## The LOGISTIC Procedure

Model Information			
Data Set MYPATH.LOAN			
Response Variable	LoanDefFlag		
Number of Response Levels	2		
Model	binary logit		
Optimization Technique	Fisher's scoring		

Number of Observations Read	313905
Number of Observations Used	313647

Response Profile			
Ordered Tota Value LoanDefFlag Frequency			
1	1	60516	
2	0	253131	

# Probability modeled is LoanDefFlag=1.

**Note:** 258 observations were deleted due to missing values for the response or explanatory variables.

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

Model Fit Statistics				
Intercept and Criterion Only Covariates				
AIC	307666.09	17523.165		
sc	307676.74	17640.381		
-2 Log L	307664.09	17501.165		

Testing Global Null Hypothesis: BETA=0				
Test Chi-Square DF Pr > Chi				
Likelihood Ratio	290162.922	10	<.0001	
Score	274061.263	10	<.0001	
Wald	13288.2780	10	<.0001	

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## The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	10.0755	0.1857	2942.3430	<.0001
delinq_2yrs	1	-0.1162	0.0314	13.7355	0.0002
mths_since_last_deli	1	0.000389	0.000925	0.1771	0.6739
TermFlag	1	-2.6995	0.0814	1099.1749	<.0001
dti	1	-0.0156	0.00269	33.8175	<.0001
total_pymnt	1	-0.00044	0.000013	1120.3208	<.0001
loan_amnt	1	0.000377	0.000013	786.8618	<.0001
Utilization	1	1.1220	0.0812	190.7742	<.0001
Paid_Rate	1	-15.8513	0.2335	4609.2104	<.0001
Last_Payment_Rate	1	-0.2580	0.00568	2067.4492	<.0001
Fee_Ratio	1	1.9088	0.2294	69.2222	<.0001

Odds	Odds Ratio Estimates				
Effect	Point Estimate	95% Wald Confidence Limits			
delinq_2yrs	0.890	0.837	0.947		
mths_since_last_deli	1.000	0.999	1.002		
TermFlag	0.067	0.057	0.079		
dti	0.984	0.979	0.990		
total_pymnt	1.000	1.000 1.00			
loan_amnt	1.000	1.000	1.000		
Utilization	3.071	2.619	3.601		
Paid_Rate	<0.001	<0.001	<0.001		
Last_Payment_Rate	0.773	0.764	0.781		
Fee_Ratio	6.745	4.302	10.574		

Association of Predicted Probabilities and Observed Responses					
Percent Concordant 99.9 Somers' D 0.997					
Percent Discordant	0.1	Gamma	0.997		
Percent Tied	0.0 <b>Tau-a</b> 0.3				
Pairs	15318475596	С	0.999		

Rank for Variable p	BUCKET_COUNT	No_of_Defaults	Bankrupt_Rate
0	31364	31341	99.92667
1	31365	28200	89.90913
2	31365	859	2.738722
3	31365	65	0.207237
4	31364	16	0.051014
5	31365	10	0.031883
6	31365	4	0.012753
7	31365	5	0.015941
8	31365	9	0.028694
9	31364	7	0.022319

## The LOGISTIC Procedure

Model Information			
Data Set	MYPATH.LOANS_INSAMPLE		
Response Variable	LoanDefFlag		
Number of Response Levels	2		
Model	binary logit		
Optimization Technique	Fisher's scoring		

Number of Observations Read	189342
Number of Observations Used	189178

Response Profile			
Ordered Value	LoanDefFlag	Total Frequency	
1	1	34992	
2	0	154186	

# Probability modeled is LoanDefFlag=1.

**Note:** 164 observations were deleted due to missing values for the response or explanatory variables.

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

Model Fit Statistics				
Criterion	Intercept Only	Intercept and Covariates		
AIC	181175.75	14313.009		
sc	181185.90	14424.664		
-2 Log L	181173.75	14291.009		

Testing Global Null Hypothesis: BETA=0					
Test	Chi-Square	DF	Pr > ChiSq		
Likelihood Ratio	166882.739	10	<.0001		
Score	161048.928	10	<.0001		
Wald	11079.7381	10	<.0001		

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## The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	12.0311	0.2339	2644.8814	<.0001
delinq_2yrs	1	-0.1094	0.0374	8.5617	0.0034
mths_since_last_deli	1	0.00100	0.00104	0.9397	0.3323
TermFlag	1	-2.8281	0.0969	851.2997	<.0001
dti	1	0.00670	0.00321	4.3491	0.0370
total_pymnt	1	-0.00027	0.000014	408.4762	<.0001
loan_amnt	1	0.000200	0.000014	204.4011	<.0001
Utilization	1	0.4348	0.0964	20.3407	<.0001
Paid_Rate	1	-18.2307	0.2811	4204.6561	<.0001
Last_Payment_Rate	1	-0.2867	0.00729	1544.4196	<.0001
Fee_Ratio	1	5.4526	0.7484	53.0858	<.0001

Odds Ratio Estimates					
Effect	Point Estimate		95% Wald Confidence Limits		
delinq_2yrs	0.896	0.833	0.965		
mths_since_last_deli	1.001	0.999	1.003		
TermFlag	0.059	0.049	0.071		
dti	1.007	1.000	1.013		
total_pymnt	1.000	1.000	1.000		
loan_amnt	1.000	1.000	1.000		
Utilization	1.545	1.279	1.866		
Paid_Rate	<0.001	<0.001	<0.001		
Last_Payment_Rate	0.751	0.740	0.762		
Fee_Ratio	233.362	53.829	>999.999		

Association of Predicted Probabilities and Observed Responses				
Percent Concordant	99.8	<b>Somers' D</b> 0.996		
Percent Discordant	0.2	Gamma	0.996	
Percent Tied	0.0	Tau-a	0.300	
Pairs	5395276512	С	0.998	

Rank for Variable p	BUCKET_COUNT	No_of_Defaults	Bankrupt_Rate
0	12446	12445	99.99197
1	12447	12446	99.99197
2	12447	617	4.957018
3	12447	3	0.024102
4	12447	3	0.024102
5	12447	1	0.008034
6	12447	2	0.016068
7	12447	4	0.032136
8	12447	0	0
9	12447	3	0.024102