BANK OF ENGLAND

Sir John Vickers
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Mark Carney
Governor

19 December 2016

Dear John

Thank you for your letter of 5 December where you suggested that the Bank supplements its current approach to stress testing by publishing parallel results that take market-based measures of equity capital, rather than regulatory capital, as a starting point.

I agree with the general point that market indicators of the health of the UK banks are extremely useful to regulators and policymakers. As you may be aware, the Financial Policy Committee (FPC) monitors a variety of market-based indicators, which are published alongside the Record of its discussions. Those indicators include CDS premia, the price to book ratio, and a market-based leverage ratio for the major UK banks.

In your letter, you expressed concern around book measures of capital for major UK banks, suggesting that price to book ratios below one were evidence of market participants doubting the accuracy of those measures. There are many reasons why valuations of a bank's equity may fall, and when we examined this issue in the November 2016 Financial Stability Report (FSR)[1] we found little evidence to suggest that investors should be concerned about poor asset quality for UK banks. For example, banks' fair value deductions have fallen sharply in recent years and are close to zero; the proportion of loans that are non-performing is low; and CDS premia remain low. We are therefore of the view that current low price to book ratios reflect investors' concerns about low long-term profitability for UK banks - with return on equity of the major UK banks averaging just 2% in 2015. Various headwinds continue to dampen bank profitability, including misconduct costs and weak investment banking returns.

This analysis suggests that low price to book ratios do not necessarily imply that banks' capital positions are mismeasured or threatened by imminent large losses. They may still indicate lower resilience, as a bank with low expected profitability will be less able to rebuild its capital if it were to make a large loss at some point in the future. A valid question is whether this lower perceived resilience is captured in the Bank's 2016 stress test.

As part of our stress testing approach, we construct a central projection of a bank's capital position over a five year period, and then calculate how that capital position would change in response to a severe stress scenario. We use a baseline forecast of a bank's profitability to construct the projection of its capital position[2]. It is possible to back out an implied price to book ratio from this forecast, after making an adjustment for misconduct costs[3]. We find that our baseline projection for the four largest UK banks

[1] See pages 26 - 30
[2] See Chart 4, page 17 of the 2016 Bank of England Stress Test results document
[3] Using a Dividend Discount Model (DDM), we calculate the implied price to book ratio using a projection of a bank's return on equity, the cost of equity and an assumption about the dividend payout ratio. We take the profits in the baseline (shown in Chart 4, page 17 of the 2016 Stress Test results document) and make an adjustment for misconduct costs based on equity analysts' forecasts, since the baseline includes no additional provisions for misconduct costs. Using a Capital Asset Pricing Model (CAPM) we

equates to a price to book ratio of between 0.7 and 0.8, consistent with the actual price to book ratio at the time the stress tests were published[4]. This is not a coincidence - we look at the prevailing price to book ratios as one cross-check of our base line forecasts for bank profits.

This reconciliation exercise suggests that it is not necessary to make an adjustment to capital at the start point of the stress test, as we have already captured weak valuation effects through weak baseline projections for bank profits. That weak baseline will translate into lower capital ratios over both the base and stress projection.

There are four other issues around your proposal that I would like to touch on:

i. A key issue is how to treat the difference between regulatory capital and the standard accounting measure of capital, so-called 'shareholders' equity'. As you know, the regulatory measure of capital that we use in stress tests (i.e. common equity tier 1 (CET1) capital) is a more conservative definition, since it involves large deductions to reflect intangibles such as good will, deferred tax credits, and investments in other financial companies. For the four largest UK banks, CET1 is more than 30% lower than total shareholders' capital. As a result, price to book ratios have to be very low for market valuations (which are of shareholders' equity) to fall below CET1. Even with the current average price to book ratio of 0.7 to 0.8, market valuation of the four largest UK banks in aggregate is still higher, at around £240bn, than CET1, at £205bn. <u>This means that replacing regulatory capital with market valuations of each bank in the stress test would *push up* the starting point for capital in aggregate</u>.
ii. The second issue relates to the overlap between the central projection described earlier and market valuations. To take a simple example, suppose a bank was expected to make just 1% return on equity in the first year of the stress test, perhaps reflecting expected restructuring costs. That would depress its equity valuation, potentially causing its price to book to fall below one. We would reflect these costs in our central projection. If we were to also adjust downwards the starting point of capital in the stress test, to reflect the low market value, that would mean double counting those restructuring costs.
iii. Third, market-indicator based stress tests could run counter to the Bank's intention that its stress tests are countercyclical. For example, during upswings, when bank valuations are high, the starting point of capital in the test would be artificially boosted, pointing to a loosening in capital requirements. During downturns, bank valuations will be low, which could encourage tighter capital requirements - the opposite of what the economy might need.
iv. Finally, publishing alternative supplementary stress test results would run the risk of confusing the Bank's communication around its stress tests. If we publish two sets of results that give different messages, people might struggle to understand what we are trying to say about the resilience of the banking system.

Let me once more thank you for raising this issue. I assure you that the Bank pays significant attention to market indicators of banks' balance sheets. We will continue to publish our analysis of market valuations of the banks and how our stress test results relate to these valuations in the Financial Stability Report.

Yours sincerely,

Cc. Andrew Tyrie, MP

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calculate the cost of equity to be 13% - in line with survey estimates of banks' perceptions of the required rate of return. We assume that beyond the five year horizon, expected return on equity is equal to the cost of equity. We assume a dividend payout rate of 0.5.

[4] See Table B.1 on page 27 of the FSR.