities financing transactions (SFTs)

- **2014 CP**: Modestly increased the supervisory haircut calibration for SFTs and removed following modelling approaches:
  - Own-estimates of haircuts under the comprehensive approach
  - VaR models for certain SFTs
  - IMM for SFTs and collateralized derivative contracts (to be replaced by SA-CCR).
2015 CP: Removes modeled approaches, consistent with 2014 CP and introduces additional concepts

- Provides alternative non-ratings-based definitions for “Eligible Guarantor” and “Financial Collateral” based on qualitative definition of “Investment Grade”
- Introduces non-ratings-based supervisory haircut table
- Introduces a revised supervisory haircut formula for master netting agreements to better account for diversification and correlation
Since all firms applying the Basel framework would be subject to an output floor, it is essential that all firms consider the implications of the proposed SA revisions.

We believe the proposed revisions to the SA address most, though not all, of the stated objectives.

The Basel Committee is monitoring whether the overall RWs are appropriately calibrated both on a relative asset basis (comparing exposure categories) and when compared to the current capital requirements.