Mind the Capital Gap

Is there a level playing field in international banking regulations?

November 2017

For your next step
Is there a level playing field in international banking regulations?

This paper considers the extent to which post-crisis regulatory reforms have been implemented consistently in different jurisdictions. We illustrate that large divergences have arisen in the regulatory standards applied in different jurisdictions. This is particularly the case for banks’ capital requirements.

The size of the differences is such that they seem likely to have competition effects. It is possible that some banking activities will migrate to jurisdictions with lighter regulatory burdens. Additionally, the different regulatory frameworks could contribute to persistent differences in the profitability of banks operating in different jurisdictions.

Following the 2008-09 global financial crisis, a large number of reforms to financial sector rules and regulations have been finalised. The prudential banking elements of these reforms that were agreed internationally are known as ‘Basel III’. Many of these reforms have already been implemented, others are in the process of being implemented.

Additional banking reforms, however, are still being finalised. National authorities refer to these reforms as ‘Completing Basel III’, whereas market participants more frequently refer to them as ‘Basel IV’. We discussed this pipeline in our previous publication: ‘Banking reform: what is still to come?’.

In this publication, we consider whether different jurisdictions have implemented the Basel III reforms in a consistent fashion.

The Pittsburgh Statement signed by leaders of the G20 countries in September 2009 said: “We are committed to take action at the national and international level to raise standards together so that our national authorities implement global standards consistently in a way that ensures a level playing field and avoids fragmentation of markets, protectionism, and regulatory arbitrage.”

Hence, as well as seeking to reduce financial stability risks via the introduction of tougher regulatory requirements for banks, a second stated aim of the post-crisis reforms was to deliver consistency and a level playing field across jurisdictions. This paper considers the extent to which this commitment is being realised.

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What are the main prudential elements of the Basel III package?

Basel III targets improvements to both microprudential (bank-level) regulatory arrangements and also to macroprudential (system-wide) frameworks. In this article, we focus on the microprudential elements.

The main microprudential banking components that have already been agreed as part of the Basel III reform package are:

**Capital requirements**
- Minimum common equity capital ratio – agreed 2011
- Capital Conservation Buffer (CCB) – agreed 2011
- Buffer requirements for Global Systemically Important Banks (G-SIB) and Domestic Systemically Important Banks (D-SIB) – agreed 2011 & 2012
- Countercyclical Capital Buffer (CCyB) – agreed 2011
- Total Loss Absorbing Capital (TLAC) – agreed 2016
- Leverage Ratio (LR) – framework agreed 2014; calibration to be finalised this year

**Liquidity requirements**
- Liquidity Coverage Ratio (LCR) – agreed 2013
- Net Stable Funding Ratio (NSFR) – agreed 2014

**Stress testing framework** – agreed 2011

It was decided to give regulators the option to phase in the full implementation of the reforms over a transition period. For most of the Basel III elements listed, the transition period runs to 2019 (see Figure 1); for TLAC, however, there will only be a partial implementation by 2019, and full implementation by 2022. Many banks have, however, decided to comply with some of the new regulatory requirements ahead of the final deadlines.

**Figure 1: Basel III phase-in arrangements**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage Ratio</td>
<td></td>
<td></td>
<td>Disclosure starts</td>
<td>3.0%</td>
<td></td>
<td>3.0%</td>
<td></td>
</tr>
<tr>
<td>Minimum common equity capital ratio</td>
<td>3.5%</td>
<td>4.0%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Capital Conservation Buffer</td>
<td></td>
<td></td>
<td>0.625%</td>
<td>1.25%</td>
<td>1.875%</td>
<td></td>
<td>2.5%</td>
</tr>
<tr>
<td>Liquidity Coverage Ratio</td>
<td></td>
<td></td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>Net Stable Funding Ratio</td>
<td></td>
<td></td>
<td>Introduce minimum standard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Additional banking reforms are still being negotiated as part of the ‘Completing Basel III’ agenda. Transition periods for the implementation of these reforms seem likely to stretch out well beyond 2019.
The Basel III package of reforms was finalised by the Basel Committee on Banking Supervision (BCBS), which comprises member central banks and regulatory authorities from 28 jurisdictions. BCBS members committed to implementing legislation and rules at their respective jurisdictional level to give effect to the Basel III reforms.

This transposition process affords the possibility that the Basel III package might not get implemented consistently in each jurisdiction. Recognising this risk, the BCBS established a Regulatory Consistency Assessment Programme (RCAP) to monitor and assess the extent to which BCBS members have faithfully implemented the agreed reforms. In addition, the BCBS publishes an annual progress report on the adoption of the Basel regulatory framework. Drawing on these assessments, peer group pressure is meant to ensure that all BCBS members fully and consistently adopt Basel III.

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1 BCBS members include: Argentina, Australia, Belgium, Brazil, Canada, China, the EU, France, Germany, Hong Kong, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.
Does the BCBS consider that Basel III has been fully and consistently implemented?

Reflecting the fact that some parts were finalised only relatively recently, the BCBS RCAP process has not yet assessed the implementation of all elements of the Basel III package. Bearing this caveat in mind, in its 2017 annual report to the G20 heads of state, the BCBS concluded that “domestic regulations [in member jurisdictions] are generally consistent with Basel III standards, while further consistency may be achieved in some jurisdictions.”

The BCBS conclusion was based on the following developments up to July 2017:

- 27 Basel Committee member jurisdictions had final rules in force for the definition of capital, the Capital Conservation Buffer (CCB) and the Liquidity Coverage Ratio (LCR);
- 26 member jurisdictions had issued final rules for the Countercyclical Capital Buffer (CCyB);
- 25 member jurisdictions had issued final rules for their frameworks for Domestic Systemically Important Banks (D-SIBs);
- All members that are home jurisdictions to Global Systemically Important Banks (G-SIBs) had implemented the Basel framework for G-SIBs;
- 20 jurisdictions had issued final or draft rules of the revised Pillar 3 disclosure requirements; and
- 20 jurisdictions had issued final or draft rules for margin requirements for non-centrally cleared derivatives.

In addition, around 70 non-Basel Committee member jurisdictions intend to issue final rules on the new definition of regulatory capital and the LCR by the end of 2018.

The BCBS assessment was also based on reviews of the quality and consistency of implementation. In its RCAP assessments of the risk-based capital standards, BCBS concluded that 15 jurisdictions were compliant with Basel III and three jurisdictions were largely compliant.

BCBS concluded that:
"Domestic regulations are generally consistent with Basel III standards, while further consistency may be achieved in some jurisdictions"

Given the finding that the EU’s implementation of Basel III was materially non-compliant, the overall positive assessment about the quality of implementation of Basel III across all BCBS members is arguably somewhat sanguine.

It is also worth highlighting that RCAP assessments only consider whether implementation in BCBS member jurisdictions falls short of the agreed Basel III standards. The formal assessment grades do not take into consideration any instances where jurisdictions have implemented tougher standards than were agreed in Basel III. Another aspect that is also out of scope of the BCBS assessment is consideration of those countries (like the US and UK) that have implemented additional regulatory reforms that were not included in the Basel III package. In this publication, we adopt this broader approach to assess the degree of convergence that has taken place internationally in banking regulations.

1 Since July, one more BCBS member has issued final rules for D-SIBs and one more BCBS member has issued rules for margin requirements for non-centrally cleared derivatives.
2 The four main reasons for this materially non-compliant grading are discussed later in this paper.
3 Four other RCAP LCR assessments have been completed since July 2017. All four of these concluded that the LCR implementation was ‘compliant’.
4 The nine EU Member States that are members of the Basel Committee are home to around 4,000 EU banks that account for around 45% of global banking assets.
5 The BCBS concluded that the European Union (assessed as a single jurisdiction, but representing nine BCBS member states) was materially non-compliant. Of the 15 jurisdictions for which an RCAP of the LCR requirement had been undertaken (by July 2017), the regulations in 12 were found to be compliant and three largely compliant.
6 The findings on the EU’s implementation of Basel III are based on a review of the EU Commission’s Annual Reports on Financial Stability and Institutions. The highlights of these reports reflect the EU’s implementation of Basel III and are consistent with the findings of the BCBS RCAP assessments.
Our assessment approach

In what follows, we provide a high-level assessment of the consistency of implementation of the agreed Basel III standards across 16 jurisdictions: the US, the EU (as a single jurisdiction), the UK, Sweden, Switzerland, Canada, Australia, Japan, Hong Kong, China, Korea, Singapore, Brazil, India, Saudi Arabia, and the UAE. These jurisdictions were chosen to provide coverage of the most important financial centres, as well as a broad geographic coverage. All but one of these jurisdictions are full BCBS members; the UAE has a BCBS observer status.

Our assessment of the consistency of implementation considers both the extent of under-shooting and of over-shooting of the agreed Basel III standards. We also highlight some additional significant regulatory reforms outside the scope of Basel III that have been implemented in some countries.

There are two dimensions in which implementation could diverge from the agreed Basel III standards; quantitatively and qualitatively. Quantitative divergences are more transparent. The BCBS RCAP assessments are focussed on this type of consistency. Given that we draw on these RCAP assessments, our focus is also primarily on the quantitative differences. Qualitative differences (e.g. how a given rule is interpreted and implemented by supervisors) can also be important—one area that we highlight relates to the application of stress testing frameworks.

We highlight only the divergences that the BCBS has identified as ‘material’ shortfalls. We have supplemented this with our own judgement relating to instances of other significant divergences that are not factored into RCAP grading assessments.
A. Scope of coverage of Basel III regulations

In determining whether or not there is a level playing field in banking regulations, one needs to consider which regulations apply to banks. For example, banks that are headquartered in the UK will, of course, be subject to all the supervisory rules and regulations applied in the UK. However, internationally headquartered banks can provide certain banking products and services in the UK via cross-border arrangements, or via operations located in the UK as part of either a subsidiary or a branch. In each of these cases, there will be different implications for whether UK or foreign prudential rules and regulations apply.

From a level playing field perspective, comparability in the application of regulations is particularly important for activities that can either be provided cross-border or via a foreign bank branch. This is why the Basel III agreement is meant to be applied to all ‘internationally active banks’. Basel III does not, however, provide clear criteria for the determination of whether or not a bank is ‘internationally active’.

Amongst our sample, the following jurisdictions have applied their versions of the Basel III rules and regulations only to ‘internationally active’ banks: Australia, Brazil, Canada, Japan, Singapore, Switzerland, and the US. In addition, China applies its implementation of the Basel III framework to all commercial banks with total assets of at least CNY 200bn.  

The US implementation of the Basel III standards uses two main filters to differentiate between banks: size and complexity. With regard to the former, the main filters used are consolidated total assets of $250bn or more; or consolidated total on-balance sheet foreign exposures of $10bn or more. The complexity filter relates to the G-SIB assessment framework.

Figure 2 illustrates how the US authorities differentiate the application of the different Basel III component parts across different types and sizes of bank.

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Figure 2: Tailoring of US bank capital and liquidity rules

<table>
<thead>
<tr>
<th>Applicable regulations</th>
<th>G-SIB</th>
<th>Internationally active ($250bn +)</th>
<th>Regional ($50bn-250bn)</th>
<th>Mid-size ($10bn-50bn)</th>
<th>Small (&lt;$10bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basel III minimum capital requirement</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CCAR quantitative Fed-run stress tests</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>LCR &amp; NSFR</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CCyB</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Basel III 3% LR</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Enhanced Supplementary LR</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>G-SIB capital buffer</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

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This includes all internationally active banks in China and accounts for around 90% of Chinese banking system assets.
In contrast, a number of jurisdictions have adopted a tougher approach and apply their respective implementation of the Basel III rules to all the banks that are headquartered in their respective jurisdictions (irrespective of size and international activity), and to all the foreign bank subsidiaries that they authorise (see Figure 3).

In the UK, there are around 150 foreign bank branches and around 100 foreign bank subsidiaries from more than 50 different countries. Foreign bank branches account for around 30% of total UK-resident banking assets and around a third of UK interbank lending. Hence, the degree to which there is a level playing field between domestic and foreign banks can be an important influence on competition in some market segments.

The PRA’s approach towards the authorisation of non-EEA branches is centred on an assessment of:

- the equivalence of the home state supervisor’s (HSS) supervision of the whole firm;
- the branch’s UK activities (the PRA expects non-EEA branches to focus on wholesale banking activities); and
- the level of assurance the PRA gains from the HSS over resolution.

In principle, therefore, in the UK, the first of these criteria should help to deliver a level playing field. At the same time, however, the Bank of England has also stated that “the UK targets a level of resilience beyond global minimum standards”. At present, the PRA has authorised foreign banks from around 25 non-EEA countries to establish branches in the UK. It is interesting to note that banks that are headquartered in all of the jurisdictions considered in this publication have branches in the UK.

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8 See speech by Governor Carney, “The high road to a responsible, open financial system” 7 April 2017.
B. Capital requirements

The Basel III stack of risk-weighted capital requirements is shown in Figure 4. We consider the consistency of implementation of each of the elements in this capital stack in turn.

Pillar 1 minimum risk-weighted capital requirement and CCB
Within our sample, most jurisdictions have adopted the Basel III 4.5% minimum CET1 requirement. However, four countries have implemented a tougher minimum requirement (see Figure 5).

All of the jurisdictions in our sample have implemented a 2.5% of RWAs capital conservation buffer.

G-SIB framework
The Basel III framework incorporates a methodology for assessing the systemic importance of global banks, and a transposition approach that maps a given score for the degree of systemic importance to one of five possible buckets with associated capital buffer requirements (see Figure 6).

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### Figure 4: Basel III risk-weighted CET1 capital requirements*

<table>
<thead>
<tr>
<th>Pillar 2 requirements</th>
<th>Firm-specific requirements: no size limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countercyclical capital buffer</td>
<td>Time varying: no size limit. Reciprocation in range: 0% to 2.5% of RWAs</td>
</tr>
<tr>
<td>Systemic importance buffers: G-SIB and D-SIB</td>
<td>G-SIB buffer 0% to 3% of RWAs D-SIB buffer size not defined</td>
</tr>
<tr>
<td>Capital Conservation Buffer (CCB)</td>
<td>2.5% of RWAs</td>
</tr>
<tr>
<td>Pillar 1 minimum requirement</td>
<td>4.5% of RWAs</td>
</tr>
</tbody>
</table>

*For the Minimum capital element, banks must hold at least 6% of RWAs in Tier 1 capital, of which 4.5% of RWAs must be in the form of CET1 capital. Pillar 2 capital requirements can be met with a combination of CET1 capital and Tier 1 capital.

### Figure 5: Differences in minimum risk-weighted capital requirements

<table>
<thead>
<tr>
<th>Basel III</th>
<th>China</th>
<th>India</th>
<th>Singapore</th>
<th>UAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5%</td>
<td>5%</td>
<td>5.5%</td>
<td>6.5%</td>
<td>7%</td>
</tr>
</tbody>
</table>

TOUGHER REGULATORY REQUIREMENTS

### Figure 6: Basel III G-SIB capital buffers – the bucketing approach

- Bucket 5
- Bucket 4
- Bucket 3
- Bucket 2
- Bucket 1

Capital buffer requirement (common equity as a % of RWA)

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Where individual jurisdictions in our sample are not mentioned in the table, they apply the Basel framework without any deviation. This approach also applies to other Figures in this paper.

The methodology is based on selected indicators relating to size, interconnectedness, the availability of substitutes, the extent of global cross-jurisdictional activity and complexity.
As noted, all BCBS members that are home jurisdictions to G-SIBs have implemented the Basel framework for G-SIBs. That said, the US, Switzerland and Sweden have each adopted tougher requirements than the Basel III agreement (Figure 7).

Under the US G-SIB framework, there are two methods for calculating the G-SIB surcharge. Method 1 is consistent with the Basel framework while Method 2 introduces a measure of a G-SIB’s reliance on short-term wholesale funding. US G-SIBs are subject to the higher of the surcharges calculated under each method. The average increase in US G-SIB CET1 buffer requirements, relative to application of the Basel III framework, is expected to be around 1pp. Swiss G-SIBs are subjected to a flat minimum CET1 requirement of 10%, implying a G-SIB buffer of 3%. There are no buckets in the Swiss framework. If Switzerland had applied the Basel III G-SIB framework, Credit Suisse would have been in Bucket 2 with a 1.5% buffer and UBS would have been in Bucket 1 with a 1% buffer. So, the Swiss regime delivers an uplift (relative to Basel III) in G-SIB capital requirements of 1.5% for Credit Suisse and 2% for UBS.

In Sweden, systemically important banks have been assigned a systemic risk buffer of 3% in CET1 capital and a further 2% within the Pillar 2 framework. This approach is applied to both Swedish G-SIBs and D-SIBs (representing the four largest Swedish banks). Whereas, if the Basel III G-SIB framework had been applied, only Nordea would have had a G-SIB buffer and it would have been 1%.

**Figure 7: Ranges of G-SIB CET1 buffer requirements**

<table>
<thead>
<tr>
<th>Country</th>
<th>Buffer</th>
<th>Japan</th>
<th>China</th>
<th>EU</th>
<th>UK</th>
<th>US</th>
<th>Switzerland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of G-SIBs as defined by Basel III framework</td>
<td>1% - 1.5%</td>
<td>1% - 1.5%</td>
<td>1% - 2.0%</td>
<td>1% - 2%</td>
<td>1% - 3.5%</td>
<td>3.0%</td>
<td>5.0%</td>
<td></td>
</tr>
</tbody>
</table>

**D-SIB framework**

In contrast to the G-SIB framework, the Basel III D-SIB framework is not prescriptive; rather, it only establishes a minimum set of principles and allows national discretion in how these principles are applied.

There is a wide range of implementation practices for the D-SIB framework. Most, but not all, countries use more than one indicator to determine whether or not a bank qualifies as a D-SIB. Focussing just on size (since this metric is used by all jurisdictions), Figure 8 illustrates the very broad range of size thresholds that have been applied in some of the jurisdictions in our sample to determine whether an institution should be classified as a D-SIB.

**Figure 8: Smallest systemically important banks in various jurisdictions**

<table>
<thead>
<tr>
<th>Country</th>
<th>Smallest D-SIB bank’s total assets, as % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1.5% [Bancorp is largest US bank not designated a D-SIB – it has total assets = 2.5% of GDP]</td>
</tr>
<tr>
<td>UK</td>
<td>9%</td>
</tr>
<tr>
<td>Canada</td>
<td>10%</td>
</tr>
<tr>
<td>Sweden</td>
<td>17%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>35%</td>
</tr>
<tr>
<td>Australia</td>
<td>48%</td>
</tr>
</tbody>
</table>

11 Applying the US framework to 2014 balance sheet data implied a G-SIB buffer for JP Morgan of 4.5%. In 2015, however, management actions to adjust JP Morgan’s balance sheet led to a fall in its expected G-SIB buffer to 3.5%. Hence, applying the US framework to the 8 US G-SIBs delivers a buffer range from 1% to 3.5% of RWAs, whereas using the Basel III framework the 3.5% bucket is an empty set.

12 Figures shown represent the range of expected actual G-SIB buffer requirements, rather than the full range of the given jurisdiction’s G-SIB framework.
## Figure 9: D-SIB frameworks

<table>
<thead>
<tr>
<th>Country</th>
<th>D-SIB CET1 buffers</th>
<th>No. of D-SIBs identified</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>Not published</td>
<td>6</td>
<td>D-SIB regulation issued January 2016 through SAMA Circular #351000138356; we were unable to locate this on SAMA's web site.</td>
</tr>
<tr>
<td>Japan</td>
<td>0.5%</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>0.2% - 1.0%</td>
<td>2</td>
<td>D-SIB framework incorporates five buckets with associated capital buffers. No firms are in the top (1.0% of CET1) bucket</td>
</tr>
<tr>
<td>Korea</td>
<td>1%</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>1%</td>
<td>0</td>
<td>Detailed policy framework for D-SIBs still under development.</td>
</tr>
<tr>
<td>Canada</td>
<td>1%</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>1%</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>0% - 2%</td>
<td>70</td>
<td>CRD-IV permits an O-SII capital buffer between 0% and 2% of risk exposures. EU framework does not prescribe the links between O-SII score and capital buffer requirement. EU framework also provides a Systemic Risk Buffer (SRB) which may be introduced by Member States, with a view to preventing and mitigating systemic risks not covered by CRD-IV/CRR. The SRB has to be met with CET1 capital. CRD-IV does not provide a methodology for identification of banks or for determining the applicable SRB rate. The level of the SRB is not capped.</td>
</tr>
<tr>
<td>UAE</td>
<td>0.5% - 2.0%</td>
<td>0</td>
<td>D-SIB framework incorporates four buckets with associated capital buffers. No D-SIB banks have yet been identified.</td>
</tr>
<tr>
<td>UK</td>
<td>0% for O-SII</td>
<td>16 O-SIs</td>
<td>16 firms designated as ‘Other systemically important institutions’ (O-SIs). These firms will be subject to more intensive supervision, including recovery and resolution planning. Only ring-fenced banks and large building societies with total assets &gt;£175bn are subject to a Systemic Risk Buffer (SRB) capital requirement. Five buckets for SRB buffers. G-SIB and SRB buffers are not additive.</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1% - 3.5%</td>
<td>5</td>
<td>D-SIB framework incorporates five buckets with associated capital buffers. No firms are in the top (3.5% of CET1) bucket.</td>
</tr>
<tr>
<td>US</td>
<td>1% - 3.5%</td>
<td>D-SIB = G-SIB</td>
<td>Under US approach, there is no difference in the firms currently identified as G-SIBs and those that would be designated as US D-SIBs. Banks with total assets &gt;$50bn are subject to CCAR stress testing.</td>
</tr>
<tr>
<td>Brazil</td>
<td>2%</td>
<td>5</td>
<td>D-SIB buffer requirement 0.5% in 2017, 1.0% in 2018, and then 2.0% from 2019 onwards.</td>
</tr>
<tr>
<td>Singapore</td>
<td>2%</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>3%</td>
<td>3</td>
<td>Swiss framework does not distinguish between G-SIBs and D-SIBs. There are 3 designated D-SIBs in Switzerland, in addition to the 2 G-SIBs.</td>
</tr>
<tr>
<td>Sweden</td>
<td>[2% for O-SII]</td>
<td>4 O-SIs</td>
<td>O-SII buffer requirement is not additive to the SRB; the larger of the two is applied. G-SIB and D-SIB banks are assigned a 3% SRB and a further 2% within the Pillar 2 framework.</td>
</tr>
</tbody>
</table>
Countercyclical capital buffer, CCyB

There are two main variations in the way that different countries have implemented their respective CCyB frameworks:

1. China, the US, Korea, Canada, Australia, Switzerland, Brazil, India, and Saudi Arabia have committed to only vary the CCyB within a 0% to 2.5% range. Whereas the EU countries, Japan, Singapore, and Hong Kong have indicated that, if conditions warrant, they would be willing to set their respective CCyB buffer requirements at a level that exceeded 2.5%.

2. The UK authorities have indicated that they would expect to set a CCyB buffer of 1% in “standard risk conditions”. In contrast, the US authorities have stated that the CCyB will only be activated when systemic vulnerabilities are “meaningfully above normal”; we interpret this to mean that the US CCyB will be set at 0% through most of the credit cycle. None of the other jurisdictions have provided an equivalent indication of their expected modal value for the CCyB.

To date, five jurisdictions have implemented a non-zero CCyB requirement. In the UK, the Financial Policy Committee has set the CCyB at 0.5% and has indicated its intention to increase it to 1.0% from November 2017. The Hong Kong Monetary Authority has set the CCyB at 1.25% and has indicated this will increase to 1.875% from January 2018. The Swedish authorities have set their CCyB at 2%. The Swiss authorities have implemented a 2% sectoral CCyB targeted at mortgage loans financing residential property located in Switzerland. Outside of the jurisdictions that we consider in this paper, Norway has set a 1.5% CCyB and intends to raise it to 2% from January 2018.

Aggregation of risk-weighted capital requirements

Figures 10 and 11 compare the aggregated risk-weighted minimum capital requirements for D-SIBs and G-SIBs. We recognise that, even if there was full consistency in the way that CCyB frameworks were being applied, we shouldn’t necessarily expect CCyB rates in different countries to be the same at any point in time. That said, given the differences discussed above in the way that some countries are applying the CCyB frameworks, we think including the CCyB in Figures 10 and 11 is likely to be illustrative of genuine differences between jurisdictions.

As can be seen, Sweden has the toughest requirements within our sample. The variation between the highest and lowest risk-weighted capital requirements is large – it is 7pp for D-SIBs and 5½ pp for G-SIBs. Given the considerable size of these ranges, it seems hard to conclude that there is a level playing field in the way that Basel III is being implemented.

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\[13\] In each case, we have applied the maximum buffer requirement that is applicable to a bank in the given jurisdiction. For the US we have applied a 2% D-SIB buffer and a 3.5% G-SIB buffer even though the identified US G-SIBs and US D-SIBs are the same. For China, the UAE and Saudi Arabia, we have applied a zero D-SIB buffer.
Capital floor for firms using the IRB approach
For banks using the internal ratings-based (IRB) approach for credit risk, the Basel framework imposes a floor on the size of the capital requirement derived from their calculated risk-weighted assets. This floor is currently set at 80% of the capital that would be derived from the application of the Basel I approach. One notable divergence here is the capital floor imposed in the US which is 100% of the US Standardised Approach (SA)\textsuperscript{14}.

On the face of it, the US approach would appear to be a very much tougher capital floor for IRB firms than the one incorporated in the Basel framework. In practice, however, this different approach does not appear to be a binding constraint for most large US banks. The reason for this is that, similar to the Basel I floor, the US SA floor does not include RWAs for either the credit risk valuation adjustment (CVA) or for operational risk. For the largest US banks, the risk weighted assets relating to operational risk and CVA typically account for around 30% to 40% of total RWAs. Hence, excluding these elements from the capital floors materially reduces the likelihood that either the Basel or US floor will be a binding constraint for firms using the IRB approach, regardless of whether the floor threshold is set at 80% or 100%.

Overall, the BCBS RCAP concluded that the US SA floor “will generally be more conservative than the Basel approach”\textsuperscript{15}.

Pillar 2 requirements
Pillar 2 in the Basel framework involves a supervisory review of each bank’s process to set capital targets that are commensurate with the bank’s risk profile and control environment. There are three main areas that are typically considered under Pillar 2: (i) risks considered under Pillar 1 but which are not fully captured by the Pillar 1 process; (ii) risks not taken into account by the Pillar 1 process; and (iii) risks that are external to the bank (e.g. business cycle effects).

The Basel framework does not prescribe how the Pillar 2 supervisory assessment should be translated into capital requirements. Rather, it is recognised that there are a number of options that are available to address such risks, including holding capital, strengthening risk management, applying internal limits, strengthening the levels of provisions and reserves, and improving internal controls.

Given that Pillar 2 requirements are firm-specific and that practices for the disclosure of Pillar 2 capital requirements differ across different jurisdictions, it is not possible (based on publicly available information) to assess the extent to which there is a consistent approach in the international application of Pillar 2 requirements. That said, anecdotal evidence suggests there are material differences between jurisdictions in the extent to which Pillar 2 supervisory assessments are (or are not) translated into additional capital requirements.

\textsuperscript{14} This capital floor approach is often referred to as ‘the Collins amendment’ since it is derived from an amendment to the Dodd-Frank Act that was proposed by Senator Susan Collins.

\textsuperscript{15} See BCBS RCAP Assessment of Basel III regulations - United States of America, December 2014 (page 81).
Advanced approaches risk weights

The BCBS RCAPs identify numerous individual material deviations of risk weights and other specifications relative to the Basel framework. In this section and the following one on the Standardised Approach (SA), we do not list all of these. Rather, we highlight the areas where multiple jurisdictions have opted to deviate from the same element of the Basel framework, and the areas where deviations by individual jurisdictions are likely to have a particularly notable impact.

An important distinction is between the risk weights that are prescribed under the Standardised Approach (SA), and the risk weights that firms are permitted to derive for themselves when they have been authorised to use an advanced internal models approach. Typically, the larger and more sophisticated a bank is, the more likely it is to use an internal models approach to derive its risk weighted assets. Reflecting this, internationally active banks are more likely to use internal modelling approaches. Hence, from the perspective of assessing whether or not there is a level playing field in the international application of banking regulations, it is the internal models-based approaches that we should be more interested in.

Unfortunately, the risk weights derived by individual banks using internal modelling approaches are not published. For most aspects, therefore, it is not possible to make a comparison of the extent to which different jurisdictions are (or are not) applying the advanced internal models approaches in a consistent manner. By undertaking various additional investigations with unpublished data, the BCBS determined that there are marked differences in the way that internal modelling approaches are being applied. This led the BCBS to develop revisions to the advanced internal models approaches in the ‘Completing Basel III’ reform agenda; these reforms, however, have not yet been finalised. One dimension that we can observe is international differences in the degree to which firms that apply the advanced internal models approaches are allowed to also make partial selective use of SA risk weights. As can be seen in Figure 12, the EU, Canada and Switzerland all allow an approach that is weaker than the Basel guidelines, whereas the US has adopted a tougher approach. A number of countries have authorised no, or very few, banks to use any advanced approaches. In the case of the EU, the RCAP concluded that the EU approach results in a material overstatement of some EU banks’ CET1 ratios.

"The EU approach results in a material overstatement of some EU banks' CET1 ratios"

Figure 12: Scope for partial application of SA risk weights by IRB firms

<table>
<thead>
<tr>
<th>WEAKER</th>
<th>TOUGHER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EU</strong></td>
<td>Canada</td>
</tr>
<tr>
<td>Scope for IRB banks to partially apply SA risk weights extends well beyond Basel framework. In RCAP sample, EU IRB banks’ SA exposures ranged from 7% to 54% of their total credit risk exposures</td>
<td>Canadian IRB banks make extensive use of partial application of SA risk weights</td>
</tr>
</tbody>
</table>

---

16 In the EU, roughly 50% of bank capital requirements are generated through Internal Ratings-Based (IRB) credit models, with corporate and retail portfolios accounting for over three quarters of the total. And, in the US, the Advanced Approaches capital framework requires certain banking organisations to use an internal ratings-based approach to calculate risk-based capital requirements for credit risk and advanced measurement approaches to calculate risk-based capital requirements for operational risk. The US framework applies to large, internationally active banking organisations.

17 One proposed element of the ‘Completing Basel III’ package of reforms is a new capital output floor. If this gets agreed and implemented, it will likely constrain the extent to which capital derived from internal modelling approaches can be below the capital that would be derived from application of the Standardised Approach.
SA risk weights and other detailed criteria
While the standardised approach is used by fewer internationally active banks, it is applied by some of them (particularly the banks from Emerging Market Economies). And, as highlighted, some firms that apply the advanced modelling approaches also make partial use of SA risk weights. Reflecting this, differences in SA risk weights between jurisdictions can impact on international competition.

The SA risk weights applied to loans secured against residential property is the area that has the largest number of differences relative to the Basel framework. Under the Basel framework, only lending that is fully secured by mortgages on residential property can be risk-weighted at 35%. And, in applying the 35% weight, the supervisory authorities should satisfy themselves of the existence of a substantial margin of additional security over the amount of the loan based on strict valuation rules.

Within our sample, the EU has implemented a weaker standard than the Basel framework, whereas six other jurisdictions have implemented a tougher approach (see Figure 13). In the EU, the Capital Requirements Regulation (CRR) allows splitting of secured loans into two parts: (a) up to 80% of the value of the collateral, which is deemed to be secured by the value of the property and risk-weighted at 35%; and (b) the remainder which is deemed to be unsecured and risk-weighted at 100%. The RCAP assessment concluded that the loan-splitting approach in CRR would likely result in lower capital charges over the life of the loan relative to two separate loans, as declining loan balances will show up first in the higher-risk part.

In addition to the above, Sweden has applied a 25% risk weight floor for mortgage risk weights derived by firms using the IRB approach. Finansinspektionen (the Swedish regulator) reports that this requirement delivers sizeable increases in capital requirements for some Swedish banks.

The RCAP assessment concluded that:

"The EU's loan-splitting approach in CRR would likely result in lower capital charges"

13). In the EU, the Capital Requirements Regulation (CRR) allows splitting of secured loans into two parts: (a) up to 80% of the value of the collateral, which is deemed to be secured by the value of the property and risk-weighted at 35%; and (b) the remainder which is deemed to be unsecured and risk-weighted at 100%. The RCAP assessment concluded that the loan-splitting approach in CRR would likely result in lower capital charges over the life of the loan relative to two separate loans, as declining loan balances will show up first in the higher-risk part.

In addition to the above, Sweden has applied a 25% risk weight floor for mortgage risk weights derived by firms using the IRB approach. Finansinspektionen (the Swedish regulator) reports that this requirement delivers sizeable increases in capital requirements for some Swedish banks.

Figure 13: SA risk weights applied to residential mortgages

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>Korea</th>
<th>US</th>
<th>India</th>
<th>Australia</th>
<th>Brazil</th>
<th>Saud Arabia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows</td>
<td>35%</td>
<td></td>
<td>50%</td>
<td>50%</td>
<td>35% - 100%</td>
<td>50% or 100%</td>
<td>100%</td>
</tr>
<tr>
<td>loan-splitting</td>
<td></td>
<td>50%</td>
<td>50%</td>
<td>50% - 75%, depending on LTV</td>
<td>35% - 100%, depending on LTV</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
Figures 14, 15 and 16 below illustrate the differences in the SA risk weights applied by different jurisdictions to retail exposures, commercial real estate (CRE) exposures, and public sector enterprise exposures. As can be seen, the US has implemented tougher requirements than the Basel framework in all three of these areas, and India has exceeded the Basel requirements in two areas.

"The US has implemented tougher requirements than the Basel framework in all three areas"

**Figure 14: SA risk weight for retail exposures**

<table>
<thead>
<tr>
<th>Basel</th>
<th>US</th>
<th>Australia</th>
<th>India</th>
<th>Brazil</th>
</tr>
</thead>
<tbody>
<tr>
<td>75%</td>
<td>100%</td>
<td>100%</td>
<td>Consumer credit loans assigned a minimum 125% risk weight</td>
<td>Long-term revolving retail exposures have a 150% risk weight</td>
</tr>
</tbody>
</table>

**Figure 15: SA risk weight for CRE exposures**

<table>
<thead>
<tr>
<th>Switzerland</th>
<th>Korea</th>
<th>Basel</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some CRE loans receive a risk weight &lt;100%</td>
<td>Applies risk weight of counterparty or 100%, whichever is lower</td>
<td>100%</td>
<td>150%</td>
</tr>
</tbody>
</table>

**Figure 16: SA risk weights for public sector enterprise (PSE) exposures**

<table>
<thead>
<tr>
<th>Australia</th>
<th>Basel</th>
<th>US</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% risk weight applied to overseas PSEs as well as domestic PSEs</td>
<td>0% risk weight applied to claims on domestic PSEs</td>
<td>20% risk weight for domestic PSEs</td>
<td>Risk weights for domestic PSEs set equivalent to risk weights for corporate exposures</td>
</tr>
</tbody>
</table>
Reasons for EU’s materially non-compliant RCAP grading
There were four main reasons why the BCBS RCAP concluded that the EU’s implementation of the risk-based capital standards was materially non-compliant. Two of these have already been discussed above: the application of ‘partial use exemptions’ for various types of credit exposures in the IRB approach for credit risk, and the allowance for secured loans to be split into two parts. The two other important deviations from the Basel framework relate to capital requirements for credit risk on exposures to small and medium-sized enterprises (SMEs), and CVA exemptions.

With regard to SME loans, the EU reduces the capital requirements for credit risk on exposures to SMEs, both in the EU and abroad. It does this by allowing banks to multiply the capital requirement by a factor of 0.761918.

With regard to the CVA exemptions, banks subject to the CRR can exclude exposures to pension funds, Member State central governments, regional governments and local bodies wherever they qualify for a 0% risk weight under the SA for credit risk, as well as qualifying non-financial end-users. These exclusions are not included in the Basel framework.

The RCAP concluded that both of these approaches materially boost some EU bank capital ratios.

Leverage ratio
Figure 17 illustrates the variations in the way that the Basel leverage ratio framework is going to be applied in different jurisdictions. As can be seen, there are some large differences: G-SIBs in Japan and continental EU countries are likely to only have to satisfy a minimum leverage ratio requirement of 3%, whereas in the UK and China the minimum G-SIB LR will be around 4%, and for US and Swiss G-SIBs it will be 5%.

Figure 17: Differences in leverage ratio (LR) requirements

<table>
<thead>
<tr>
<th>Country</th>
<th>Basel</th>
<th>UK</th>
<th>China</th>
<th>US</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan, Hong Kong, Singapore</td>
<td>3% min LR</td>
<td>Non-systemic firms: 3%*</td>
<td>4% min LR</td>
<td>SA firms: no LR requirement</td>
<td>Non-systemic firms: 3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Systemic firms: 3% + 0.35<em>SRB buffer + 0.35</em>CCyB buffer</td>
<td></td>
<td>Advanced approaches firms: 3% min LR</td>
<td>Systemic firms: 5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[implied LR for G-SIB = 4%]</td>
<td></td>
<td>G-SIBs: 3% min + 2% buffer</td>
<td>At least 3.5pp must be held in CET1 capital and the remainder in AT1 instruments with a CET1 trigger point of 7%</td>
</tr>
</tbody>
</table>

* In the UK, the LR definition will shortly be revised to exclude claims on central banks from the leverage exposure measure. Other things equal, this would deliver a reduction in required capital. To compensate for this, the UK’s minimum LR requirement will be increased to 3.25%.

In November 2016, the European Commission put forward draft amendments to the CRR and CRD-IV capital requirements. As well as incorporating various elements of the ‘Completing Basel III’ reforms that had been agreed in Basel, this amendment also proposed extending the SME carve-out. The current EU capital reduction of 23.81% for an exposure to an SME applies only to loans that do not exceed €1.5 million. If the proposals from the Commission are implemented, SME exposures that exceed €1.5 million will also be eligible for reduced capital requirements: there will be a 23.81% capital reduction for the first €1.5 million portion of the exposure and a 15% reduction for the remaining part of the exposure above the €1.5 million threshold.
**Total loss-absorbing capacity (TLAC)**

Basel III requires that G-SIBs must have sufficient loss absorbing and recapitalisation capacity available to implement an orderly resolution that will minimise any impact on financial stability, ensure the continuity of critical functions, and avoid exposing taxpayers to loss. There are two TLAC standards in Basel III; one expressed in terms of risk-weighted assets, and one expressed in terms of unweighted assets (i.e. a leverage ratio exposure measure). These TLAC requirements can be met with instruments that are eligible for the minimum regulatory capital requirement (typically common equity), plus debt liabilities that meet certain criteria.

From January 2022, the Basel TLAC requirements will be:

<table>
<thead>
<tr>
<th>TLAC instruments</th>
<th>RWA</th>
<th>≥18%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage Exposure Measure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The 18% minimum TLAC risk-weighted requirement excludes capital buffers. Including these buffers — the CCB, the G-SIB buffer, and firm-specific Pillar 2 supervisory buffers — gives a total Basel capital requirement of around 23%.

As of end-June 2017, all of the BCBS members that are home jurisdictions to G-SIBs, except China, had finalised their TLAC frameworks. In addition, Canada, Australia, Hong Kong, Korea, Brazil, the EU, India, Saudi Arabia and Singapore had indicated their intention to apply the TLAC framework to the D-SIBs operating in their jurisdictions; among these, only Canada had published its framework by September 2017.

As can be seen from Figure 18, the UK, Canada, the US and Switzerland have all implemented higher TLAC requirements (in one or more dimensions) than the Basel III framework. Amongst these, the Swiss approach is notably tougher than the rest.

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**Figure 18: Differences in end-state TLAC frameworks**

<table>
<thead>
<tr>
<th>Japan, EU, Sweden</th>
<th>UK</th>
<th>Canada</th>
<th>US</th>
<th>Switzerland</th>
</tr>
</thead>
</table>
| Basel compliant   | • For G-SIBs, MREL is ≥20% of RWAs. MREL defined as higher of:  
                   • 2x(Pillar 1 + Pillar 2A); or higher of 2x LR requirement or  
                   • 6.75% of leverage exposures  
                   • For D-SIBs, MREL is higher of:  
                   • 2x(Pillar 1 + Pillar 2A); or 2x LR requirement | • Minimum risk-based TLAC ratio of ≥21.5% of RWAs  
                                                                                   • Minimum TLAC LR of ≥6.75%  
                                                                                   • D-SIBs expected to hold buffers above the minimum TLAC ratios.  
                                                                                   • With buffers, total risk-weighted capital requirement for DSIB ≥25% of RWAs | • US approach includes both a TLAC requirement and a long-term debt requirement  
                                                                                   • Min risk-based TLAC ratio: 18% of RWA + buffer  
                                                                                   • Min TLAC LR: 7.5% of leverage + buffer  
                                                                                   • L-T debt: 6% of RWA + G-SIB surcharge  
                                                                                   • L-T debt: 4.5% of leverage | • Risk-based TLAC requirement ≥28.6% of RWAs, with capital buffers included (except CCyB)  
                                                                                   • Min TLAC LR requirement ≥10%  
                                                                                   • Swiss G-SIBs able to meet half their TLAC requirements with bail-in debt instruments |
| Japanese framework only applied to G-SIBs. In EU, all banks have to comply with bank-specific Minimum Requirements for own funds and Eligible Liabilities (MREL). MREL delivers a level playing field between G-SIBs and D-SIBs which pose similar systemic risks. | Applicable to G-SIBs and D-SIBs | There are currently no Canadian G-SIBs Canadian TLAC framework applicable to D-SIBs | TLAC rules apply to US G-SIBs and US intermediate holding companies of foreign G-SIBs with >$50bn in US non-branch assets | Applicable to G-SIBs |
C. Liquidity requirements

Of the 19 jurisdictions for which an LCR RCAP assessment has been undertaken, the regulations in 16 were found to be compliant and three were largely compliant. The main area of divergence relates to the assets that are deemed to qualify as high quality liquid assets (HQLA). As can be seen in Figure 19, four jurisdictions, including the EU, allow a broader range of assets to qualify as Level 1 HQLA than is allowed for in the Basel framework. In contrast, three jurisdictions have adopted a tougher approach than the Basel framework.

The BCBS RCAP concluded that the EU deviation delivered an average increase of 14pp in the reported LCR ratios of a sample of EU banks.

<table>
<thead>
<tr>
<th>EU</th>
<th>Saudi Arabia</th>
<th>India &amp; Australia</th>
<th>Basel</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-quality covered bonds qualify as Level 1 HQLA, whereas in Basel framework they count as Level 2A</td>
<td>All assets that the central bank accepts in a repo agreement qualify as Level 1 HQLA, regardless of whether the asset is traded in deep and liquid markets</td>
<td>India: All State government development loans qualify as HQLA. The RCAP reviewed features of these loans and concluded that they cannot be considered as sovereign debt securities in the context of HQLA.</td>
<td>Level 1 assets are largely limited to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Banknotes;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Central bank reserves (including required reserves) to the extent that the central bank allows them to be drawn down in times of stress;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Marketable securities representing claims on, or guaranteed by, sovereigns, central banks, public sector entities, the BIS, the IMF, the ECB or multilateral development banks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>China &amp; Brazil</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>China: For central bank reserves, only those that are ‘excess’ to minimum requirements are included as Level 1 HQLA.</td>
<td>In the US framework, covered bonds and private label RMBS do not count as HQLA.</td>
</tr>
<tr>
<td>Brazil: The Brazilian implementation limits the amount of central bank reserves that can be included in the stock of HQLA to ensure proper diversification of HQLA.</td>
<td>Whereas in Basel standard, covered bonds count as Level 2A HQLA and private label RMBS count as Level 2B</td>
</tr>
</tbody>
</table>

**Figure 19: Differences in LCR HQLA requirements**
Basel III is prescriptive about the application of stress testing in a number of areas, for example with respect to assessments of model estimates for wrong-way risk and counterparty credit risk. Basel III is not prescriptive, however, about whether or not regulators should require banks to undertake macroeconomic stress tests to help inform their Pillar 2 capital requirements. Reflecting this, different practices have emerged between different jurisdictions.

The most important differences between the jurisdictions that do undertake macroeconomic stress testing relate to the severity of the stress tests that are imposed, and whether or not individual bank results and required capital actions are published (see Figure 20). Given that 12 of the jurisdictions in our sample do not publish their stress test results, it is not possible to assess the relative degree of toughness of their macro stress testing frameworks.

Among the jurisdictions that do publish macro stress test results, the US and UK approaches have acted as the binding capital constraint for some banks, over-and-above all the capital requirements previously discussed in this publication. Evidence of this can be seen by the fact that the Federal Reserve Board required capital actions from one bank in each of its 2013 and 2014 stress tests. Similarly, in the UK, the PRA required capital actions from three banks as part of the 2014 stress test.

In contrast, in the 2016 EU macroeconomic stress test undertaken by the European Banking Authority and the European Central Bank, there was no published pass/fail threshold. It was unclear, therefore, whether any capital actions resulted from the stress test.

"The US and UK stress testing approaches have have acted as the binding capital constraint for some banks"
The above discussion has illustrated the sometimes marked divergences in the ways that different jurisdictions have implemented Basel III. In reaching an overall assessment of the progress that is (or isn’t) being made towards a level international playing field in banking regulations, we also need to take into consideration any regulatory reforms that were not part of the Basel III framework.

We do not attempt to provide a comprehensive assessment of these additional reforms. Rather, we highlight a few of the most significant examples.

**Intermediate holding company requirements**

There are also important differences with respect to requirements for foreign banks to establish an intermediate holding company (IHC). In the US, the Federal Reserve requires foreign banks with $50bn or more in US non-branch assets to establish an IHC over the relevant bank’s US banking and non-banking subsidiaries.

The implication of this requirement is that these IHCs must meet the same risk-based capital, capital planning, and leverage standards that are applicable to US banks with $50bn or more in total assets. In addition, the Federal Reserve’s TLAC and minimum debt rule requires IHCs of foreign banks that are G-SIBs to maintain a certain amount of internal TLAC (including a certain percentage of debt) issued to their foreign parent company.

Non-US banks view the US IHC requirements as excessive because a non-US bank’s ultimate parent is already supervised and capitalised at the consolidated level, including its US operations, under the applicable banking standards applied in the jurisdiction where the bank is headquartered. Requiring such capital and liquidity at the US IHC level results in requirements that can often exceed what would be required if the US activities were treated as part of the IHC’s consolidated parent.

No other jurisdiction currently has an equivalent IHC requirement in place. However, something similar is likely to be introduced in the EU. The European Commission has proposed that non-EU headquartered banks with two or more institutions established in the EU, and which are either identified as a G-SIB or have entities in the EU with total assets of at least €30bn, should be required to establish an IHC in the EU.

In a recent speech on the impact of geography on the geometry of finance, Bank of England Deputy Governor Sam Woods commented on IHC requirements. He said “We are not persuaded that these developments are a good idea.” Instead, he called for deeper cooperation between supervisors19.

**Trade transparency**

Finally, in the EU, MiFID-2 and the accompanying regulation (MiFIR) will introduce a wide range of reforms relating to pre- and post-trade transparency of prices; rules for the provision and receipt of investment research requiring research to be unbundled from trade execution; increased reporting requirements; and increased requirements for market participants to take all sufficient steps to ensure and demonstrate best execution for their clients. At this stage, most other BCBS members have not indicated plans to introduce similar reforms in their jurisdictions.

In the US, the Dodd-Frank Act introduced requirements for some pricing and transaction data to be publicly reported as soon as technologically practical after execution.

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19 See speech by Sam Woods, 4 October 2017, “Geoﬁnance”
Implications of the international differences in regulatory requirements

Overall, it is clear from this assessment that there are a number of material divergences in the way that different jurisdictions have implemented their post-crisis reforms. On balance, more of these divergences relate to standards being adopted that are tougher than what was agreed in Basel. In particular, Sweden, Hong Kong, Switzerland, Singapore, the US and the UK have each adopted (to varying degrees) tougher regulations than the Basel framework. But, there are also a number of instances where jurisdictions have adopted weaker regulations than the Basel agreement.

Given the size of these differences, it seems likely that there will be implications for competition. Internationally active banks will need to think how to optimise their allocation of capital and liquidity across different jurisdictions. At this stage, however, it is difficult to determine what the new steady state position is likely to be. That is because the transition periods for implementation of the Basel III reforms extend out to 2019 and beyond, and also because the BCBS are still negotiating additional regulatory reforms in the ‘Completing Basel III’ agenda.

Inevitably, higher capital and liquidity requirements will put downward pressure on banks’ returns on equity. This effect will be more pronounced in those jurisdictions that have applied tougher regulatory requirements. Banks could respond to this through some combination of: charging higher prices for products and services, withdrawing from some low-return activities, ceasing to service some low-return clients, and actions to migrate assets off their balance sheets.

A number of examples of changes in participation in certain markets have already been seen. For example, in recent years there have been notable changes in foreign bank participation in the US tri-party repo market triggered by the different regulatory requirements imposed on US and non-US banks. And, reflecting the higher capital requirements that are being imposed on systemically important banks, a number of the largest banks in various jurisdictions have been reducing their balance sheet sizes. While this latter development was the intended outcome of the post-crisis reforms, this paper illustrates that the incentives for systemically important banks to downsize vary considerably between different jurisdictions.

"There is a strong likelihood that international competition will be impacted by the different ways in which countries have implemented post-crisis regulatory reforms"

The ratios between risk-weighted capital requirements and leverage ratio capital requirements are also different in different jurisdictions. Reflecting this, the incentives for banks to hold riskier assets will differ between jurisdictions. Similarly, the differences between jurisdictions in LCR standards will provide different incentives for banks to hold deposits and different forms of high quality liquid assets.

It is possible that some banking activities will migrate to jurisdictions with lighter regulatory burdens. Additionally, the different regulatory frameworks could contribute to persistent differences in the profitability of banks operating in different jurisdictions.

Historically, banks have very rarely decided to relocate their headquarters. This is because, in addition to prudential regulatory requirements, there are a number of other factors that influence where firms decide to locate. Important considerations in this regard include: tax, certainty of the rule of law, ease of access to related services and to deep and liquid wholesale markets, the availability of skilled labour, transport links, and the availability of required physical infrastructure.

Reflecting the broad range of these considerations, it seems unlikely that there will be many banks that will decide to relocate their headquarters as a result of the international regulatory differences that we have highlighted in this paper. That said, one bank has recently decided to move its headquarters—Nordea Bank AB. In that regard, it is interesting to note that Per Bolund, Sweden’s financial markets minister, recently said that Sweden will review its regulatory framework in the light of Nordea’s relocation decision.

In his recent speech on the impact of geography on the geometry of finance, Bank of England Deputy Governor Sam Woods said that “the next challenge will be striking the right balance on geofinance”. He warned that “bringing up the borders in wholesale finance would be regrettable for all sides”. The evidence presented in this paper suggests that there is a strong likelihood that international competition will be impacted by the different ways in which countries have implemented post-crisis regulatory reforms.
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