

Learning in a Financial Market with Changing Fundamentals

We study the price path of a financial asset whose fundamental value changes over time. We focus on the speed of learning, as measured by the expected distance between the price and the fundamental value. We show that the speed of learning decreases in the probability that a shock hits the economy and in the unconditional volatility of the fundamental. On the other hand, it increases in the percentage of informed traders. Moreover, we show that the price conditional volatility (i.e., the variance of the asset price at $t+1$, conditional on the history of trades and the realized asset value at t) can be greater than the conditional volatility of the asset value. Therefore, the mechanism of sequential learning helps to explain why in financial markets we observe volatility in excess of the fundamentals.