Reading: GLM.Validation
Model: Source Text
Problem Type: Perform a quantiles test

Given

Observation	Predicted Pure Premium	Actual Premium Premium
1	$362	$628
2	$780	$635
3	$849	$306
4	$138	$126
5	$343	$239
6	$989	$835
7	$381	$515
8	$716	$143
9	$696	$738
10	$685	$388

Find Create a quantiles plot using quintiles.

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7	$381	$515
8	$716	$143
9	$696	$738
10	$685	$388

Solution   First rank the observations according to their predicted pure premium

Observation	Predicted Pure Premium	Actual Premium Premium	Rank
1	$362	$628	3
2	$780	$635	8
3	$849	$306	9
4	$138	$126	1
5	$343	$239	2
6	$989	$835	10
7	$381	$515	4
8	$716	$143	7
9	$696	$738	6
10	$685	$388	5

We'll assume each observation is one exposure since we're not given any information about weights.
Since we're asked for quintiles, we'll need five groups. Since each observation is one exposure, we'll have two observations per quintile.

Quintile	Average Predicted	Average Actual	Observations
1	$241	$183	4, 5
2	$372	$572	1, 7
3	$691	$563	10, 9
4	$748	$389	8, 2
5	$919	$571	3, 6
Overall	$594	$455	NA

The normalized values are found by dividing by the average overall predicted pure premium

Quintile	Average Predicted	Average Actual	
1	0.4050	0.3073	The predicted values are plotted on the x-axis and the actual values on the y-axis.
2	0.6255	0.9623	
3	1.1627	0.9480	
4	1.2595	0.6550	
5	1.5474	0.9606	
Overall	1.0000	0.7666	
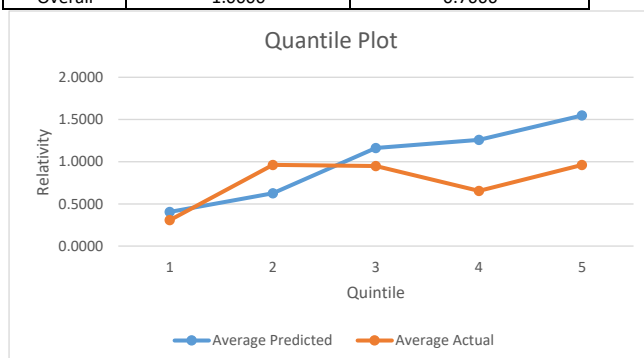
Reading: GLM.Validation
Model: Source Text
Problem Type: Perform a quantiles test

Given

Observation	Predicted Pure Premium	Actual Premium Premium
1	$379	$344
2	$100	$755
3	$499	$850
4	$342	$193
5	$210	$425
6	$346	$749
7	$602	$216
8	$354	$825
9	$350	$157
10	$163	$270

Find   Create a quantiles plot using quintiles.

Solution   First rank the observations according to their predicted pure premium

Observation	Predicted Pure Premium	Actual Premium Premium	Rank
1	$379	$344	8
2	$100	$755	1
3	$499	$850	9
4	$342	$193	4
5	$210	$425	3
6	$346	$749	5
7	$602	$216	10
8	$354	$825	7
9	$350	$157	6
10	$163	$270	2

We'll assume each observation is one exposure since we're not given any information about weights.
Since we're asked for quintiles, we'll need five groups. Since each observation is one exposure, we'll have two observations per quintile.

Quintile	Average Predicted	Average Actual	Observations
1	$132	$513	2, 10
2	$276	$309	5, 4
3	$348	$453	6, 9
4	$367	$585	8, 1
5	$551	$533	3, 7
Overall	$335	$478	NA

The normalized values are found by dividing by the average overall predicted pure premium

Quintile	Average Predicted	Average Actual
1	0.3931	1.5321
2	0.8251	0.9238
3	1.0404	1.3543
4	1.0957	1.7474
5	1.6457	1.5934
Overall	1.0000	1.4302

The predicted values are plotted on the x-axis and the actual values on the y-axis.

Quantile Plot