Guidance consultation

Reverse stress-testing surgeries – Frequently Asked Questions (FAQs)

March 2011

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During the course of the two rounds of our reverse stress-testing surgeries – which were held in April/May and September/October 2010 for firms that are subject to our requirements about reverse stress-testing – a large number of issues were raised and answered. We believe that publishing the FAQs in their entirety will be of interest to all firms, including those unable to attend the surgeries, and they have been collated below. A number of questions that were raised in more than one surgery and/or have more general relevance are in the 'General' section below, while the remaining questions are classified according to the group of firms that raised them. (In both cases the responses provided during the course of the surgery are included and, where appropriate, qualified with additional information.)

If you need any further help on this topic or any other related to stress testing, please email the team on stress.testing@fsa.gov.uk.

General questions

Category	*Question*	*Response*
Scope	1. At what level in my firm are reverse stress-tests required?	BIPRU firms (banks, building societies, and investment firms) and insurers that fall within the scope of SYSC 20 must carry out reverse stress-testing on both a solo and consolidated basis. This will obviously include the overseas branches of UK-regulated firms within that scope.

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	2. For which entities should a reverse stress-test be carried out?	All solo entities must carry out a reverse stress-test and be captured by the reverse stress test carried out for the consolidated group. However, where a solo entity is not material to the risk profile of the group, and its going-concern status can be shown to depend primarily on the solvency of the group, a simple qualitative submission from that solo entity pointing to the group reverse stress-test will suffice.
	3. How does the requirement apply to firms with non-regulated entities in the group?	The reverse stress-test carried out on a consolidated basis must include all entities – both regulated and non-regulated – in the consolidation group falling within the scope of the requirement, but on a solo basis, only regulated entities falling within the scope of the requirement need to be considered.
	4. What if my firm is a UK-regulated subsidiary with an unregulated parent (overseas or otherwise)?	Where the unregulated parent is based in the UK, see response to question 3. Where the unregulated parent is overseas and there is no UK group in existence, the firm should undertake the reverse stress-test on a solo basis. In this case, the potential impact on a subsidiary of an event overseas affecting the parent should be considered and factored in where appropriate.
	5. Are you asking overseas parents of UK-regulated firms to comply with the reverse stress-testing requirement?	No, but the relevant UK entity undertaking the reverse stress-test should consider the potential for a parent to have a material impact on its subsidiary (e.g. through an event at the parent resulting in significant reputational risk for the UK entity only).
	6. Is a full quantitative analysis of the parent required where it is an overseas group and the UK entity is a material undertaking?	No, but the potential for the state of the parent to affect that of the subsidiary in an adverse manner must be addressed. On the bases of materiality and proportionality this may be undertaken in a largely qualitative manner. (See response to question 5.)
	7. How should the reverse stress-test be carried out where the UK-regulated firm	The failure of the parent may be the most clearly relevant scenario, but the subsidiary should also consider local stresses that give

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	is a subsidiary of an overseas parent on which it is wholly reliant for its survival?	rise to business model failure, e.g. an operational risk event affecting just the UK-regulated entity.
	8. How does the requirement apply to groups that have operations outside the UK?	All operations outside the UK that are part of a UK solo entity or its consolidated group should be captured in the reverse stress-testing exercise.
	9. How detailed does my exercise have to be at the solo and/or group level?	For solo entities the level of detail should be proportionate, reflecting the materiality of those entities and their dependency on other group entities. The group exercise should include an assessment of interlinkages between entities within the group and the potential for risk contagion to crystallise (e.g. through reputational risk).
	10. Is the reverse stress-test requirement being implemented by other countries outside of the UK?	Yes, to differing extents by different international supervisors, e.g. for banks through the Basel Committee and the European Banking Authority (EBA). We are also aware that other international authorities are considering implementing this requirement (see response to question 11).
	11. The UK is pursuing a policy that is not being implemented elsewhere – is there discussion with other regulators about implementing reverse stress-testing? (This is a particular issue with regard to obtaining sign-off at Board level.)	We are keeping other regulators informed of our work in this area and guidelines drawn up by umbrella supervisory organisations recommend that supervisors consider reverse stress-testing for their supervised institutions (see response to question 10).
Process	12. What has to be done by the implementation date?	Firms to which the requirement applies should be in a position to carry out a reverse stress-test for submission with their next Individual Capital Adequacy Assessment Process/Individual Capital Assessment (ICAAP/ICA). (For eligible firms other than BIPRU investment firms the implementation date was 14 December 2010, and for BIPRU investment firms within scope of *SYSC* 20 it is

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		28 March 2011.)
	13. What should we do if our strategic planning process is in September every year – will the FSA simply ask us for the reverse stress-test in September 2011?	We require you to have procedures and processes in place to produce a reverse stress-testing exercise as of 14 December 2010 (or 28 March 2011 for relevant investment firms). In future, your reverse stress-testing submission should form part of your ICAAP/ICA submission (and we would expect to see it play a role in your planning exercises) – although, if supervisors wish to see it and discuss it with you before that time, they will give you appropriate notice.
	14. In reverse stress-testing, will firms be considering the same risks as they do for other stress tests? Doesn't this create overlap?	The reverse stress-testing requirement should build on and complement the existing stress testing framework. While the stress tests performed for capital planning purposes will have an adverse impact on the financial situation of the firm, for reverse stress-testing purposes, we are asking firms to consider where one or more causes lead to the existing business model of the firm becoming unviable – i.e. crystallising risks cause the market to lose confidence in it, with the consequence that counterparties and other stakeholders are unwilling to transact with it or provide it with capital.
	15. Does the implementation template imply that we need to deploy additional resources/make wholesale changes to IT infrastructure to undertake a reverse stress-test?	No, the reverse stress-testing framework should complement your existing stress testing framework. (The cost-benefit analysis undertaken in relation to this requirement, published in PS09/20[1], found that several firms surveyed for the policy statement indicated that incremental IT costs for reverse stress-testing would be zero.)
	16. How should the point at which the business model fails be identified?	Firms may start to develop scenarios that lead to the business model failing by considering the cause, consequence or impact (financial or otherwise) of one or more events that lead to the failure of the firm. Firms should note that

[1] "PS09/20: Stress and Scenario Testing - Feedback on CP08/24 and final rules", December 2009, http://www.fsa.gov.uk/pubs/policy/ps09_20.pdf

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		'failure' is not necessarily identified with the point at which the capital and/or liquidity of the firm is exhausted. For example, it may be the point at which: • market participants see that the firm is over-exposed to a particularly risky sector (cause); • market sentiment results in the refusal of market counterparties to deal with the firm or under such onerous conditions that it is economically unviable for the firm to do so (consequence); or • the firm is unable to transact any new business and its revenue streams dry up (impact). Firms might consider any one of these as a starting point from which to develop the scenarios. (This may be contrasted with a real-world failure, where the sequence of cause-consequence-impact occurs in that distinct order.)
	17. How do I define business model failure?	The firm should decide what constitutes business model failure, based on risks crystallising that cause the market to lose confidence in the firm (see response to question 14): it is important to note that it is not solely about inadequate financial resources.
	18. Is it acceptable if my firm starts off only including qualitative analysis in reverse stress-tests and moves on to include more quantitative analysis over time?	We would expect the overall process to be primarily qualitative in nature for smaller firms, given our view on proportionality. In the future, smaller firms may well retain a primarily qualitative focus in their analysis, but we would expect larger, more complex firms to undertake more detailed analysis, incorporating quantitative analysis from the outset.
	19. Do management actions need to be signed off by senior management, or is the FSA just looking for agreement in principle to management actions in the reverse stress-test?	The firm should consider whether the management actions need to be signed off by senior management – this will depend on the action being considered (and it should be noted that the Board or senior management will sign off the exercise in its entirety anyway).

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	20. We are asked to submit the results of reverse stress tests after taking account of currently available management actions, but we are asked to then think about mitigating management actions, based on the results of the reverse stress tests. How do these two sets of management actions fit together?	The reverse stress-tests that cause a firm's business model to fail are those where prospective management actions would not be sufficient to prevent such a failure. Having identified such scenarios, we ask firms to think about ways in which they might strengthen their business models now to mitigate the risks posed by the scenarios. This strengthening may include enhancing the impact that prospective management actions would have, or putting in place the necessary conditions for taking new management actions that could avert business model failure.
Scenarios	21. Is the FSA asking firms to produce eight reverse stress-tests that cover the extremes of the reverse stress-testing 'cube' illustrated in the first round of surgeries?	No, we are asking firms to consider adverse but plausible events or confluences of events that might give rise to their business model failing. However, it is for firms themselves to consider whether events at the extremes are relevant to their own circumstances (see responses to questions 22 and 23).
	22. There are any number of scenarios with a range of complexities – is the FSA going to give more guidance about their expectations in regard to the complexity of the scenario?	No, the reverse stress-testing exercise supplements the firm's existing risk appetite statement, which itself is informed by, among other things, 'normal' stress testing. Firms should start by considering a wide number of scenarios that might potentially threaten their business model, despite credible management actions – subject to those scenarios being plausible – and narrow them down to the ones most likely to cause the business model of the firm to fail (see responses to questions 21 and 23).
	23. There are any number of scenarios that may be considered – are we required to discount scenarios and submit the most likely scenarios?	Yes – the most relevant, severe and plausible scenarios that might give rise to the business model failing, despite credible management actions, should be identified via a process of elimination and submitted (see responses to questions 21 and 22). These should be the most likely scenarios, given that business model failure is a prerequisite for a scenario to be considered, and not necessarily based on an assessment of the absolute probability of the scenario occurring.

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	24. Should firms document scenarios that have been considered but dismissed as being deemed too unlikely?	No, but the process undertaken to choose the final scenarios should be documented, and firms may wish to record all scenarios considered, both for internal reference purposes and for future iterations of the reverse stress-testing exercises.
	25. What about scenarios that are considered, but after being run show that the firm does not fail?	We expect firms to have considered a range of scenarios and to submit detail on any that significantly threaten the firm's business model to the point of failure, although we are also interested in those where the firm does not fail but material issues are uncovered.
	26. How many scenarios should firms focus on in detail in their submission?	We would generally expect all firms to include a number of relevant scenarios in the submission, and larger, more complex firms to consider and submit more scenarios. Firms should undertake a filtering process, starting with a wide set of potential scenarios and narrowing these down until those that present the greatest threat to the failure of the business model are left for detailed analysis and for inclusion in the submission.
	27. At what stage should the management actions be incorporated into an assessment of the impact of events that threaten the business model?	We are asking firms to identify those events (or confluences of events) that would lead to their business model failing after currently available management actions had been taken. This will enable firms to identify those management actions that would not be sufficiently effective in their current state of development and/or would not currently be possible. Given this knowledge, firms should then consider (i) strengthening currently available management actions to the point that they could prevent failure of the business model and/or (ii) putting in place the conditions necessary for new, credible management actions, with the outcome that the business model subsequently would not fail under the same single event or set of events.
	28. Should firms include scenarios where the management actions prevent	These may be useful to illustrate to your supervisors how you have identified relevant scenarios, particularly where the scenario(s) in

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	business model failure?	question may at first have appeared to be relevant and likely to result in the failure of the business model. However, the requirement for the reverse stress-testing exercise is that each scenario should result in business model failure after all available existing management actions have been deployed.
	29. What quantitative analysis should be included in the submission?	As a starting point, every scenario should be described in qualitative terms, with quantitative analysis where appropriate and possible. We expect larger, more complex firms to undertake more extensive quantitative analysis in their reverse stress-testing as appropriate, relative to smaller, less complex firms.
	30. Do firms need to assess the likelihood of a scenario crystallising in quantitative terms?	No, the likelihood can be expressed by ranking the scenarios, rather than deriving a probability and/or confidence level.
	31. Can we consider reverse stress-test scenarios where the firm does not take enough risk, i.e. it is too conservative and therefore loses out to competition?	Yes, if this leads to potential failure of the business model (e.g. through reduced income).
Time horizon	32. Should we incorporate only those events that crystallise over an extended period?	Although firms should consider events that might occur at any time within a time horizon of three to five years, it may be that there is an event (or a set of events) that leads to the firm's business model failing more rapidly – e.g. discovery of a significant internal fraud event with resultant loss of market confidence. Firms must, therefore, consider both slow- and fast-crystallising events that might cause the business model to become unviable.

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Governance	33. Who does the reverse stress-test need to be signed-off by?	The Board or senior management of the firm must sign off the reverse stress test. However, as generally under our rules in *SYSC* both the Board and senior management are ultimately responsible for the management of a firm's prudential risks, sign-off by the Board is recommended in any event and may present an opportunity for it to use the reverse stress-testing exercise and outputs to inform the firm's risk appetite and business planning.
	34. What degree of engagement is required by the Board for reverse stress-testing?	The Board or senior management will ultimately sign-off the outputs of the exercise on a periodic basis, but we would also expect the Board to perform several other tasks, such as: • input into identifying potential events that might result in failure of the business model; • challenge the outputs of the reverse stress-testing exercises; and • approve changes to the reverse stress-testing framework.
Outputs	35. How will the results of the reverse stress-testing exercise be used?	Firms should use the results to inform their own risk mitigation plans that would be enacted should the scenarios occur, as the primary purpose of the exercise is for firms to identify weaknesses in their business model, and associated management actions, under those scenarios. We may discuss the results with each firm in the context of their risk management framework, and we may look across the spectrum of firms to see whether any common themes arise, e.g. a common event that might lead to the business model of multiple firms failing (such as the failure of a firm that provides an outsourced service to multiple users). Firms should note that we will not use the results of the exercise to generate additional capital requirements directly, but they might give rise to additional capital requirements where they highlight more general shortcomings in the existing oversight and governance processes in a firm.

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	36. Does the FSA have a template for submissions?	No, we want firms to develop a format that is appropriate for their own risk framework and makes all relevant components of the exercise clear.
	37. What will supervisors do if they believe that the firm's exercise, including the analysis and outputs, are poor?	Firms should strive to submit the outputs of a good-quality reverse stress-testing exercise the first time around. Assuming that this has been done, where supervisors find a submission to be wanting, they will adopt a pragmatic approach, and give the firm feedback on its submission and an opportunity to re-visit the exercise. We recognise that, to begin with, the development, review and refinement of the exercise will be an iterative process for both firms and supervisors.
	38. Will the outputs of a firm's reverse stress-testing exercise be used to set part of its Individual Capital Guidance and/or Capital Planning Buffer?	No – however, any new risks highlighted during the course of the exercise may feed back into the Pillar 2 assessments in the case that the reverse stress-testing exercise highlights potential shortcomings in either the ICAAP/ICA and/or general risk management framework (see response to question 35). The reverse stress-testing exercise is an internal risk management exercise intended to be a complement to the ICAAP/ICA, and will not prompt us to raise the bar in terms of our expectations of those assessments.
	39. What will the FSA use the outputs of reverse stress-tests for and why is the FSA asking for it if there is no capital outcome?	We want to understand what firms think about potential weaknesses in their business models and, in particular, how they are integrating the analysis of these into their risk management processes. In doing so, we seek to enhance firms' own risk management, which is not only advantageous to firms but also helps us to meet our regulatory objectives of consumer protection, market confidence and financial stability. See also guidance in *SYSC* 20.2.7G.
Banks	40. What if my firm is currently applying for a banking licence?	You should liaise with the FSA contact dealing with your application regarding the stage at which you might be required to present the results of your reverse stress-testing exercise. We expect you to build in the ability to perform

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		the reverse stress-tests alongside the development of your more general risk-management framework.
Insurers - life	41. How does the requirement apply to a group that includes a bank and an insurer?	In accordance with *SYSC* 20.2.2R, firms must conduct reverse stress-tests in relation to their insurance group or UK consolidation group or non-EEA sub-group. Where one of these groups is part of a broader financial conglomerate the requirement to undertake a reverse stress-test must be met at any intermediate level too.
	42. How does reverse stress-testing link with Solvency II implementation?	We will clarify the requirements for submitting firms' reverse stress-testing exercises when the reporting requirements arising from Solvency II are finalised, but firms will be expected to be able to submit the outputs of their annual reverse stress-testing exercise to their supervisor from 14 December 2010.
	43. What are the FSA's expectations about 'unviability' for insurers? Is it insolvency, run-off, etc?	It is any set of circumstances that, either on a standalone basis or in conjunction, cause the firm to arrive at the point that crystallising risks cause the market to lose confidence in it, with the consequence that counterparties and other stakeholders are unwilling to transact with it or provide it with capital. While financial insolvency might be one reason for reaching this point, other earlier trigger points leading to this state might be the withdrawal of authorisation by the supervisor or an adverse audit opinion. These might not represent the end-point of business model failure, but they may potentially be the start of an inexorable move to such status.
	44. Do we need to calibrate the reverse stress-test and does it link with the '1 in 200' stress test?	The reverse stress-test will require firms to identify one or more events that cause the failure of the firm's business model, and should therefore be linked to your overall business and strategic planning process. There is no explicit link to the '1 in 200' stress test (that is focused on ensuring the firm has sufficient capital to withstand such a stress) as the intention is that the reverse stress-testing requirement will

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		enable firms to identify circumstances that bring about failure of the business model – not necessarily through a shortage of capital – and thereby to strengthen currently available management actions, or to develop new ones, that prevent such failure. (While this may involve some aspects of your ICA, it is not necessarily the case that the two exercises would be closely calibrated.)
Investment firms	45. How does the requirement apply to a group that has an investment firm with a consolidation waiver – i.e. it does not have to submit an ICAAP, but is in scope of the reverse stress-test requirement?	The fact that an investment firm may benefit from a consolidation waiver is irrelevant for reverse stress-testing purposes. The requirement will apply both to the consolidated group, including the investment firm(s) to which the waiver applies, and the investment firm(s) on a solo basis, given that a potential failure of other group firms might lead to one or more investment firms failing.