



Cogent QC Systems: Sampling Methodology

Cogent QC Systems started with a sampling methodology, and then gradually evolved into the full-scale QC products that we market today. The five kinds of samples discussed below are the basis for the Cogent System's statistically sophisticated reporting. They allow our users to establish data sets that result in (1) statistically valid quality trends and comparisons, and (2) maximum risk management value.

Statistical Sample

The Statistical Sample is a random sample designed to estimate Overall Loan Quality. The Statistical Sample is drawn on a random basis from the entire loan population for a given time period and review type. In the ServicingQC System, a separate Statistical Sample is selected in each time period for each function or department to be reviewed.

When asked to draw a statistical sample, the System computes suggested Statistical Sample size based on achieving 2% Statistical Precision (at a one-sided 95% Confidence Level) on an annual basis. This computation is based on: (1) the number of loans available for sampling; and (2) the most recent average defect rate, calculated from three prior sampling periods. By taking these variables into account, the system is able to determine how many loans must be sampled to guarantee the desired precision and confidence.

Stratified Sample

The Stratified Sample, available in all Systems except for the ServicingQC System, is a discretionary random sample designed to address origination source risk. Loans from one origination source may have higher defect rates than loans from other sources, so you would need to sample a higher percentage of loans from that source to achieve the same statistical precision as the other sources. For example, wholesale lending typically involves more defects than retail lending -- if so, the System will suggest a higher percentage sample for wholesale, basing the calculation on the average defect rate from three prior periods of reviews of wholesale loans only.

The stratified sample is designed to facilitate statistical reports of comparisons between origination sources, such as in the Loan Quality by Origination Source report, or the Comparative Loan Quality by Source report.

Targeted Sample

Targeted Samples comprise the most flexible sample group you can generate, since the User defines the exact population from which the sample will be selected. Defining the population involves constructing a Query, essentially a set of rules you want the system to use in defining your population. Queries can range from quite simple to very complicated, but Users have almost unlimited flexibility in defining the populations.

Typical Targeted Samples may be new and untested brokers, branches, loan agents, loan products, etc. - or sources known to have had quality problems in the past. Or they may be loans with combinations of risk characteristics, such as high LTV, low credit score, high ratio, delinquency history, etc.. Advanced users are fans of targeted samples as they allow QC departments to allocate the samples to populations of loans that have the highest value for risk mitigation.

Manual Sample

Manual Samples are a special category of Targeted Samples. The name is relatively self-explanatory; with this sampling option, the user directly selects the loans that he or she wants to sample. These may be loans that have been flagged in pre-screens, such as for compliance or fraud, or loans that have been referred for specific reviews, such as appraisal or credit.