

Project title: The Industry Effects of Monetary Policy
Investigators: Ruby Kishan and Dean Showalter
department: Finance & Economics

Project summary:

The main purpose of this project is to examine the cross-industry heterogeneity of monetary policy effects. To date, we have collected individual firm level data for 10 sectors of the economy, spanning the time period 1962:1 – 2003:4.

We use structural vector auto regression (SVAR) to measure the effects of exogenous monetary policy shocks. Before estimating the SVAR, we examined the time-series properties of the data. ADF tests suggest that all variables, except the federal funds rate, contain unit roots. Accordingly, we estimate a six-variable VAR in growth rate terms. We treat federal funds rate as $I(0)$. To identify the monetary policy and output shocks, we use the Cholesky decomposition. The impulse response functions resulting from the above identification scheme show that an unexpected increase of short-term interest rate:

1. causes a sharp decline in the sales of construction and mining industries after the 2nd quarter.
2. causes durable goods sales, and manufacturing sector's sales to rise initially. This puzzle can be explained by the persistence of the policy shock.
3. causes insignificant decline in both nondurable and service sectors.

Above results indicate that over the long-run, construction and mining sectors are most adversely affected by a policy shock.

This project is on-going. The task of cleaning the data on large number of firms, quarterly, over 40 years, proved to be very time-intensive and delayed start of the analysis for over a year. We still have several issues to explore. It's needless to say that we intend to publish our findings in top quality academic journal.