

Secured Overnight Financing Rate (SOFR) and CME Term SOFR Rates will replace LIBOR as the new reference rate for U.S. Dollar financial contracts. This thesis investigates the feasibility of replicating CME Term SOFR Rates Benchmark. We develop a new approach for calculating SOFR Futures prices and follow the methodology from CME Group. The empirical results show that our estimation is close to the real Term SOFR with less than one basis point error. Our findings suggest that CME Term SOFR Rates can be replicated with small errors using free and accessible data, and contributes to hedge the risk of forward SOFR rate in further study.