

## [Monetary Policy and Sentiment-Driven Fluctuations](#)

CFM-DP2020-20

Jenny Chan

Bank of England

The appropriate monetary policy stance depends on the source of fluctuations. Introducing information frictions to the benchmark New Keynesian model allows for a non-fundamental component to fluctuations. Such shocks are conceptually demand shocks, induce the same co-movements in output and prices as productivity shocks, and introduce a trade-off between stabilizing output and inflation, like cost-push shocks. Monetary policy can affect outcomes through an alternate information channel, qualifying the positive and normative implications of policy in our workhorse models.

In this paper, I relax the perfect information assumption in the standard New Keynesian model by allowing firms make production (pricing) decisions before shocks are known, while conditioning on a signal that confounds idiosyncratic and aggregate demand. Such frictions are intended to capture the role of strategic uncertainty, which refers to uncertainty about the decisions of others. As economies are characterized by interconnectedness, decisions are often made under uncertainty, not only about the state of the economy, but also about how others will behave. For example, a firm's labor demand and investment decisions may depend on expected demand for its product, while household consumption is contingent on expected income and labour market conditions. At the same time, decisions are usually conditioned on information which are endogenous in most situations of interest, capturing the role of market research, prices, or macroeconomic indicators in coordinating beliefs and actions.

The perfect information benchmark in the New Keynesian model turns out to be non-trivial and relaxing it in this manner allows for an alternate channel through which monetary policy can affect outcomes. Through its effect on aggregate variables, the stance of policy determines the precision of endogenous signals that firms receive, and consequently the degree of coordination in firms' production (pricing) decisions.

Several predictions of the New Keynesian model no longer hold. Policy itself becomes a source of fluctuations, as the frequency and size of shocks that hit the economy are no longer invariant to its stance. As a result, the standard view that monetary policy should mitigate the distortionary effects of shocks no longer applies. The endogeneity of equilibrium outcomes to the stance of policy implies that other predictions of the New Keynesian model no longer hold. Fluctuations that arise in this

model can have a non-fundamental component, which introduces a novel trade-off for a policymaker whose goal is to stabilize output and inflation. Responding strongly to inflation has a destabilizing effect by increasing output volatility. Relatedly, adjusting the nominal interest rate too strongly in response to inflation leads to indeterminacy that arises from expectations of aggregate demand. This stands in stark contrast to the literature on multiple equilibria in New Keynesian models has emphasized the Taylor principle in ruling out expectation-driven fluctuations of the price-level.

Fluctuations caused by non-fundamental shocks are not efficient from the perspective of a social planner who takes the decentralization of information as given and directs firm production conditional on their signal. The use of information by firms affects its aggregation, an externality that firms and policymakers do not internalize. As the stance of monetary policy determines the volatility of non-fundamental fluctuations, a policymaker can also mitigate them with a sufficiently low weight on inflation in a simple Taylor rule.

While the positive implications of monetary policy carry over the case in which aggregate fluctuations have both non-fundamental and fundamental sources, a policymaker that cannot distinguish between them will be unable to eliminate the non-fundamental component of fluctuations.

Workhorse models used to study the effects of monetary policy typically assume agents make decisions with common knowledge of the current state and future trajectory of the economy. Relaxing this assumption, unconventional effects of monetary policy are derived from the fact that the use of information by firms is not policy invariant. This calls into question the interpretation of policy in our benchmark models, as their effects can be appropriately measured when deep parameters governing individual behaviour take into account changes in policy.