Transmission Mechanisms of Monetary Policy

This lecture examines the transmission mechanisms of monetary policy to understand monetary policy's impact on the economy.

How Monetary Policy Impacts the Economy

A. Monetary policy impacts the economy through two different channels: Asset price and credit view.

B. Asset Price Channels

1. Real interest rate channel

   a. This channel says that easing monetary policy by lowering real interest rates will stimulate investment, which pushes up output. [$r\downarrow \rightarrow I\uparrow \rightarrow Y\uparrow$]

   b. Even when the nominal interest rate is near zero, unconventional monetary policies, such as forward guidance, can raise expected inflation and lower the real interest rate (recall, $R = r + \pi^e = 0$) by committing to expansionary monetary policy in the future. [$\pi^e\uparrow \rightarrow r\downarrow \rightarrow I\uparrow \rightarrow Y\uparrow$]

2. Exchange rate effects on net exports

    a. When monetary policy pushes down domestic real interest rates, the domestic currency falls in value. That raises import prices and lowers export prices, which pushes up net exports and output. [r↓→E↓→NX↑→Y↑]

3. Tobin's q theory

    a. Tobin's q measures the market value of a firm, the stock price multiplied by outstanding shares, divided by the replacement cost of capital.

    b. This theory says as q rises, firms will find it valuable to issue stock to pay for more capital investment.

    c. When real interest rates decline (from a monetary policy easing), stock prices (P_s) rise, which pushes up Tobin's q. That higher value increases investment and output. [r↓→P_s↑→q↑→I↑→Y↑]

4. Wealth effects
    a. When individuals' wealth increases, they raise their consumption.
    b. When real interest rates decline (from a monetary policy easing), stock prices (P_s) rise, which pushes up household wealth. People then raise their consumption which increases output. [r↓→P_s↑→wealth↑→C↑→Y↑]
    c. Example: The early- to mid-2000s increase in housing prices raised household wealth, which pushed up consumption.

C. The Credit View Channels

1. Bank lending channel

   a. Banks are so efficient at solving the asymmetric information problem in credit markets that the only access certain borrowers have to credit markets is through banks.

   b. The ability of banks to lend to those borrowers depends on their ability to acquire funds.

   c. As long as banks cannot acquire funds from other sources besides retail deposits, an increase in reserves (via an easing of monetary policy) raises the amount of bank deposits, which provides banks with more funds for loans. That increase in loans drives up investment and output. [reserves↑→deposits↑→loans↑→I↑→Y↑]

d. One drawback that limits this channel's effect is banks can easily acquire funds from non-retail deposits (those without reserve requirements) to fund their loans. The presence of alternative funding mechanisms means monetary policy has a much smaller impact on the economy through this channel.

e. Many economists believe the bank lending channel played an important role in the slow recovery of the U.S. economy after the Great Recession.

2. Balance sheet channel

   a. As a firm's net worth increases, banks are less likely to lose money on non-performing loans, so they are more willing to lend to that firm. That higher level of lending raises investment and output.

b. When monetary policy is eased, real interest rates fall, which drives up the price of the firm's stock and its overall market value. That higher value increases lending to that firm, which raises its ability to invest in new capital. [r↓→P_s↑→net worth↑→loans↑→I↑→Y↑]

3. Cash flow channel

   a. Cash flow is the difference between a firm's cash receipts and its cash expenditures.

   b. Lower nominal interest rates improve a firm's cash flow, which lowers a bank's risk in lending to that firm. These firms are able to borrow more funds, which increases investment and output.
   [R↓→cash flow↑→loans↑→I↑→Y↑]

4. Unanticipated price level changes

    a. An unanticipated increase in the price level lowers a firm's liabilities (but not its assets), which are usually contractually fixed in nominal terms. That decline raises a firm's net worth.

    b. An easing of monetary policy reduces real interest rates, which drives up inflation and the price level. That higher price level improves a firm's net worth, which reduces a banks risk in lending to that firm. The resulting increase in lending drives up investment and output. [r↓→π↑→unanticipated P↑→net worth↑ →loans↑→I↑→Y↑]

5. Household liquidity effects

    a. This channel focuses on consumer spending on housing and durable goods.

b. When monetary policy is eased, real interest rates fall causing stock prices and liquid household wealth to increase. Having more liquid funds, means households are less worried about becoming financially distressed, so they increase their purchases of durable goods and housing. [r↓→ P_S↑→wealth↑→likelihood of financial destress↓→(durable goods↑ & housing↑)→Y↑]

D. Three Reasons Credit Channels are Important to the Monetary Transmission Mechanism

1. Financial frictions in the credit channels impact firms' employment and spending decisions.
2. Small firms, which have less access to credit, are hurt more by tight monetary policy than large firms.
3. Asymmetric information via financial frictions is useful in explaining many economic phenomena such as why financial crises are so damaging to the economy.

Lessons for Monetary Policy

A. A monetary policy easing is represented by decreases in real interest rates as opposed to nominal interest rates.

B. Asset prices besides short-term debt instruments contain information on the stance of monetary policy.

C. Monetary policy can stimulate the economy even if short-term interest rates are already near zero.

D. Making price stability the primary long-run goal of monetary policy helps avoid the negative effects from unanticipated movements in the inflation rate.