The regulatory change transmission mechanism and Basel 3
A practitioner perspective
Conference on Macroprudential policy, bank regulation and financial stability, Brunel University London
Simon Brennan | 28 June 2019
Implementation of Basel 3 in the EU
Adoption split across recently-finalised and yet-to-be-written legislation

<table>
<thead>
<tr>
<th>Basel December 2017 revisions</th>
<th>CRR2</th>
<th>CRR3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit Risk</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Standardised Approach for Credit Risk.</td>
<td></td>
<td>To be adopted</td>
</tr>
<tr>
<td>• Internal Ratings-Based Approach for Credit Risk.</td>
<td></td>
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<tr>
<td><em><em>Fundamental Review of the Trading</em> Book (FRTB)</em>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Delayed application of framework to January 2022.</td>
<td>Introduced as a reporting requirement</td>
<td>To be adopted as a binding requirement</td>
</tr>
<tr>
<td>• BCBS published its final rules for FRTB in January 2019*.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CVA, Operational Risk, Output Floor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Minimum capital requirements for Credit Valuation Risk (CVA) risk.</td>
<td></td>
<td>To be adopted</td>
</tr>
<tr>
<td>• Minimum capital requirements for Operational Risk.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Standardised output floor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Leverage Ratio</strong></td>
<td>Leverage ratio G-SIB buffer introduced</td>
<td>Revised Exposure definition likely to be introduced</td>
</tr>
<tr>
<td>• Revised exposure definition.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• G-SIB buffer.</td>
<td></td>
<td></td>
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</tbody>
</table>

*These rules will be reflected by the European Commission by way of a Delegated Act under CRD5/CRR2.
Implementation of Basel 3 in the EU
Expected timeline

27.06.19 Entry into force.

2019
- CRD5: Restrictions and required actions in event of failure to meet capital/leverage ratio buffer requirements.
- CRD2: Scope, supervisory powers.
- TLAC requirements.
- Own funds requirements for CCP exposures.

2020
- CRD2: Commission to adopt Delegated Act modifying FRTB framework.
- One year after adoption of FRTB Delegated Act, 31.12.20
- CRR2: Application of FRTB reporting requirements based on Standardised Approach.

2021
- CRD5: Provisions on interest rate risk arising from non-trading book activities.

2022
- CRD2: G-SIB leverage ratio requirement.
- Three years after adoption of Delegated Act on FRTB

2023

2024
- CRD6/CRR3: Predicted implementation of legislative package.
- 30.12.23
  - CRD5: Intermediate Parent Undertaking (IPU) requirements.
- 01.01.24
  - BRRD2: MREL application date for resolution and non-resolution entities.

Q2 2022

Q2 2020

18 months after entry into force CRD5/BRRD2 Member State adoption and publication, and application deadline.

01.01.22
- CRD5: Restrictions and required actions in event of failure to meet capital/leverage ratio buffer requirements.

1.01.22
- CRD5: Provisions on interest rate risk arising from non-trading book activities.

2 years after entry into force CRR2 general application date.

Including NSFR, SA-CCR, leverage ratio.
## Prudential framework at a glance

Complex and multivariate, and with many stakeholders

### Capital stack

- **Maximum Distributable Amount (MDA)** restriction trigger point.
- **Minimum capital requirement** that banks must meet at all times.
- **MREL**
- **PRA Buffer**
  - Higher of G-SIB Buffer, Systemic Risk Buffer
- **Countercyclical Capital Buffer**
- **Capital Conservation Buffer**
- **Pillar 2A**
- **Tier 2 capital**
- **Additional Tier 1 (AT1) capital**
- **Common Equity Tier 1 (CET1) capital**

### Authority responsible

- Determined by resolution authority
- Determined by supervisor and stress tests
- Determined by MacPru authority (excl. G-SIB buffer)
- Determined by regulation
- Determined by supervisor
- Determined by regulation

### Component

<table>
<thead>
<tr>
<th>Component</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calculating Pillar 1 capital requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Credit risk</td>
<td>• Major revisions to IRB and SA, plus output floors.</td>
</tr>
<tr>
<td>Market risk</td>
<td>• FRTB implementation split over CRR2 and CRR3.</td>
</tr>
<tr>
<td>Operational risk</td>
<td>• Fundamental revision via removal of AMA.</td>
</tr>
<tr>
<td>Leverage ratio</td>
<td>• Implementation via CRD5/CRR2.</td>
</tr>
<tr>
<td>Sovereign risk</td>
<td>• Progress on new rules paused</td>
</tr>
<tr>
<td><strong>Pillar 2</strong></td>
<td></td>
</tr>
<tr>
<td>IRRBB</td>
<td>• Revised EBA guidelines to apply from 30 June 2019.</td>
</tr>
<tr>
<td>Stress testing</td>
<td>• Continuously evolving framework/expectations.</td>
</tr>
<tr>
<td><strong>Liquidity and funding</strong></td>
<td></td>
</tr>
<tr>
<td>LCR</td>
<td>• Stable [but perhaps needs to be revised].</td>
</tr>
<tr>
<td>NSFR</td>
<td>• Implementation via CRD5/CRR2 forthcoming.</td>
</tr>
<tr>
<td><strong>Gone-concern</strong></td>
<td></td>
</tr>
<tr>
<td>MREL/TLAC</td>
<td>• Implementation ongoing.</td>
</tr>
<tr>
<td><strong>Quasi-external factors</strong></td>
<td></td>
</tr>
<tr>
<td>IFRS9</td>
<td>• Recently applicable, stable.</td>
</tr>
<tr>
<td>TRIM</td>
<td>• Ongoing, likely to lead to revisions to IRB.</td>
</tr>
<tr>
<td>Model risk management</td>
<td>• Area of ongoing supervisory focus.</td>
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Impact of Basel 3
2017 revisions increase capital requirements and alter balance between components of the framework

Change in total T1 minimum capital requirements due to the full implementation of Basel 3 – as a percentage of the overall current requirements, EU banks peer group

Impact of 2017 Basel revisions on constraining factor on banks’ capital positions – per cent of banks, Global banks peer group

Notes: Table 1. Weighted-average impact across all banks. Based on June 2018 EBA Quantitative Impact Study data.

Notes: Table B6. Proportion of Group 1 banks (internationally active banks with >€3bn T1 capital) constrained by different elements of capital regime under current framework vs. 2017 revised package.
Impact of Basel 3
Return on Equity (RoE) is below pre-crisis levels, primarily due to lower financial leverage and profit margins

DuPont analysis of bank profitability
Simple average, per cent

<table>
<thead>
<tr>
<th>2005-2006</th>
<th>Financial leverage</th>
<th>Asset yield</th>
<th>Profit margin</th>
<th>2015-2016</th>
<th>Financial leverage</th>
<th>Asset yield</th>
<th>Profit margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail-funded</td>
<td>15</td>
<td>-2</td>
<td>-2</td>
<td>-6</td>
<td>ROE, 2015-2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale-funded</td>
<td>14</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>ROE, 2015-2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universal</td>
<td>15</td>
<td>-4</td>
<td>0</td>
<td>-2</td>
<td>ROE, 2015-2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trading</td>
<td>14</td>
<td>-5</td>
<td>1</td>
<td>-1</td>
<td>ROE, 2015-2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Of which, changes by business model

Notes: Table 3. Financial leverage = assets / equity, asset yield = revenue / assets and profit margin = net profit/revenue.
Regulatory change transmission mechanism
An ongoing process, rather than a point-in-time ‘event’

1. Bank receives final regulation
   - Likely to have tracked regulation from inception, and carried out preliminary analysis.

2. Analysis of impact on business – products, services/ ops/ tech, profitability, capital, etc.
   - May build on previous ‘sketch’ impact analyses. Likely to require input from across the business (front/ middle/ back office, + ops/ tech, strategy department).

3. Go to ExCo for senior buy-in, sponsor, funding
   - ‘Regulatory mandatory’ projects will receive funding – but how much? How ambitious will project/ implementation be? What are the competing priorities for funding?

4. Initiate and execute implementation project
   - Depending on project, can last from 2-24 months, or even longer.
   - Ongoing adjustments may be necessary to accommodate secondary rule-making.

5. Review implementation as needed
   - Lessons learned may lead to revisions.
Regulatory change transmission mechanism
Banks vary in terms of how they respond to regulatory change

- A response in top right-hand quadrant requires most resources, in terms of planning, implementation, management attention, etc.
- Centre reflects a balance between regulatory change and competing priorities.
- Bottom left quadrant represents overburdened, under-resourced banks.
Regulatory change transmission mechanism
How much do we really know?

- Little work has been done to examine the practical complexities of the new regulatory framework.
- Variety of methodological issues limit the real-world insights available from existing attempts at modelling of impacts.

“In many cases, research connects regulatory changes (e.g. higher capital ratios) to relevant indicators capturing resilience and terms of financing (e.g. changes in risk indicators, spreads, or cost of lending) rather than broader G20 objectives as such (e.g. increased financial stability and sustainable economic growth). […] The higher capital and liquidity requirements under Basel III intend to “improve the banking sector’s ability to absorb shocks arising from financial and economic stress, whatever the source”. Evaluations [of Basel III] have focused mainly on the effects of changes in capital requirements, and lesser on liquidity regulation as well as on analysis of combined effects of reforms…”

FSB, 2017

“…how banks take, measure and control risks tends to be much harder to observe than some other aspects of banking. […] banks appear to have improved their risk governance and risk management practices since the crisis, although further progress is often needed to meet supervisory expectations. It can be difficult to disentangle the drivers of improvements: while many reflect regulatory and supervisory changes, banks have also been adjusting as a result of their crisis experience and market pressure.”

CGFS, 2018

“…banks may not respond to regulatory requirements in the manner assumed in many models and […] we should be cautious about any conclusions drawn from models that ignore these issues.”

BCBS, 2016
Questions

Food for thought

- Do we understand what ‘optimisation’ means in the context of an increasingly complex and ever-changing regulatory environment?

- Does the reality of how implementation occurs in practice affect our assumptions about what the ‘optimal’ regulatory framework looks like?

- Do we sufficiently understand the business model and business strategy incentives created by the current regulatory regime?