Discussion: "A Plucking Model of Business Cycles"
Stéphane Dupraz, Emi Nakamura, Jón Steinsson

Carolin Pflueger

University of Chicago – Harris

Motivation

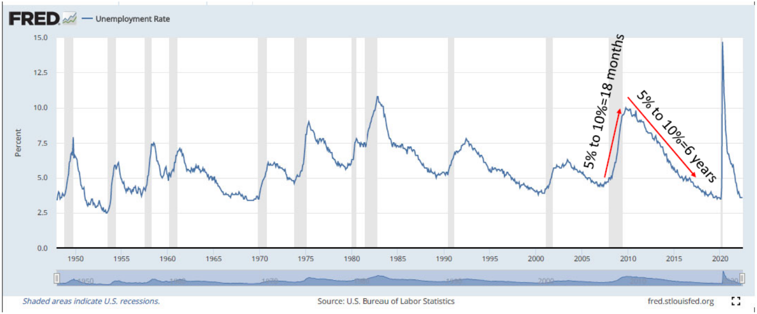
- The trillion dollar question in macroeconomics: What drives expansions and recessions?
- This paper builds on Friedman's observation that recessions are sudden and unpredictable in size, but recoveries are slow
- *"All recoveries are alike, but every recession is bad in its own way"*
- This paper:
  - New empirical analysis summarizing this feature in macro time series
  - Model building on labor search literature with asymmetric wage rigidities and slow attachment to labor market
  - Speaks to very slow recovery after financial crisis and welfare costs of recessions

Roadmap

1. Summary of main results:
   - Neat empirical summary is explained by tractable and intuitive model
   - The paper is also beautifully written.
2. Raw data: Asymmetry easily visible!
3. Firm Profits and Wage Rigidity in NK Model
4. Questions and suggestions:
   - Key feature of model is asymmetry: Testable implications for financial markets?
   - Role of time-varying monetary and fiscal policy, e.g. during fast Covid recovery?

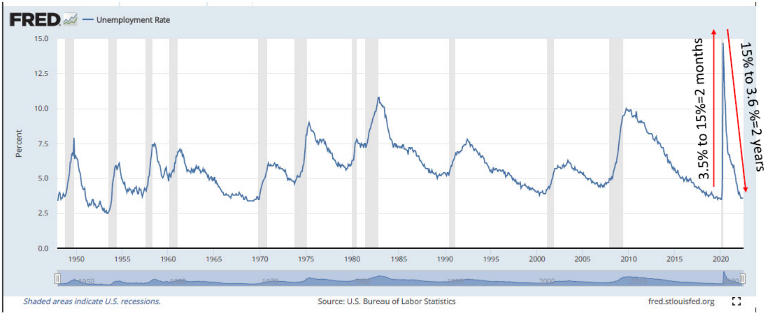
RAW DATA

Leading Example: Financial Crisis and "Great Stagnation"



- Asymmetry is clearly visible
- Careful judgement calls are required for coding peaks and troughs, which are not the same as NBER dates
- E.g., is recovery complete when unemployment rate reaches pre-crisis low or when new trough is reached?
- Transparency is great: Authors' code available online!

Much more rapid rebound after Covid layoffs



- Asymmetry is there, but overall pace is much more rapid
- Why so different? Extended accommodation by monetary and fiscal policy?

Firm Profits and Wage Rigidity in NK Model

Implications for Firm Profits and Stocks

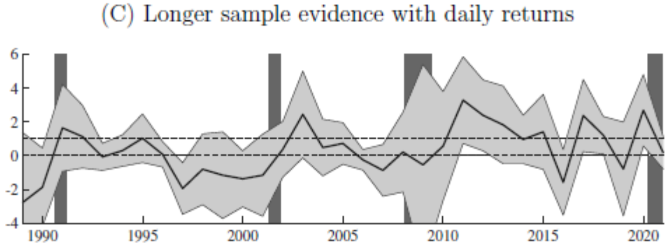
- Real firm profits: $\Pi_{i,t} = Y_{i,t} - \frac{W_{i,t}}{P_{i,t}} L_{i,t}$
  $Y_{i,t}$ = output, $L_{i,t}$ = labor, $W_{i,t}$ = nominal wage, $P_{i,t}$ = price level
- If wages are rigid, profits rise with output
- If wages are flexible, profits fall with output
- "Good shocks mostly lead to increases in wages, while bad shocks mostly lead to increases in unemployment" (p.2)
- In addition: Shocks mostly lead to decreases in firm profits.

Testable Implications for Macro-Finance Data

- When wages are rigid (e.g. low inflation environment) macroeconomic news should feed into stock prices, but when wages are flexible (e.g. high inflation) macroeconomic news should feed into inflation expectations.

Evidence from High Frequency Macro News

Stock-Macro News Sensitivity Moves with Wage Rigidity



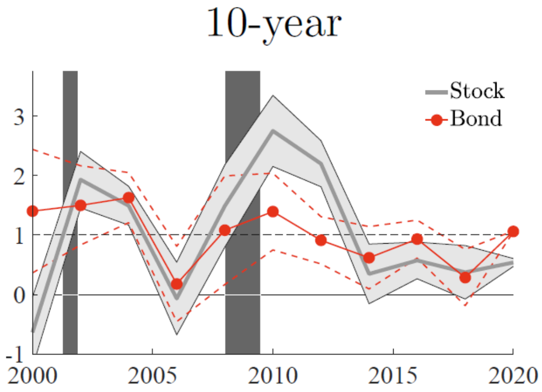
Source: Elenev, Law, Song, and Yaron (2022)

- Pre-2000 stock returns appear less sensitive to macro surprises, when wages were less rigid according to Daly, Hobijn, Lucking (2011)

- Supports model prediction that higher inflation leads to more flexible wages and "greases the wheels of the economy"

- Elenev, Law, Song, and Yaron (2022) find no asymmetry between positive and negative news. But wage rigidity likely depends on quarterly shock, and not on small news surprise.

Breakeven Response Moves with Stock Response

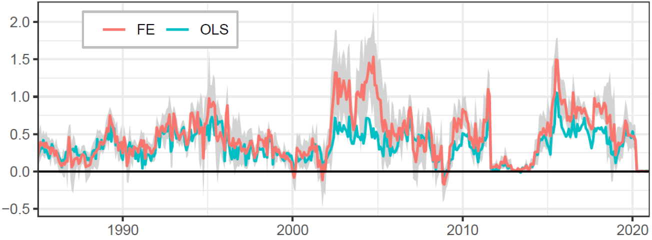


Source: Pflueger and Song (2022)

- Breakeven inflation responds more strongly to news when stocks also do
- ZLB and smaller monetary policy response should raise both stock and breakeven responses to news

Evidence for Time-Varying Monetary Policy Rule

Output gap coefficient $\hat{\gamma}$



Source: Bauer, Pflueger and Sunderam (2022)

- Monetary policy sensitivity to output perceived to vary substantially in survey micro data
- Higher perceived output weight at beginning of tightening cycles
- Model with asymmetry would seem like a natural starting point for why this might be optimal

Conclusion

- Beautiful paper on important topic
- Role in monetary and fiscal policy in generating asymmetries and fast Covid recovery?
- Important and intuitive welfare implications: Recessions are costly, higher average inflation may be beneficial
- Next step: Optimal time-variation in monetary policy, and implications for equilibrium dynamics?