Professor Dai Min and his coauthors find that market closure and the volatility difference across trading and nontrading periods significantly change optimal trading strategies of investors. Different from the standard literature but consistent with empirical findings, they assume market closes periodically and stock return dynamics may differ across trading and nontrading periods. They find that in the presence of even small transaction costs, the investor trades only infrequently. Their model suggests that conditional on the same increase in the transaction costs, stocks with greater volatility-differences across trading periods and nontrading periods require higher additional liquidity premia, which verified by their empirical analysis. For example, for a 1% increase in the bid-ask spread, stocks with high volatility-differences require 0.36% higher monthly risk adjusted excess return than those with low volatility-differences. This is the first empirical analysis indicating that volatility difference across trading and non-trading periods significantly affects liquidity premia.

This figure plots the realized returns for S&P 500 index from January 1962 to October 2008, where the red path represents the simple return from market open to market close (“daytime” return) and the blue path represents the return from market close to next market open (“overnight” return). The figure illustrates the much higher volatility during trading periods than that during nontrading periods.

Reference: