Abstract: This paper reappplies a statistical model that was created before 2003 to forecast the residual value of used heavy construction equipment in the U.S. The objective is to evaluate the performance of the model in the radically changed economy in the second half of the decade. The research hypothesis addresses whether the model is still usable and functional even almost a decade after the data occurred that determined its coefficients. This existing statistical model was a comprehensive multiple linear regression analysis for various categories of common types and sizes of equipment. Manufacturer, condition rating, and auction region are included as binary indicator variables. Statistically significant macroeconomic indicators can be used directly, but provide new challenges as various governmental data series have been discontinued or modified, so that valid replacements must be found that range until the time of the economic crisis. Performing such a re-analysis faces technical challenges, including that several macroeconomic data series since the time of the original study have been discontinued or modified by their governmental sources. Moreover, new auction sales records mostly lack conditions and are devoid of locations. Various reconstructions are explored to still enable a valid re-analysis and upon validation are used to augment the previous data series seamlessly with new data. Expert elicitation is used to select several equipment types that are likely to be affected by the recent economic downturn. The existing implementation tool is provided with the updated data for calculating forecasted residual values that are compared statistically with actual auction sales prices. Both practical and numerical problems are identified. The model consistently underestimates the actual values, indicating that they are less affected by the economic crisis or new variability is introduced from reconstructing its inputs. It is recommended that such model should be regularly updated, ideally by a professional organization.