UK Banks
Stress Tests as a Tool for Ensuring Financial Stability

This year's UK bank stress results were released in conjunction with the Bank of England's semi-annual Financial Stability Report – giving the clear message that stress testing has become and will remain a key tool for regulators and policymakers. In our view, the stated aims and policies further demonstrate how bank supervision has become much more proactive and far-reaching.

The Bank of England has put in place a framework for the regular stress testing of the UK banking system. Stress tests are now "an integral part" of the framework for determining the equity requirements of banks and will also be used for setting the UK countercyclical capital buffer.

We view positively the holistic approach that is being implemented – with regulators and supervisors acting in an increasingly coordinated manner, using both macroprudential and microprudential tools. This should be supportive for the credit quality of UK banks as well financial stability. Furthermore, the UK's approach is likely to set an example for the ECB as it further settles into its role of supervising European banks.

No further action required

Five of the seven banking groups that took part in the stress test (Barclays, HSBC, Lloyds, Nationwide and Santander UK) passed without capital shortfalls (based on balance sheets at end-2014). The other two banks, RBS and Standard Chartered, had capital shortfalls but were not asked to submit new capital plans, as the PRA considered that they were already taking sufficient measures to improve their capital positions. Banks were assessed against two metrics of capital adequacy: a CET1 ratio of 4.5% and a Tier 1 leverage ratio of 3%.

Capitalization of banking system further improved in 2015

The Bank of England concluded that the core UK banking system was "able to support the UK real economy in a stress scenario" with lending to the UK real economy expanding by 9% over the five year period, in line with its projections for credit demand.

The 2015 macroeconomic stress scenario was based on materially lower than expected global growth accompanied by financial market volatility. In addition, the stress test incorporated GBP 40bn in potential misconduct costs.

The Financial Policy Committee (FPC) noted that in the stress, in aggregate, the risk-weighted CET1 and Tier 1 leverage ratios of UK banks were 7.6% and 3.5% respectively at the low point, after "strategic" management actions. The FPC also noted that the capitalisation of the system had improved further over the course of 2015, and it believed that UK banks would now be comparatively more resilient to the macroeconomic stress scenario than in 2014.

No need to convert AT1 securities

Importantly, the FPC judged that no macroprudential actions on bank capital were required in response to the 2015 stress test. Consequently, for the time being, the countercyclical capital buffer will remain at 0% and other macroprudential tools such as sectoral capital requirements will not be used.

The FPC and Prudential Regulatory Authority (PRA) further noted that under the stress test no AT1 securities needed to be converted into equity. However, they stated that the conversion of these instruments would support the resilience of the banking system, as

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well as individual banks within it, in future stresses. They emphasised that investors should be aware that in a real stress where banks' CET1 ratios fell below trigger points, conversion would happen.

Stress tests as a tool for ensuring financial stability

This year's UK bank stress results were released in conjunction with the Bank of England's (Bank) semi-annual Financial Stability Report – providing the clear message that stress testing has become and will remain a key tool for regulators and policymakers. This is in line with the Bank's recently detailed approach to stress-testing which includes as key features: (i) annual concurrent stress tests, (ii) biennial stress tests to explore other risks that may threaten financial stability, (iii) coordinated decisions around the setting of capital buffers to ensure that the banking system as a whole and individual banks are able to withstand future stress, and (iv) a clear and transparent framework for determining whether banks need to strengthen their capital positions.

At the same time, the FPC specified that the design phase is nearly complete and that the focus is now on the implementation of new standards. In calibrating the capital framework for UK banks, the FPC aims to ensure that there is no duplication of requirements and that the capacity of banks to support the real economy remains resilient. In aggregate, the FPC considers the appropriate structural Tier 1 equity requirement for the system to be 11% of risk-weighted assets, of which 1.5% may be met with contingent capital instruments. These requirements will not apply to every bank and some banks may face higher requirements while others lower requirements.

Interestingly, to support its conclusions the FPC explains that an effective resolution regime has been established in the UK and that it relies on "pre-emptive, judgement-led prudential supervision" by the PRA. Further, the FPC stated that it intends to actively use the time-varying countercyclical capital buffer to make equity requirements more efficient and better aligned with changing cyclical risks.

Recognising that some going concern equity requirements to be phased-in between 2016 and 2019 cover some of the same risks that are currently captured by individual supervisory requirements, the FPC and the PRA will work together to ensure that existing requirements on individual banks are adjusted appropriately.

Future stress tests

Over the next three years, the Bank has stated that its approach to stress testing will be explicitly countercyclical, with the severity of the test and the associated regulatory capital buffers varying with the state of the financial cycle. Further, the hurdle rate framework will be modified to ensure that systemically important banks are held to higher standards. This means that each bank will be expected to meet all of its minimum risk-based CET1 capital requirements in the stress scenario – i.e. internationally agreed Pillar 1 requirements and Pillar 2A requirements set by the PRA. Each bank will also be required to meet its minimum leverage ratio requirements. In addition, for systemically important banks such as those designated as global systemically important banks (G-SIBs), G-SIB buffers will also be included in the hurdle rate framework.

At the same time, the FPC acknowledges that all elements of the equity buffer would be available to absorb losses in a real stress event. Therefore, if a bank's capital position were projected to fall below the sum of its minimum and G-SIB requirements in a stress scenario, the bank would be expected to strengthen its capital position over time but the supervisory response would "likely be less intensive" than if the bank's capital position were projected to fall below minimum requirements.

Each year, the Bank will design a stress scenario to assess the risks of the banking system – the annual cyclical scenario. The results will be considered when setting the UK countercyclical capital buffer as well as any additional capital buffers for individual banks. Further, every other year, the annual cyclical scenario will be complemented by an exploratory scenario which assesses risks to the banking system that are not necessarily linked to the financial cycle – such as the impact of persistent deflationary pressures or a more in-depth evaluation of asset quality in particular sectors. Banks will be asked to participate in the exploratory scenario only if relevant.

In 2016, the Bank will run the cyclical scenario only as the EBA will also be performing a stress test. In 2017, the Bank intends to run both the cyclical and exploratory scenarios for the first time.

Drivers of 2015 stress test results

Relative to projected pre-tax profits under the baseline scenario, profits decline by almost GBP 100bn by end-2016, the low point of the stress. The shortfall in aggregate profits relative to the base was driven by the following:

- Falling GDP and rising unemployment, leading to higher loan impairment charges, particularly in emerging economies and euro-area periphery countries
- Sharp movements in market prices and increased counterparty credit risk, which lead to material traded risk losses (negative impact of GBP 34bn)
- Lower interest income as a result of lower interest rates and lending volumes
- A sharp increase in misconduct costs (GBP 30bn during first two years and GBP 40bn in total over the five-year period). From 2009 to 2014, banks had incurred nearly GBP 30bn in misconduct costs and had made provisions for a further GBP 13bn. The stressed projections relate to known misconduct issues, such as mis-selling of payment protection insurance and misconduct in wholesale markets. While the Bank has said that the stressed projections have been calibrated to have a "low likelihood of being exceeded", they cannot be considered a worst case scenario. Further, due to the high degree of uncertainty in the projections, the results do not disclose stressed projections for misconduct costs at the individual bank level.

Stress scenario focused on Asia and emerging markets

The Bank noted that since the publication of the 2015 stress scenario in March, there has been notable volatility in some global financial markets, particularly concentrated in emerging economies. However, the scale of the macroeconomic shocks in the stress scenario are generally much larger than what has been observed.

China and Hong Kong together accounted for more than 10% of impairment charges faced by UK banks under the 2015 stress scenario. In the stress scenario, annual real GDP growth in China slows from just under 7.5% in 2014 to a low of 1.7% while house prices fall by 35%. Further, in Hong Kong, commercial real estate prices fall by 45%. Due to the scale and speed of recent credit growth as well as the significant slowing of GDP growth in the stress (unprecedented in recent history), the Bank considered that historic loss rates during previous episodes of stress were of limited use for its purposes.

The corporate impairment rate for UK banks' direct exposures in China and Hong Kong combined was projected to triple between the baseline and stress to 5.5%. Meanwhile, UK banks' direct lending to households is limited, accounting for just 0.2% of RWAs at end-2014. In Hong Kong, UK banks have more exposure to mortgage lending but impairment rates are expected to remain low because of conservative rules and practices regarding household borrowing.

In other Asian and emerging market economies, impairment rates rose by around 50% under the stress - UK banks in particular have large exposures to India, South Africa and Brazil. The 2015 stress scenario also incorporated a significant fall in both economic activity and prices in the euro area. The exposures of UK banks to households and companies in the euro area however, are relatively small compared to their aggregate loan books, with lending to euro-area households and businesses accounting for 4% of aggregate RWAs at end-2014. Consequently, euro-area losses accounted for 6% of total impairments under the stress scenario.

Traded risks stressed under new methodology

Compared to the 2014 stress test which used the EBA's methodology for stressing trading books and other fair valued positions, the Bank designed its own traded risk scenario for the 2015 stress test. Under the stress, financial market sentiment deteriorates rapidly with equity and other risky asset prices falling and credit spreads rising, particularly in Asia. In some markets, liquidity becomes seriously impaired. In aggregate, market risk losses across trading books and AFS/FVO portfolios accounted for about half of overall projected traded risk losses. Counterparty credit risk losses, relating to the default of large counterparties, and stressed PVA were also significant contributors to total losses.

Under the Bank's new traded risk methodology, the following elements were stressed:

- Market risks on trading book. Losses associated with changes in the value of traded positions, i.e. price risk of derivatives and securities. As well, liquidation costs take into account how the liquidity of positions.
- Counterparty credit risk
- Credit valuation adjustment (CVA). As the credit quality of counterparties decline during the stress scenario, CVA costs increase.
- Investment banking revenues less incurred costs
- Available-for-sale (AFS) and fair value option (FVO). AFS assets include government bonds held for liquidity purposes while FVO assets include specifically designated loan portfolios. While these assets are part of the banking book and considered credit assets for regulatory purposes they are marked to market.
- Prudent valuation adjustment (PVA). Under the stress scenario, banks were required to stress their PVA related to investing and funding costs, stressing funding spreads when it could impact the valuation of a position. The Bank noted considerable uncertainty when assessing stressed traded risk projections for legacy assets, which are associated with significant PVA costs.

Appendix A: Bank specific results

Figure 1: Stress test results

CET1 Ratios (a)	Actual (end-2014)	Min stressed ratio (before 'strategic' mgt actions or AT1 conversion) (c)	Min stressed ratio (after 'strategic' mgt actions and before AT1 conversion) (c)	Min stressed ratio (after 'strategic' mgt actions or AT1 conversion) (c)	Actual (2015 Q3)
Barclays	10.2	6.8	7.3	7.3	11.1
HSBC	10.9	7.0	7.7	7.7	11.8
Lloyds	12.8	9.5	9.5	9.5	13.7
Nationwide (d)	19.8	19.1	19.1	19.1	21.9
RBS	11.1	5.9	6.1	6.1	12.7
Santander UK	11.9	9.5	9.8	9.8	11.7
Standard Chartered	10.5	5.1	5.4	5.4	11.4
Aggregate (e)	**11.2**	**7.2**	**7.6**	**7.6**	**12.2**
Leverage Ratios (b)					
Barclays	3.7	3.2	3.3	3.3	4.2
HSBC	4.8	3.5	3.7	3.7	5.0
Lloyds	4.9	3.9	3.9	3.9	5.0
Nationwide (d)	4.1	4.1	4.1	4.1	4.2
RBS	4.2	2.9	3.0	3.0	5.0
Santander UK	3.8	3.3	3.4	3.4	4.1
Standard Chartered	4.5	2.8	3.0	3.0	4.8
Aggregate (e)	**4.4**	**3.4**	**3.5**	**3.5**	**4.7**

Notes:
(a) The CET1 capital ratio is defined as CET1 capital expressed as a percentage of risk-weighted assets, where these are defined in line with the UK implementation of the CRR via the PRA Rulebook.
(b) The end-point Tier 1 leverage ratio as defined in the FPC's leverage ratio review, taking into account the European Commission Delegated Act on the leverage ratio.
(c) The minimum CET1 ratios and leverage ratios shown in the table do not necessarily occur in the same year of the stress scenario for all banks.
(d) For Nationwide the stress tests are based on an estimated 4 April 2015 balance sheet, rather than end-2014.
(e) Aggregate CET1 ratios are calculated by dividing aggregate CET1 capital by aggregate risk-weighted assets. Aggregate leverage ratios are calculated by dividing aggregate Tier 1 capital by aggregate exposure measure.
Source: Bank of England

Barclays

Barclays is a universal bank, with operations focused in the UK and the US. In the stress scenario, Barclays's CET1 and leverage ratios reached a low point of 6.8% and 3.2%, respectively before "strategic" management actions and 7.3% and 3.3%, respectively after "strategic" management actions. The effects of the traded risk scenario included a decline in investment banking income, market and counterparty credit risk losses and increased prudent valuation adjustments for illiquid assets. Impairment charges related to the credit cards business also increased. The PRA judged that the stress test did not reveal capital inadequacies for Barclays given its balance sheet at end-2014.

HSBC

HSBC is a global, universal bank as well as being the largest bank in Hong Kong and the largest foreign bank in China. The stress scenario included macrofinancial stress in Asia, Latin America and the euro area, all regions where HSBC has a strong presence. The group experienced higher impairments on credit exposures and increased risk weights as well as market risk losses from its trading business. HSBC's CET1 and leverage ratios reached a low point of 7% and 3.5%, respectively before "strategic" management actions. The PRA judged that the stress test did not reveal capital inadequacies for HSBC given its balance sheet at end-2014.

Lloyds

Lloyds is a UK retail and commercial bank with limited international exposures and trading business and was therefore less impacted by the stress scenario. There was a decline in net interest income due to lower interest rates and incresed credit impairments in the mortgage book in the UK and Ireland. Lloyds CET1 and leverage ratios reached a low point of 9.5% and 3.9%, respectively. Management did not submit any “strategic” management actions for consideration in the stress test. The PRA judged that the stress test did not reveal capital inadequacies for Lloyds given its balance sheet at end-2014.

RBS

At the start of the stress, RBS had retail, commercial and trading businesses in the UK and the US. In the stress scenario, RBS’ capital and leverage ratios reached a low point of 5.9% and 2.9%, respectively before “strategic” management actions and 6.1% and 3%, respectively after “strategic” management actions. The PRA judged that RBS did not meet its CET1 individual capital guidance after management actions. The stress highlighted potential downside risks related to the corporate loan portfolio. The analysis incorporated the expected disposals of Citizens Financial Group and Williams & Glyn as well as rundown plans for RBS capital resolution. Since December 2014, RBS has taken measures to improve its capital position, including the issuance of GBP 2bn in AT1 securities. Considering the steps taken to improve its capital position and the planned future issuance of AT1 capital, the regulator did not demand RBS to revise its capital plans.

Santander UK

Santander UK is the UK subsidiary of Banco Santander SA. Santander UK had limited exposed to the stress-test scenario, given its UK retail activities and small trading business. Customer margins were reduced due to low interest rates and higher funding costs and impariments increased in both the mortgage and commercial lending portfolios. The CET1 and leverage ratios reached a low point of 9.5% and 3.3%, respectively before “strategic” management actions. The PRA judged that the stress test did not reveal capital inadequacies for Santander UK given its balance sheet at end-2014.

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