Discussion of 'Sectoral Volatility and the Investment Channel of Monetary Policy' by Ozgen Ozturk and Thomas Walsh

Alistair Macaulay
University of Oxford

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The Question

High level: how does monetary policy work?

Specifically: does the investment response to monetary policy vary according to the volatility firms face?

- Important: investment is a large part of MP transmission. Firm-level vol varies a lot (over time and cross-section).

- Plausible mechanisms: real options channel (Bloom et al, 2018), nominal adjustment channel (Vavra, 2014).

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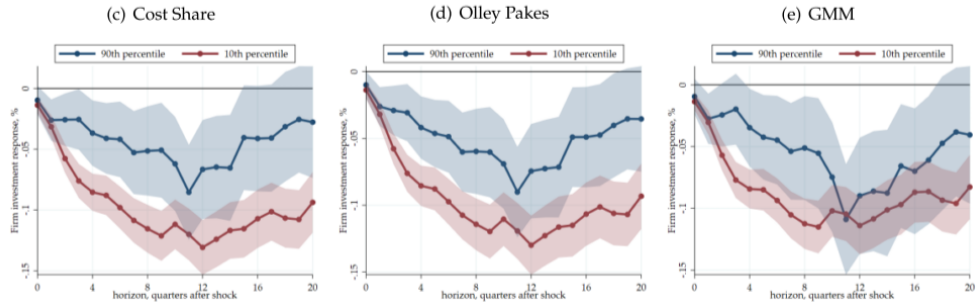
Method: firm-level productivity measures $\implies$ sector-level vol. measures. LP estimates of MP shocks on investment, interacted with vol. measures (across-sector within period + within-sector over time)

Answer: MP shocks have larger effects on investment when firm-level vol is **low**.

The key picture

Figure 5: Heterogeneity in Investment Channel of Monetary Policy by Sectoral Volatility



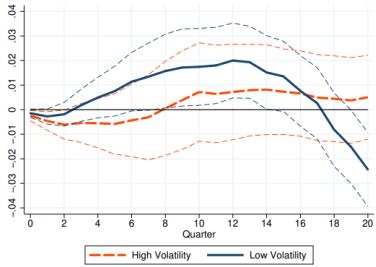
Note: The above charts construct IRFs to a 25 basis points contractionary monetary policy shock, evaluated at the tenth and ninetieth percentile of the unconditional time-pooled volatility distribution.

Clear result: $\frac{\partial Inv}{\partial r}$ is more negative when firm-level volatility is **low**.

A related paper

Fang, M. (2021) Lumpy Investment, Fluctuations in Volatility and Monetary Policy

Figure 2: Volatility-dependent Effectiveness of Monetary Policy



Note: The dashed lines indicates the 90% confidence interval. The *Low Volatility* period is defined as IQR sales growth within its Bottom 20% while *High Volatility* is defined as IQR sales growth within its Top 20%.

- **Simpler empirics:** LP on aggregate investment response to MP shocks, interacted with economy-wide sales growth dispersion.
- **Quantitative theory:** real options channel explains $\approx \frac{1}{2}$ empirical result

Main comment: can you distinguish the mechansims?

Rich firm-level productivity shocks, and sector-level dispersion - lots to play with!

Some ideas:

- To test real options channel: is effect stronger within sectors with more K irreversibility? e.g. with high intangible intensity? (Haskel and Westlake, 2018)

- To test nominal adjustment channel: do some sectors have more serial correlation in volatility? If so, is the effect stronger or weaker among them?

- To test nominal adjustment channel: do we see the same size effect in response to real shocks (e.g. aggregate TFP)?

Smaller comments/questions

- Production processes changed a lot 1990-2010, but volatility defined using residual of regression with constant parameters. Is there enough data to split the sample?

- A key selling point is explaining Tenreyro-Thwaites result that MP more powerful in booms. How much of their result can you explain?

- Where does the changing firm-level volatility come from? Decker et al (2016) proposal: firms reaching for larger markets to diversify market-specific shocks.
  - **But** then volatility determined by investment. Identification problem?