This paper establishes a new theory for creditworthiness and credit rating. It provides a unified framework for analyzing both the real-world credit ratings (such as agency ratings or bank ratings) and theoretical approaches (such as first-hitting defaults or Distance-to-Default model). The paper offers solutions to many common rating problems (such as time consistent or rating mapping). Using agency ratings as examples, it establishes credit ratings that are consistent across time and fully convertible between different rating systems. It also explains connections between creditworthiness, credit rating and regulatory requirements. When applied to first-hitting default model, it reveals deep connections between credit rating, asset volatility and market price of risk.