

Validation Study

This is one of the most beneficial and important parts of the program. It is what takes this program miles beyond those products that simply assign a letter grade and call it risk-based lending. This analysis will reveal a wealth of information that will help you manage, monitor, and shape your loan portfolio – like never before.

It will also help you comply with the NCUA Validation requirements (should be performed annually). I believe that the NCUA will begin placing more emphasis on Risk Based Lending Validation Studies – perhaps even requiring annual validations. At minimum, the validation should include analysis of both risk scores, the adequacy of the tier ranges, and how well the current program has achieved the original objectives.

How to perform the analysis

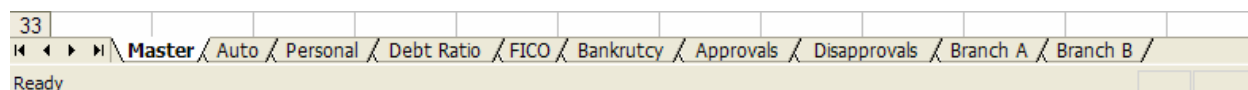
Start by recording the information from your Loan Officer Log onto a computer spreadsheet program (Excel, Lotus, etc). This should be done on a regular basis. I use Microsoft Excel for my spreadsheet, so any references will be from the basis of Excel.

Create three (3) separate folders for the data: an “*Annual*” folder(i.e. 2006 Data); a “*Cumulative*” folder; and a “*Charge-Off*” folder.

Use the “*Annual*” folder throughout the year. At year-end, I “copy & paste” the “*Annual*” data into “*Cumulative*” folder and than analyze each folder separately.

At year-end, “copy & paste” the data for each charged-off loan from the appropriate *Annual* folder to the *Charge-Off* folder for further analysis.

Annual Analysis: Begin by “*Inserting*” a number of “blank worksheets” after the “*Master*” worksheet – enough for each column of Loan Officer Log that you want to analyze. Rename each worksheet to correspond to the appropriate column. For example:



Now break down the data as follows:

1. First Worksheet – “*Master*”: This first worksheet is a complete listing of all the loan officer log data and is used as the “master file”. Begin by sorting that data by the Approved/Disapproved Column and calculate that year’s Approval Rate (Approved Loans/Total Loans).

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	DATE	ACCT#	ADV	NEW BAL	LT	DR	ILS	MDS	FICO	Matrix	A/D	X'TION	COMMENTS
233	25-Apr	123456	2,500.00	4,998.94	P	28	143	686	576	HH	A		
234	26-Apr	234567	5,000.00	5,000.00	P	24	145	698	711	HM	A		
235	27-Apr	345678	16,360.00	16,360.00	A	17	67	1200	350	HH	A	X	4000 cash down & co-sig
236	27-Apr	456789	3,000.00	6,162.07	P	52	99	249	763	LL	A		
237	28-Apr	567890	6,000.00	6,000.00	P	38	96	566	628	MH	A	X	has auto with us only 30
238	28-Apr	678901	5,000.00	6,389.04	P	35	140	638	637	MM	A		
239	1-May	789012	23,002.10	23,002.10	A	28	97	689	574	HH	A		65%max or qualified c/s
240	1-May	890123	11,844.92	11,844.92	A	43	104	640	649	MM	A		with co-signer.

2. Next “click” in the upper left hand corner of the grid again to “*Select All*” data and “*Copy*” the entire worksheet. Then, “*Paste*” that data into each one of your blank worksheets.
3. Go through each worksheet, click any cell in the data range, and “*Sort*” by the column that matches its worksheet name. On some worksheets, you will keep all the data. For other worksheets, “*Sort*” the data first and then delete the non-relevant data. For example:
 - a. Columns with Single data points: Worksheets with single data items would be sorted and left in tact. For example, the FICO, Bankruptcy, Matrix worksheets can be “Sorted” by their respective columns – with no further refinement.
 - b. Columns with Multiple Data: The “Loan Type” column contains information on both Personal Loans and Vehicle Loans. For the Personal Loan Worksheet, sort by the “Loan Type” column and then delete all non-personal loan “Rows” from that worksheet. Next, go to the Vehicle Worksheet, sort the worksheet by the “Loan Type” once again, but this time delete all “Rows” that pertain to Personal Loans. This would also apply to the Approval/Disapproval column. By using this method, you are certain that data is not be corrupted with non-relevant data.
4. Once all the worksheets have been filled and refined, analyze the data, with various “*Sorts*” and “*Subtotal Functions*”. Some possibilities would include:
 - a. Master Worksheet:
 - 1) *Overall Approval Rate*. This rate should be at least as high as your pre-risk based lending approval rate. If it is not, analyze your disapprovals for reasons. To further refine the approval rate, you can do the same review by loan type (i.e. unsecured, auto, RV, etc.)
 - 2) *Total Dollar Amount* of all submitted loan applications
 - 3) Sort by Matrix column – determine percentage of *total loan submissions* per matrix risk level as an indicator of the basic risk structure of your borrowing base.

b. Personal Loans and Vehicle Loans Worksheets

- 1) Sort by “Matrix” column to find the overall approval rate and the approval rate of each risk tier.
- 2) Calculate the total dollar amount for each risk tier and loan type.
- 3) Analyze the composition of each tier. Divide each tier range by thirds. Are the scores evenly divided across the thirds or is there clumping in one of the thirds – especially near cut-off points?

c. Debt Ratio

- 1) Sort this data and analyze as desired. Explore correlations to certain risk levels, etc. (*Note: I don't rely too heavily on the debt ratio – it has never been a reliable indicator of loan default – especially bankruptcy—nor is it relative to the risk scores.*)

d. FICO & Bankruptcy Score Worksheets

- 1) Sort by “Matrix” column and evaluate the distribution among and between tier levels.

e. Approvals

- 1) Sort by the FICO Score column to find the percentage of Approvals per tier level. How close did it come to the original 20/60/20 mix? What tier level adjustments would bring tier ranges into the proper mix?
- 2) Now do the same with the Bankruptcy Score column.
- 3) Divide each tier (L,M,H) by thirds and search for any “clumping” of scores around the cutoff points that could impact the mix.
- 4) Sort by Matrix column and find *Total Loans* issued per tier to gain a better understanding of your portfolio risk makeup.

f. Disapprovals

- 1) Sort by the Matrix column and find *Disapproval Rate* per tier.
- 2) Sort by the Matrix column and find *Total Loans denied* per tier.
- 3) Sort by the Loan Type column and find the disapproval rate and tier consistency for each loan type.
- 4) Analyze disapprovals for common characteristics or weaknesses in the program.

g. Exceptions

- 1) Sort the different columns and analyze any common traits or oversights that led to the exception approval. Check the comments column for common over-riding factors.

5. Tier Deviations:

- a. Most of the time your two scores should be within 1 tier level of each other (LM or MH). If you have a significant number of LH (or HL) scores, look at the score groupings for each score. Sometimes scores “clump” around a tier cutoff point. By moving that cut-off a few points one way or the other, you can often smooth out your ranges and improve the over-all risk score relationship.
 - b. If you have a significant number of low-risk borrowers, you may find the need to increase the middle score range (for example, you might need to increase the top point value for the FICO "M" tier level from 729 to 739 or 749, etc). If you choose to keep a large low-risk score population, you should monitor loan interest income.
6. Compare this year’s analysis to the “Cumulative Total” analysis and note any discrepancies.
 7. Compare this year’s ratios to last year’s ratios for any minor (or new) trends.
 8. Write-Off Analysis:
 - a. Use one Folder for all Write-offs.
 - b. For every write-off, locate and *copy & paste* the appropriate data from the Master Sheet (above) into the “Write-off” worksheet.
 - 1) Insert another column (next to the column marked Loan Amount) and label the new column “Charge-Off Amount”. Enter the amount of the actual charge-off in this column.
 - 2) Insert a column next to the Issue Date and label it “Loss Date”. Insert the date the loan was charged off for each bad loan. Insert another column and enter a formula (Loss Date – Issue Date) that will calculate the duration of the loan.
 - 3) Use the “Comments” column to record the reason for the loss (i.e.: Collection, Chapter 13, or Chapter 7). Next, sort the Charge-Off worksheet by “reason”, then “Copy & Paste” each charge-off reason (Collection Chapter 7, Chapter 13) into their own worksheet for further analysis.
 - c. Analyze (Sort and Sub-Total) the charge offs by each column and tier level to determine the actual and percentage loss per risk score, per tier level, loan type, etc.

- d. Calculate the duration of each loan. Note the average duration per tier level. With a sufficient data base, it will help classify delinquencies as potential write-offs by risk level and loan type.
- e. Analyze the data for any other type of information that will help you identify and manage default risk.

The above information is just the start. You may find other methods of analyzing the data that will prove more beneficial to your credit union.

I can guarantee you that there is a tremendous amount of insight that can be gained through the analysis of this spreadsheet. How much or how little you get from this analysis depends on you.

If you have any questions or need additional assistance – please don't hesitate to contact me.

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