BANK OF ENGLAND

March 2015

Stress testing the UK banking system: guidance for participating banks and building societies

1 Background

The Financial Policy Committee (FPC) recommended in March 2013 that, 'looking to 2014 and beyond, the Bank and Prudential Regulation Authority (PRA) should develop proposals for regular stress testing of the UK banking system. The purpose of those tests would be to assess the system's capital adequacy'.(1)

The 2014 test was a first step towards establishing the Bank of England's medium-term stress-testing framework.(2) While stress-testing plans and practices will continue to evolve, both within and beyond the Bank, the 2015 concurrent stress test (hereafter 'the 2015 stress test') represents an important next step towards this framework. In particular, it includes a more focused and longer-lasting global scenario than in 2014 and incorporates new analysis of banks' trading books.(3) The Bank will publish further details of its medium-term stress-testing framework later this year.

A key difference with last year is that the 2015 stress test and methodology have been fully designed and calibrated by Bank staff, and discussed and agreed with the FPC and PRA Board. Ultimately, the results of the stress test will inform both system-wide policy interventions by the FPC and bank-specific supervisory actions by the PRA.

2 Objectives of this guidance

This document provides participating banks with guidance for conducting their own analysis for the 2015 stress test. The templates used for collecting data, along with the document setting out definitions of data items, have already been provided to participating banks. And the scenario is published separately.(4) These documents should be read in conjunction with this guidance.

This document does not cover the full approach taken by the Bank to arrive at the final stress-test results. In addition to banks' own analysis, Bank staff will perform analysis to independently assess the impact of the baseline and stress scenarios on banks' profitability and capital and leverage ratios. Accordingly, the final stress-test results may differ from banks' own submissions.

3 Banks participating in the 2015 stress test

The 2015 stress test will cover seven major UK banks and building societies: Barclays, HSBC, Lloyds Banking Group, Nationwide, Royal Bank of Scotland, Santander UK and Standard Chartered. Unless agreed otherwise with the Bank, participating banks should complete all aspects of the 2015 stress test.

The Co-operative Bank has not been asked to participate in the 2015 stress test. The Co-operative Bank has a smaller balance sheet than last year, will have a more limited role in payment systems in the future and has no plans to grow the size of its balance sheet. In addition, it is significantly smaller than the other banks included in the 2015 stress test. So the resilience of Co-operative Bank is unlikely, on its own, to have a material impact on the resilience of the financial system.

4 Scope of consolidation

Banks should provide results at the highest level of UK consolidation. The scope of consolidation is the perimeter of the banking group as defined by the Capital Requirements Regulation (CRR)/Capital Requirements Directive (CRD) IV, which includes investment banks. Insurance activities are excluded, although banks are expected to assess the impact of the scenarios on their insurance activities and model the impact on any dividend streams, material holdings or minority interest capital deductions and risk weightings.

5 Macroeconomic scenario

Banks should follow the guidance outlined in this document to assess the impact of the baseline and stress scenarios. In order to do this, it is likely that banks will need to expand the set of macroeconomic and financial variables provided as part of the scenario document. For example, banks may need to derive variable paths for some additional macroeconomic variables (such as different measures of aggregate household income gearing) or to expand the scenario paths across a broader range of geographies. In doing so, banks should adhere to certain standards. In particular, banks are expected to:

- ensure that the paths of any additional macroeconomic or financial variables that are required by their models are derived in a way that is consistent with the broad narrative and severity of the scenario;

- display an awareness of the current state of the economy when projecting paths for extra variables. For example, other things being equal, if prices in a particular sector or region have recently fallen sharply, then further price falls might be more muted. On the other hand, prices that have risen sharply in the recent past may be more susceptible to sharp falls in a stress;

(1) See 'Financial Policy Committee statement from its policy meeting, 19 March 2013', available at www.bankofengland.co.uk/publications/pages/news/2013/013.aspx.
(2) Unless otherwise stated, references to the Bank or Bank of England throughout this document include the PRA.
(3) The term 'bank' is used throughout this document to refer to banks and building societies.
(4) See www.bankofengland.co.uk/financialstability/Documents/stresstesting/2015/keyelements.pdf. and www.bankofengland.co.uk/financialstability/Documents/stresstesting/2015/variablepaths2015.xlsx.

- use robust statistical techniques as a starting point to derive additional variable paths. These should be calibrated using long periods of historical data in order to capture a full credit cycle, rather than being restricted to periods of macroeconomic stability. Banks are expected to deviate from purely statistical techniques if there is a lack of historical data that is relevant to conditions today (such as factors relating to the low level of Bank Rate) and conditions envisaged as part of the stress scenario. Where banks deviate from such statistical techniques, they are expected to explain how and why such judgements were made (see Section 13); and

- take a prudent approach to deriving additional variable paths and not to assume that past correlations will always hold in the future.

6 Time horizon and reference date

The 2015 stress test will cover a five-year horizon. Unless otherwise agreed, and with the exception of some elements of banks' market and counterparty credit risk (see Section 10.3), the reference date will be 31 December 2014 and banks are expected to submit projections as at 31 December for each subsequent year end. Banks that operate with a different financial year may apply to make alternative reporting arrangements.

7 Definitions of capital and leverage ratios

Banks are expected to submit starting point capital positions and projected capital positions in the baseline and stress scenarios. The adequacy of banks' capital resources will be judged with reference to risk-based capital ratios and leverage ratios. Banks should submit projections of both risk-based capital ratios and leverage ratios using the following definitions:

- Common equity Tier 1 (CET1), Tier 1 and Total capital ratios as defined by the UK implementation of the CRR, via the PRA Rulebook.(1)

- 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.(2) The PRA expects to make rules, via public consultation, to implement the FPC's leverage ratio framework. Subject to these changes, the Bank may ask banks to resubmit certain data if the PRA rules deviate from this definition.

8 Publication of results

The results of the 2015 stress test will be published towards the end of 2015 Q4, alongside the Bank's *Financial Stability Report*.

9 Submission

Submission instructions are outlined in the Firm Data Submission Framework (FDSF) Target Operating Model that was communicated to all banks with the data request in January 2015. These instructions need to be followed for both structured and unstructured data requests.

Banks are expected to report baseline and stress projections using their reporting currency.

10 Guidance on modelling risks and income

10.1 Balance sheet modelling

Banks should use actual balance sheet data at the reference date as the starting point for their submissions. After that point, banks should submit projections based on the baseline and stress scenarios (**Figure 1**).

The macroeconomic scenarios begin in 2015 Q1. Banks should not replace projections with actuals where data for actuals exist. Submission of actual rather than projected data should only be considered selectively and in exceptional circumstances, where:

- there is a sale of a material asset scheduled, and completed, immediately after the end of 2014.

- there are assets for which a sale has been agreed at the end of 2014 such that: the timetable for sale was agreed; the contractual terms and price were certain; the contractual terms were binding under a stress; and there is evidence that the counterparty could honour the contract under stress.

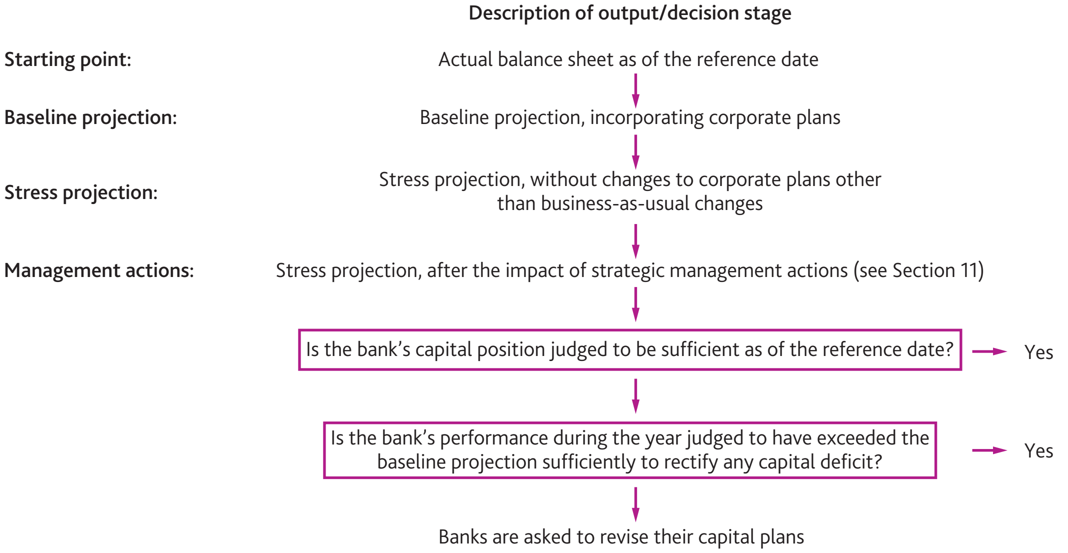
In these exceptional cases, the Bank may allow banks to include the asset in their data for the end of 2014 only, and for the bank to exclude the asset from the projections submitted as part of the detailed FDSF template. The same principles, in reverse, should be followed for asset purchases.

The 2015 stress test will be performed on a dynamic balance sheet basis. This means that banks' projections will take into account changes in the size and the composition of their balance sheet, both in the baseline and in the stress scenario.

Banks' submissions should reflect their corporate plans, including any costs and business changes. These should be adjusted appropriately to reflect changes in the expected performance and execution of these plans in each scenario,

(1) The PRA Rulebook is available at www.bankofengland.co.uk/pra/Pages/policy/handbook.aspx.
(2) See 'The Financial Policy Committee's review of the leverage ratio'; www.bankofengland.co.uk/financialstability/Pages/fpc/fscp.aspx and the European Commission Delegated Act; http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2015.011.01.0037.01.ENG.

Figure 1 Stylised stages of the stress-testing process



including business–as-usual changes in the stress scenario (also see Section 11).

Banks should clearly set out their assumptions for forecast balance sheet growth or contraction in the baseline and stress scenarios. These assumptions should be consistent with the macroeconomic scenarios provided. To ensure comparability and consistency between banks, the Bank is providing the following guidance on the overall approach to balance sheet growth:

- To the extent that a bank's corporate plan includes a reduction in the size of their balance sheet (or certain portfolios within it), either via outright asset sales or a reduction in new business, they may incorporate that reduction into their baseline and stress projections.[1]

- **For markets where the Bank has provided a profile for lending** in the scenario document, banks' market share of the stock of lending in each year of the stress scenario should be at least as large as their corresponding market share in the baseline scenario. Banks should only allow their projected lending market shares to fall below this threshold if this is as a result of higher impairments. Banks should calculate these shares using the lending profiles provided as part of the scenario document. Banks can report the impact of further reductions relative to this threshold as a potential management action (Section 11).

- **For markets where the Bank has not provided a profile for lending and where banks have assumed positive asset growth in the baseline scenario**, banks may assume slower growth but should not assume a contraction of these portfolios except as a result of higher impairments. Banks can report the impact of reducing these portfolios relative to their end-2014 position as a potential management action (Section 11).

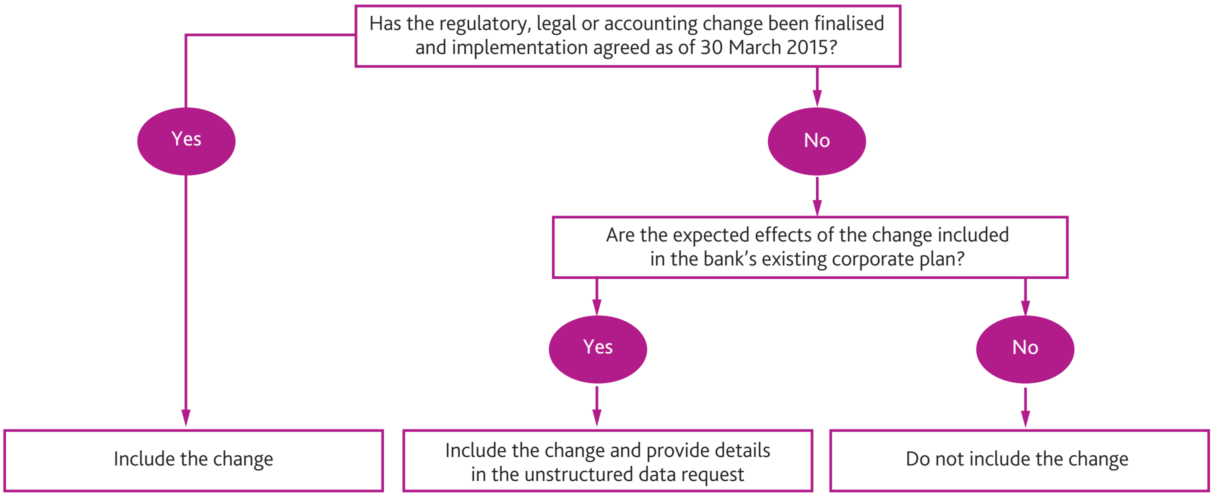
- **For markets where the Bank has not provided a profile for lending and where banks have assumed a contraction in the size of assets in the baseline scenario**, relative to the end of 2014, banks should not assume further contraction in the stress scenario except as a result of higher impairments. Banks can report the impact of reducing these portfolios further as a potential management action (Section 11).

- Banks are expected to consider the impact of the stress scenario on the timing and price of any planned asset sales that are included in their baseline submissions and should document the reasoning behind the impact. In particular, banks are expected to provide clear supporting evidence in cases where the bank has assumed that an asset disposal in the stress scenario would improve the bank's capital position.

Banks should include the effects of regulatory, legal or accounting changes in their projections where final requirements and implementation or effective dates have been announced or endorsed publically by the relevant authority on or before 30 March 2015. Where relevant, these changes should be modelled in line with their respective implementation dates. Banks' projections should also reflect the expected effects of such changes where requirements or implementation details have not been finalised, to the extent that these effects are included in banks' existing corporate plans. This should include the expected effects of each bank's current view of ring-fencing arrangements. The Bank recognises that regulatory policy on ring fencing has not yet been finalised but expects banks' corporate plans to include at least an estimate of associated one-off implementation and ongoing costs. Banks are not required to provide separate submissions for their ring-fenced and non ring-fenced entities.

(1) Balance sheet reduction plans in the baseline scenario are not expected to differ materially from those in a bank's most recent corporate plan.

Figure 2 Stylised guidance for including the effects of regulatory, legal and accounting changes in banks' submissions



Banks that have modelled the impacts of changes that are not yet finalised or where questions on implementation exist should provide details of these changes as part of the unstructured data request. This should include details of the assumptions and financial impacts that have been modelled in relation to ring-fencing. **Figure 2** summarises this overall approach.

10.2 Credit risk

Banks should use their own stress-testing methodologies to translate the macroeconomic scenarios provided into projections for impairments and risk-weighted assets (RWAs), categorised by both asset class and country of risk. In doing so, banks are expected to follow the high-level guidance outlined in Section 5. Moreover, banks should not assume that there is a material lag between the macroeconomic shock materialising and credit quality deteriorating that might delay the impact of the scenario.

Banks should provide details of the assumed impact of any unwind of acquisition-related fair value adjustments relating to impairment losses on loans and advances as part of the unstructured data request, split by asset class and year. Banks should describe any material assumptions used to determine the timing of that impact.

In line with the calculation of capital requirements for all risks:

- banks should not assume changes to their approach to calculating credit risk capital requirements (eg adoption of, or changes to, IRB models) unless by prior agreement with the PRA; and

- banks' baseline projections should be consistent with the credible execution of their business plans in the baseline scenario. Similarly, banks' RWA projections in the stress scenario should take into account the impact of the stress scenario on the risk profile of the positions associated with these RWAs and of the bank's ability to execute its business plan.

Banks are expected to articulate the following judgements clearly and with justification as part of the unstructured data request (see Section 13):

- Any choices about statistical or judgement-based approaches used to produce banks' projections, including evidence of the effectiveness of their governance process. The Bank expects banks' governance processes to include effective challenge from senior officials and the use of expert judgement to confirm or adjust key assumptions used within their models or affecting the outputs of models.

- Assumptions affecting banks' forbearance practices or provisioning model assumptions that have been included within their projections. Banks are also expected to adhere to the guidance regarding the permissible path of balances through the stress scenario (Section 10.1).

- The governance process should also assess the validity of any tactical mitigating actions assumed within banks' projections.

10.3 Market and counterparty credit risk

This section provides banks with guidance for calculating stressed losses and RWAs for fair-value positions (excluding securitisations and covered bonds) with respect to market and counterparty credit risk. For the 2015 stress test, the Bank has produced a set of financial variable shocks that are consistent with the stress scenario and is adopting a new approach to better align market shocks applied to Trading Book positions with their corresponding liquidity horizons.[1]

(1) The Bank will publish the financial shock variables in due course.

The market risk approach outlined in this section covers: all fair value positions in the regulatory Trading Book; and all Available for Sale (AFS) and Fair Value Option (FVO) positions and their hedges in the Banking Book, excluding securitisation positions and covered bonds. This approach differs in its treatment of Trading Book (Section 10.3.1) and Banking Book (Section 10.3.2) positions, with Banking Book positions typically being subject to longer holding periods and correspondingly larger shocks. For counterparty credit risk, banks should include all Trading Book and Banking Book derivatives and Securities Financing Transactions (SFTs) when applying the approach outlined in Section 10.3.3.

Banks should use positions at 20 February 2015 for the purposes of calculating their market and counterparty risk, with the exception of AFS and FVO Banking Book positions and their hedges, for which banks should use positions at 31 December 2014. Banks should also use positions at 31 December 2014 for all other submissions covered in this section, including stressed RWA projections for market risk, counterparty credit risk and credit valuation adjustments (CVAs).

Banks should allocate all Trading Book losses (both market risk and counterparty credit risk) to year 1 of the scenario, for the purposes of their submissions. For AFS and FVO Banking Book losses, banks should allocate losses in a way that is consistent with the scenario description.

10.3.1 Market risk in the Trading Book

The Bank is adopting a new approach for calculating banks' market risk losses for Trading Book positions, which aims to capture variation in the liquidity of banks' Trading Book positions and the speed at which banks would be able to unwind positions during a stress. This approach involves three parts, comprising: a 'Liquids' stress for the entire Trading Book; an additional 'Structural Liquids' stress to capture positions which banks may choose to not fully exit for franchise reasons; and an 'Illiquids' stress to capture banks' illiquid positions.

The Liquids stress

Banks should apply the Liquids stress to all Trading Book positions. In order to do this, banks should apply an instantaneous shock, the size of which depends on the liquidity of the position. Specifically, the Bank will provide a number of key financial variable shocks for one-day, one-week, one-month and one-year liquidity horizons, which banks may interpolate between in order to obtain the shock that is appropriate to the liquidity of their positions in the stress scenario. Any product or positions that a bank assesses to have a liquidity horizon greater than two weeks should be classified as illiquid and should also be subject to the Illiquids stress described below.[1]

Banks are expected to use the financial variable shocks supplied by the Bank, together with the macroeconomic scenario, to expand the set of shocks to other risk factors to which the bank is exposed. The Bank will review each bank's approach for extending these shocks as part of the stress-testing process.

The Structural Liquids stress

The Structural Liquids stress is incremental to the Liquids stress and is intended to take account of risks that banks would continue to take, for business reasons, in the aftermath of the initial Liquids stress. Specifically, banks may be unable or unwilling to reduce their inventories fully in response to a large market shock, in order to continue to make markets for franchise-supporting reasons (eg maintaining bond inventories to support a corporate credit business). This risk is considered 'structural' in that it is a necessary part of the bank's business and therefore exposes the bank to the possibility of multiple market shocks over longer time horizons. For the purpose of the Structural Liquids stress, banks should identify the affected assets based on a prudent assessment of the stock of inventory that the bank would need to maintain for franchise purposes. Banks should then apply further stresses to this inventory, as appropriate, and add the result to the Liquids stress.

The Illiquids stress

The Illiquids stress is incremental and is intended to take account of risks from particularly complex or illiquid positions that are not captured adequately by the Liquids or Structural Liquids stresses. Banks should identify positions as being illiquid if any of the following characteristics apply at the reference date or may be anticipated as part of the stress scenario:

- Positions that are difficult to model and consequently may have significant non-modelled characteristics that are not captured in the stressed price (eg legal enforceability risk or rating-downgrade contingencies);
- Positions with characteristics that may be modelled, but with significant uncertainty;
- Positions where there are only thin or one-way hedging markets available — or where such one-way markets would likely be produced under the stress scenario — such that the ability to ascribe a liquidity horizon is very uncertain; or
- Positions that would take longer than two weeks to fully liquidate or hedge, whether complex or not (eg large inventories of an illiquid corporate bond).

(1) Banks should not assume that positions that are currently liquid will remain so under the stress. We expect banks to assess carefully the extent to which positions will become less liquid under the specified stress scenario.

The severity of the illiquid stresses applied by banks should be consistent with the severity of the risk-factor shocks and the macroeconomic narrative. The Bank would expect that the specific stresses applied in each case will require bespoke treatment by each bank depending on the specific characteristics of the illiquid product or portfolio in question.

Bid/offer spreads
Banks should explicitly assess the increase in bid/offer spreads arising from the stress and should report any additional losses arising from wider bid/offer spreads as part of their results.

Defaults
Banks should consider defaults in the Trading Book to the extent that this is necessary for consistency with the defaults assumed under the Counterparty Credit Risk stress (Section 10.3.3). That is, all obligations of a given name should be consistently defaulted.

10.3.2 Market risk in the Banking Book

The approach to market risk in the Banking Book should be applied to all AFS and FVO positions, excluding securitisations and covered bonds. Given that these positions are unlikely to change frequently, banks should apply the one-year shock parameters to these positions and any hedges that are in place at the reference date. Banks should not assume that hedges on these positions can be rebalanced.

10.3.3 Counterparty credit risk

Banks should follow the guidance in this section in order to calculate counterparty credit risk losses for Trading and Banking Book derivative and SFT positions. Banks should calculate: (i) CVA losses, (ii) losses arising from default of specific counterparties and (iii) portfolio-level default losses.

For CVA losses, price shocks must be calibrated to a one-year liquidity horizon for both the CVA and its hedges, regardless of the frequency used by the hedging desk. All types of hedges should be identified and included (ie both credit and market risk).

Banks should estimate losses arising from the default of specific counterparties by applying the following process. For Asian exposures, banks should identify the ten largest uncollateralised counterparty exposures — after applying the stressed risk factors — and default, at a minimum, the two most vulnerable Asian counterparties. For European exposures, banks should identify the ten largest uncollateralised counterparty exposures (also post-stress) and default, at a minimum, the most vulnerable counterparty.

For collateralised counterparty exposures, banks should identify their 20 largest exposures globally (post-stress) and default, at a minimum, the two most vulnerable.

Banks should assess counterparties' vulnerability based on the stress scenario and the bank's understanding of their counterparties' risk profiles.

For portfolio-level default losses, banks should identify cohorts of uncollateralised clients that will be particularly impacted by the stress and default a proportion of the cohort without consideration of the specific underlying names.

10.3.4 Revenue and cost projections

Banks should provide baseline and stress projections for investment banking revenues and costs for each year end, broken down by sub-business area. Revenues should include both trading income and fee and commission income. Banks should ensure that their baseline projections are consistent with the credible execution of their business plans. Under the stress scenario, banks are expected to create revenue and cost projections that are consistent with the scenario and, in particular, to take account of the impact of the stress scenario on the bank's ability to execute its business plan.

10.3.5 Risk-weighted assets for market risk, counterparty credit and CVA risk

Banks should provide projections for RWAs for each year end in the baseline and stress scenarios, broken down into: market risk; CVA; and counterparty credit. For each category, further breakdowns are required between standard rules and advanced model components.

10.4 Prudential Valuation Adjustments (PVA)

The 2015 stress test includes an assessment of the 'Investing and Funding cost' component of PVA. While the market risk stress may partly capture changes to 'Investing and Funding cost' valuations, banks may also be carrying PVA on the part of their investing and funding cost that is not recognised in mark-to-market accounting values. Banks should assess the impact of a shock to their cost of funding on this component of their PVA and should deduct this from their capital resources. Banks should assume that other components of PVA remain constant.

10.5 Structured finance

For the purpose of the 2015 stress test, structured finance (covering Trading Book and non-Trading Book assets) includes the following assets:

- exposures to third-party cash or synthetic securitisations, including liquidity lines for securitisation transactions, as specified in Chapter 5 of the CRR;
- exposures to own-originated securitisations which have achieved significant risk transfer; and
- exposures to third-party covered bonds that are risk weighted as per CRR Articles 120, 121 or 129.

The structured finance component should exclude: securitisations issued or guaranteed by international organisations, multilateral development banks, governments, or government agencies; covered bond exposures capitalised under Value-at-Risk (VaR); and derivatives related to eligible assets that are not capitalised under the relevant securitisation or covered bond framework as per the CRR.

Own-originated securitisations should only be treated as securitisations during the period that these are expected to achieve significant risk transfer. If banks expect this to cease during the scenario horizon, then parameters pertaining to the underlying assets should be considered for the parts of banks' submissions relating to the remainder of the scenario horizon. Banks should provide details of these considerations as additional comments as part of the relevant structured finance data templates.

For individual structured finance assets, banks should produce projections of the following variables for each year of each scenario:

- regulatory carry value, which should be gross of impairment charges and, for fair value and AFS assets, should be net of market value movements and AFS reserve balances, respectively;

- incremental market value movements (ie the annual change in market value) for fair value and AFS assets;

- annual impairment charges for held-to-maturity (HtM), AFS, and loans and receivables assets. These should take into account the impact of credit enhancements and other structural features;

- AFS reserve balances (ie the balance sheet value of AFS reserves), which should be consistent with projected market value movements and impairment charges;

- expected losses over the full economic life of the asset (re-estimated at the end of each projection year), for HtM and loans and receivables assets; and

- RWAs, which should be calculated after impairment charges and market value movements have been estimated. Market value and AFS reserve balance movements should be applied before the RWA calculation and impairment charges should be applied in accordance with the relevant approach.

Banks should use their own stress-testing methodologies to translate the macroeconomic scenarios provided into projections for the variables detailed above. In doing so, banks are expected to follow the same high level guidance set out in Section 5. Moreover, banks should not assume that there is a material lag between the macroeconomic shock materialising and credit quality deteriorating that might delay the impact of the scenario.

Banks are expected to articulate the following judgements clearly and with justification as part of the unstructured data request (see Section 13):

- Any choices about statistical or judgement-based approaches used to produce banks' projections, including evidence of the effectiveness of their governance process. The Bank expects banks' governance processes to include effective challenge from senior officials and the use of expert judgement to confirm or adjust key assumptions used within their models or affecting the outputs of models.

- Any choices regarding asset prepayment rate assumptions, default rate assumptions and other cash flow related assumptions. Banks are expected to adhere to the guidance regarding the permissible path of balances through the stress scenario.

- The governance process should also assess the validity of any tactical mitigating actions assumed within banks' projections.

As part of the unstructured data request, banks should provide details of the assumed impact of any unwind of acquisition-related fair value adjustments relating to impairment losses, split by asset class and year. Banks should describe any material assumptions used to determine the timing of that impact.

10.6 Interest income and interest expense

Banks should assess the vulnerability of projected net interest income (NII) under the baseline and stress scenarios. The global economic environment described by the stress scenario is characterised by low interest rates and low inflation. Against this backdrop, banks will be expected to demonstrate that they have analysed critically the potential impacts of the interest rate and economic environments in detail.
In particular:

- banks should not assume that they will benefit from a 'flight to quality' in the stress scenario;

- banks should consider the possible effects of greater competition in retail savings markets that might result from reduced liquidity and higher risk premia in wholesale funding markets, and the impact that this may have on deposit quantities and rates; and

- banks should also consider a range of related effects, including the likely impact of credit quality on interest income and credit demand, when pricing assets and liabilities.

In addition, banks are expected to assess the impact of the following factors on NII and net interest margins in all material currencies:

- balance sheet evolution;
- funding evolution (structure and cost) and liquidity adequacy requirements;
- product interest rate and margin movements;
- hedging impacts from yield curve shifts and foreign exchange movements; and
- structural hedging programmes.

Banks should refer to the detailed instructions and definitions contained within the Semantic Data Model (SDM) when collating and submitting data for the 'Asset and Liability Management (ALM) Balance Sheet' section of the 'Capital and Other Projections' template. In particular, the unstructured data request contains reconciliation requirements between the 'ALM Balance Sheet' template and the 'Balance Sheet, Profit and Loss Projections' template. In all cases, the data submitted should be consistent with that supplied for other workstreams and be aligned with FINREP reporting.

Banks should separately identify and provide details of any existing use of central bank facilities (including the Bank of England's Funding for Lending Scheme and liquidity insurance facilities and the European Central Bank's longer-term refinancing operations). Banks that intend to make additional use of central bank facilities, in either the baseline or stress scenarios, should calculate the marginal effect on funding costs and interest expenses of using these facilities compared with wholesale market funding. This should be identified separately as a management action (see Section 11).

10.7 Other income and costs

Banks are expected to model the impact of the baseline and stress scenarios on their 'Other income', such as income from fees and commissions on both retail and wholesale products, and how this relates to the profiles for activity (GDP, unemployment etc).

Banks may include lower costs where there is a direct relationship with profitability and may also include business-as-usual cost reductions. However, these reductions are expected to be modest. Significant cost reductions that would require additional senior management or board decisions, such as redundancy programmes in response to a stress event, should be included as a strategic management action and should not be included as part of banks' pre-management action submissions (see Section 11). Banks should provide details of how they expect to achieve any cost reductions, including key judgements affecting their ability to achieve these, as part of the unstructured data request.

10.8 Operational risks and misconduct costs

Banks should project operational risk losses (excluding misconduct costs, which are covered below) and RWAs (in line with their current Pillar 1 approach) and provide details of the methodology used to produce these projections, in line with the guidance that accompanied the unstructured data request.

Banks' baseline projections should include a prudential estimate of all potential costs relating to misconduct risks, in excess of existing IAS 37 provisions, allocated to time periods on a systematic basis. Banks' prudential estimates of future misconduct costs should be determined, irrespective of whether a provision has been recognised, by evaluating a range of settlement outcomes and assigning probabilities to these outcomes. On a case by case basis, prudential estimates are expected to exceed provisions, unless there is a high degree of certainty over the eventual cost (**Table A** provides further details).

Table A Guidance for estimating misconduct costs

Existing treatment of the misconduct issue	Approach to modelling future misconduct costs
An accounting provision has been raised. There is a high degree of certainty over the eventual cost.	The prudential estimate will equal the existing IAS 37 provisions.
An accounting provision has been raised. There is a high degree of uncertainty over the eventual settlement cost. While the IAS 37 provision strikes a balance between potential upside and downside, the likelihood of adverse outcomes exceeding existing provisions is greater than remote.	The prudential estimate should exceed the existing IAS 37 provision. Banks are expected to provide a prudential estimate, even if they are unable to reliably quantify the full range of potential outcomes, by exercising expert judgement and targeting a high level of confidence of settling at or below their prudential estimate.
An accounting provision has not been raised. While a settlement cost is not probable, there is sufficient evidence to determine a range of settlement outcomes and the possibility of a significant settlement cost is greater than remote.	A prudential estimate should be determined by evaluating a range of settlement outcomes and assigning probabilities to these outcomes.
An accounting provision has not been raised. While a possible obligation has been identified, current evidence is insufficient to be able to reliably quantify any potential liability, or range of liabilities, that may exist. The possibility of a significant settlement cost is greater than remote.	A prudential estimate should be determined by exercising expert judgement and targeting a high level of confidence of settling at or below the prudential estimate.

Banks may ignore individual risks and outcomes where the likelihood of settlement is remote. However, banks should assess the need to include costs in the baseline projections to cover the possibility that, at the aggregate level, one or more remote settlement outcomes crystallise. Banks should provide the Bank with any information they have used in forming this assessment.

Misconduct costs may not vary significantly between the baseline and stress scenario. However, there may be exceptions, for example where redress relates to market prices. If applicable, the impact of the stress scenario on such costs should be considered and included in banks' submissions.

Banks should provide quantitative and qualitative information about the extent of their business in relevant areas. Banks should also provide information to support material assumptions underlying their prudential estimates of misconduct costs. For example, where future customer redress is estimated using statistical data, banks should provide details (by vintage) of the volume and value of past business written, the proportion of business that the bank expects to pay redress for, and the average expected value of redress.

In rare cases where a bank is unable to provide a prudential estimate for an individual misconduct risk due to the extent of uncertainty, banks should clarify that this is the case and provide evidence to support their assessment.

10.9 Pension risk

Banks are expected to apply a stress across all balance sheet assets and liabilities. This includes banks' pension schemes. Banks must therefore model the change in their pension scheme surplus in each year of the scenario, as measured using the IAS19 accounting standard. Remeasurements of the pension scheme should flow through into 'Other Comprehensive Income' thereby affecting banks' retained earnings. Other changes to the value of pension schemes should be recorded as a cost within banks' income statement. Banks should also take account of the restriction that disallows any pension scheme surplus when calculating capital resources.

Banks should take appropriate account of the scenario and narrative when modelling pension assets and liabilities and should pay particular attention to profiles for gilt yields, inflation, expected inflation and equity prices.

11 Management actions

Banks are asked to consider what realistic strategic and business-as-usual management actions could and would be taken in response to the stress scenario:

- Strategic management actions are defined as extraordinary actions taken in response to the stress scenario. Typically, the Bank would expect these to include any actions that require Board sign-off before they can be undertaken. These actions should not be included within banks' projections. Instead they should be set out separately in the management actions section of the projections templates.

- Business-as-usual management actions represent any other actions taken by banks in response to the stress scenario. These actions would be in the control of the bank and would be a natural response to weakening economic conditions. A qualitative listing of all material business-as-usual actions should be submitted alongside banks' projections (also see the unstructured data request).

Banks should ensure that the strategic management actions they propose:

- are consistent with a market-wide stress. For example, attempts to raise capital in a stress scenario are unlikely to be permitted;

- have a material benefit to the bank's capital position and can be executed, in practice, with no material impediments envisaged. For example, attempts to reduce preference coupon payments below those expected by market participants are unlikely to be permitted; and

- are part of, or consistent with, the bank's recovery plan.

The Bank will assess whether the management actions proposed by banks are realistic actions that a bank could and would take in the stress scenario. For these purposes, banks should provide: a detailed qualitative assessment of the main risks to executing a management action; a numerical trigger for authorising each action; and an accompanying explanation for why the numerical trigger has been selected. Banks should also provide a quantitative assessment of the impact of actions across the balance sheet and capital position. The Bank expects banks to only propose strategic management actions that have a material impact on their capital position.

Banks should take into account the time necessary for full implementation of a management action (due to normal governance process of identifying an issue, deciding an action and implementing an action), and the time it takes for the action to take effect (such as the lag between changing lending standards and observed changes in arrears). Banks should also consider how modelled actions would be perceived by market participants. Actions that are likely to evoke a negative market reaction — such as ceasing discretionary coupons on preference shares — are unlikely to be permitted unless supported by conclusive evidence to the contrary.

The following areas of specific guidance should be noted:

- Under stress, banks should model ordinary dividend payments as moving in line with their publicly quantified payout ratio range. Where a public payout range does not exist, then stressed annual ordinary dividend payments should be fixed at the level projected in the 2015 baseline scenario. Any further reductions in the payment of ordinary dividends should be classified as a strategic management action and should be: consistent with banks' payout policies; in line with historical precedent; and supported by a qualitative explanation for the approach taken.

- Asset disposals that have not been publicly announced prior to 2015 will generally only be considered if they have been included in banks' recovery plans with sufficient details on the technicalities of the sale and an analysis of the plausibility of the sale under stress.

- When proposing strategic cost cuts, banks should take into consideration whether these: would be damaging to the bank's franchise; result in offsetting reductions in income or lead to additional risk for the business; are plausible in the context of other continuing or past cost-cutting programmes.

- Banks should ensure that any proposed actions that might lead to a reduction in lending in the stress scenario are in line with the guidance outlined in Section 10.1.

12 Capital actions

Banks should model regulatory restrictions on distributions in line with the use of their CRD IV buffers. Where a bank does not meet its combined buffer in the stress before strategic management actions, it should model distributions in the following order up to the Maximum Distributable Amount: payments on additional Tier 1 (AT1) instruments; variable remuneration; and ordinary dividends. In addition, banks should provide an accompanying qualitative statement to describe how distributions would have been modelled in the absence of this guidance. Banks can change the prioritisation within their strategic management actions, which should be submitted separately.

Banks may allow for the replacement of Tier 1 and Tier 2 instruments in the baseline scenario. In the stress scenario, however, banks should consider whether it would be possible to replace Tier 1 and Tier 2 instruments with CRD IV compliant instruments. Banks should also consider whether they would be able to undertake other capital management exercises that rely on third parties, including capital injections from parent institutions. Written justification must be provided by banks to support the inclusion of any of these capital actions as part of their submissions for the stress scenario. The Bank's default position is that such exercises are unlikely to be realistic in the stress scenario and that all banks will be expected to amortise their Tier 1 and Tier 2 capital positions.

Banks should model the impact of any contingent capital instrument being triggered as part of their pre-management action submission. This should be modelled even if banks' proposed strategic management actions would raise their capital levels above the level of the trigger. Banks should also have regard to their total Tier 1 capital position, which would not be expected to benefit from any conversion of these instruments.

13 Qualitative information

A key objective of the Bank's stress-testing framework is to contribute to improving banks' risk and capital management practices. Building on the 2014 reviews of banks' stress-testing practices, banks are expected to provide updated qualitative information that will allow authorities to ensure that banks' risk management and capital planning processes are of a high standard.

In January 2015, banks received an unstructured data request. The request emphasised areas that were poorly documented in 2014 and highlighted specific additional details required for the 2015 stress test. Banks should refer to the unstructured data request for the specific documentation and data required.

The unstructured data requests includes the following key requests:

- Internal governance arrangements for approving methodologies and results, presentation material and minutes of key decision-making committees at the aggregate results level and for each risk strand.

- Reports produced by internal audit or other review functions. While the Bank does not require a formal attestation from banks' internal audit functions we expect that each bank will complete formal review work for the 2015 stress test.

- Methods and governance arrangements related to the extrapolation of scenario variables and risk factor shocks.

- An assessment of the key sensitivities of the results, including the impact of data availability limitations, an assessment of the variables to which the results are most sensitive and details of the impact of foreign exchange rate movements over the stress horizon.

- Details of how the baseline and stress scenarios have been translated into impacts on the income statement and balance sheet, including details of the assumptions made in applying methodologies and any deviations from the methodologies and frameworks that were provided.

- Specific details for identified portfolios, including selected retail and commercial portfolios, pension schemes, tax rates, deferred tax assets, dividends and management actions.

The documentation supplied by banks will be reviewed alongside banks' quantitative submissions and will be used as part of ongoing supervisory dialogue.