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Three Lessons for Monetary Policy from the Panic of 2008

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The Philadelphia Fed Policy Forum
December 4, 2009

Any opinions expressed here are my own and do not necessarily reflect those of the Federal Open Market Committee members.

The nature of the crisis

- The autumn 2008 panic was part of an ongoing crisis usually dated to August 2007.
- Some key events include:
  - October 2007: U.S. equity prices peak.
  - March 2008: Bear Stearns is purchased by JPMorgan with Fed assistance.
  - The U.S. economy continues to grow through Q2 2008.
  - Commodity prices spike during Q2 2008.
  - The U.S. economy contracts in Q3 2008.
  - The contracting economy intensifies the financial crisis, which has at that point been continuing for a year.
  - Q4 2008: Dozens of financial firms worldwide require assistance to avoid bankruptcy.
  - Q4 2008 and Q1 2009: Many major economies worldwide contract.

A three-part monetary policy response

- A wide array of collateralized lending programs: *liquidity programs*.
    - Funded by reserve creation, "printing money," after September 2008.
    - Temporary in nature.
    - Not an inflationary threat.
- A target policy interest rate near zero.
- An aggressive asset purchase program: *quantitative easing*.
    - Also funded by reserve creation.
    - Far more persistent than the liquidity programs.
    - Creates a medium-term inflation threat.

THREE LESSONS FOR MONETARY POLICY

- Lesson One: Lender-of-last-resort (LOLR) on a grand scale.
- Lesson Two: Quantitative easing can substitute for policy rate easing after the zero bound is encountered.
- Lesson Three: Better understanding of the connections between asset pricing and monetary policy is a top priority.

Lender-of-last-resort on a grand scale

The lesson

- The Lesson: The Fed's ability to act decisively in a crisis through its lender of last resort function far outstrips previous conventional wisdom.
- The liquidity programs need to be carefully evaluated.
- The scale of the liquidity programs may be unintentionally setting up expectations of future intervention.

The lender of last resort

- Central banks traditionally lend extensively in a crisis.
  - This is the "lender of last resort" function of monetary policy.
- The Fed developed a wide array of liquidity programs in 2007 and 2008.
- These programs are designed to improve market functioning during the crisis.
- The programs are temporary in nature.
- As market functioning improves, these programs are not as necessary.

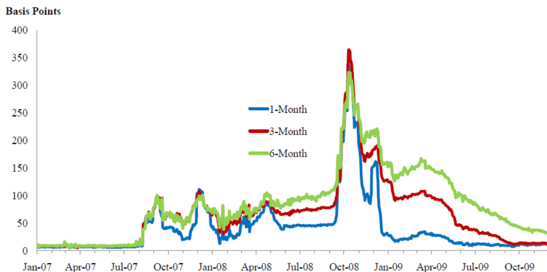
The liquidity facilities

- Depository institution facilities.
  - Primary credit.
  - Term Auction Facility (TAF).
  - Foreign currency swaps with foreign central banks.
- Primary dealer facilities—authorized under 13(3).
  - Primary Dealer Credit Facility (PDCF).
  - Term Securities Lending Facility (TSLF).
- Market and institution facilities—authorized under 13(3).
  - Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF).
  - Commercial Paper Funding Facility (CPFF).
  - Money Market Investors Funding Facility (MMIFF).
  - Term Asset-Backed Securities Loan Facility (TALF).

IMPROVED MARKET FUNCTIONING

- The liquidity facilities are intended to improve market functioning.
- Some may have worked better than others.
  - Careful evaluation of these programs is an important topic for current research.
- A quantitatively important role for government guarantees?
- By many metrics, global financial markets are less strained than they have been.
- To be sure, some stress remains.

An example of improved market functioning

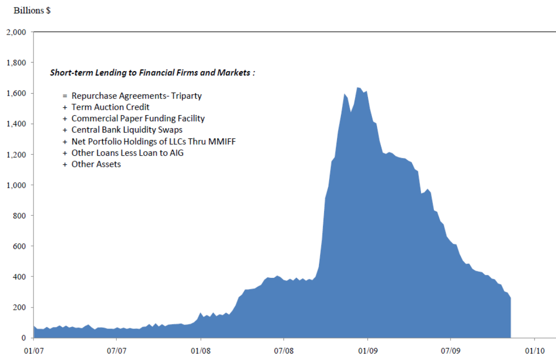


Source: Financial Times and Reuters.

The diminishing need for liquidity programs

- Many programs are being used less intensively than in the recent past.
- Core idea: let these programs continue to wind down naturally.
- Plan to end the 13(3) programs next year.

Liquidity program volumes



The future of the liquidity facilities

- The expectation is that most or all of these programs will end next year if financial conditions continue to improve.
- The lesson is that these programs were far larger and more varied than what could have been anticipated before the crisis.
  - The effectiveness of these programs should now be carefully evaluated.
  - The central banking research community needs to think much more carefully about the ramifications of the lender of last resort policy.
  - The crisis may have unwittingly set up expectations of future intervention that could be influencing markets today.

Monetary Policy by Different Means

The lesson

- The Lesson: The Fed is very capable of conducting stabilization policy when policy rates are near zero.
- The quantitative policy should be conducted in a manner analogous to interest rate policy.
- This means adjusting the policy according to incoming information on the economy.

Zero policy rates

- The FOMC has said it will keep the federal rate funds target near-zero "for an extended period."
- Any movement on this is contingent on both inflation and real economic developments.
- How should the FOMC conduct stabilization policy during the period of near-zero policy rates?
- Answer: There are many interest rates that the Fed can influence.

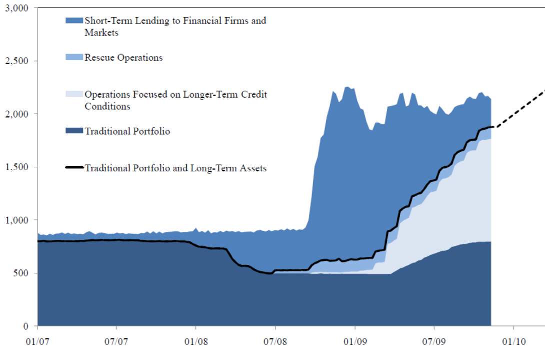
Outright asset purchases

- The FOMC has announced more than $1.7 trillion in outright asset purchases.
- The purchases are in agency debt, agency MBS, and longer-term Treasuries.
- This is being financed by reserve creation, "printing money."
- The monetary base has more than doubled.
- In contrast to the liquidity programs, the expansion of the monetary base associated with the asset purchase program is likely to be very persistent.
- This has created a medium-term inflation risk.

THE MEDIUM-TERM INFLATION RISK

- Very large increases in the monetary base are inflationary under ordinary monetary theory.
- The actual effects depend on at least two factors.
- One factor: Private sector expectations of the future level of the monetary base.
  - Large increases which are expected to be temporary, as with the liquidity programs, are not inflationary.
  - Large increases which are expected to be more persistent may be inflationary.
  - The increase in the base associated with asset purchases is more persistent.
- A second factor: The speed with which the monetary base is translated into changes in the money supply.
  - This is not occurring very rapidly right now.

The composition of Federal Reserve assets



Asset purchases as quantitative easing

- The FOMC moved its policy rate to near zero in December 2008.
- The asset purchase program began in January 2009.
- The program has been regarded as successful in further easing monetary conditions after the zero bound was encountered.
- The asset purchase program substituted for additional easing that could not be done through the policy rate.
- It would be natural for the FOMC to continue to adjust the asset purchase program going forward, while the policy rate is near zero.

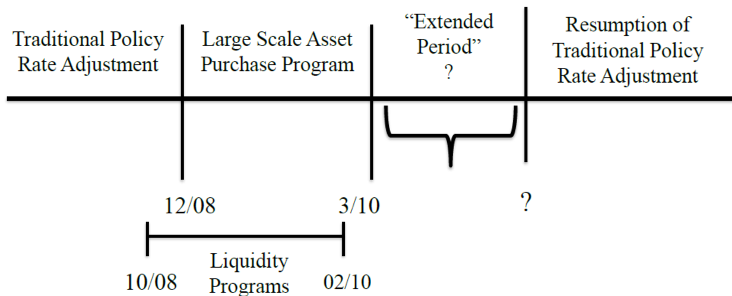
Asset purchases as state-contingent policy

- When central banks adjust interest rates, they do so in response to economic conditions (e.g. Taylor Rule).
- The U.S. asset purchase program does not currently have this state-contingent character.
- The Committee has simply announced that $1.725 billion of assets will be purchased by *Q*1 2010.
- It may be helpful to think more in terms of adjusting this program as macroeconomic information arrives.
- This means adjustments to asset purchases would dominate U.S. monetary policy responses to incoming information in the near term.

What to do

- Stay active at a very low level in the market for agency MBS past $Q1$ 2010.
- If reasonably encouraging information on the economy arrives, consider removing some monetary accommodation through asset sales.
- If the economy performs poorly, consider additional asset purchases.
- This allows monetary policy to remain active, responding to shocks, during the period of near-zero interest rates.

WHAT TO DO



SUMMARY FOR THE ASSET PURCHASE PROGRAM

- The U.S. asset purchase program is large and is being financed by reserve creation.
- It is generally considered successful, substituting for easing that could not be accomplished through the policy rate.
- Longer-term interest rates generally fell as aspects of the program were announced.
- The FOMC could use the program to respond to incoming information on the economy during the period of near-zero policy rates.

Asset Pricing

THE LESSON

- The Lesson: Asset price "bubbles" are a very serious issue for monetary policy.
- This issue has been debated extensively over the past 15 years, but the debate will now intensify.
- The main problem: It is hard to see what was “wrong” with previous policy, given conventional ideas about what policy is trying to accomplish.

Two decades, two "bubbles"

- Monetary policy necessarily affects asset prices and interest rates.
- Historically, this did not appear to create prolonged run-ups in asset prices.
- But changes in the recovery of employment in the past two recessions led the Fed to keep interest rates low for a long time.
- Both periods featured prolonged increases in certain asset prices: for technology in the 1990s, and for housing in the 2000s.
- The drag on the economy from the housing decline since 2006 has been especially severe.

Monetary policy outcomes

- Still, monetary policy outcomes during the past two decades up to the current crisis have been good.
- Unemployment hit lows of 3.8 percent in 2000, and 4.4 percent in 2007.
- Inflation has been low and stable through this period.
- If policy was too low for too long in the 1990s and in the 2000s, why didn't we see more inflation?
- Yet, without an increase in inflation, asset price misalignments seem to have caused significant problems for the macroeconomy.
- This may mean that monetary policy should put more weight on asset prices going forward.

What the policy debate has said

- At least three points have been stressed.
- It is hard to identify asset price misalignments in real time.
- Interest rate movements are a blunt instrument to use to lean against particular asset price movements.
- Not all "bubbles" are bad.
- These are all good points.

WHAT THE LITERATURE SAYS

- The literature on (New Keynesian) monetary policy investigates situations under which multiple equilibria exist.
- This can be interpreted as the "bubbles" of common parlance.
- The multiple equilibria co-exist with a fundamental equilibrium.
- Inside the literature, the main idea is to identify policies that "kill off" the multiple equilibria so that they no longer exist.
- One example of a policy that often works well is for monetary policy to react aggressively to shocks.
- To obtain a better analysis of policy issues with respect to bubbles, we may have to entertain ideas like these.

Conclusions

THREE LESSONS

- The lender of last resort function has proven far more flexible and more powerful than previously believed.
- The asset purchase program has shown that an active stabilization policy is possible with the policy rate at zero.
- The issue of asset price "bubbles" is a difficult one for monetary policy and may require new and innovative analysis.

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