

CR Reliability Ratings Methodology Bulletin: March 30, 2023

Calculation of Reliability and Owner Satisfaction Weights for Product Overall Scores

Each product model that CR rates incorporates Testing ratings as well as Survey Research ratings. The Survey Research ratings include one rating based on the product's predicted brand reliability and one score based on a brand's owner satisfaction score. These ratings are based on CR's Quarterly Surveys, in which CR members are asked about their product's reliability and their satisfaction with it.

The overall weight assigned to owner satisfaction ratings for a given model's score is currently 5% across all product categories. Owner satisfaction accounts, then, for 5% of each model's overall score. The owner satisfaction weight is constant across all products. For example, 5% of a specific dishwasher model's overall score is accounted for by the owner satisfaction score for a given dishwasher brand, and the same is true for a TV model's overall score, a snow blower model's overall score, etc.

Reliability weights for specific products, on the other hand, vary by product category. Currently, each product category's reliability weight falls somewhere within the range of 10% to 20%. For example, reliability may account for 20% of the overall score for models in Product Category A, 17% for models in Product Category B, 14% for models in Product Category C, and 10% for models in Product Category D.

It is important to note that while reliability weights vary across product categories, for reasons described below, they are consistent within each category. In other words, two brands within the same product category will have the same reliability weights used in their overall scores.

How are reliability weights determined?

Three elements are involved in the determination of the reliability weight that is assigned to a specific product category:

- The priority attached to product reliability (in comparison to product quality and product price) by CR members when making a purchase in that category, as reflected in a rank-ordered survey question periodically administered to CR member samples.
- The relationship between reliability estimates from a multivariate statistical model and mean owner satisfaction for a specific product category, reflecting the degree to which reliability affects overall satisfaction with the product.
- The median brand-level predicted reliability value for a specific product category, reflecting the relative overall reliability of a specific product category compared to other categories.

Consumer Reports' calculation of reliability weights for specific product categories is based on a statistical index of these three elements, and results in higher reliability weights for products where a higher priority is attached to reliability by CR members at the time of purchase, product categories for which the reliability-satisfaction nexus is highest, and product categories that are among the less reliable ones we analyze. The latter consideration is derived from the premise that reliability affects consumers more when products are more breakage-prone. Reliability weights are recalibrated when new survey data for our entire catalog of reliability-rated products becomes available.