

Measuring the Discrimination Quality of Suites of Scorecards: ROCS, Ginis, Bounds and Segmentation

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Credit scoring systems are measured in many ways - predictive ability, power of discrimination, and accuracy of calibration. In practice a scoring system will consist of a number of scorecards - one for each subpopulation - and of vital importance is the overall ROC curve and Gini coefficient when the scorecards are combined. The ROC curve turns out to have almost all the discrimination and business measures hidden away in it.

The paper then outlines a very simple-to-calculate lower bound on the Gini coefficient which shows how much of the discrimination can be explained by splitting on one characteristic, that is it shows how much of the discrimination is explained by segmenting the population on that characteristic. This approach can also be used to explain how much of the other discrimination measures is explained by segmentation on a characteristic. This is particularly useful in explaining why behavioural scorecards tend to be so much more discriminating than application ones