

Counsel's Comments on Report Plan

I make two general points before addressing specific comments:

1. The litigator's concern to cover all the bases for their client may not align perfectly with the expert's concern to investigate and report in a balanced manner in the timescale. This is not a problem, provided we are aware of how it affects us, early.
2. Launching a rocket to the moon, you use small thruster rockets to make mid-course corrections, and later do more corrections when you get into the moon's gravity. Coyne's report is the moon. These are the mid-course corrections.

Comment	Response
<p>1. We like the first part of Robert's overview section and we particularly like his positioning of robustness as the critical issue.</p> <p>However, we all need to be clear that for the client, <u>the key objective is to satisfy the court that, when faced with any discrepancy in any branch's accounts, the chances are very small indeed that this deficiency is caused by Horizon</u>, still less by any of the specific matters identified by Coyne.</p> <p>That the Horizon system is well designed / built is highly relevant to and helpful on that key question, but it is not the key question. We want to win even if (as seems to be suggested in some of the reports and other documents referred in the outline claim document) parts of Horizon were not perfectly designed / built for some or all of the time.</p>	<p>The client's key objective may not be fully met, and you need to understand the reason.</p> <p>You may recall that the claimants suffered shortfalls at an average rate of £360 per month. But about 1/5 of them had shortfalls less than £50 per month, averaged over their tenure.</p> <p>I am finding it hard to show that if a branch has small shortfalls, of say £25 per month, some part of them - say £10 per month - is not caused by undetected mini-bugs in Horizon, which cause mini-shortfalls which no SPM ever complains about, and which never get investigated.</p> <p>So, my statement under issue 1 of the JS (written by a lawyer and accepted by me) needs to be qualified with some phrase like 'not pennies, or just a few pounds' of the kind nearly all SPMs would accept as 'in the noise'. The statement was a preliminary view, which gives me room for movement.</p> <p>Data on non-claimant branches (Credence) would be a real help here - but, even then, I may not be able to eliminate the unknown mini-bugs.</p> <p>You may need to ensure that, for the next trial after the Horizon trial, the claimants do not pick a set of low-shortfall lead claimants, to score this point. The sample of lead claimants needs to be unbiased - to have typical average monthly shortfalls.</p>
<p>2. When we say "caused by Horizon", we mean caused by a bug or caused by any of the other issues raised by the common issues and/or by the outline claim document and/or by Coyne's report. At the risk of stating the obvious, Robert needs to ensure that he does not focus exclusively on bugs.</p> <p>We note that the outline claim document also makes complaints about "error repellency" and about the ability of Horizon to alert SPMRs to bugs (Issue 2); the adequacy of controls (Issue 4 and Issue 6); and the general process of reconciliation (Issue 5). Does Robert need an additional section or sections somewhere addressing the other issues?</p>	<p>There are sections in the report to address each Horizon issue, covering all these other points, and I plan to address them all. We have been told not to focus on the common issues.</p> <p>Error repellency, issue 4 and issue 6 are all aspects of robustness, and I intend to make those links. In my current draft, issues 4 and 6 are addressed only very briefly after issue 3 (which includes them), but they will doubtless expand - if only in response to Coyne's report.</p>
<p>3. In this context, it is worth adding that Robert should not simply focus on the specific criticisms which Coyne makes.</p> <p>We know that there are likely to be strong responses to them, but we also know that Coyne's approach is to throw as much mud in the hope that some sticks so he is likely to shift ground onto the more amorphous criticisms if he feels he needs to.</p> <p>The point is that the consideration of robustness and countermeasures needs to cover all this as well.</p>	<p>I think you are asking me here to address Coyne's 'amorphous criticisms'.</p> <p>So far, he has taken a point approach, of dragging out specific smoking guns, as he sees them.</p> <p>In our meetings I have got little sense of any more amorphous criticisms. I may only know about these when I see his report. The impact of countermeasures on amorphous points will be addressed.</p>

<p>4. While on the subject of robustness and countermeasures (and thus the chances of Horizon causing discrepancies in branch accounts), to what extent will Robert be addressing the business processes surrounding the operation of the Horizon system, in addition to the countermeasures that are built into Horizon itself?</p> <p>If those processes are operated properly, branches should (for example) do cash balances on a daily basis. If these are done, it seems to us that the chances of an error going undetected and becoming impossible to resolve, reduce to a vanishingly small probability.</p> <p>The Horizon issues should not be approached as if the system is entirely automatic i.e. not affected by human interaction. An essential part of the system is how it is used by its users. To take an extreme example, if a user (negligently or fraudulently) persistently enters £20 as having been deposited when £200 was in fact deposited, and then fails to carry out any checks or worse, puts misleading entries in, there is little Horizon can do about it.</p> <p>All this is obvious but we wonder if there is scope for Robert to address the proper use and human operation of Horizon i.e. that part of the robustness of the system comes with users following proper procedures on a regular basis.</p> <p>This certainly would not be a principal line of attack, not least because we suspect that a significant number of postmasters may have recorded false balances in Horizon in order to conceal shortfalls. But we would like the judge to get a feel for the point and would be interested to know Robert's views on whether and how it can properly and usefully be included in his analysis of robustness etc.</p>	<p>I think that by business processes, you are referring to both the processes in the branch, and PO back office processes.</p> <p>I have no intention of approaching Horizon as if it was entirely automatic, or as if its robustness countermeasures were all fully automatic. You will already see in the JS a reference to automated robustness versus manual robustness (now countermeasures). Processes will be discussed in many places.</p> <p>BTW many of these are processes around POLSAP - and Credence, which you might also want out of scope. They, and the processes around them, add to the robustness of Horizon. They crop up in a lot of KELs.</p> <p>So, under issue 3, and in the chapters brought forward from the Foundation report, there is a lot about manual countermeasures – e.g. redundant copies of data, humans eyeballing data in lots of different ways, bug investigation processes.</p> <p>I am not sure about '<i>part of the robustness of the system comes with users following proper procedures on a regular basis</i>' which might get us into a semantic trap. Robustness is all about continuing to operate correctly even when users do not entirely follow proper procedures. If we say robustness depends entirely on users following proper procedures, that is no longer robustness. If some users screw up sometimes, they or other users may repair it later; or Horizon may handle it automatically.</p> <p>We need to tackle this one with care, but I certainly have it in mind. It will evolve with drafts and in response to Coyne.</p>
<p>5. As regards the second part of his overview section:</p>	
<p>a. Yes, robustness and countermeasures should be placed up front, but as indicated in para 1 above, this is a stepping stone to the key question, which should be clearly identified.</p>	<p>I can identify the question but see my comments above about what I can deliver in the answer.</p>
<p>b. As to the proper scope of the robustness question and what should be treated as countermeasures, see para 4 above</p>	<p>Scope includes robustness through processes.</p>
<p>c. Are Robert's views on the high level of robustness consistent with all the KELs referred to in paras 1.4, 1.4 and 4.1-4.3 of the outline claim document and the contemporaneous reports referred to in para 3.2(f) of that document? He needs to deal thoroughly with points such as this – as we are sure he is aware.</p>	<p>The KELs are a gold mine of information about robustness working well in Horizon. I am glad I have sampled 80 of them looking for impact on branch accounts; I am now sampling the same set, and other important KELs, to show how countermeasures worked.</p> <p>One problem that I face is that I promised to be balanced, and I am finding it hard to do that given the weakness of the Claimants' case. If I can find a few KELs for which to say: robustness worked, but it might have worked better - then that will add balance.</p>
<p>d. Second and third bullet points – in the joint statement, Robert and Coyne both classed issues 1, 3, 4 and 6 together, but Worden now puts issue 1 after issues 3, 4 and 6. We are not sure that matters very much and, in any event, we think his way of looking at issues 3, 4 and 6 means that he sees them as stepping stones and subsidiary to issue 1, which raises the key question identified in para 1 above. If that is right, we like it. However, he will need to explain why he has taken this slightly different structure.</p>	<p>Yes, this is a small change of structure, but no big <i>volte face</i> and I explain it in the report.</p> <p>If we need to completely avoid surprises, I can notify Coyne openly, once I have finalised my structure (in case any other small changes seem appropriate as well).</p>

<p>e. We do not like the way Robert approaches issue 1 – starting with the relevant KELs then going quantitative (see also para 8 of the summary section at the end of his essay plan).</p> <p>Where does he include his analysis on the key point that undetected bugs were very unlikely to be the cause of permanent shortfalls in a branch’s accounts (the point he repeatedly makes in the joint statement, in relation both to issue 1 and to issues 4 and 6)? This is much more important than and logically prior to the quantitative approach.</p> <p>It should accommodate his analysis of the relevant KELs (or at least the KELs referred to in para 1.3 of the outline claim document), including his analysis of how long it took to identify them etc. Hopefully, those KELs could be used as strong support for his conclusion, depending on things such as (1) how long it took to detect those KELs, (2) which features of those KELs resulted in their arising and not being detected until they were in fact detected, and (3) whether there are reasons for thinking it very unlikely that other bugs with similar features would have arisen. See further para 7 below.</p>	<p>The key point - undetected bugs - is hard. As described above under point (1), I may not be able to deliver all the client wants. This, too, may enhance my balance.</p> <p>I tackle undetected bugs by:</p> <ul style="list-style-type: none"> • Analysis of claimant data - that gives the 8% figure, but does not help you for the very low loss claimants • Analysis of competent postmasters - still waiting for data to start this (Credence data I hope) • A new analysis, presented graphically, that you won't like at first (what lawyer likes a picture?) but is powerful. I hope we can agree how to present it. <p>See above - my view in the first sentence of issue 1 of the JS needs a little qualification for mini-bugs, which there is room for. Under issues 4 and 6, I say 'very unlikely'; but, again, I may need to exclude mini-bugs with impact of pennies or a few pounds - which might have happened, for all I know.</p> <p>This may not get you all of what you want. On undetected bugs, I am still thinking (as on other topics!)</p> <p>Your last points (1) - (3) are in my thoughts but are work in progress.</p> <p>Ordering of points on issue 1 is up for grabs. I had intended to put the strong points first.</p>
<p>f. As to the quantitative upper limits approaches Robert refers to:</p>	
<p>i. We welcome the fact that he recognises the desirability of treating them as backups (in case he is wrong on the key question).</p>	
<p>ii. We also welcome that he recognises the need to explain the approaches and their logic in simple language in the body of the report, leaving any fancy calculations to an appendix.</p>	
<p>iii. We are unclear about which approaches he will be adopting and the order in which he will be presenting them. Can he clarify on a single piece of paper?</p>	<p>The current table of contents reflects my current approach, but is subject to change. It is really quite fluid depending on your feedback later.</p>
<p>iv. Will he be doing different calculations for different periods, before and after significant changes in Horizon – e.g. pre and post 2010? Does the logic of his approach suggest that he ought to do a separate calculation for each update/iteration of Horizon? If so, is this a problem for his approach?</p>	<p>I am looking at time dependence and will say what I can about it. There is a tradeoff - the finer the time slice, the less evidence there is. So the margin of error goes up.</p> <p>It also depends on what Coyne says about it.</p>

<p>v. Four big questions occur to us, some or all of which may be stupid:</p> <p>(1) First, is it possible for him to do a calculation of the chances of a bug affecting a branch's accounts, before he calculates the maximum likely impact of such a bug on a branch's accounts? If this is possible, we see this as extremely desirable.</p> <p>(2) Second, is there any possible tension between his conclusion that the chances of that happening are very low and his calculation of the maximum likely impact when it does happen?</p> <p>(3) Third, I have looked at Gareth Jenkins' note on the payments mismatch bug dated 29/09/10 and I see that para 6 says that it had so far been identified that the bug had caused one discrepancy of £30k, one of £4,800 and others of less than £350. Does this pattern of losses call any or all of his quantitative methodologies into question? If not, why not?</p> <p>(4) Fourth, as we discussed at our con in August, we wonder whether there is a point worth making in this context about the (im)probability of the patterns of losses alleged by the Claimants – which we think may be no or small losses for month after month, then much bigger losses in a few months (we may be wrong, of course). Might this be undermined or called into question by the Jenkins note and/or by the fact that Claimants may have accumulated small losses over a long period and concealed them by false accounting until it was no longer possible to do so? We would be interested to know what Robert thinks about this.</p>	<p>Not stupid at all.</p> <p>(1) For Horizon issue 1, I have two measures (a) number of occurrences of a bug, and (2b) net financial impact. Both can be presented on a per-branch basis.</p> <p>(2) My new analysis is systematic about numbers of occurrences and financial impact of each occurrence. I don't see tension, but clarity is continuing to emerge.</p> <p>(3) In all my analyses, individual occurrences of a bug can have a range of variation in financial impact. Mean financial impact is one way to encompass this - or if the sign can change, RMS (root mean square) impact. I am thinking in this way for all my analyses, at the risk of baffling the court.</p> <p>(4) I agree that claimants may well have been hiding their heads in the sand for many months on end. I have done two analyses of claimant losses - one of them time-independent, and the other time-dependent. Only the latter is affected by delay reporting loss. I am thinking what to say about it - but it has no effect on the main time-independent conclusion.</p> <p>By talking about reporting delays, we get near to accusing those claimants of false accounting - which I am wary of doing. Maybe you can.</p>
<p>g. Fifth bullet point – do we have the chapters he refers to, or the most up to date version of those chapters?</p>	<p>You don't have a draft - we could send one any time. Obviously, it is in flux and we'd like to agree progress points for you to read rather than snapshots. I'd rather not get into a review cycle this early unless you have major comments.</p>
<p>6. The first part of this section makes points that seem sensible. However, we have two queries:</p> <p>a. Is it a problem that some contemporaneous reports appear to suggest that there were some serious deficiencies in Horizon (see para 3.2(f) of the outline claim document)?</p> <p>b. Robert will ideally be addressing the position when Horizon was first rolled out – will he be able to do so? More generally, will he be able to deal adequately with the position pre-Horizon online in 2010?</p>	<p>a. I have addressed 3.2(f) in the current draft. The documents cited are hardly about Horizon at all - very weak points.</p> <p>b. Time dependence is a big issue for us, not just the Horizon to HNG change. We will be trying to give the picture of the major changes. There is no shortage of written evidence about pre-2010. Horizon was designed and built to high standards from the start; it has also been well maintained and continually enhanced over the years (not just for 2010). Horizon has been robust throughout.</p> <p>When I plot claimants' shortfalls against time, there is for instance no big peak in the early days of Horizon, or on the change to HNG. So, there is no evidence for bugs causing shortfalls just after releases.</p> <p>I'd like to histogram KELs v time to see if there was any peak in bugs early or just after 2010 - to make a general point that bugs do not imply shortfalls. But it adds to the workload, and may need to be deferred.</p>
<p>7. As regards the second part of this section (the table):</p>	

<p>a. Do these points allow an assessment to be made of the (very low) likelihood of undetected bugs being the cause of permanent shortfalls in a branch's accounts? If so, how? Which of the countermeasures had that effect? Did any other features that are not countermeasures also contribute to that effect (e.g. reconciliation, facilities for subpostmasters, facilities to Post Office etc)? If so, where are they taken into account?</p>	<p>See above - undetected bugs can only really be those that cause shortfalls less than £300 per occurrence (all others get reported and investigated and fixed), but bugs with small financial impact which are undetected (because they are not noticed) are a bit of a problem. Overall, they would have to occur with huge frequency to affect the claimants' overall shortfall - but for individual low-shortfall claimants, they are still a problem.</p>
<p>b. Are all of the points made in the table (e.g. good support processes):</p> <ul style="list-style-type: none"> i. safe to say? ii. true for the whole of the period 2000 to 2018? iii. consistent with the existence/duration/history of (1) the three bugs referred to in para 1.3 of the outline claim document (we would love to know how quickly they were identified) and (2) the other bugs referred to elsewhere in the outline claim document? iv. consistent with the para 3.2(f) reports referred to above? 	<ul style="list-style-type: none"> i. safe to say - yes. The table describes common practice. I have to assess how well Horizon does for each one. ii. true always - I need to assess (balance). Broadly I think it was. iii. consistent with the 3 bugs - yes. 3 bugs with impact on branch accounts in 18 years is good going. As to your other questions - we don't yet have evidence to address Calendar Square. The suspense account bug lasted 2 years which was exceptional, because it only occurred once a year to branches where it occurred - and PO did not tell FJ about it, first time round. So, measured in recurrences, it was not bad. iv. yes- they are hardly relevant.
<p>c. Re- item 12 in the table, will this item include the business processes discussed in para 4 above? If not, where will those processes be covered?</p>	<p>12 and 13 cover processes</p>
<p>On any view, some careful reasoning/deft footwork will be needed to deal with these points</p>	<p>I am sure you will be checking my footwork all the way.</p>
<p>8. We are not sure how and where issue 2 (alerting subpostmasters to bugs etc), or issues 7, 10, 11, 12 and 13 (remote access), or issue 15 will be addressed?</p>	<p>There are sections of the report for all issues. We could send a table of contents to give you a flavour.</p>
<p>9. Para 4 – is there sufficient available material to allow Horizon pre 2010 to be addressed adequately? And what about the possibility that Horizon was terrible when first rolled out? Also, should all Robert's calculations (of the low probability of Horizon causing losses, of the likely maximum amount of such losses etc) be different for the period up to 2010 and the period after it? See para 3.e.iv above.</p>	<p>See above. There is no shortage of written evidence pre-2010, including documents, KELs and Peaks. What is short is people who remember it - but we can't talk to them in any case.</p> <p>Horizon was not terrible when first rolled out, at least as measured by claimants' shortfalls.</p> <p>I am addressing time dependence when I have evidence to do it. Time dependence of claimants' shortfalls shows nothing in particular.</p>
<p>10. Para 8 – see our points above. The most important point is that we would like a calculation/assessment of the probability of an undetected bug (and other Horizon issues such as error repellency?) causing losses in branch accounts, before any calculation/assessment of the maximum likely losses caused thereby.</p>	<p>See above for what I can and cannot do.</p> <p>Error repellency is a part of robustness, not a cause of losses. Horizon was OK.</p>
<p>11. Para 9 – does issue 10 go with issue 5?</p>	<p>No. 5 and 15 are a group. This was just a typo in the report plan, which says that section 9 covers Expert Issues 5 and 10 (rather than 5 and 15).</p>