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Overview

Last September, to satisfy a growing problem list from ██████████ Bank (SVB), we compiled SVB Account Management emails and meeting notes converting them into individual Jira issues. Several of the issues were problems reported in late 2013.

We methodically worked through the issues, regularly met with SVB in hopes of recognizing patterns and special circumstances around issues. During this process, the bankers had access to their Jira issues and could submit new SVB issues. After six months, we closed 105 SVB issues with complete agreement across both companies.

What We Worked On

Initially, we had 87 unresolved complaints from 2013 – 2014 stored in several desktop standards, such as mail and spreadsheet notes.

Reported Date	Description of Problem Identified by Heather
2013	
4-Nov SVB-41	We have some more chargeback/repres related Discover funding variances as shown below (10/31 & 11/1); please advise the status of resolving this is
3-Dec SVB-40	We had a credit variance today of \$584.00; using the Discover Online reports (attached), I was able to determine that \$504.10 were representments; the remaining \$79.90 was for incoming chargebacks which we did not appear to be debited from our Discover funding.
2014	
24-Jan SVB-35	We have a variance for Discover today for \$2228.55. Based on the reporting from Discover I was able to determine the variance is related to chargebacks. This continues to be an issue it seems; what is the status of the resolution for this issue with Discover?
4-Feb SVB-31	We have a variance of \$34.95 today for Discover. Based on the Discover Online reporting, this is again related to chargebacks. Please provide an update on this issue and its resolution with Discover, thanks.
6-Feb ?	We have a variance of \$75.51 today for Discover. Based on the Discover Online reporting, this is again related to chargebacks, as well as a variance in the merchant credits. Please provide an update on this issue and its resolution with Discover.
13-Feb SVB-35	Today, we had a variance of \$2228.55 for Discover. This variance relates to representments. I do believe this may be a data feed issue at MeS and not Discover, because the Discover Online reporting is correct; MeS captured the \$2228.55 amount in both the Incoming Chargebacks and the Second

We shifted the stovepipe storage and maintenance of those complaints into our Jira system by creating a walled-garden project named “SVB” and gave access to the issues to bankers and our SVB-team members.

Each SVB banker-reporter and the MeS SVB-team members had access to all SVB Jira project issues. The banker-reporters are linked to Jira through their bank email accounts.

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Note: SVB banker-reporter Jira accounts are only functional for SVB Jira issues.

Who Was Involved

This special project was a confluence of key [REDACTED] Bank and MeS individuals namely:

- SVB Bankers - Heather [REDACTED], Justin, and Eric
- Project Manager - Susan Kraft
- Key Engineers - Maher [REDACTED], Igor [REDACTED], Rob [REDACTED], and Tracie [REDACTED]
- Finance Research – Andy [REDACTED], Mary [REDACTED], and Hue [REDACTED]
- Portfolio Management - Jenna [REDACTED], Eric [REDACTED] and Tom [REDACTED]

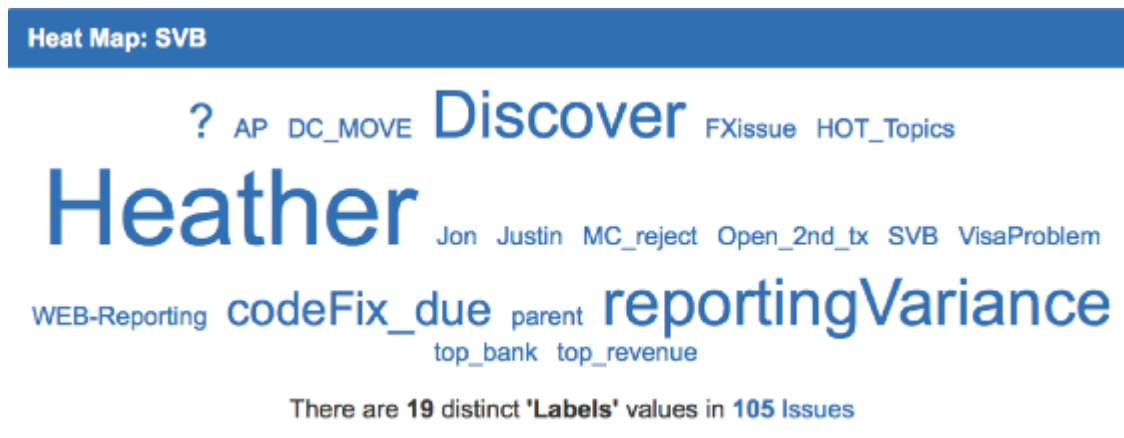
Purpose of Project

We launched this project for two main reasons – to deeply investigate apparent repeated problems of a key client and to show special courtesy towards SVB, as a key client.

SVB Jira Issues

The primary complaint was reporting variances. Although a couple consistent problems, such as [REDACTED] chargeback and [REDACTED] variances emerged from the 105 individual issues, many problems were singularities. To separate true patterns from personally enhanced issue groups, we tagged each issue.

The following Heat Map shows patterns in the SVB Reconciliation Jira project. The larger the font, the more often the label was used in the issue list.



The names in the heat map represent bankers Heather [REDACTED] and [REDACTED]; they were the originators of the 87 complaints transferred into Jira tickets. Heather reported 72

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issues of the total 105 issues. Other reporters not listed by labels are MeS employees, Tom [REDACTED], Eric [REDACTED] and Jenna [REDACTED].

Labeled As Reporting Variances

33 issues are tagged with a “**reportingVariance**” label. Those problems include the following:

- Month-end Visa variances.
- Not understanding why SVB billing does not tie back to Card Network data.
- Not knowing why reported variances are later corrected.
- Variances due to Suspended/Released funds.
- Variances in the MBS Funding Summary and the Visa Clearing Summary.

Labeled As Discover

50 issues are tagged with a “**Discover**” label. Other issues include the following:

- Representments picked up in both the incoming chargebacks and second presentment line items.
- Many Sunday/Monday and Holiday weekends display reporting problems.

There are many variances due to chargebacks. It is the opinion of Engineering, that it will take a large engineering effort to fix this problem¹. Representments processed the day after when expected.

Labeled As Heather

74 issues are tagged with a “**Heather**” label as the tickets were converted from the emails and spreadsheets. Therefore, these only represent problems reported to Cynthia, Tom, or Eric prior to the start of this project. However, by the time we completed analysis of the entire collection, it was clear there was a problem with Heather’s reconciliation methods.

Four Main Engineering Solutions

We found the solutions to many problems fell into four categories defined and resolved with the following Jira issues:

Issue Key	No. of Issues	Trouble Type	Issues Label
PROD-368	31	Discover	Discover, codeFix_due
PRF-3625	2	Master Charge Rejects	MC_reject

¹ To update the code/tables and make a change in the "Clearing summary" report is a large engineering effort. This fix is not part of any planned version release.

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PROD-325	2	Visa Clearing	VisaProblem
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Summaries

As the 2014-year came to a close, we defined which remaining tickets to resolve by the dollar amount affected. We only worked on big-ticket items of over \$1000, with moderate success. SVB was able to close out their year within an acceptable variance overall. In March, we sorted through the remaining tickets, and then closed tickets whose problem matched a stability release fix.

Heather, Jenna and I stepped through each remaining issue to determine how much we owed them and how much they owed us. In the end, they owed us several thousand dollars and we closed the project without a financial exchange.

From Client Services

“Overall the SVB reconciliation project and mounds of JIRAs that came with it was due to reports not updating prior to Heather pulling the information, certain chargebacks not picking up and being left out of the funding summary, as well as the largest still pending issue that Heather is unable to match up our Funding with what the merchants are getting paid. After going through all the JIRAs, Heather stated that there was a credit rather than MeS owing them money.

It also seemed that through the process Heather was not aware of certain places to look for things as well as what exactly the card brands are charging SVB versus what MeS is charging them. This factor seems to be the biggest fuel to the fire (that is still being addressed) after our instability period is taken into consideration.”

– Jenna [REDACTED]

From Engineering

Throughout the project, engineering worked on “MBS Funding Summary” and “MBS Clearing summary” reports, for areas such as sales, credits, rejects, Incoming Chargebacks, second presentments, and fee collection.

“There has been a long stream of minor variances that have been the root of many SVB tickets. A few of these have resulted in discovery of bugs related to how we process our settlement-related incoming CA files. Many of them are rooted in the difference of timing and processes of each company. Overshadowing these are the several major settlement issues that MES experienced in 2014.

I strongly believe that these larger issues have accelerated the concern of smaller issues, but the dialogue on these issues goes years into the past. Over the past few 12 months, several attempts have be made to convene ‘engineering task forces’ to attempt to consolidate and resolve the bulk of

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these small variances, but a lack of resources in engineering, a lack of commitment on behalf of the executive, as well as lack of engineering knowledge on the highly detailed accounting elements of the true reconciliation work have left many of these issues unsolved.

As Trevor likes to say, an effort where we 'step over dollars to pick up pennies.'"

– Rob [REDACTED]

From Silicon Valley Bank

Heather is going to a refresher class on reading the VISA invoice to get a better understanding of what is on the invoice. Jenna is requested to bring a bigger picture of all the contributing issues that define charging and debiting SVB on both a daily and monthly level.

Deep Technical Dive Into Back-End Finances

Several of SVB Reconciliation key members want to take the next step and look for finer resolutions to variances and other related problems coming from SVB pulling reports. Jenna [REDACTED] and Technical Project Manager Dave [REDACTED] are currently in discussion about this with Product Manager, Jessica [REDACTED].

"I've been speaking with Andy [REDACTED] at a wider level to put together a daily activity and balance sheet showing all funds by type by card, etc. which presents a picture where everything stands. This idea is still in early stages.

As I told Susan, we need to learn our back-end finances and put it on a screen where it can be reviewed, reconciled, and monitored.

This will take time as we have too few people that understand it all, and have a lack of resources to work on things like this. Though this would be a large and comprehensive effort, it is also very important to get done. It may also help us to resolve variance issues and reconcile differences more quickly.

I would like to work on this idea with team members from Portfolio Management, Product, and Engineering. Completing this effort would most likely fix many other banks' problems with the same needs and issues."

– Dave [REDACTED]

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Conclusion

Opening our MeS Jira ticketing system to SVB was a positive experience on both sides.

Regarding the current results of the SVB tickets, although we identified a repeated pattern and corrected three bugs, there are two complex technical problems left on the table. One is defined in SVB-32

- SVB-32: change the "Clearing summary" report by updating the code/tables.
- Unscoped: a deeper understanding of variances and related problems when pulling bank reports.

The next step is to bring these two issues to the Product Management Committee for resolution planning.

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More Samples of Specific Problems

The SVB Reconciliation Project logged 105 issues between September 2013 – March 2014.

- Post to this date range, MeS conducted a Data Center move on 12th July; MeS took a few days to get the chargebacks, etc. back on track and the Clearing report correct.
- SVB did receive the funds, but it went to a different DDA (demand deposit account).
- Chargebacks caused a variance of \$1020.15 between the MasterCard Clearing Summary and the incoming wire from MasterCard. (Resolved with Eng and Fin research)
- MBS Funding does not sync with Discover Clearing for 1/7/15 for variance of
- MBS incorrectly over-funded Discover Funding Summary between 0103-0415 and Discover Funding Summary 010615 by an amount \$589.53
- Monetary variance to SVB. The Discover variance is a credit, so it either needs to go back to MeS or Discover.
- Variance between the clearing and funding summary – clients underfunded.
- Sales amount is incorrect based on the VSS-110 report
- Visa had a variance of \$99.99. Based on the Visa VSS-115.
- Visa had a variance on 012315 for \$53.24. Based on the VSS-115.
This was an amount of Funds Disbursement that was not picked up in the MeS Clearing Summary.

Repetitive Problem Examples

- Rejected transaction problem causes MasterCard Clearing summary variance; this issue was corrected in a 2015 stability release.
- Discover Clearing Summary Report errors - encryption key was temporarily missing to trace/understand this issue; this issue is to be corrected in a 2015 stability release.
- Variance Correction at fault. These become non-issues with no monetary discrepancies, due to adjustment near the time of the initial complaint; this issue is a process-timing problem between SVB and MeS.
- A reporting error sometimes seen on Sunday-Monday, especially Holiday weekends complaint; this issue is a process-timing problem between SVB and MeS.