Whitman College
Econ 407
Final Exam
December 13, 2010

Write all answers in your blue book. The exam ends at noon.

1. (8pts) Consider the speech Nicholas Le Pan, former Superintendent of Financial Institutions for Canada, gave February 11, 2011 entitled "Lessons from the Financial Crisis: Canada in Comparative Perspective."

According to Mr. Le Pan, how did the Canadian government's refusal over the past dozen years to permit mergers of financial institutions help Canada weather the 2008-2009 financial crisis?

2. (a) (2pts) Define monetary theory.

(b) (2pts) Define money.

Consider the article by Mortiz Schularick and Alan M. Taylor entitled "Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870-2008."

(c) (3pts) How do the authors define credit for the purposes of their study?

(d) (10pts) What do the authors mean when they say that in the first financial era they study, from 1870 to 1939, "money growth and credit growth were essentially two sides of the same coin?"

(e) (10pts) How did the relationship between money, credit, and real output change after World War 2?

(f) (5pts) According to the authors, why is it surprising that financial crises in developed economies have become more severe in real terms since Word War 2?

(g) (5pts) According to the authors, what might be the reason why these financial crises have become more severe since World War 2?

3. (a) (5pts) Define the moral hazard problem of deposit insurance.

(b) (10pts) Consider John Boyd and Arthur Rolnick's article "A Case for Reforming Federal Deposit Insurance." According to Boyd and Rolnick, what kept the moral hazard problem of deposit insurance in check before 1980?

For parts (c) and (d) consider the role a Diamond-Dybvig bank plays in improving people's welfare, as described by Robert Lucas and Nancy Stokey in their article "Liquidity Crises: Understanding Sources and Limiting Consequences: A Theoretical Framework."

(c) (10pts) Describe the advantages a Diamond-Dybvig bank provides.

(d) (10pts) Describe the advantages deposit insurance provides for an economy with Diamond-Dybvig banks.

4. Consider the following excerpts from the December 7, 2011, Wall Street Journal article "Separating Fact From Fiction on the Fed's Loans" by David Wessel. The entire article appears at the end of the exam.

It sounds like a great story: The Federal Reserve lent the banks $7.7 trillion during the financial crisis. And Congress wasn't told. But it isn't true. Even if Jon Stewart says otherwise.

The Fed and the taxpayers did bail out the banks, including some that occasionally pretend otherwise today. The Fed lent *enormous* sums: $1.6 trillion in emergency loans and individual bailouts at the December 2008 peak. The Fed has been too secretive in the past. The Fed deserves some blame for not preventing the crisis. The Fed executed some aggressive plays during the crisis that demand post-game scrutiny.

But lending against collateral to solvent, but cash-short, banks during a panic isn't among the Fed's more controversial moves. That's what central banks have done since 19th-century England. And the Fed didn't lend anywhere near $7.7 trillion. Nor did it keep the size of its lending secret, though it did unsuccessfully try to keep the borrowers' identities secret….

Fault the Fed for failing to head off the worst crisis since the Great Depression. Ask if the Fed should have let Bear Stearns go under or could have saved Lehman Brothers from bankruptcy six months later. Ask why it paid AIG's counterparties on derivatives contracts 100 cents on the dollar. Ask if the Fed failed to push Congress hard enough to prevent banks from growing "too big to fail." Ask if the Fed is doing too little now to sustain the economy or so much that it is sowing the seeds of inflation. There's plenty to argue about, without turning to inflated numbers. The actual facts are stark enough.

(a) (10pts) According to former Federal Deposit Insurance Corporation Chair Sheila Bair in a September 7, 2011interview with Diane Rehm, what could the Federal Reserve have done to head off the 2008-2009 financial crisis?

(b) (20pts) What do Robert Lucas and Nancy Stokey in "Liquidity Crises: Understanding Sources and Limiting Consequences: A Theoretical Framework" say about whether the Fed should lend against collateral to solvent but cash-short banks during a panic? What is Lucas and Stokey's reasoning?

5. Consider the following excerpts from the December 12, 2011, Wall Street Journal article "Risks of the Fed Unmasked" by Kelly Evans. The entire article appears at the end of the exam.

> The Federal Reserve has gone to great lengths to make its monetary policy intentions more transparent. … The Fed now publishes its economic projections and holds quarterly news conferences…
>
> Two decades ago, statements to the public following policy decisions were rare, short and terse. This is an example from early 1994: "Chairman Alan Greenspan announced today that the Federal Open Market Committee decided to increase slightly the degree of pressure on reserve positions. This action is expected to be associated with a small increase in short-term money market interest rates." Got that? Few did. The Fed's interest-rate increases that year, in fact, caught investors by surprise, routed bond markets and helped precipitate the bankruptcy of Orange County, Calif.
>
> To prevent a repeat of such turmoil, and lately to help fend off political pressure, the Fed has become increasingly open about its methods. Whereas Chairman Greenspan often intended to make his views difficult for the public to divine, Chairman Bernanke wants to make sure everybody can read his lips. …
>
> Over time, though, … benefits [of the Fed's transparency] might not seem so great. … The Fed could also get boxed in if, for example, inflation is above forecast and officials still want to loosen policy.

(a) (10pts) If you were a saver who owned bonds at a point when interest rates unexpectedly rose, in what way would the bond market look like a rout (i.e. a disaster) to you?

(b) (20pts) Suppose that in the future the Federal Reserve uses the Taylor Rule to set monetary policy. Suppose that at some point while the Fed is using the Taylor Rule, the economy ends up in the situation Kelly Evans describes of the inflation rate being above the Fed's forecast. Then, under what particular circumstances would loosening monetary policy be the action that the Taylor Rule would call for? In your answer, be sure to write the equation for the Taylor Rule and explain each part of that equation.

6. (20pts) In "Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870-2008," why do Mortiz Schularick and Alan M. Taylor disagree with the argument often heard after the 2008-2009 crisis, that paying more attention to monetary aggregates instead of focusing on the Taylor rule indicators of output and inflation might have averted the crisis? Explain their reasoning.

7. (20pts) According to our textbook author Frederic Mishkin, which asset price bubbles might not pose particular stability risk for a financial system, and which asset price bubbles likely do pose such risk? Explain Mishkin's reasoning.

8. (20pts) Consider the conclusions in the Financial Crisis Inquiry Commission's January 2011 report. According to the report, why was the government so ill-prepared for the 2008-2009 crisis?

The end. Have a great winter break!

Risks of the Fed Unmasked, by Kelly Evans, December 12, 2011, Wall Street Journal.

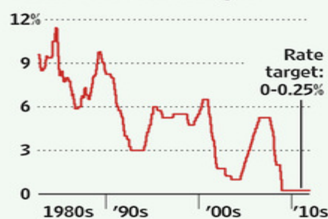
Once he steps out from behind the curtain, the wizard is just another old man.

The Federal Reserve has gone to great lengths to make its monetary policy intentions more transparent. The question as the Fed gathers for its next meeting Tuesday is whether that is such a good thing.

Consider changes already made under Chairman Ben Bernanke: The Fed now publishes its economic projections and holds quarterly news conferences. Soon, it may go so far as to publish fed-funds-rate projections—that is, to telegraph its intended path for interest rates.

Two decades ago, statements to the public following policy decisions were rare, short and terse. This is an example from early 1994: "Chairman Alan Greenspan announced today that the Federal Open Market Committee decided to increase slightly the degree of pressure on reserve positions. This action is expected to be associated with a small increase in short-term money market interest rates." Got that? Few did. The Fed's interest-rate increases that year, in fact, caught investors by surprise, routed bond markets and helped precipitate the bankruptcy of Orange County, Calif.

To prevent a repeat of such turmoil, and lately to help fend off political pressure, the Fed has become increasingly open about its methods. Whereas Chairman Greenspan often intended to make his views difficult for the public to divine, Chairman Bernanke wants to make sure everybody can read his lips. An additional motivation for this today is to "talk down" long-term interest rates now that short-term ones are essentially zero bound.



Over time, though, these benefits might not seem so great. For starters, it won't take long for the public to realize the Fed's economic forecasts are no better than the average economist's. The Fed could also get boxed in if, for example, inflation is above forecast and officials still want to loosen policy.

Most important, by so clearly telegraphing its rate intentions, the Fed may foster systemic risk by giving investors a false sense that they are insulated from abrupt market shifts. This Bernanke "put" could potentially be damaging as the desire to shield financial markets may actually encourage them to take ever greater gambles.

The Fed may have only the best intentions for the American people in mind, but in practice risks doing less and less good for them.

DECEMBER 7, 2011

Separating Fact From Fiction on the Fed's Loan By DAVID WESSEL

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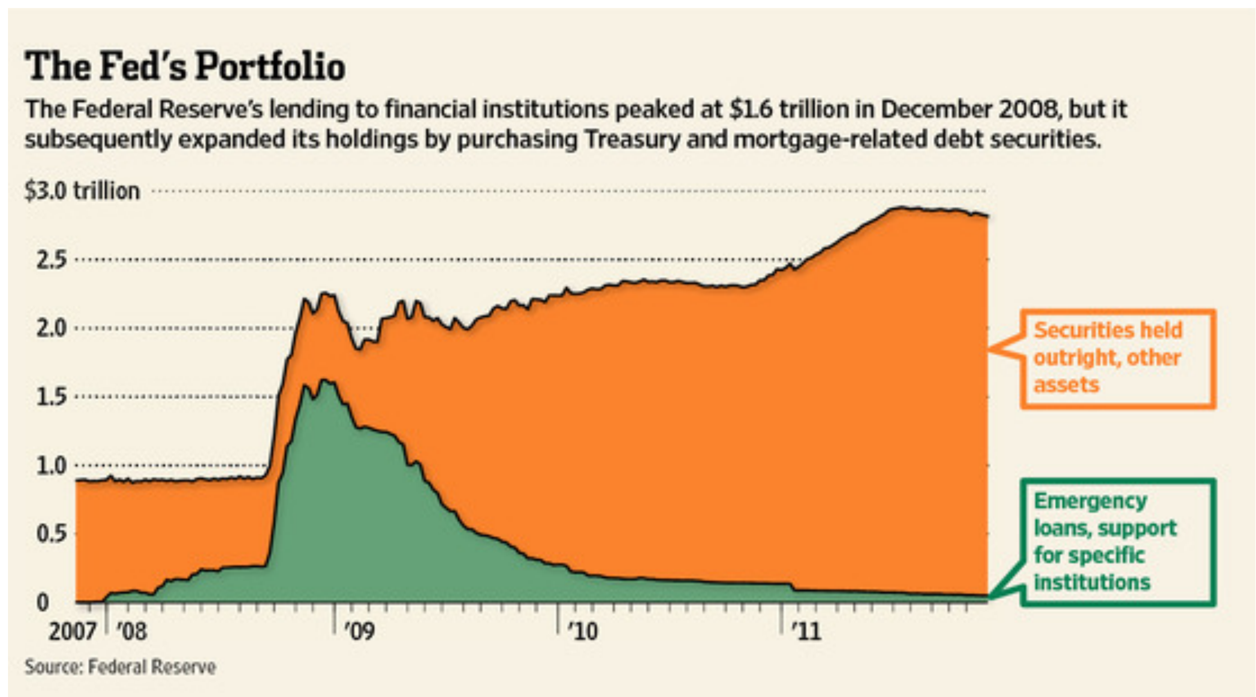

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But lending against collateral to solvent, but cash-short, banks during a panic isn't among the Fed's more controversial moves. That's what central banks have done since 19th-century England. And the Fed didn't lend anywhere near $7.7 trillion. Nor did it keep the size of its lending secret, though it did unsuccessfully try to keep the borrowers' identities secret.

How did this get started? Blame the law of large numbers (large ones crowd out smaller, more meaningful ones) and the delight we all take in revealing and learning secrets (even if they aren't really so secret). Why does it matter? Because widespread misunderstanding of what the Fed does and actually did can cripple it in taking steps to protect the economy in a future crisis. That's why Fed Chairman Ben Bernanke protested Tuesday what he described as "egregious errors" in some reports, and released a staff memo with details. (Full disclosure: My 2009 book, "In Fed We Trust," recounted the Fed's handling of the crisis favorably.)

Since the onset of the financial crisis, reporters have been trying to add the components of the bailout—loans, guarantees, stock purchases—to come up with a grand total. In December 2008, when the crisis was still unfolding, this newspaper wrote: "Using the most expansive counting possible, the U.S. has pledged to spend, invest or loan as much as $10 trillion....Yet the final tab is likely to be much, much smaller."

Bloomberg did a similar exercise in March 2009, tallying what it said the government had "spent, lent or committed." By that metric, the government total was pushed to $12.8 trillion and the Fed's share to $7.7 trillion.

In fact, the Fed never came close to "committing" to lend that much. The total reflects not what the Fed had actually laid out nor the sum of its promises. Rather, it adds the ceilings set on a number of emergency programs, some of which were more hype than reality. It counted, for instance, $900 billion for something called TALF (for Term Asset-Backed Securities Loan Facility), based on Treasury statements that the program might someday reach that size. In fact, the Fed board authorized up to $200 billion in loans, and actually lent $71 billion.

At first, the $7.7 trillion got only a bit of attention. Then the Fed, its hand forced by Congress and the courts, revealed what it had wanted to keep secret: Which banks borrowed how much and when.

In July 2011, the Government Accountability Office took the Fed data and listed the biggest borrowers: Bank of America and Citigroup were at the top. A month later, Bloomberg published the fruits of its own number crunching, an extensive bank-by-bank tally of what it labeled "secret loans." Last month—long after the Fed had shut its emergency lending window—Bloomberg recycled that work in a story that included this sentence: "Add up guarantees and lending limits, and the Fed had committed $7.77 trillion as of March 2009 to rescuing the financial system, more than half the value of everything produced in the U.S. that year."

This time the figure got attention. Jon Stewart on "The Daily Show": "We ultimately sent the

banks $7.7 trillion...That's TARP, the worst program in U.S. history times 11." CNN: "For the first time we have details now on how much money the U.S. Federal Reserve doled out to U.S. banks. And the number? $7.7 trillion." The New York Times: "Among all the rescue programs set up by the Fed, $7.77 trillion in commitments were outstanding as of March 2009, Bloomberg said."

Actually, at the end of March 2009, the Fed had $1.3 trillion in loans outstanding, both emergency-liquidity loans and those made in the rescues of Bear Stearns, American International Group and others. And that was no secret: It was posted on the Fed website.

After Mr. Bernanke's letter was released Tuesday, Bloomberg spokesman Ty Trippet said, "We have met with the Fed numerous times on this issue and not once has the Fed ever told us our reporting on this issue is inaccurate." The amount, $7.77 trillion, was never characterized by Bloomberg as money *lent* by the Fed, Bloomberg said. However, other news

outlets have mistakenly done so.

Fault the Fed for failing to head off the worst crisis since the Great Depression. Ask if the Fed should have let Bear Stearns go under or could have saved Lehman Brothers from bankruptcy six months later. Ask why it paid AIG's counterparties on derivatives contracts 100 cents on the dollar. Ask if the Fed failed to push Congress hard enough to prevent banks from growing "too big to fail." Ask if the Fed is doing too little now to sustain the economy or so much that it is sowing the seeds of inflation.

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