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| **ECON 4033: Money and Finance in China**  **Answer Sheet for Assignment** | |
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2. Before making loans, traditional bank will do due diligence and credit qualifications by human employees based on the evaluation of borrowers’ credit scores, guarantees, collaterals, says the repay ability. Ant takes advantage of big data and its mobile payment platform Alipay, credit qualifications are done by artificial intelligence and algorithms based on anlysis of users' daily transaction records.

Traditional banks mainly provide loans to households and companies for investment purposes, Ant mainly provides financial services to ordinary individuals for consumption purposes.

Traditional banks collect savings from savers and use these funds to make loans to borrowers, and gain profit from the difference in interest rates, therefore put a risk on their balance sheets. Ant just help banks identify borrowing needs and quantify and control the credit risks, but loans are 98% funded by banks and the risk goes to banks and borrowers, Ant can earn money with little risk in this financial activity.

1. Ant runs a originate-to-distribute model. The logic is that Ant helps banks review credit qualifications and build lending channels, but it contributes little funds to participate in credit activities. After completing its intermediary services, the process and risks of lending and repayment are transferred to banks and borrowers.

There is a moral hazad that Ants have the incentive to approve more credit qualifications to collect service fees, but it has no incentive to control credit risk and quality because it don’t lend money by itself. At the same time, unlike the traditional large loans for household and company investment behaviors, Ant mainly distribute small consumer loans, so the loss and risk of one unit of loan default will be smaller, therefore, it will be more aggressive in lending, and will further lower the requirements for obtaining credit for “little people” who already lack the ability to repay credit.

At the same time, only high-risk individuals who cannot obtain loans from traditional banks or whose main purpose of loans are consumption that do not create value will choose Ant. This is also a sort of self-selection.

The result is that Ant continues to create high-risk micro-loans into the financial system, gradually accumulating systemic risks. Ant acts like a bank but with low capital adequacy ratio and gerenates a lot NPLs.

1. A personal credit reporting licence can put Ant under administrative regulation and restrict Ant’s high-risk personal consumer credits.
3. The impossible trinity indicates that it is impossible in the long run to simultaneously maintain a fixed exchange rate, conduct an independent monetary policy, and allow unrestricted capital flows. China does not allow free capital flows, therefore China must make a choice between the remaining two.

China chooses to maintain a fixed exchange rate, so the domestic price level must move in proportion to foreign price levels to keep e fixed, therefore how much money is needed to supply is determined by foreign governments’ monetory policies and price levels.

1. If absolute purchasing power parity holds, there will be no arbitrage because the price levels in two places are equal when expressed in a common currency, the normal exchange rate should equals to the ratio of two price levels.

We take the derivation at both ends of this formula at the same time. The left side becomes the change rate of the exchange rate, which is rate of depreciation of the nominal exchange rate, and the right side becomes the difference between the inflation rates of the two places. So in the long term, if the foreign countries facing a higher inflaton rate, it will be reflected in a increasing rate of depreciationnof the nominal exchange rate, the domestic inflation rate will not change and the relative PPP equation will still keep balance; Otherwise the domestic inflaton rate need to also increase to keep a fixed exchange rate. In short, floating exchange rate offsets the effect of foreign inflation.

2. China mainly used investment and transfer payments to stimulate the economy, US mainly used tax relief or unemployment benefits and other transfer payments to encourage consumption and stimulate the economy.
3. In China, personal tax counts for a small part of personal income, and personal income and consumption count for a small part of GDP, so stimulating the economy through lower taxes would have a small effect.

In the Keynesian model, consumption is related to the disposable income of residents:

We only keep the denominator of the third formula, the numerator becomes 1, it becomes a multiplier that shows the relationship between GDP and GDP excluding the disposable part of residents' consumption. If we take differentiation with respect to t, the absolute value of dY/dt shows when 𝑐 is small, the change rate of Y is also small.