

## Lift Chart for Validation Data

### The LOGISTIC Procedure

Model Information	
Data Set	WORK.TRAIN_IMPUTED_SWOE1
Response Variable	churn_dummy
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	812
Number of Observations Used	812

Response Profile		
Ordered Value	churn_dummy	Total Frequency
1	0	609
2	1	203

Probability modeled is churn\_dummy='1'.

Model Convergence Status	
Convergence criterion (GCONV=1E-8) satisfied.	

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	915.232	723.255
SC	919.932	746.753
-2 Log L	913.232	713.255

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	199.9769	4	<.0001
Score	185.6524	4	<.0001
Wald	131.9060	4	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	10.2395	1.0953	87.3972	<.0001
address_swoe	1	8.6365	0.9188	88.3505	<.0001
mix_cr_M1_swoe	1	2.4230	0.4154	34.0229	<.0001
love_dummy	1	1.4362	0.2792	26.4636	<.0001
worker_dummy	1	0.5486	0.1889	8.4352	0.0037

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Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
address_swoe	>999.999	930.409	>999.999
mix_cr_M1_swoe	11.279	4.997	25.461
love_dummy	4.205	2.433	7.268
worker_dummy	1.731	1.195	2.506

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	80.1	Somers' D	0.624
Percent Discordant	17.7	Gamma	0.638
Percent Tied	2.2	Tau-a	0.234
Pairs	123627	c	0.812

Fit Statistics for SCORE Data					
Data Set	Total Frequency	Log Likelihood	Error Rate	AIC	AICC
WORK.VALID_IMPUTED_SWOE1	50000	-1316.2	0.00394	2642.473	2642.474

Fit Statistics for SCORE Data					
BIC	SC	R-Square	Max-Rescaled R-Square	AUC	Brier Score
2686.572	2686.572	-0.00115	-0.02299	0.65302	0.004081

**Statistics in the ROC Data Set**

Obs	_PROB_	_SENSIT_	_1MSPEC_
1	0.46303	0	.000140554
2	0.35090	0	.000200791
3	0.33253	0	.000321266
4	0.30410	0	.000361424
5	0.27711	0	.000401582
6	0.24815	0	.000421661
7	0.23769	0	.000501978
8	0.23124	0	.000522057
9	0.22128	0	.000542136
10	0.20158	0	.000582294

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