When and what to learn in a changing world

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Abstract

I study a model where a decision-maker periodically acquires information about a changing state, controlling both the timing and content of updates. I characterize optimal policies using a decomposition into optimal stopping and static information acquisition problems. Over time, information acquisition either stops or follows a simple cycle, with updates occurring at regular intervals and leading to consistent certainty levels. I explore how costs and volatility influence these dynamics. Notably, as fixed costs decrease, it is optimal to prioritize frequency over quality, resulting in lumpier belief and action changes. By contrast, the frequency of information acquisition is generally non-monotonic in the volatility of the underlying environment. I study applications to investment problems, highlighting consequences for portfolio diversification and asymmetries between safe and risky assets.

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