Econ 308
Final Exam
May 10, 2012

Write all answers in your blue book. Show all of your work. The exams ends at 4pm.

1. Consider the excerpts below from the Wall Street Journal.

Amid Furor, Gains on Economy, Trade May 4, 2012

By BOB DAVIS

BEIJING—China and the U.S. closed a two-day economic strategy meeting with several handshake agreements …
China made a number of pledges that, if carried out, would help the country shift its economy to rely more on domestic consumption than investment… The U.S. thinks such a change would boost U.S. exports…. Beijing believes the change would create a firmer foundation for growth. China's proposed measures include boosting dividends paid by huge state-owned companies. The dividend revenue would be paid into the national treasury and help finance social spending. With a stronger social safety net, Chinese and U.S. economists have argued, Chinese consumers would be more likely to spend rather than save their earnings.

Read all of parts (a)-(e) below before you answer any of them. For parts (a)-(e), use the labor-augmenting technology version of the Solow Growth Model to consider the effects of reforms that would make Chinese consumers "more likely to spend rather than save." Assume that the Chinese currently save at a rate above the golden rule rate and are at their steady state equilibrium.

(a) (20pts) Draw a graph showing how Chinese output per effective worker depends on capital per effective worker. Letting s stand for the current savings rate and s_{gr} stand for the golden rule savings rate, indicate on your graph the steady state level of capital per effective worker, k*, and the golden rule steady state level of capital per effective worker, k^*_{gr}. Make your graph large and clear.

(b) (5pts) On your graph from part (a), label the steady-state consumption per effective worker, c*. Label the golden rule steady-state consumption per effective worker, c^*_{gr}.

For parts (c)-(e), assume that the Chinese implement their reforms now and the Chinese savings rate immediately decreases to the golden rule level.

(c) (5pts) On your graph from part (b), indicate how much current Chinese consumption per effective worker would change as a result of the reduction in the savings rate.

(d) (5pts) Explain how these reforms make the Chinese economy "rely more on domestic consumption than investment." Use your graph from part (c) to help you explain.

(e) (5pts) Explain how these reforms "create a firmer foundation for growth" for China. Use your graph from part (c) to help you explain.

2. (a) (10pts) Define efficiency wage theory, and describe how it can help explain the wage rigidity that causes structural unemployment.

(b) (10pts) Describe two other sources of wage rigidity and how they cause structural unemployment, according to Greg Mankiw in Macroeconomics.

3. (20pts) Suppose that United States has a 6.5% average annual rate of growth of the money supply in the future. Use the Quantity Theory of Money to predict the average U.S. inflation rate over these years. Explain your work, and any assumptions that you are using.

4. Consider the speech "The Federal Reserve and the Economic Recovery," that San Francisco Federal Reserve Bank President John Williams gave January 10, 2012, which you read for class.

(a) (10pts) According to President Williams, why did the subprime mortgage market mushroom in the early to mid 2000s?

(b) (5pts) According to President Williams, why did financial institutions become afraid to lend money to anybody in 2008?

(c) (10pts) What did the Federal Reserve do in 2008 and 2009 to prevent financial collapse? Why did the Fed's actions not put taxpayer money at significant risk?

5. On May 13, 2010, Federal Reserve Vice Chairman Donald Kohn said the following in remarks to a monetary conference at Carleton University in Ottawa, Canada, to explain why the Fed did not raise interest rates to stop the housing price bubble of the early to mid 2000s:

> "I can see situations where housing prices might be rising and creating a dangerous situation in the financial system, but what about business capital investment? [If] the monetary authority [were to] raise interest rates to damp a housing bubble, at the same time it would be damping business investment…"

(a) (5pts) Define investment.

(b) (5pts) How does the Federal Reserve raise interest rates?

(c) (15pts) Derive an IS curve.

(d) (10pts) On an IS-LM diagram, separate from the your diagram in part (c), show the effect of the Federal Reserve raising interest rates. What happens to investment?

6. Consider the excerpts below from the Wall Street Journal.

Fed Officials Split on Jobs Progress

By Michael S. Derby May 3, 2012

A trio of Federal Reserve officials… spoke [May 3, 2012] at the University of California Santa Barbara…

"The nation remains far from the Fed's assigned goal of maximum sustainable employment," [San Francisco Federal Reserve President John] Williams said "…it's essential that we keep strong monetary stimulus in place for quite some time."

…

"The Fed's already done a lot to support the recovery," [Atlanta Federal Reserve President Dennis] Lockhart said. "Whether additional monetary-policy actions should be used at this time to try to speed things up has to be balanced against the risks to the Fed's price-stability objective that could accompany an overestimating of the amount of economic slack"…

[Philidelphia Federal Reserve President Charles] Plosser said while he doesn't see a need for further stimulus, he could envision something happening if a deflationary price environment started to emerge…

Use the Keynesian fixed nominal wage Aggregate Demand – Aggregate Supply (AD-AS) model to answer each of parts (a) through (f) below.

(a) (15pts) Consider John Williams's assessment of the economy. Explain why a nation that "remains far from the Fed's assigned goal of maximum sustainable employment" needs "strong monetary stimulus." Refer to an AD-AS graph in your explanation.

(b) (5pts) Draw a Short Run Phillips Curve (SRPC) graph. Indicate the natural rate of unemployment. On your graph, label with an "A" the point where the economy is now, in President's Williams's assessment. Label with a "B" where the economy would be in the short run if the Fed follows President Williams's advice of "keeping strong monetary stimulus in place." Explain your reasoning.

(c) (15pts) Consider Dennis Lockhart's assessment of the economy. Explain the "risks to the Fed's price-stability objective that could accompany an overestimating of the amount of economic slack." In your explanation, refer to a new AD-AS graph in which you show the short run and long run results of the Fed overestimating the amount of economic slack.

(d) (5pts) Draw a new graph on which you put a SRPC. Indicate the natural rate of unemployment. On your curve, label with an "A" the point where the economy has a small amount of slack. Suppose the Fed overestimates the amount of slack, as President Lockhart fears, and acts on this overestimate. Label with a "B" where the economy would be in the short run, and label with a "C" the point where the economy would be in the long run. Explain your reasoning.

(e) (15pts) Consider Charles Plosser's assessment of the economy. Note that he currently "doesn't see a need for further stimulus." Explain how and why the Fed should intervene "if a deflationary price environment started to emerge." Refer to a new AD-AS graph in your explanation.

(f) (5pts) Draw a new graph on which you put a SRPC. Indicate the natural rate of unemployment. On your curve, label with an "A" the point where the economy is now, in President's Plosser's assessment. Label with a "B" where the economy would be in the short run if a "deflationary price environment" emerged and the Fed did not intervene.