

Local Suspense Problem

Ref: g:\gij documents\poa\prosecution support\spot reviews\localsuspense.docx
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Version 0.2: minor clarifications.
Version 0.3: Worked example added as Section 3.
Version 0.4: input from FSC
Version 0.5: Additional detail from Horizon Logs: Changes from version 0.3 in red like this
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1. Management Summary

The purpose of this note is to provide a management level summary of the “Local Suspense” problem that was identified earlier this year and was seen to impact 14 of the current Horizon Branches. This issue occurred on Horizon Online and due to the different architecture of the old Horizon system, such an issue could not have occurred on the old Horizon system.

The root case of the problem was that under some specific, rare circumstances some temporary data used in calculating the Local Suspense was not deleted when it should have been, and so was erroneously re-used a year later. When the SPMR was asked to clear Local Suspense the actual (ie incorrect) amount was recorded in the Audit Trail. This means that there was no corruption in the audit trail and it accurately reflects the transactions that occurred in the Branch.

If the BTS from the previous period was taken to provide a set of Opening Balances and all transactions that were logged to the audit trail during the period were taken as adjustments, then this would show the correct value that should be in the Local Suspense account.

Section 2 of this report provides a more detailed description of the problem and the cause and rectification actions carried out.

Post Office Ltd have asked for a detailed worked example which has been added as Section 3 to this report.

2. Detailed Description

2.1 Background

Local Suspense is a mechanism whereby any gains or losses from a Stock Unit can be rolled up at a Branch Level, so that the last Stock Unit to Balance within a Trading Period can clear all the individual discrepancies in a single transaction.

This is achieved by the various Stock Units calculating the net value of all their gains and losses, and Horizon then generates transactions such that the discrepancies sum to zero and the balance is posted to a gain / loss Local Suspense account. This is visible on the Stock Unit Balance report that is produced by Horizon every time the Stock Unit is rolled over into a new Trading Period.

As well as passing these Local Suspense transactions to the normal accounting tables that are used to update POL SAP and Credence, they are also written to a table in the Branch Database that is used to support the printing of the Branch Trading Statement (BTS) after that Branch has been fully Balanced.

When the last (or only) Stock Unit in a Branch is rolled over into a new Trading Period, then all these Local Suspense values are summed and an aggregate gain or loss for the branch is calculated. The SPMR is then asked how they propose to clear this gain or loss and the appropriate accounting transactions are generated. Details of the changes to the Local Suspense account are again written to the Branch Database both for reporting to Post Office Ltd' back end systems and also for the production of the BTS.

2.2 The Problem

Data in the Branch Database is regularly archived and then deleted when it is no longer required. Different tables have different rules concerning exactly how long data is retained and when it is archived and deleted.

In April 2011 a problem was found with the archiving strategy related to Stock Units that have been deleted in a Branch. A consequence of this is that some changes were made to the archiving strategy on 3rd July 2011. An unintended consequence of this change was that any Branch that deleted a Stock Unit at the end of 2010 which had local suspense transaction in that Stock Unit before it was deleted were left in the table used for constructing the BTS. This meant that as Trading Periods cycle around each year, these BTS records became visible in 2011 when the same Trading Period was reached.

The effect of these old records was that after the BTS was produced an incorrect figure was generated for the Opening Balance of the Local Suspense Account for the following period. This amount corresponded to the value of the historical record. These orphaned records were created between 16th November 2010 and 9th December 2010.

When the next Trading Period was balanced, then this incorrect Opening Figure would result in the total value for Local Suspense being calculated incorrectly and the SPMR being asked to make good an incorrect amount. It is at this point that transactions would be generated into the audit trail reflecting the fact that the SPMR had cleared the Local Suspense account for an incorrect amount. The audit trail operated correctly in the sense that it accurately recorded the transaction on the system.

This problem was not reported to Fujitsu in 2011 / 12 and only affected a small number of Branches and only for a single Trading Period. However the two branches with the largest discrepancies did report the issue to Post Office Ltd who could see the impact of the problem in their back end system and wrote off the loss or gain for the branch but did not ask Fujitsu to investigate further.

At the same Trading Period in 2012 / 13, the problem re-occurred and this time one of the affect Branches reported the problem to Fujitsu on 25th February 2013 (Peak 223870) resulting in a detailed analysis of this issue and finding the orphaned BTS

records. The root cause was determined by 28th February 2013 and a preliminary report was sent to Post Office Ltd. A further update was sent on 14th March 2013 with a full analysis of the issue and all the affected branches.

2.3 Rectification Actions

When the problem was investigated earlier this year, 14 Branches were identified that had such historical records in the table used to generate the BTS report (which is the root cause of the problem). (5 Branches had losses and 7 had gains and 2 branches that had both a loss and a gain. One loss was for £9,800, one gain for £3,100 and the rest were less than £161.)

These records have now been manually deleted so that they do not cause a further issue in future years. Also two further checks have been identified during the balancing process each of which indicate a situation associated with this problem, so that should those situations arise in the future, then alerts would be raised to indicate to support staff that a situation that should never occur has occurred and thus trigger immediate investigation. These changes are being progressed through the normal support route for a maintenance release of the Horizon counter code.

No changes need to be made to the Audit logging process, which worked as designed.

2.4 Affected Branches

The following table lists the affected Branches and the amounts:

Branch	Name	Amount
002647	Aberystwyth	-£6.71
002840	Inverness	£140.61
010007	East Dulwich	-£0.01
011458	Willen Village	-£9,799.88
012004	Lower Edmonton	£16.12
054011	Lower Regent Street	£3.34
101832	Dundas	£5.84
104937	Grange	£0.03
104937	Grange	-£49.65
155025	Hounslow	-£113.14
156715	Gilford	£11.55
211844	Rosyth Terminus	£36.20
211844	Rosyth Terminus	-£77.97
243242	Wardles Lane	-£0.51
266418	Bowness Road	£3,186.70
297611	Merthyr Dyfan	£160.92

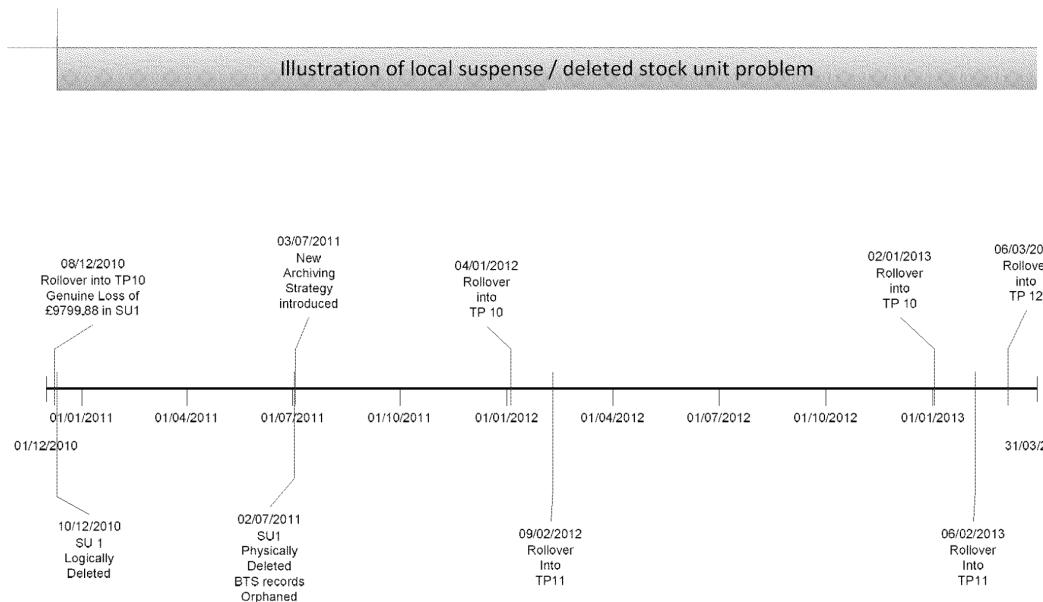
A negative amount signifies a loss.

3. Worked Example

The following goes through in detail what happened in Branch Willen Village, which reported the problem and where the impact was most significant. This Branch has a Branch code of 011458.

Detailed transaction logs have been retrieved and from these it is clear that the Branch is an Operator self funded Branch with a single counter.

In November 2010 (where the logs start) it was operating in Stock Unit 1, and then when Balancing on 10th November 2010, switched to using Stock Unit AA. Rather than transferring stock between the two Stock units, what appears to have happened is that the Stock levels in the two Stock Units were adjusted resulting in a Cash Surplus in SU AA and a Cash Shortage in SU 1.



3.1 Original Discrepancy

The Branch balanced its Stock Units and rolled over from TP 9 to TP 10 on 8th December 2010. Specifically, SU 1 had a Loss of £9,799.88 which was recorded in the BTS table related to TP 10 BP 1. Note that this branch had a gain of £6,336.87 in a SU AA resulting in a net loss of £3,463.01 which was settled centrally. The discrepancies would have been genuine and the loss was recovered through normal process.

Immediately after the Branch Rolled over into TP10, SU 1 was deleted. When a Stock Unit is deleted, it is actually updated with a “~~logically deleted~~ flag”. Should an attempt be made to re-create a Stock Unit with that name in the same Branch this is prevented by the existence of this “~~logically deleted~~ SU”. However after a period of 205 days, the Logically Deleted Stock Unit is archived (and so physically deleted) from the Branch database (thus allowing the SU ID to be reused).

The change to the archiving strategy was related to handling items associated with Logically Deleted Stock Units. If this change had not been made there would have been many more orphaned records left lying around in the branch database which could have had other impacts (and that was the problem the fix was addressing). However the fix didn't retrospectively remove records created in TPs 9, 10, 11 or 12 associated with a Stock Unit that had been Physically Deleted and hence this resulted in a small number of records being left in the BTS table.

As stated earlier this impacted 16 records in 14 branches.

3.2 Balancing in 2012

When the Branch came to Balance at the end of TP 9 on 4th January 2012, then this orphaned BTS record (for £9,799.88 loss) was picked up in the database queries.

This resulted in a Discrepancy of £9,727.41 being settled centrally on 9th February 2012. Note that the difference between the two figures (ie £9,799.88 - £9,727.41 = £72.47) would have been a genuine gain for that period.

This issue was reported to FSC who saw the issue in POL SAP and corrected the problem by journalising the values in the Local Suspense account against the value in the Settle Centrally account. Thus clearing the situation as far as the SPMR was concerned. The balancing value of £72.47 was written off in FSC. Unfortunately Fujitsu were not informed about this and so no investigations were made as to why this occurred.

3.3 Balancing in 2013

When the Branch rolled over into TP 10 on 2nd January 2013, the erroneous record in the BTS table from 2010 was found again and resulted in an Opening Figure being posted to account 6295 with a value of £9,799.88 (ie the value of the erroneous BTS record from 2 years earlier). This had no impact on the rollover from TP 9 into TP 10, but was instrumental in causing a problem at the end of TP10.

During TP 10, a (genuine) cumulative Loss of £39.57 was calculated. However when the erroneous £9,799.88 was added in, this resulted in a recorded Loss of £9,839.45. which was processed when balancing the Stock Unit as Make Good to Cash.

On 8th February, a Cash Discrepancy was created by rolling the SU over into a new BP for £9,862.43 and at the end of the following period (TP11) with other cumulative discrepancies resulted in £9,830.98 being settled centrally. An uncleared value of £9,799.88 is presently held in the Local Suspense ledger in POLSAP along with a debt of £9,830.98.

Settling it centrally took the loss out of the Branch' records.

4. Draft FSC Letter to SPMR

The basic outline of the problem will be explained to the subpostmaster in a letter. The net gain arising from the correct discrepancy values declared over the two trading periods of £32.90 will be returned to the subpostmaster through pay.

The text of the proposed letter (below) will be approved by Post Office Ltd' legal department prior to sending.

Dear Mr Mistry

Re Branch Discrepancies

Thank you for your assistance in helping us to understand the unexplained discrepancies that have impacted your branch.

I can confirm that losses of £9,799.88 declared at TP10 in 2012 and 2013 were not proper to your branch. This problem was created by a specific set of circumstances dating back to an actual loss you declared in December 2010 (TP9).

In brief, the stock unit that declared the discrepancy and placed it into Local Suspense was deleted on or before 10th December 2010. The related Local Suspense entry should also have been removed, but this did not happen.

The impact of this was that the loss of 2010 was picked up again at the beginning of TP10 the next year in Horizon. At the end of TP10 the branch was forced to clear this along with current discrepancies. The Local Suspense ledger in the Post Office Finance System was impacted in the same way.

This scenario was then repeated at the same point the next year.

Both TP10 discrepancies recorded at your branch were settled centrally and blocked on your Customer Account.

The values of 2 * £9,799.88 have been cleared from your Customer Account. The actual discrepancies that were proper to your branch were a gain of £72.47 in 2012 and a loss of £39.57 in 2013. This leaves a net gain of £32.90. This amount will be returned to you in May' pays

Changes to Horizon in 2011 prevented this problem for stock units deleted after mid-December 2010, and the old Local Suspense entry has now been removed from the system.

I apologise for the distress this will have caused you along with the support we have requested from you.