Faculty of Business and Economics
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THE UNIVERSITY OF MELBOURNE

ECON10003
In-Tutorial #5

Introductory Macroeconomics

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Week Starting 12th April 2021

Questions.

1. The type of money controlled by a central bank is quite *narrow*,[1] basically cash plus bank reserves. Call this narrow measure of the money supply M_0. The amount of money M in the $MV = PY$ equation is however *broad*, and refers to a wide range of close substitutes for narrow money that are routinely used in the broader economy. Implicitly the quantity theory assumes these are proportional $M = kM_0$ where $k > 1$ is some constant. Then control of M_0 is then tantamount to control of M.

   How would a fall in this k affect a central bank's ability to control inflation?

2. During the second half of the 1970s, the Reserve Bank of Australia, and other central banks around the world followed a process of *monetary targeting*. What is monetary targeting and what was the rationale behind it? What factors caused central banks to abandon the process of monetary targeting?

3. In 2008, at the height of the global financial crisis, the Australian government introduced the Financial Claims Scheme to provide insurance to depositors up to the value of $250k. They also guaranteed larger deposits and wholesale funding by banks up until the year 2015.[2]

   This deposit insurance effectively meant that if a bank or financial intermediary went bankrupt, the government would compensate the depositor.

   (a) What effect do you think guaranteeing deposits would have upon the ability and cost of banks and other financial institutions to raise funds?

   (b) If it became difficult for banks to raise funds, what impact do you think this would have on the broader economy? Explain your reasoning.

[1] Sometimes referred to as 'inside money' or 'base money' or 'high-powered' money.

[2] Wholesale funding refers to the sale of bonds and other financial instruments to raise funds. Although deposits fund the majority of bank lending in Australia, a significant amount of funding for financial intermediaries comes from other sources.

Solutions to In-Tutorial Work.

1. Write the quantity equation $MV = PY$ with $M = kM_0$ so

$$kM_0V = PY$$

or

$$(kV)M_0 = PY$$

Hence a fall in k is equivalent to a fall in velocity V. Hence even if velocity itself is stable, control of narrow money M_0 does not translate to control of PY (and hence inflation) unless k is also stable. If k falls a lot because commercial banks do not lend out money, then increasing narrow money M_0, e.g., increasing bank reserves at the central bank, need not lead to a rise in inflation.

2. McFarlane, in the required reading, notes that there were two central problems with monetary targeting. First, the central bank was unable to actually control the level of the money supply (i.e., k was not stable). Second, and more importantly, there was a breakdown in the relationship between money and prices caused by changes in velocity (i.e., V was not stable). This change in velocity reflected deregulation and technological progress in the financial sector.

   The bottom line is that the RBA, like most central banks, abandoned money targeting as impractical and turned to inflation targeting. They also found that there were communication and transparency benefits from targeting a 'final objective' like inflation preferable to targeting an 'intermediate objective' like the money supply.

3. (a) The decision to guarantee deposits made it easier for banks to raise funds. There are a few issues that are worth highlighting. When deposit insurance was introduced, there was a significant amount of uncertainty in financial markets at this time. This included uncertainty regarding the balance sheet position of major banks and as a result, uncertainty regarding their future solvency. This uncertainty raised the cost of funding for Australian banks — essentially banks were viewed as more risky which raised the rate of return required to hold deposits with them (that is, it raised the risk premium). This was exacerbated by several other countries offering deposit insurance for financial institutions based in those countries. This further increased the risk associated with investing in Australian banks.

   (b) In terms of effects on the broader economy, there are two key things to note. First, if it became difficult for banks to obtain funds for financial intermediation, we would expect that it would be difficult for firms within the economy to finance investment. This decline in investment would have implications for the equilibrium level of output and employment in the economy. Second, the financial sector is responsible for allocating resources to their most productive use. If financial intermediaries are unable to raise funds, then firms may be constrained in their investment decisions.