Effect of Basel III on bank business models
Patricia Jackson head of EMEIA Financial regulation
April 2014

Overall effect of Basel III
Components of Basel III

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 1 capital</td>
<td>4%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
</tr>
<tr>
<td>G-SIB surcharge</td>
<td>Phase in</td>
<td>Phase in</td>
<td>Phase in</td>
<td>Phase in</td>
<td>1%-2.5%</td>
<td>1%-2.5%</td>
</tr>
<tr>
<td>Countercyclical buffer</td>
<td>0%-0.625%</td>
<td>0%-1.25%</td>
<td>0%-1.875%</td>
<td>0%-2.5%</td>
<td>0%-2.5%</td>
<td>0%-2.5%</td>
</tr>
<tr>
<td>Capital conservation buffer</td>
<td>0.625%</td>
<td>1.25%</td>
<td>1.875%</td>
<td>2.5%</td>
<td>2.5%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Various new capital buffers introduced

- Extra SIFI buffer depending on risk factors included
- Including additional requirement for over heating buffer

Banks

- Capital conservation
- Additional requirement for overheating
- Indicative 9.2.5%

SIFIs

- Capital conservation
- Base level 2.5%
- Extra SIFI buffer 2.5%
- Indicative 13%

Boom

Recession

Boom

Recession
UK Banks CET1 ratios – current and fully loaded CRD IV basis

<table>
<thead>
<tr>
<th>UK Banks</th>
<th>Current 2012</th>
<th>Current 2013</th>
<th>CRD IV End Point 2012</th>
<th>CRD IV End Point 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barclays</td>
<td>10.9</td>
<td>13.2</td>
<td>8.2</td>
<td>9.3</td>
</tr>
<tr>
<td>HSBC</td>
<td>11.4</td>
<td>13.6</td>
<td>9.0</td>
<td>10.9</td>
</tr>
<tr>
<td>LBG</td>
<td>11.6</td>
<td>14.0</td>
<td>8.1</td>
<td>10.3</td>
</tr>
<tr>
<td>Nationwide</td>
<td>12.3</td>
<td>12.2</td>
<td>9.1</td>
<td>13.1</td>
</tr>
<tr>
<td>RBS</td>
<td>10.3</td>
<td>10.9</td>
<td>7.7</td>
<td>8.6</td>
</tr>
</tbody>
</table>

► CRD IV End Point is the firm’s best efforts estimate of the position applying the final CRD IV definition of capital and revised RWA treatments.
► Basel Committee Monitoring suggests a similar picture in other jurisdictions with capital shortfalls contracting and ratios on the increase.
► Basel III and CRDIV Transitional Arrangements seek to phase in the new measures without detriment to the macro economy.

Impact of Basel III plus G-SIB requirements on the amount of common equity Tier 1 capital – 2013 EY / IIF survey

Substantial increase in CET1

<table>
<thead>
<tr>
<th>Increase</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>30% of banks</td>
<td>30% - 50%</td>
</tr>
<tr>
<td>10%</td>
<td>50% - 100%</td>
</tr>
<tr>
<td>20%</td>
<td>+100%</td>
</tr>
</tbody>
</table>
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Percentage increase in eligible higher quality liquid assets under Basel III relative to pre-crisis

<table>
<thead>
<tr>
<th>Percentage Increase</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% - 50%</td>
<td>30%</td>
</tr>
<tr>
<td>50% - 75%</td>
<td>10%</td>
</tr>
<tr>
<td>75% - 100%</td>
<td>12%</td>
</tr>
<tr>
<td>100% - 125%</td>
<td>15%</td>
</tr>
<tr>
<td>125% - 150%</td>
<td>3%</td>
</tr>
<tr>
<td>150% - 175%</td>
<td>5%</td>
</tr>
<tr>
<td>200%+</td>
<td>25%</td>
</tr>
</tbody>
</table>

Large increases in liquid asset buffers

Percentage of the balance sheet (under the LCR regime) that will be accounted for by the liquid assets

<table>
<thead>
<tr>
<th>Percentage of Balance Sheet</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% - 20%</td>
<td>47%</td>
</tr>
<tr>
<td>Above 20%</td>
<td>26%</td>
</tr>
<tr>
<td>5% - 10%</td>
<td>20%</td>
</tr>
<tr>
<td>2% - 5%</td>
<td>4%</td>
</tr>
<tr>
<td>0% - 2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The proportion of the balance sheet not available for lending is 20%+.
Targeted ROE, pre-2008 crisis relative to current

Overall effect is to put downward pressure on rate of return on equity

Investor acceptance of lower ROE

Investors are not accepting lower ROE
- Driving business change
- Search for yield
Setting strategy – six way adjustment in business models is needed

- Organisation structure has to change
- But they cannot rise in all areas
- Capital efficiency must increase
- Margins have to rise
- Cost reduction including bonuses
- Competition for talent will make this more difficult
- ROE has to fall
- Leverage needs to fall
- Unprofitable businesses have to be exited
- Potential effects on the economy

Some business will move to non banks – will constrain margin increases in some areas

A wide range of regulatory drivers impacting decisions about business structure, legal entities, and booking models...

Specific drivers of structural change

Global bank
- Regulatory capital requirements
- Risk governance and appetite
- Leverage
- US IHC and other forms of subsidiarization
- Cross-border activities
- Activity-based reforms and ringfencing (Vickers, Volcker, Liikanen)
- Country-by-country reporting (CRD)
- Global booking center pushback
- Key country regulators
- Competitor funding stress and regulatory requirements (Fed, ECB)
Effect on lending

Consequences of higher / binding capital requirements EY / IIF survey 2014

More activity flows into shadow banking or does not occur

Banks are already exiting lines of activity – Indicated in early 2014 EY / IIF risk management survey results

Will the combined liquidity and capital changes under Basel III cause your firm to consider making any of the following changes to your business model?

- Shifting out of complex less liquid instruments
- Exiting lines of business
- Exiting geographies
- Streamlining legal entity structures
- None of the above
- Other

Shadow banking activity now higher than the 2007 level - $71 Trillion in 2013*

FSB, Global Shadow Banking report 2013
Basel III: indications of changes to pricing for liquidity and credit lines…

Changes to charging of counterparties/customers for liquidity

<table>
<thead>
<tr>
<th>What changes have been made</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>50%</td>
</tr>
<tr>
<td>Charges on drawn lines have been increased</td>
<td>42%</td>
</tr>
<tr>
<td>Charges have been increased for lines of credit</td>
<td>47%</td>
</tr>
<tr>
<td>Intraday liquidity charges have been introduced or increased</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: 2013 EY-IIF survey “Remaking financial services: risk management five years after the crisis, A survey of financial institutions”

Basel III: effects on loan pricing still largely uncertain…

Effect of higher capital & liquidity costs on margins for unsecured corporate loans

<table>
<thead>
<tr>
<th>Margin Increase</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td>62%</td>
</tr>
<tr>
<td>Less than 50 basis points</td>
<td>18%</td>
</tr>
<tr>
<td>50 to 100 basis points</td>
<td>11%</td>
</tr>
<tr>
<td>101 to 150 basis points</td>
<td>7%</td>
</tr>
<tr>
<td>151 to 200 basis points</td>
<td>2%</td>
</tr>
<tr>
<td>Above 200 basis points</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: 2013 EY-IIF survey “Remaking financial services: risk management five years after the crisis, A survey of financial institutions”
Drivers of regulatory reform: decline in cross-border claims...cyclical or structural?

- Overall cross-border claims are down 13% since 2007.
- Claims on developed countries are down 19% with much of it driven by Europe.
- Claims on emerging countries are up 38% but from very low base.

External position of banks vis-à-vis location of claim ($B)

Source: BIS; * As of March 2013

Banks deleveraging and exiting many areas of business where return on capital too low

- Project finance
- Infrastructure lending
- Energy finance
Complex structures are growing up outside banking in shadow banking

The leverage ratio could drive more activity into shadow banking

Leverage has generally increased in booms to accommodate growth. With leverage ratio in place in the US this was not as true of US banks 2007/8. But the added leverage was in structured products.

US ‘commercial’ leverage did not include embedded leverage structured products

**Does it matter if lending moves into shadow banking?**

- Shadow banks may not be long term participants.
- When yields pick up elsewhere, they may exit – or not grow books.
- Or if default rates rise higher than expected shadow banks could also exit.

**Shadow banks place less focus on intrinsic credit worthiness**

Different types of lenders place less reliance on underlying credit assessment:

- **Banks**
  - Credit assessment/ internal external data
  - Diversification of lending

- **Structured products**
  - Credit enhancements
  - Diversification of pools

- **Institutional investors**
  - Security
  - Credit enhancement

- **Peer to peer**
  - Diversification of lenders
  - Credit assessments, internal/external data

Trading books

Overall effects on trading business model

Percentage increase in capital requirements for trading book from Basel II to the combined Basel 2.5 and Basel III:

- 0-50%: 11%
- 50-100%: 13%
- 100-200%: 36%
- 200-300%: 21%
- Over 300%: 10%

Percentage increase in capital charges on OTC derivatives for CCR alone (i.e. Basel III CCR charges, including CVA charge relative to CCR charges under Basel 2.5):

- 0-10%: 20%
- 10-20%: 23%
- 20-30%: 41%
- Over 30%: 16%

Likely effects of the proposal in FTR
Vickers /Dodd Frank and Liikanen

- Structural reform will also make trading activity more costly

Basel III is changing the shape of markets

Capital effect
- Banks exiting capital intensive position taking
- Some contracts no longer available
  - For example, longer dated swaps
- Or liquidity could fall and costs rise
  - Illiquid markets could become more illiquid
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Indications of greater concentration of fixed income & currency market: higher regulatory barriers to entry?

- The top five investment banks have increased their market share of fixed income / currency revenue relative to the top 15 global players since 2010.

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>52%</td>
</tr>
<tr>
<td>2011</td>
<td>53%</td>
</tr>
<tr>
<td>2012</td>
<td>55%</td>
</tr>
<tr>
<td>2013</td>
<td>56%</td>
</tr>
</tbody>
</table>

Source: Company reports

Will Basel III make bank lending more stable?

- 2013 – first half

EY
Countercyclical buffers

A positive development

Building up capital in good times and allowing draw down in recession – but will markets allow drawdown. Authorities must convince markets that 4.5% is enough – rhetoric important

Capital conservation rebuilt from earnings – constraints on pay-out through share buybacks, dividends, bonuses etc.

The question is the magnitude of the effect

IRB bank PDs must be are stabilised for capital conservation to work – point in time PD effect much larger than buffer.

Mortgage PDs can go up 5x boom to recession

Point in time in PDs also distort risk signals – essential supervisors insist on through the cycle PDs

Taken from: Jackson, Patricia, ‘A false sense of security: lessons for bank risk management from the crisis’, 2010
The countercyclical buffer

In theory looks like a good idea but many issues, including political

But acting to increase capital required by 2.5 percentage points when house prices are rising by 15%-20% per annum may have little effect

2% points on capital requirements will not change lending in a bubble
Other tools need to be considered
• LTV caps
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Link between macro supervision & monetary policy

Whole level of interest rates might need to be raised

The leverage ratio could contain growth in balance sheets

But it will drive distortions in activity as well as driving business into shadow banking

<table>
<thead>
<tr>
<th></th>
<th>Bank A</th>
<th>Bank B</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality mortgages</td>
<td>Sub-prime uncollaterised loans</td>
<td></td>
</tr>
<tr>
<td>Leverage capital</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Capital relative to risk</td>
<td>Very high</td>
<td>Low</td>
</tr>
</tbody>
</table>

Puts pressure on ROE for Bank A but not Bank B
Example of the Coventry Building Society

Almost all loans are residential mortgages

<table>
<thead>
<tr>
<th>CET1</th>
<th>22.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Modigliani-Miller

Why does relative capital for one bank against another matter?

- Higher capital = lower borrowing costs / cost of equity
- But long run concept – Long run could be 20-30 years

- Asymmetry of information vis a vis counterparties & investors.
  - Market for lemons

Source: Jackson, P. Birchler, U. ‘Trust in Modigliani-Miller theorem is misguided, say former BCBS members’
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References


EY / IIF, Risk Management Survey 2013: Five years after the crisis.

FSB, ‘Global Shadow Banking report’ 2013

Jackson, 2014 Shadow banking and new lending channels - past and future, in Morten Balling and Ernest Gnan (Eds.), 50 years of money and finance: Lessons and challenges, Vienna, Larcier for SUERF - the European Money and Finance Forum (www.suerf.org)