Measures of increasing financial intensity
### IMF estimates of public support costs in 2008-2009 financial crisis

<table>
<thead>
<tr>
<th></th>
<th>Pledged</th>
<th>Utilised</th>
<th>Recovery</th>
<th>Net direct cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advanced economies</strong></td>
<td>6.2</td>
<td>3.5</td>
<td>0.8</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Emerging economies</strong></td>
<td>0.8</td>
<td>0.3</td>
<td>-</td>
<td>0.3</td>
</tr>
</tbody>
</table>

**Source:** IMF: *A fair and substantial contribution by the financial sector*, June 2010
Growth in lending and nominal income: UK 2005 – 2010

Leverage increased through the boom

Private debt stock (%YoY)
Nominal GDP (%YoY)
Mechanisms to increase loss absorption capacity and market discipline

- Bail-inable senior debt
- Capital surcharge and/or sub debt convertibility
- Resolvability & statutory bail-in

- Increase role of loss-absorbing capital
- Smooth resolution without disruption
  OR
  ‘Reserve army’ of capital to cover extreme events

- Resolution procedures which can rapidly impose losses/conversion on all liabilities (to extent required)
TBTF: Conditions for success of debt based solutions

- Large enough % of balance sheet junior to depositors
- Subject to write-down/conversion to equity in smooth process
- Long enough in maturity to avoid pre-crisis runs
- Held outside banking system and by investors able to take losses without knock-on asset fire-sale or debt default consequences

Required to address idiosyncratic failure of SIFI

Additionally required to address systemic risks of multiple failures
Frequency distribution of bank bond payouts

100% of principal and due interest

Observed in good times

Not observed in good times
Financial firms’ CDS and share prices

Firms included: Ambac, Aviva, Banco Santander, Barclays, Berkshire Hathaway, Bradford & Bingley, Citigroup, Deutsche Bank, Fortis, HBOS, Lehman Brothers, Merrill Lynch, Morgan Stanley, National Australia Bank, Royal Bank of Scotland and UBS.

CDS series peaks at 6.54% in September 2008.

Source: Moody’s KMV, FSA Calculations
Mechanisms to increase loss absorption capacity and market discipline

- **Capital surcharge and/or sub debt convertibility**
- **Bail-in able senior debt**
- **Resolvability & statutory bail-in**

- **Increase role of loss-absorbing capital**
- **Smooth resolution without disruption**
  - OR
  - ‘Reserve army’ of capital to cover extreme events

- **Resolution procedures which can rapidly impose losses/conversion on all liabilities (to extent required)**

- **Insured depositors**
- **Non-insured depositors**
- **Interbank & other counterparties**
- **Senior debt instruments**
- **Subordinated debt & Preferred stock**
- **Common equity**
Rigidities and vulnerabilities of debt contracts

- Bankruptcy costs: non-smooth adjustment
- Fire-sale costs
- Need for continual roll-over
- Multiple equilibria depending on interest rate
- Credit and asset price cycles
Measures of increasing financial intensity

- **US debt as a % of GDP by borrower type**

- **Global issuance of asset-backed securities**

- **Growth of interest rate derivatives values, 1987-2009**

- **FX Trading values & world GDP 1977-2007**

Source: Bank of England

Notes: Public issuance only. Full-year issuance, except for 2008 which is up to and including September 2008. Other ABS includes Auto, Credit Card and Student Loan ABS.