In this paper saddlepoint techniques are used in the computation of risk measures for large market-to-market credit portfolios with stochastic recovery and correlation between obligors depending on the state of the economy. We compare the efficiency of the saddlepoint approach with existing methods such as plain Monte Carlo simulation and large deviation theory. By measuring run time and accuracy of calculations of the Value at Risk and the conditional Value at Risk for different significance levels we analyze the quality of these approximation approaches. Furthermore the approximation quality over the whole portfolio loss distribution function is analyzed. The results show that the saddlepoint approximation performs not only very fast but also very accurate over the whole loss distribution function. This result is not limited to large portfolios but can also be achieved for small portfolios.

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