Risk & Capital Management under Basel III

London, 15 February 2011
Agenda

- Basel III – changes to capital rules
  - Definition of capital
  - Minimum capital ratios
  - Leverage ratio
  - Buffer requirements
  - Systemically important financial institutions

- Basel III – the liquidity proposals
  - Liquidity coverage ratio
  - Net stable funding ratio
## The new elements

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<td>• Capital definition</td>
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<td>Liquidity Standards</td>
<td>• Liquidity Coverage Ratio</td>
</tr>
<tr>
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<td>• Net Stable Funding Ratio</td>
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</tbody>
</table>
The proposals in summary

- Tightening the capital requirements
- Raising the quality, consistency and transparency of the capital base through stricter rules on eligibility of instruments to be included in capital and introduction of a new core Tier 1 ratio, “Common Equity Tier 1” (CET1)
- Enhancing risk coverage through ‘strengthening’ counterparty credit risk capital requirements arising from derivatives, repurchase transactions and securities financing
- Supplementing risk-based capital requirements with a non-risk-based leverage ratio
- Reducing pro-cyclicality and promoting countercyclical capital buffers
- Introducing a global liquidity standard comprising a stressed liquidity coverage ratio and a longer-term structural liquidity ratio
- Addressing systemic risk and interconnectedness, with more specific proposals promised
Changes to the capital adequacy framework

Focus on Common Equity – Core Tier 1 ratio as the key ratio

Harmonised regulatory adjustments (deductions) to be made from Common Equity Tier 1

Greater detail of public disclosures
Capital Definition

Total regulatory capital will consist of the following elements:

- Common Equity Tier 1
- Additional Tier 1 Capital

Tier 3 capital will be eliminated.
Capital Base

**Tier 1 capital**

**Common Equity Tier 1**
- Common shares that meet the criteria for classification as common shares for regulatory purposes
- Stock surplus (share premium) resulting from the issue of instruments included Common Equity Tier 1
- Retained earnings
- Accumulated other comprehensive income and other disclosed reserves
- Common shares issued by consolidated subsidiaries and held by third parties (i.e. minority interest) that meet the criteria for inclusion in Common Equity Tier 1
- Regulatory adjustments applied in the calculation of Common Equity Tier 1

**Additional Tier 1 capital**
- Instruments that meet the criteria for inclusion in Additional Tier 1 capital (and are not included in Common Equity Tier 1)
- Stock surplus (share premium) resulting from the issue of instruments included in Additional Tier 1 capital
- Instruments issued by consolidated subsidiaries and held by third parties that meet the criteria for inclusion in Additional Tier 1 capital and are not included in Common Equity Tier 1
- Regulatory adjustments applied in the calculation of Additional Tier 1 Capital

**Tier 2 capital**
- Instruments that meet the criteria for inclusion in Tier 2 capital (and are not included in Tier 1 Capital)
- Stock surplus (share premium) resulting from the issue of instruments included in Additional Tier 2 capital
- Instruments issued by consolidated subsidiaries and held by third parties that meet the criteria for inclusion in Tier 2 capital and are not included in Tier 1 capital
- Certain loan loss provisions
- Regulatory adjustments applied in the calculation of Tier 2 capital
**Capital Adjustments**

### Deductions from Core Equity Tier 1 (general rule)
- Goodwill and intangibles (not new in EU)
- Deferred tax assets (limited recognition if due to timing differences)
- Shortfall of provisions over expected loss
- Defined benefit pension assets
- Investments in Core Equity Tier 1 instruments of banking, financial and insurance entities

### Other deductions
- Investments in other Tier 1 or Tier 2 instruments of banking, financial and insurance entities

### Risk weighting of former deductions (1250%)
- Certain securitization exposures
- Non-payment/delivery on non-DvP and non-PvP transactions
- Significant investments in commercial entities
In addition to the full criteria published in December 2010, all Additional Tier 1 and Tier 2 capital instruments must have the following feature:

- They can be either converted to ordinary equity or written down, at the discretion of the relevant authority, at the earlier of,
  
a) a decision by the authority that the firm requires this to remain viable, or
  
b) the decision to make an injection of public sector funds to ensure the viability of the firm.

- Unless national law already allows this.

All new instruments issued after 1 Jan 2013 must have the above feature to qualify.

Existing instruments which qualify under the old rules still qualify after that date BUT will be given a haircut, increasing by 10% p.a. after 1 Jan 2013.
Create buffers in good times that can absorb shocks in periods of stress

In addition to the minimum capital requirements for Common Equity Tier 1, Tier 1 and Total Capital, two types of buffers are introduced:

- **Capital Conservation Buffer:** Should be available to absorb banking sector losses conditional on a plausible severe stressed financial and economic environment.

- **Countercyclical Buffer:** Extends capital conservation range during periods of excess credit growth or other indicators deemed appropriate by supervisors for their national contexts.
Capital Conservation Buffer

- 2.5% - points added to the minimum ratios
- To be built up in good times and available in period of stress
- Inclusion in target capital ratios by end of transition period (2018)
- Restriction on distributions (dividends, share buy-backs and bonuses) if the full buffer requirement is not met
Countercyclical Capital Buffer

- Up to 2.5%-points added to the minimum ratios
- Declared by any country which is experiencing overheated credit markets – preannouncement of decision by up to 12 months
- Can be relaxed when the market ‘cools down’ again – takes effect immediately with announcement
- Restriction on distributions (dividends, share buy-backs and bonuses) if the buffer requirement is not met
**Countercyclical Capital Buffer**

- Calculated as weighted average of buffers deployed across all jurisdictions where a firm has credit exposure

\[
\text{Countercyclical Capital Buffer} = (0.6 \times 0.02) + (0.4 \times 0.01) = 0.016 = 1.6\%
\]
# Capital Ratios (by 1/1/2018)

<table>
<thead>
<tr>
<th></th>
<th>Common Equity (after deductions)</th>
<th>Tier 1 capital</th>
<th>Total capital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum</strong></td>
<td>4.5%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Capital conservation buffer</strong></td>
<td>2.5%</td>
<td>2.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Minimum plus conservation buffer</strong></td>
<td>7%</td>
<td>8.5%</td>
<td>10.5%</td>
</tr>
<tr>
<td><strong>Countercyclical capital buffer</strong></td>
<td>0% - 2.5%</td>
<td>0% - 2.5%</td>
<td>0% - 2.5%</td>
</tr>
<tr>
<td><strong>Upper end of minimum capital</strong></td>
<td>9.5%</td>
<td>11%</td>
<td>13%</td>
</tr>
</tbody>
</table>

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## Capital Ratios – Transitional arrangements

From 1 January:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Min Common Equity Ratio</td>
<td></td>
<td></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>
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<tr>
<td>Capital conservation buffer</td>
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<td></td>
<td></td>
<td>0.625%</td>
<td>1.25%</td>
<td>1.875%</td>
</tr>
<tr>
<td>Min common equity + cap</td>
<td>3.5%</td>
<td>4.0%</td>
<td>4.5%</td>
<td>5.125%</td>
<td>5.75%</td>
<td>6.375%</td>
<td>7.0%</td>
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<tr>
<td>conservation buffer</td>
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<tr>
<td>Phase in of deductions from</td>
<td>20%</td>
<td>40%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
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</tr>
<tr>
<td>Common Equity</td>
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<tr>
<td>Minimum Tier 1</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.5%</td>
<td>5.5%</td>
<td>6.0%</td>
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<tr>
<td>Minimum Total Capital</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
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<td>8.0%</td>
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<td>8.0%</td>
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<tr>
<td>Min Total Capital + Capital</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.625%</td>
<td>9.25%</td>
<td>9.875%</td>
</tr>
<tr>
<td>Conservation buffer</td>
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<tr>
<td>Capital instruments that no</td>
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<tr>
<td>longer qualify as Tier 1 or</td>
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<td>Tier 2</td>
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</tbody>
</table>

- **Shading indicates transition periods**

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Leverage Ratio

\[
\frac{\text{Tier 1 Capital}}{\text{Exposure}} \geq 3\%
\]

- A ‘simple’, non-risk based, ‘backstop’ measure
- To be calculated as an average over the quarter
- Supervisory monitoring to start on 1 January 2011
- Ratio to be tested during a parallel run period from 1 January 2013 to 1 January 2017
- Final adjustments in first half of 2017 with a view to migrating to a Pillar I treatment in January 2018
- Banks will be required to disclose beginning in January 2015
Leverage Ratio

Capital measure (numerator)
- Tier 1 (i.e. Common Equity Tier 1 and Additional Tier 1)

Exposure measure (denominator)
- On balance sheet exposures excluding derivatives, net of specific provisions and valuation adjustments
- No netting of collateral or other credit risk mitigants
- No netting of loans and deposits
- Securities Financing Transactions and repos can be netted under Basel II rules
- Derivatives converted to a ‘loan equivalent’ value per Basel II rules (MTM plus add-on)
- Other off balance sheet items converted at 100% CCF, (except cancellable lines of credit, at 10%)
Approaches to address systematically important financial institutions could include any of the following and/or combinations:

- Capital Surcharges – The “Swiss Finish”
- Liquidity Surcharges
- Ban on business (eg. “Volcker Rule” in the US)

In parallel, work-in-progress on Recovery and Resolution Regimes.
The Basel III liquidity package

Liquidity Coverage Ratio (LCR) (introduced 2015)

Net Stable Funding Ratio (NSFR) (introduced 2018)

Monitoring tools

Observation period for LCR and NSFR starts in 2011
Liquidity Coverage Ratio

30-day liquidity coverage ratio designed to ensure short-term resilience to liquidity disruptions

Liquidity Coverage Ratio = \[ \frac{\text{Stock of High Quality Liquid Assets}}{\text{Net Cash Outflows over the next 30 calendar days}} \geq 100\% \]

Net Cash Outflows over the next 30 calendar days = Outflows – Min [inflows; 75% of outflows]
**LCR – Stress Scenario Conditions**

The scenario for this standard entails a combined idiosyncratic (institution specific) and market-wide shock that would result in:

- The run off of a proportion of retail deposits
- A partial loss of unsecured wholesale funding capacity
- A partial loss of secured, short-term financing with certain collateral and counterparties
- Contractual outflows that would arise from a downgrade in the bank’s public credit rating by up to and including 3 notches, including collateral posting requirements
- Increase in market volatilities that impact the quality of collateral or potential future exposure of derivative positions
- Unscheduled draws on committed but unused credit and liquidity facilities
- The potential need to buy back debt or honour non-contractual obligations in the interest of mitigating reputational risk

*The stress scenario incorporates many of the shocks experienced during the crisis*
## High Quality Liquid Assets

### Asset Characteristics

<table>
<thead>
<tr>
<th>Fundamental</th>
<th>Market-Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Low credit/market risk</td>
<td>• Active/sizeable market</td>
</tr>
<tr>
<td>• Ease/certainty of valuation</td>
<td>• Committed market makers</td>
</tr>
<tr>
<td>• Low correlation with risky assets</td>
<td>• Low market concentration</td>
</tr>
<tr>
<td>• Listed on recognized exchange</td>
<td>• Flight to quality</td>
</tr>
</tbody>
</table>

- ‘Ideally’ be eligible at central banks for intraday or overnight liquidity facilities BUT eligibility in itself does not constitute basis for such categorization

\[
\text{LCR} = \frac{\text{Stock of High Quality Liquid Assets}}{\text{Net Cash Outflows over the next 30 calendar days}} \geq 100\%
\]
Level 1 vs. Level 2 Assets

**Level 1 Assets**
- Cash
- Central Bank Reserves
- Sovereign and Supra-national bonds assigned 0% risk-weight under Basel II Standardized Approach
- Sovereign/Central Bank bonds not assigned a 0% risk weight:
  - Issued in domestic currency of the home sovereign or the sovereign in the country the risk is taken; or
  - Matching the currency of liquidity risk

**Level 2 Assets**
- Sovereign and Supra-national bonds assigned 20% risk-weight under Basel II Standardised Approach
- Corporate and Covered Bonds rated AA- by a recognised ECAI (or internally rated with a corresponding PD)
  - A minimum 15% haircut
  - For all assets, maximum price decline (haircut increase) over 30-day period in relevant period of stress not to exceed 10%
Restrictions on Level 1 and Level 2 Assets

Level 1 Assets

- Level 1 Assets can be included without limit in the ratio

Level 2 Assets

- Can only comprise up to 40% of the total of high quality liquid assets
- Maximum of 2/3 adjusted Level 1 assets that would exist after an unwind of all secured funding transactions

Stock of High Quality Liquid Assets

$$\text{LCR} = \frac{\text{Net Cash Outflows over the next 30 calendar days}}{} \geq 100\%$$
Calculation of Cash Outflows

Retail Deposits

- Term deposits >30 days with penalty: 0%
- Stable (Demand & term deposits <30 days): 5%
- Less Stable (Demand & term deposits <30 days): 10%

Unsecured Wholesale Funding

- Portion of corporate deposits with operational relationships covered by deposit insurance: 5%
- Stable small business customers: 5%
- Less Stable small business customers: 10%
- Deposits needed for operational purposes of legal entities: 25%
- Non-financial corporates, sovereigns, central banks and PSEs: 75%
- Other legal entity customers: 100%
**Calculation of Cash Outflows**

**Secured Funding**

- Transactions backed by L1 Assets with any counterparty: 0%
- Transactions backed by L2 assets with any counterparty days: 15%
- Transactions backed by assets not qualifying as highly liquid with domestic sovereigns, domestic central banks or domestic public sector entities as counterparty: 25%
- All other secured funding transactions: 100%

- Other items (Undrawn commitments, liabilities related to derivative transactions, ABCP, SIVs, etc) are included as well.

**LCR = \frac{\text{Stock of High Quality Liquid Assets}}{\text{Net Cash Outflows over the next 30 calendar days}} \geq 100\%**
**Calculation of Cash Inflows**

<table>
<thead>
<tr>
<th>Items</th>
<th>Weighting Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposits held at centralized institution of a network of co-op banks</td>
<td>0%</td>
</tr>
<tr>
<td>Operational deposits held at other financial institutions</td>
<td></td>
</tr>
<tr>
<td>Credit or liquidity facilities</td>
<td></td>
</tr>
<tr>
<td>Reverse repos and securities borrowing with L1 assets as collateral</td>
<td></td>
</tr>
<tr>
<td>Reverse repos and securities borrowing with L2 assets as collateral</td>
<td>15%</td>
</tr>
<tr>
<td>Amounts receivable from retail counterparties</td>
<td></td>
</tr>
<tr>
<td>Amounts receivable from non-financial wholesale counterparties</td>
<td>50%</td>
</tr>
<tr>
<td>(transactions not otherwise listed)</td>
<td></td>
</tr>
<tr>
<td>Reverse repos and securities borrowing with all other assets as collateral</td>
<td>100%</td>
</tr>
<tr>
<td>Amounts receivable from financial institutions from transactions not otherwise listed</td>
<td></td>
</tr>
<tr>
<td>Net derivative receivables</td>
<td></td>
</tr>
</tbody>
</table>

**LCR** = \[ \frac{\text{Stock of High Quality Liquid Assets}}{\text{Net Cash Outflows over the next 30 calendar days}} \] ≥ 100%

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**Net Stable Funding Ratio**

To promote more medium and long-term funding of the assets and activities of banks

\[
\text{NSFR} = \frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} > 100\%
\]

- To establish a minimum acceptable amount of stable funding based on the liquidity characteristics of an institution’s assets and activities *over a one year horizon*

- To ensure that long-term assets are funded with at least a minimum amount of stable liabilities.
Available Stable Funding

\[
\text{NSFR} = \frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} \geq 100\%
\]

Portion of non-maturity deposits and/or term deposits with maturities of less than one year that would be expected to stay with the institution for an extended period in an idiosyncratic stress event – includes stable and less stable retail and SME deposits

ASF Factors

- Portion of wholesale funding with maturities of less than a year that is expected to stay with the institution for an extended period in an idiosyncratic stress event
  - wholesale funding by non-financial corporates, sovereigns and PSEs with maturity <1yr (50%)
  - All other liabilities

- Capital
- Preferred stock with maturity of equal to or greater than one year
- Liabilities with effective maturities of one year or greater
### Required Stable Funding

#### Components of Required Stable Funding

<table>
<thead>
<tr>
<th>Component</th>
<th>RSF Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and unencumbered assets with maturity less than one year</td>
<td>0%</td>
</tr>
<tr>
<td>Claims on sovereigns, central banks, multilaterals with 0% risk-weight under Basel II Standardized Approach</td>
<td>5%</td>
</tr>
<tr>
<td>Corporate or covered bonds rated AA-or better; Claims on sovereigns, central banks, multilaterals with 20% RW under Basel II Standardized Approach with maturities over one year</td>
<td>20%</td>
</tr>
<tr>
<td>Gold, equities and other corporate and covered bonds rated A+ to A- with maturities over one year; other loans to non-financial corporate clients, sovereigns, central banks, PSEs with maturities less than one-year</td>
<td>50%</td>
</tr>
<tr>
<td>Residential mortgages</td>
<td>65%</td>
</tr>
<tr>
<td>Other retail and SME loans with maturities less than one year</td>
<td>85%</td>
</tr>
<tr>
<td>All other assets</td>
<td>100%</td>
</tr>
<tr>
<td>Off Balance Sheet Items (Undrawn amount of committed credit and liquidity facilities)</td>
<td>5%</td>
</tr>
</tbody>
</table>

Other contingent obligations: National supervisions to specify RSF factors based on national circumstances

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**NSFR** = \[
\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} \geq 100%
\]