The Federal Reserve and the COVID-19 Crisis

ECON 40364: Monetary Theory & Policy

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Readings

- Cecchetti and Schoenholtz: Contagion: Bank Runs and COVID-19
- Cecchetti and Schoenholtz: COVID-19: What can monetary policy do?
- Cecchetti and Schoenholtz: Fed Goes to War: Part 1
- Cecchetti and Schoenholtz: Fed Goes to War: Part 2
- Cecchetti and Schoenholtz: Fed Goes to War: Part 3
Economic Fallout

- The economic contraction from the Coronavirus pandemic is almost certainly going to be catastrophic
- We do not yet have good data – lockdown really only started in US in mid-March, most major series are released at best monthly and are somewhat backward-looking
- Still: based on data through mid-March, unemployment rate up about 1 percentage point and industrial production down about 5 percent
- Weekly unemployment claims unlike anything we have ever seen
  - About 25 million people have filed for unemployment
  - US labor force about 160 million
  - If all these stay in the labor force, means US unemployment rate $\approx 20 \text{ percent}$
Unemployment Rate

Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Labor Statistics

fred.stlouisfed.org
Industrial Production

Source: Board of Governors of the Federal Reserve System (US)  
fred.stlouisfed.org
Weekly Unemployment Claims

Source: U.S. Employment and Training Administration  fred.stlouisfed.org
Financial Fallout

- Significant financial upheaval, though signs of recovery in last couple of weeks
  - S&P 500 lost about 35 percent of its value from mid-February to mid-late-March
    - Has since recouped about 27 percent of that; still down more than 15 percent from pre-Crisis high
  - Massive increase in market volatility (VIX), though it has also come down
  - Significant increase in corporate credit spreads – roughly 200 basis points from mid-February to mid-late-March; some recovery since
  - Widening of TED spread (LIBOR minus 3 month Treasury): indicator of interbank credit risk
  - Collapse of oil prices
S&P 500 Index

Shaded areas indicate U.S. recessions

Source: S&P Dow Jones Indices LLC

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Market Volatility: VIX

Shaded areas indicate U.S. recessions

Source: Chicago Board Options Exchange

fred.stlouisfed.org
Bond Spreads

Moody's Seasoned Baa Corporate Bond Yield Relative to Yield on 10-Year Treasury Constant Maturity

Source: Federal Reserve Bank of St. Louis  
fred.stlouisfed.org
TED Spread

Source: Federal Reserve Bank of St. Louis
fred.stlouisfed.org
Oil Prices (Spot, not Futures)

Source: Federal Reserve Bank of St. Louis
fred.stlouisfed.org
The Fed and Recovery

▶ The Fed has engaged in **drastic, rapid, and controversial** actions

▶ Balance sheet expanded by 50 percent by early-April; likely to double before end of year
Structure of Lecture

1. Similarities between dealing with a **pandemic** and dealing with a **bank run** *(post)*
2. What **should** the Fed do in response to a pandemic *(post)*
3. What **has** the Fed done *(post 1, post 2, post 3)*
4. What **will** happen *(speculative, my opinions)*
Bank Runs

- Gary Gorton, *Misunderstanding Financial Crises*, thinks of bank runs (in either traditional or more modern forms) as information events
  - Some piece of bad news leads people to believe financial institutions are not sound
  - Banks are like black boxes, and asymmetric information is an important friction: hard to tell which banks hold what, which ones are solvent and which ones aren’t, etc.
  - Concerned, depositors and other creditors rush to get out; exacerbated by first mover advantage
  - Even if most banks are fine, the threat of some being bad triggers a run
  - Left untreated, rush for liquidity threatens solvency of system as a whole

- Lender of last resort can mitigate the liquidity crisis
- But to really end the run, need to change information environment – restore confidence and convince public that banks are fine ("stress tests" of May 2009)
Pandemic

- In current pandemic, official infection rate is low (roughly 1/300)
- Likely many more are infected, but in any event most people are not infected
- And even with infection, most people will be fine and recover
- But no one knows who is or isn’t infected, nor whether they as an individual will develop the most severe symptoms or if the health system can handle a surge in demand
- Optimal response is to “run” from economic and social activity
- Only way to really restore normal life is to manage the information environment – transparent political leadership, adequate test and trace mechanisms, and credible work towards treatment/vaccine
What *Should* Monetary Policy Do?

- Starting point: is COVID-19 a supply or demand shock?
  - Obviously a mix of both
  - My own read: in short-run, it is mostly a massive negative supply shock
  - The issue is how do you prevent that from turning into a persistent slump with very long-lasting aggregate demand consequences (e.g. long-lasting collapse in financial intermediation)

- Monetary policy (conventional or otherwise) is about managing aggregate demand
- Monetary policy can (and should) try to offset demand shocks – this is consistent with both aspects of its dual mandate
- It should not try to offset supply shocks – in fact, if anything it should accommodate them. Trying offset supply threatens price stability mandate
Aggregate Demand Shock

\[
\begin{align*}
\pi_t & = \pi_0, t \\
Y_t & = Y_0, t
\end{align*}
\]

\[
\begin{align*}
\pi_1, t & = \pi_1, t \\
Y_1, t & = Y_0, t
\end{align*}
\]
Countering AD Shock with Policy

Lower policy rate to stimulate demand, stabilize both output and inflation; equivalent to inflation targeting with horizontal AD.
Aggregate Supply Shock

\[ \pi_t, Y_t, \Delta S_0, \pi_0, t, Y_0, t, \Delta S_1, \pi_1, t, Y_1, t \]
Policy Conundrum Conditional on Supply Shocks

- If you try to stabilize output after a negative supply shock, this will result in high inflation.
- If you try to stabilize inflation, it will result in large output decline.
- What should you do? Depends on the nature of the shock.
  - Potential output, $Y^p$, stabilizing inflation and allowing output to decline is optimal (Divine Coincidence, inflation targeting).
  - Cost-push, $\rho$, no easy answers.
COVID-19 in Terms of AD-AS

- I see at least the initial economic consequence of the coronavirus as being mostly *supply*
  - Government enforced lockdowns
  - Massive decline in labor supply due to social distancing
  - Basically, a reduction in $Y^p$

- Fed should *not* be trying to provide stimulus to combat this
  - Early interest rate cuts probably a mistake, at least in hindsight
  - Had no stimulus effect at a time when stimulus wasn’t even desirable, and left the Fed with less “space” to cut rates when stimulus is needed (see Loretta Mester’s dissent)

- But *demand* is likely to be weak long after worst of public health problem is over
  - Changed spending habits/fears
  - Breakdown of bank-firm-worker-supplier relationships
  - Unavailability of credit due to worsening financial conditions
What Should the Fed be Doing?

- The Fed wants to promote maximum sustainable employment and price stability
  - Maximum sustainable employment is almost certainly far lower now than two months ago (supply shock)
  - At the same time, deflation is more of a fear than inflation (which looks more like weak demand)
  - Deflation is a bigger problem/risk than inflation ⇒ argues for being aggressive with policy accommodation

- An important component of achieving this dual mandate is promoting **financial stability**

- Most of the Fed’s actions in last six weeks best understood in this way
  - Flood markets with liquidity to support market functioning
  - Extend credit widely to promote continued relationships; otherwise little chance of strong recovery
  - Substitute for private intermediation where necessary

- Big question is whether the Fed has **gone too far**
Supporting Continued Economic Relationships

- As a gross oversimplification, in a nutshell what the Fed has done for the last month is say: “Don’t worry, we’ll pay for it”
- What they are trying to avoid is massive business failure, which would trigger massive bank failures, which would . . .
- Recall Bernanke (1983): bank failure in Great Depression was costly not so much because of resulting decline in money supply, but rather because when banks failed information and relationships were lost
- Especially in a services-based economy, businesses are webs of relationships and information – not easily replaceable. Failure would be very costly
- For any hope of a recovery, have to keep businesses and banks on “life support” so that they’re there when we can go back to some semblance of normal
- But to do this, they need cash – to pay bills, to pay debts, etc.
- Fed is supplying that cash
Legal Constraints on the Fed

- Fed is designed to be an independent arm of the federal government
- Traditional viewpoint: Fed can expand (or contract) its balance sheet (reserves plus currency in circulation) by buying and selling assets without (at least without much) credit risk – Treasuries and agency-backed debt (e.g. GSE MBSs). Fed can lend to solvent banks facing a liquidity crisis against sound collateral
  - What the Fed should not do: take on credit risk or lend to non-financial firms
- Legally, the Fed can only buy Treasuries and agency-backed debt, though there are workarounds (lending to special purpose vehicles, SPVs)
- Because of scope of the crisis, Fed is pushing the envelope on these dimensions
- Is that good or bad? What are the tradeoffs and potential consequences?
In normal times, Fed only interacts with banks

But they have special “wartime” powers

Historically, section 13(3) of the Federal Reserve act said: “In unusual and exigent circumstances, the Board of Governments . . . may authorize any Federal Reserve bank . . . to discount for any individual, partnership, or corporation notes, drafts, and bills of exchange”

- Basically, they can lend to anyone if conditions warrant it

In effort to end “too big to fail,” Dodd-Frank limited this ability and changed wording of 13(3)

- Lending facilities have to have broad-based eligibility
- Must have approval and backstop of Treasury

In practice, new wording doesn’t seem much of a constraint
Interest Rate Cuts and QE

- The Fed’s first actions were more-or-less traditional
  - March 3: cut FFR and discount rates by 50 basis points
  - March 15: cut FFR by 100 basis, down to zero. Cut discount rate by 150 basis points
  - March 15: also announced new $700 billion QE program: $500 billion in long-term Treasuries and $200 billion in agency mortgage-backed securities

- Interest rate cuts and “traditional” QE (sometimes called targeted asset purchases) are designed to stimulate demand
- Not obviously the right moves in the fact of the shock
- Indeed, interest rate cuts actually seemed to stoke fears
Lender of Last Resort, Market Liquidity, and Financial Stability

- Other actions broadly fall under rubric of serving as lender of last resort, supplying liquidity in key markets, and promoting financial stability
- Challenge is that now 2/3 of credit intermediation happens outside of traditional banks
- My own opinion – these actions, at least in principle, make a lot of sense
- Want to keep cash flowing so that business and banks can survive in a state of suspended animation
- If not, with fewer and impaired businesses and banks, no possibility of economic recovery once public health scare has passed
- But some of the details of these programs are unprecedented and move the Fed into risky territory
Resuscitated Actions and Facilities

- Repo funding to short-term Treasury markets to promote market liquidity and functioning in short-term markets
- Dollar swap lines with foreign central banks: basically a way for foreign central banks to lend in dollars; also used in 2007-2009
- Commercial Paper Funding Facility (CPFF): create a SPV that Fed lends to to purchase commercial paper. Lender of last resort – commercial paper is short-term and hence “runnable”
- Money Market Liquidity Funding Facility (MMLF): roughly same idea; lend to institutions to purchase assets of MMFs to make sure they can meet redemptions without “breaking the buck”
- Primary Dealer Credit Facility (PDCF): way to lend to primary dealers (the big banks that buy Treasuries, hence market-makers) against wide range of collateral to support market liquidity and function
New Actions and Facilities

- QE infinity: purchases of Treasuries and agency bonds without limit
- Resuscitation of TALF (facility to buy asset backed securities other than mortgages) and small changes to MMLF and CPFF
- Really ground-breaking new stuff started rolling in March 23 and continued into this month:
  1. Primary Market Corporate Credit Facility (PMCCF): creates SPV that purchases bonds directly from investment-grade firms
  2. Secondary Market Corporate Credit Facility (SMCCF): creates SPV that purchases previously issued corporate bonds
  3. Municipal Liquidity Facility (MLF): purchase municipal bonds issued by states, cities, and counties
  4. Main Street New and Expanded Loan Facilities (MSNLF and MSELF): sets up SPVs to fund 95 percent of loans issued by traditional banks to small and medium-sized businesses
Concerns

- With purchases of corporate bonds and effectively making loans to municipal governments and non-financial businesses, Fed is taking on credit risk.
- In a sense, it is engaging in fiscal policy: recall traditional purview of central banks is to lend to banks against sound collateral and only purchase assets with little or no credit risk.
- In some sense, Fed has gone from “lender of last resort” to “buyer of last resort.”
  - On the one hand, this is a natural jump since so much intermediation is now outside of the banking system (capital markets and securitization).
  - On the other hand, involves Fed making distributional choices and taking on credit risk, both of which are fundamentally fiscal.
- In some cynical sense, the CARES act uses the Fed as an off-balance-sheet vehicle for the Treasury.
  - Makes sense in that Fed has expertise and ability to move quickly.
  - But dangerous precedent for longer-run independence.
In my view, Cechetti and Schoenholtz are a bit too hard on the Fed’s “overreach”

They are operating as lender of last resort applied to modern finance

For any recovery to happen, have to keep relationships between banks-firms-workers-suppliers alive

This requires tons of cash when economic activity has otherwise ground to a halt

With unemployment ≈ 20 percent, now is not a great time to worry about moral hazard and longer-run independence issue

In a war, you have to act quickly. I don’t trust Congress and the Treasury to do that effectively. I do trust the Fed
Going Forward

- No doubt we are in a deep recession
- Big question is what will recovery look like? V-shaped, U-shaped, or L-shaped?
- Fed and Treasury actions today should not be aimed at stimulating the economy at present, but rather in laying foundations for recovery
- I am not optimistic about quick recovery – economy is too complex, relationships too varied, to just flip a switch. I really see No Easy Way Out
- There are also going to be long-run changes in consumption and living patterns, and consequent effects on particular industries (e.g. oil and airlines)
- The Fed cannot eliminate the economic damage from the health crisis
- What it can and should do is try to eliminate that from destroying the financial system, which would have deep and longer-lasting consequences