ECON4033: Money and Finance in China

Assignment 2: Short Answer

Please submit your report at the beginning of Week 12's class on (Friday) Nov. 26, 2021. Input your answers in the answer sheet provided on the iSpace if you so wish. Assignment 2 accounts for 20% of your final mark of this course.

1. Read the following 3 articles on the iSpace to answer the questions below based on your understanding of China's banking sector:
   - Ant's dangerous business model (Forbes)
   - Ant ordered to restructure by Chinese regulators (The Financial Times)
   - China tightens online lending rules in fresh blow to Jack Ma's Ant Group (The Financial Times)

   a) How Ant's financial services are different from those of traditional commercial banks? **(3 marks)**

   b) Why Ant's business model could be dangerous to China's financial sector? **(5 marks)**

   c) Why China's regulators have demanded Ant apply for a personal credit reporting licence? **(2 marks)**

Total: 10 marks

Answer:

a) In terms of the scope of business, Ant's services are more diverse than those of a traditional commercial bank. For example, traditional commercial banks' development model relies solely on the assets and liabilities scale expansion. Ant's group, however, provides a wide range of services, including investment products, property and casualty insurance, life insurance, credit scoring, health insurance, crowdfunding, online banking, financial data, and software, etc. **(1 mark)**

In terms of the target market, Ant's services reach out to a broader market. Its payments processing business, Alipay, and the e-commerce platform, Alibaba, lead to a vast potential market. Alipay and Alibaba, with the use of new technology, make it possible accessing to and process the information of hundreds of millions of customers, which is beyond the capacity of the traditional commercial bank. **(1 mark)**

The use of new technology (such as blockchain) allows Ant's group to create in China a parallel ecosystem of financial services targeted to consumers and small businesses which had been largely left out of the traditional financial system. Ant has created a wide range of products to serve these underserved masses and has become a major supplier of credit to the lower strata of the credit market. **(1 mark)**

b) The loans made by Ant are unsecured as Ant essentially does not supply the credit. Ant's group acts as an auditor to qualify the borrowers, originate the loans, and then hand them off to traditional commercial banks, which essentially carry the liability. With only

2% of outstanding loans funded Ant's money, and banks or asset-backed securities funded the rest, it will be the banks exposed to the default risk, not Ant. **(2 mark)**

This business model is saturated with "moral hazard". The originator (Ant) has an incentive to generate loans but has no incentive to verify that these are good loans. Hence, the risk could spill over to the other parts of the financial market through banks, asset-backed securities, and other related financial derivatives, as the buyers of the loans have no way to assess the risk associated with them accurately. Given the size of this market, Ant's services pose a serious systematic risk to financial stability. **(3 marks)**

c) In Ant's previous business format, banks underwrite the debt, take the credit risk and collect interest payments. The banks, however, didn't perform the due diligence on those loans. They never met the borrowers. They rely on Ant's technology to quantify and control the credit risk, which is not fully transparent. By asking Ant to apply for a personal credit reporting licence, China's regulators are essentially requesting Ant to work more closely with banks and share the technology and data that would allow banks to participate in the crediting verifying process. **(2 marks)**

2. This question is related to the exchange rate regime of China:

a) Explain the conflict between the fixed exchange rate regime and China's ability to tailor monetary policy to domestic objectives. **(3 marks)**

b) It is argued that moving to a more flexible exchange rate regime help to insulate China from the nominal (inflation) shock from abroad. Explain based on your understanding of purchasing power parity. **(3 marks)**

Total: 6 marks

Answer:

a) If a country adopts a fixed exchange rate, it loses its monetary autonomy (i.e., no independent monetary policy). Any attempt to increase or decrease the money supply will result in a change of exchange rate, so monetary autonomy cannot be maintained. As shown by the UIC approximation below:

$$R_{China} = R_{US} + \text{Expected USD appreciation}$$

under fixed exchange rate regime, expected USD appreciation $= 0$, so $R_{China} = R_{US}$ to hold a fixed exchange rate regime credible. **(1 mark)**

In practice, while China may want to move the money supply to impact either output or inflation, it may prefer a different interest rate than the equilibrium rate because of China's desire to control the exchange rate. Consequently, there are frequent shortages and surpluses of money and credit in the market, which makes it challenging to achieve domestic economic objectives via tailored monetary policy. **(2 marks)**

b) This can be seen from the absolute PPP presented below:

$$P = e_{H/F} P^*$$

where P is the domestic price index and P^* is the foreign price index. Nominal exchange rate $e_{H/F}$ is denominated as the price of foreign currency in terms of domestic currency (i.e., RMB). **(1 mark)**

With a fixed exchange rate regime, any foreign inflation will be passed onto China through trade, resulting in domestic inflation. With a more flexible exchange rate regime, the nominal exchange rate could be adjusted to offset the change in foreign price so that the domestic price level will not be affected. **(2 marks)**

3. This question is related to public finance in China:

   a) Describe the major difference in terms of the post-crisis fiscal expansion in China and the U.S. during 2008-2009. **(2 marks)**

   b) What could be problematic if China focused on using tax relief to recover the economy? Your answer should be informed by a tax multiplier derived based on the Keynesian model. **(2 marks)**

Total: 4 marks

Answer:

a) In China, most fiscal stimulus was in the form of investment. In the United States, most of the stimulus came in the form of tax relief or unemployment benefits and other transfer payments. Only a small share of the U.S. stimulus package was in the form of investment. **(1 mark)**

In China, personal taxes are an insignificant part of personal income, and personal income represents a small share of GDP. Stimulating the economy through lower taxes would have a small effect. Besides, establishing a system for transfer payments related to retirement or health benefits are complex structural reforms. In the U.S., however, consumption represents a large component of demand. Changes in tax rates that impact consumption can have a substantial impact on demand. **(1 mark)**

b) In China, personal taxes are an insignificant part of personal income, and personal income represents a small share of GDP. Stimulating the economy through lower taxes would have a small effect. To see how aggregate output Y is affected by tax t, consider in the Keynesian model:

$$C = a + c(1 - t)Y$$

where $c =$ marginal propensity to consume and t is the tax rate. Together with GDP accounting formula gives:

$$\begin{aligned} Y &= C + I + G + (X - M) \\ &= a + c(1 - t)Y + I + G + (X - M) \end{aligned}$$

$$\therefore Y = \frac{A}{[1 - c(1 - t)]}$$

where $A = a + I + G + (X - M)$. The simple multiplier $TM = \frac{1}{[1-c(1-t)]}$.

Take differentiation with respect to t, we have

$$\frac{dY}{dt} = \frac{-cA}{[1 - c(1 - t)]^2}$$

The absolute value of dY/dt is small when c is small. **(2 marks)**