Monetary Policy: A Summing Up

Chapter 25

25-1 The Optimal Inflation Rate

The Costs of Inflation

•Very high inflation can disrupt economic activity. There are four main costs of inflation:

(1) shoe-leather costs: the costs of making more trips to the bank in the presence of inflation. They reflect an increase in the opportunity cost of holding money.

(2) tax distortions: Tax distortions occur when tax rates do not increase automatically with inflation, a concept known as bracket creep.

(3) money illusion: the cost of inflation associated with the notion that people make systematic mistakes in assessing nominal versus real changes, leading people to make incorrect decisions.

(4) inflation variability: financial assets such as bonds, which promise fixed nominal payments in the future, become riskier.

The Optimal Inflation Rate: The Current Debate

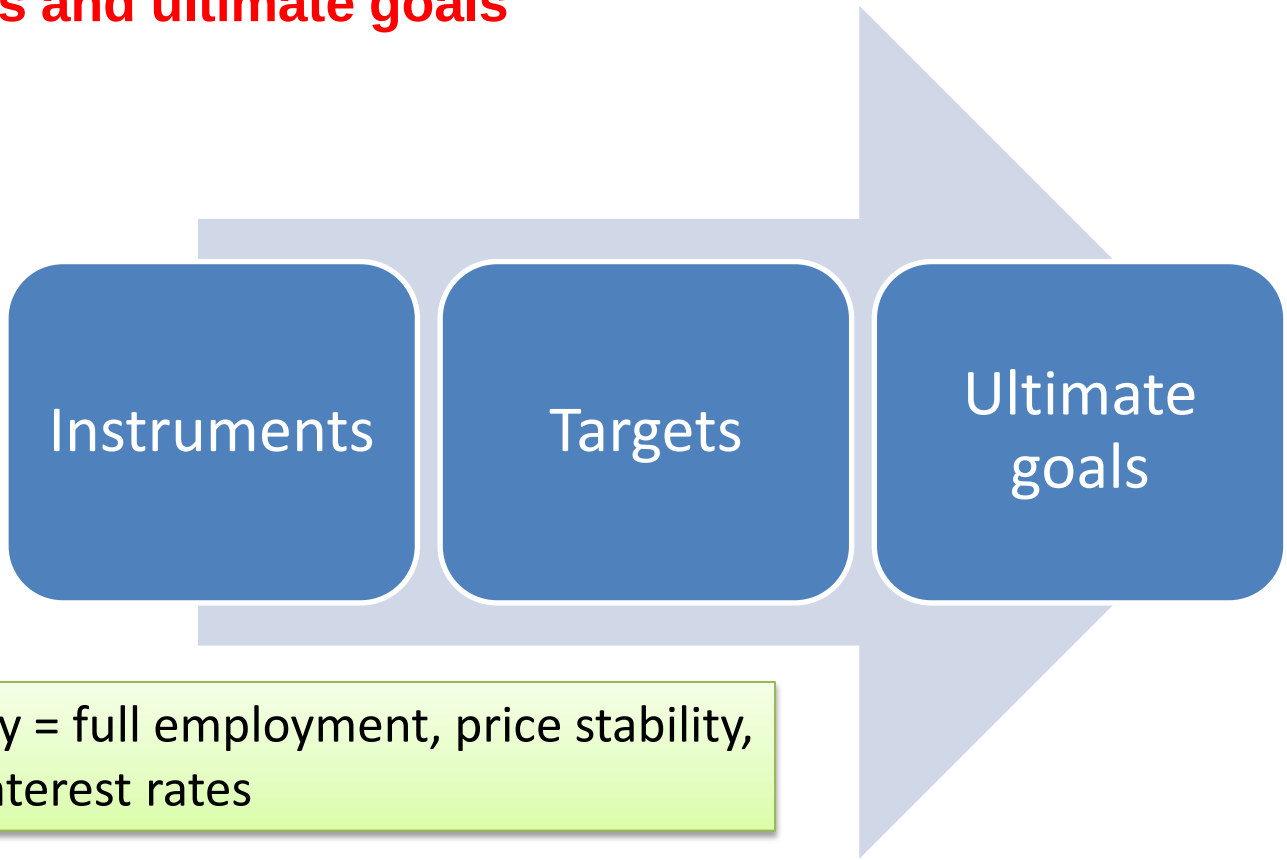
- Those who aim for small but positive inflation argue that some of the costs of positive inflation can be avoided, and the benefits are worth keeping.

- Those who aim for zero inflation argue that this amounts to price stability, which simplifies decisions and eliminates money illusion.

- Today, most central banks in developed countries appear to be aiming for a low but positive inflation, between 2 and 3%.

25-2 The Design of Monetary Policy

Instruments, targets and ultimate goals



Goals of monetary policy = full employment, price stability, moderate (long-term) interest rates

•Most central banks have adopted an inflation rate target rather than a nominal money growth rate target. And they think about short-run monetary policy in terms of movements in the nominal interest rate rather than in terms of movements in the rate of nominal money growth.

Money Growth Targets

- Until the 1990s, monetary policy in the US and other OECD countries was typically conducted as follows:

  - The central bank chose a target rate for **nominal money growth** corresponding to the inflation rate it wanted to achieve in the medium run.

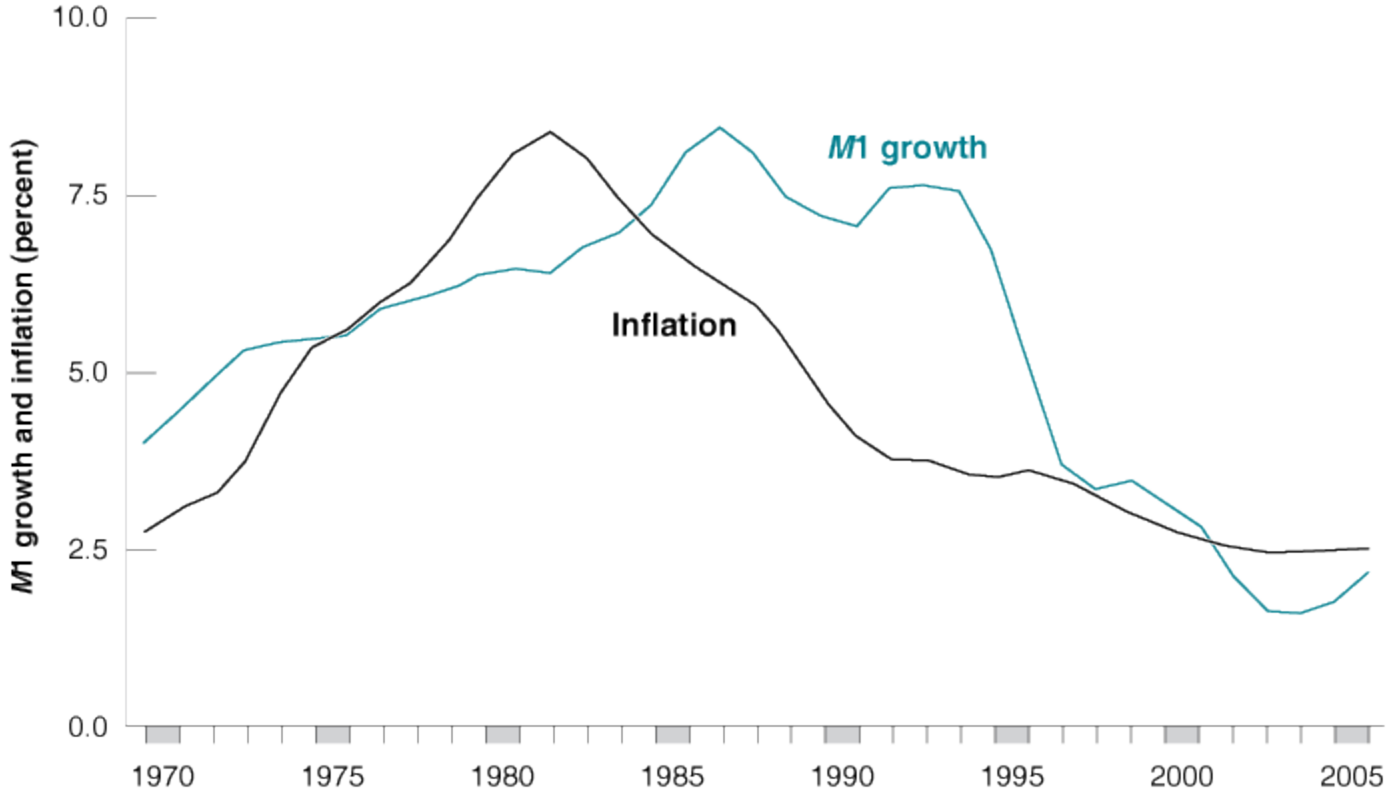
  - To communicate to the public both what it wanted to achieve in the medium run and what it intended to do in the short run, the central bank announced a range for the rate of nominal money growth.

Money Growth and Inflation

Figure 25 – 1

M*1 Growth and Inflation: 10-Year Averages since 1970*

There is no tight relation between *M*1 growth and inflation—not even in the medium run.



There is no tight relation between *M2* growth and inflation either —not even in the medium run.

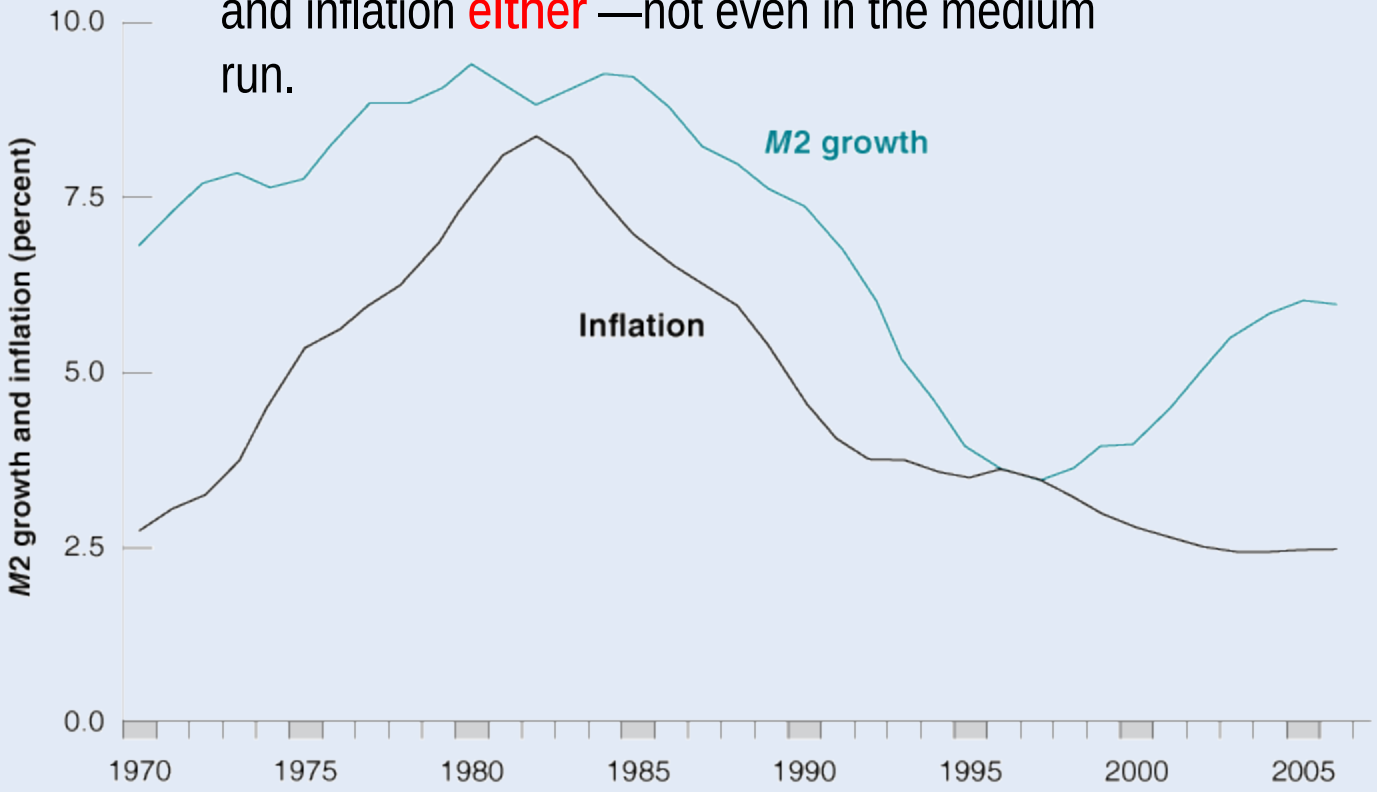


Figure: M2 Growth and Inflation: 10-Year Averages since 1970

- The relation between *M1* (or M2) growth and inflation is not tight because of *shifts in the demand for money.*

- When people reduce their bank account balances and move to money market funds, there is a negative shift in the demand for money.

- Frequent and large shifts in money demand create serious problems for central banks in using money growth as a target for monetary policy.

Inflation Targeting

- In many countries, central banks have decided that the achievement of a low inflation rate is their primary goal, both in the short run and in the medium run. This is known as **inflation targeting.**

Note, however, that the assumption that inflation targeting eliminates deviations of output from its natural level is too strong, for two reasons:

The central bank cannot always achieve the rate of inflation it wants in the short run.

Like all other macroeconomic relations, the Phillips curve relation does not hold exactly.

Interest Rate Rules

•Since it is the interest rate that directly affects spending, it has been suggested (by **Taylor**) that the central bank should choose an interest rate rather than a rate of nominal money growth.

•Taylor proposed a rule – **the Taylor Rule** –which provides a way of thinking about monetary policy: Once the central bank has chosen a target rate of inflation, it should try to achieve it by adjusting the nominal interest rate.

$$i_t = i^* + a(\pi_t - \pi^*) - b(u_t - u_n)$$

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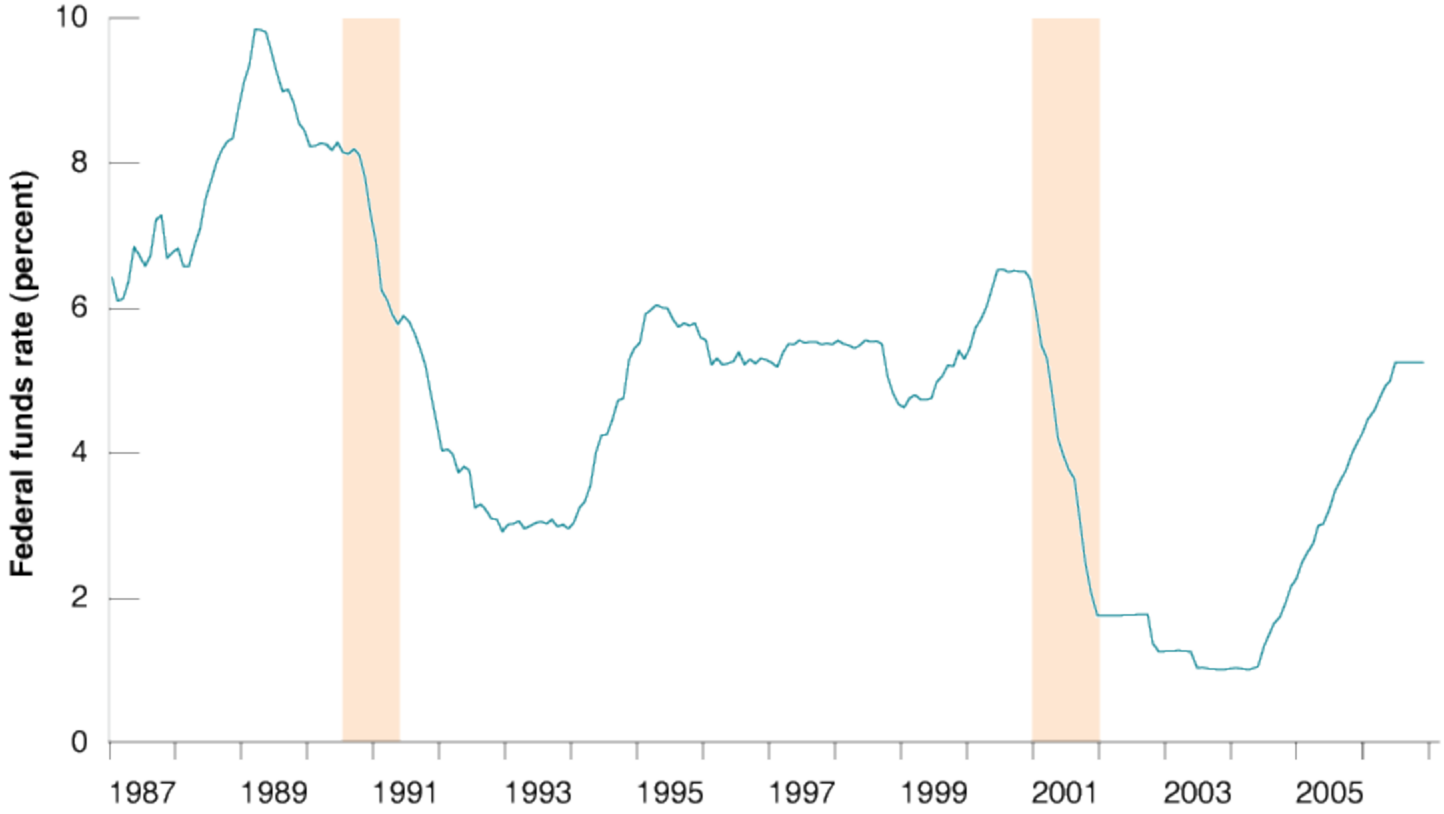
- If $\pi_t = \pi^*$, and $u_t = u_n$, then the central bank should set i_t equal to its target value, i^*.
- If inflation is higher than the target $(\pi_t > \pi^*)$, the central bank should increase the nominal interest rate i_t above i^*.
- If unemployment is higher than the natural rate of unemployment $(u > u_n)$, the central bank should decrease the nominal interest rate.

Figure 25 – 2

The Federal Funds Rate since 1987

In 1990–1991, and again in 2001, the Fed dramatically decreased the federal funds rate to reduce the depth and length of the recession.



25-3 The Fed in Action

The Mandate of the Fed

- The mandate of the Federal Reserve System was most recently defined in the **Humphrey-Hawkins Act**, passed by Congress in 1978.

Organization of the Fed

The Federal Reserve System is composed of three parts:

- A set of 12 **Federal Reserve Districts**
- The **Board of Governors**
- The **Federal Open Market Committee (FOMC)** and the **Open Market Desk**.

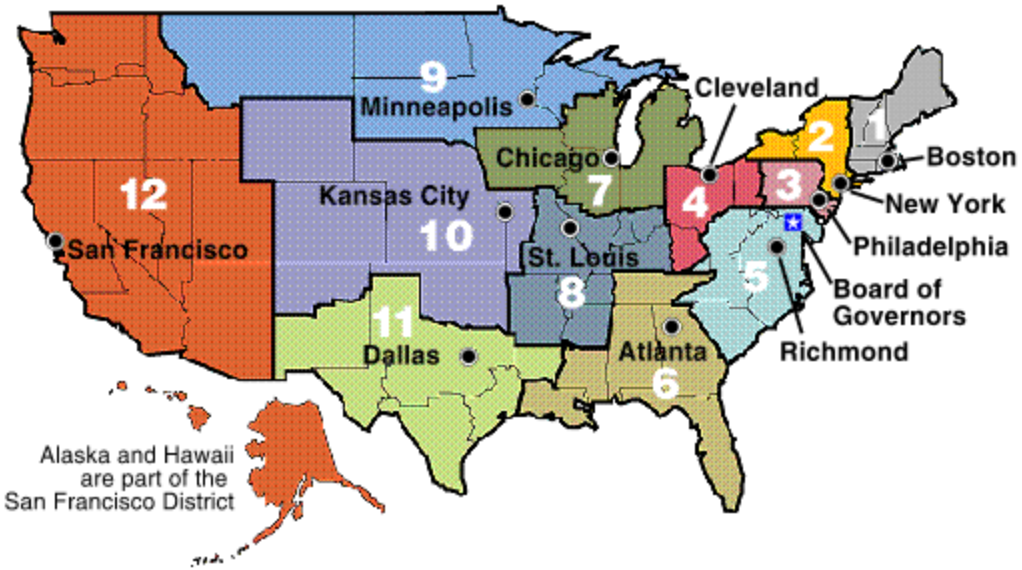
The Federal Open Market Committee (FOMC) is made of twelve members: seven members of the Board of Governors of the Federal Reserve System; president of the FRB of New York; and four of the remaining eleven Reserve Bank presidents, who serve one-year terms on a rotating basis.

The Federal Reserve Board

The Twelve Federal Reserve Districts

Addresses and phone numbers
Banks
Branches

Boston
New York
Philadelphia
Cleveland
Richmond
Atlanta
Chicago
St. Louis
Minneapolis
Kansas City
Dallas
San Francisco
Board



The Federal Reserve officially identifies Districts by number and Reserve Bank city.

In the 12th District, the Seattle Branch serves Alaska, and the San Francisco Bank serves Hawaii. The System serves commonwealths and territories as follows: the New York Bank serves the Commonwealth of Puerto Rico and the U.S. Virgin Islands; the San Francisco Bank serves American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands. The Board of Governors revised the branch boundaries of the System in February 1996.

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The Instruments of Monetary Policy

1. **The Required Reserve ratio:** the minimum amount of reserves that banks must hold in proportion to checkable deposits. With this instrument, the Fed can affect the volume of lending by banks.
2. **Discount policy:** The Fed sets the **discount rate (**rate at which the Fed lend to commercial banks) and controls the volume of its lending to commercial banks. Thus the Fed can affect the interest rates in the economy as well as the volume of bank lending.
3. **Open-market operations:** the purchase and sale of government bonds in the open market is the main instrument of U.S. monetary policy (e.g., Large Scale Asset Purchase strategy). It is convenient and flexible. Thus the Fed can affect the interest rates as well as the volume liquidity and bank lending in the economy.

The Implementation of Policy

- The most important monetary policy decisions are made at meetings of the FOMC.

- Fed staff prepares forecasts and simulations of the effects of different monetary policies on the economy, and identifies the major sources of uncertainty.

- The conduct of open-market operations between FOMC meetings is left to the Open Market Desk.

- **Does the Fed have an inflation target, or follow an interest rate rule?**

  - The answer is: we don't know. Alan Greenspan, the chairman of the Fed until 2006, never specifically stated an inflation target, nor has his successor, Ben Bernanke.

  - The evidence strongly shows that the Fed has in fact an implicit inflation target of about 2-3%. It is also clear that the Fed adjusts the federal funds rate in response both to the inflation rate and to deviations of unemployment from the natural rate.

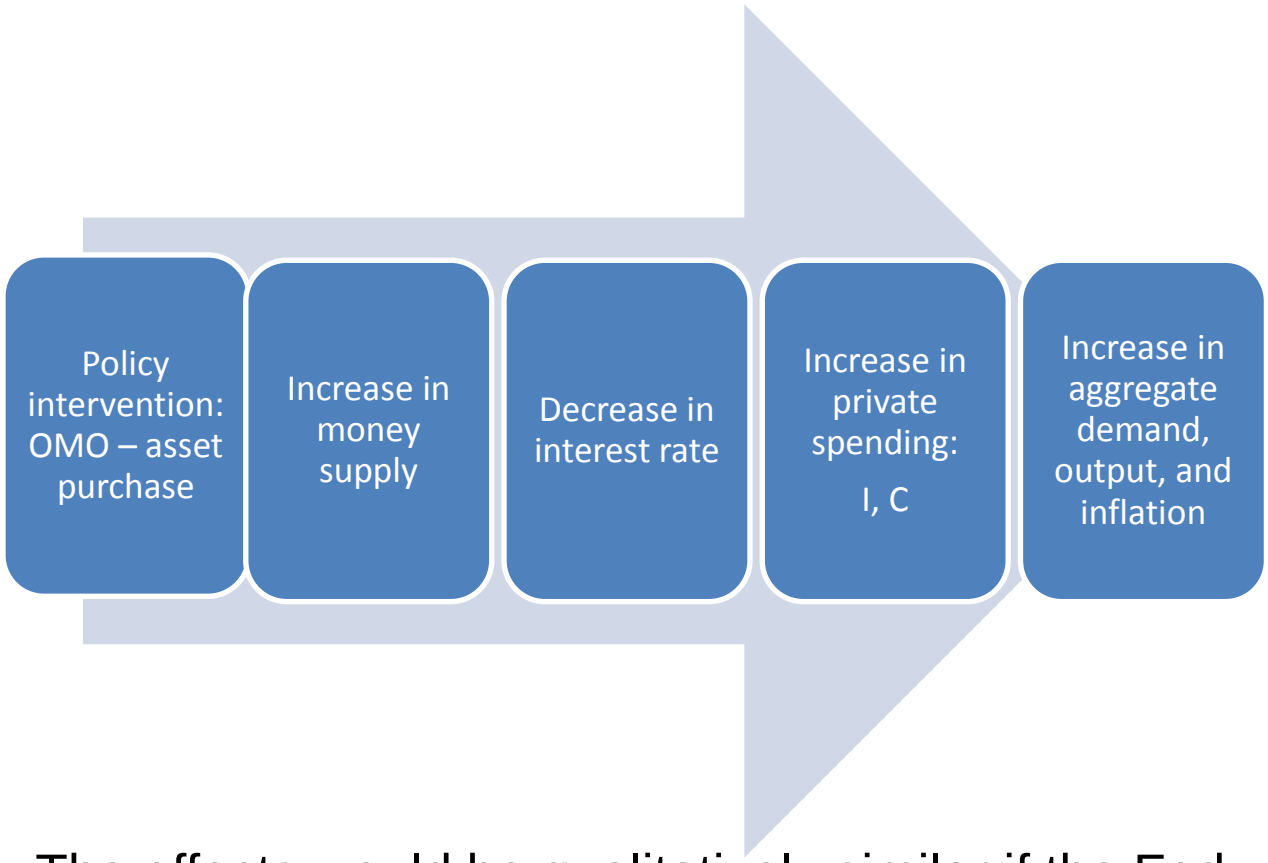
- **Does it matter that the Fed has neither an *explicit* inflation target nor an *explicit* interest rate rule?**

  - Many economists say: Do not argue with success. They argue that the record of monetary policy under both Alan Greenspan and Ben Bernanke has been good.
  - Other economists are more skeptical. They argue that it is unwise to have monetary policy depend so much on one individual, that the next Chairman of the Fed may not be able to achieve the same **mix of credibility and flexibility.**

Monetary policy transmission

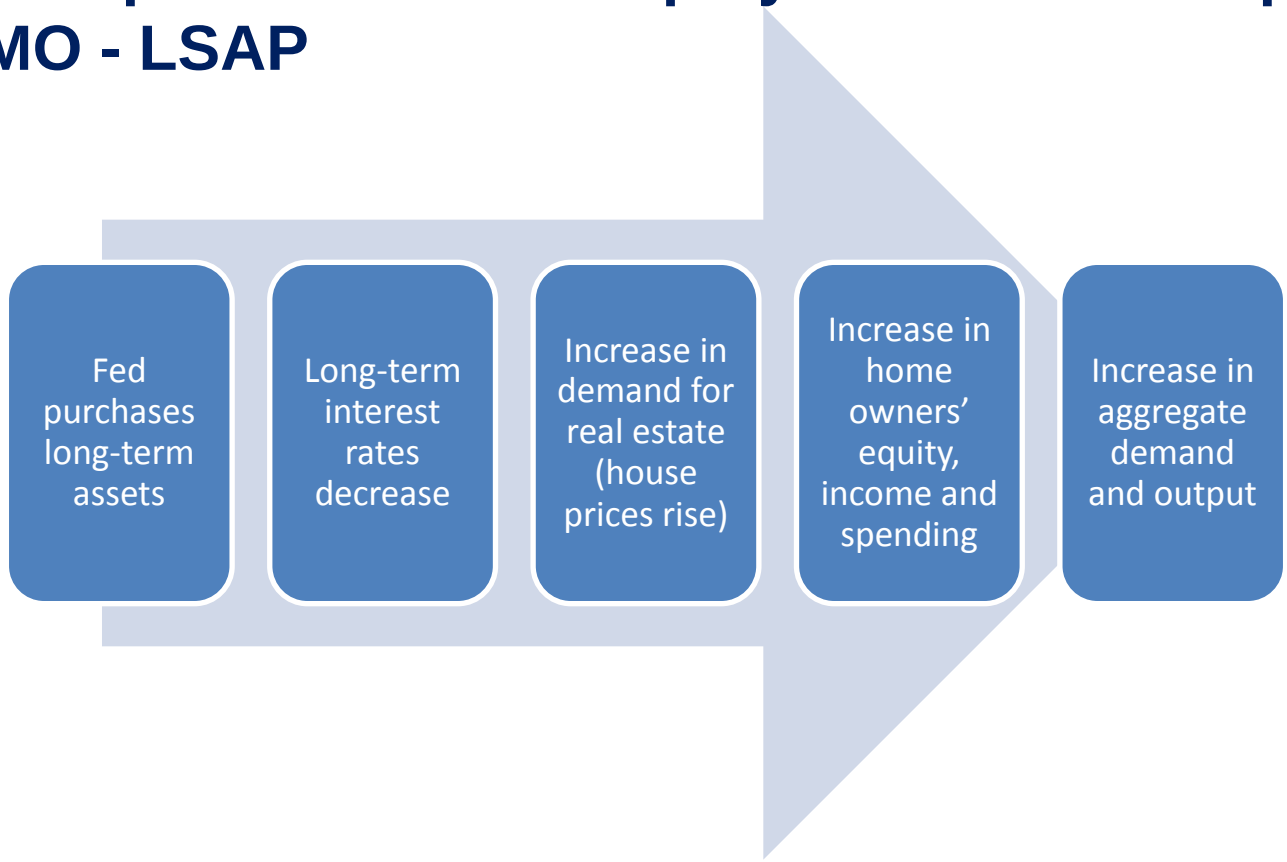
- How exactly does monetary policy affect real economic activity? Through what channels does monetary policy affect the economy?
- Key channels:
  - The interest rate channel
  - The asset price channels
    - Equity and real estate channel
    - Exchange rate channel
  - The credit channels
    - bank lending channel
    - balance sheet channel

Interest rate channel. Example = expansionary monetary policy with asset purchase (e.g., LSAP)



Note: The effects would be qualitatively similar if the Fed, instead, had cut the **discount rate**. However, the effects may be quantitatively different.

Asset price channel – equity channel. Example: OMO - LSAP



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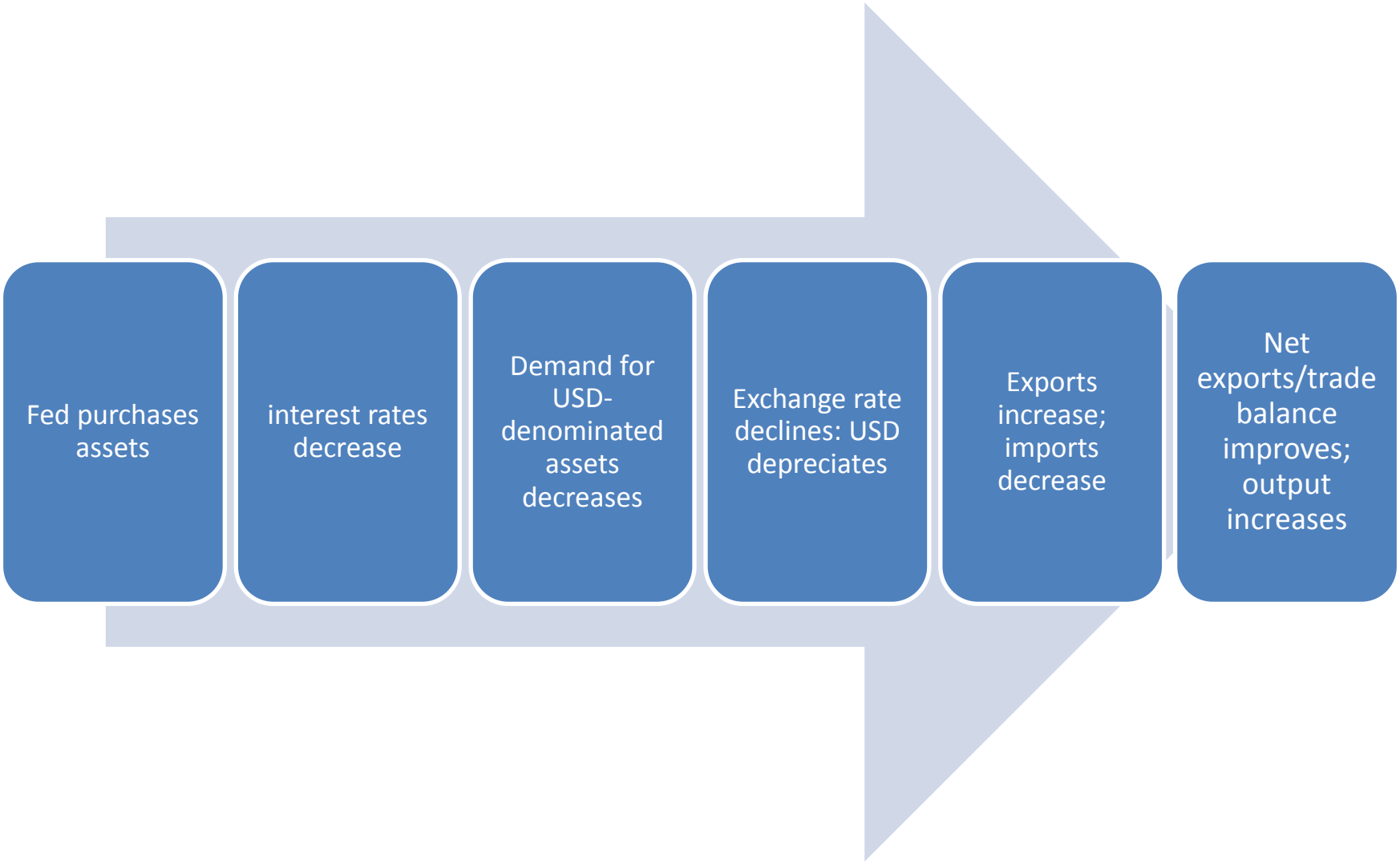
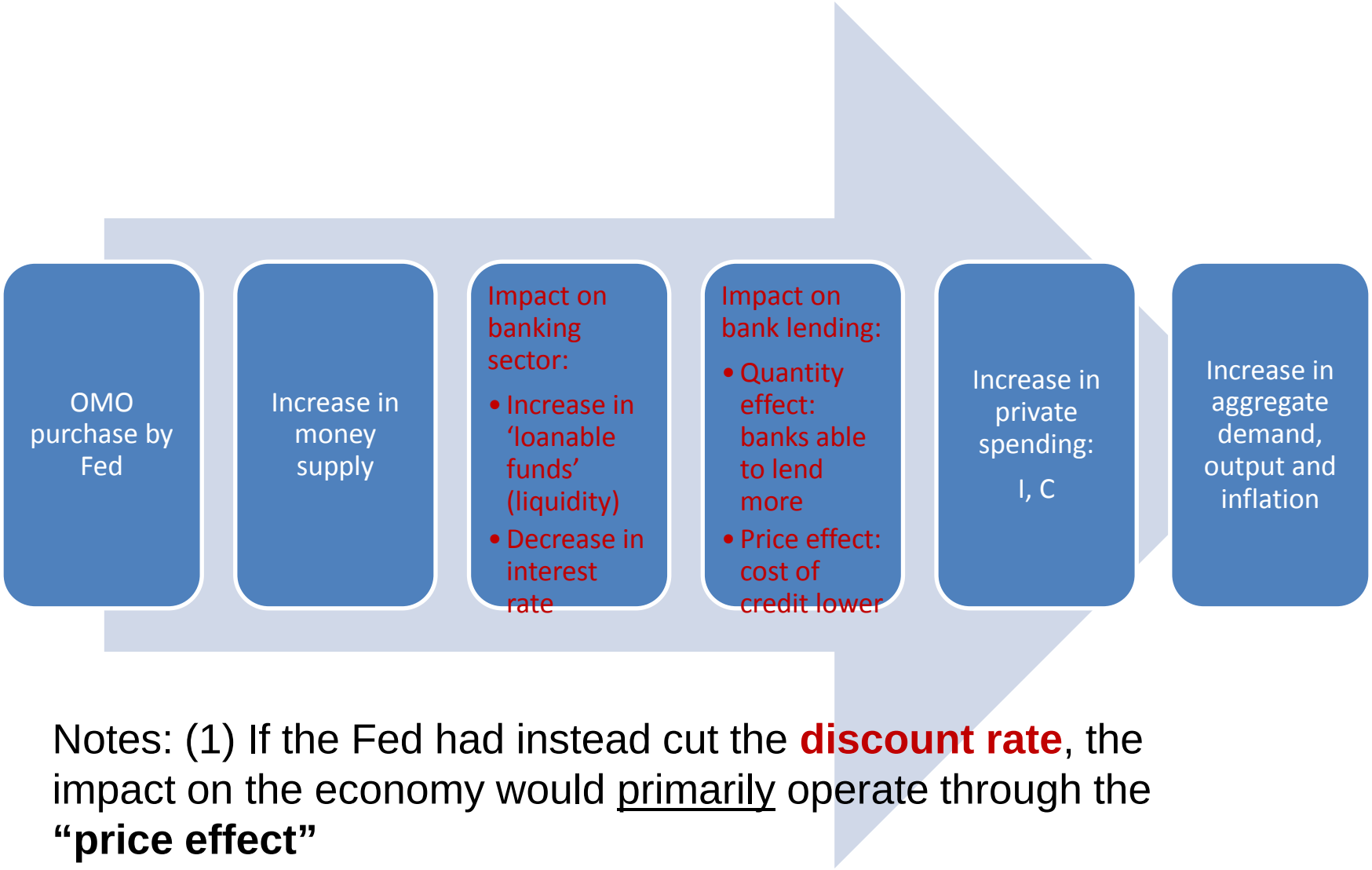
Asset price channel – exchange rate channel. Example: OMO - LSAP



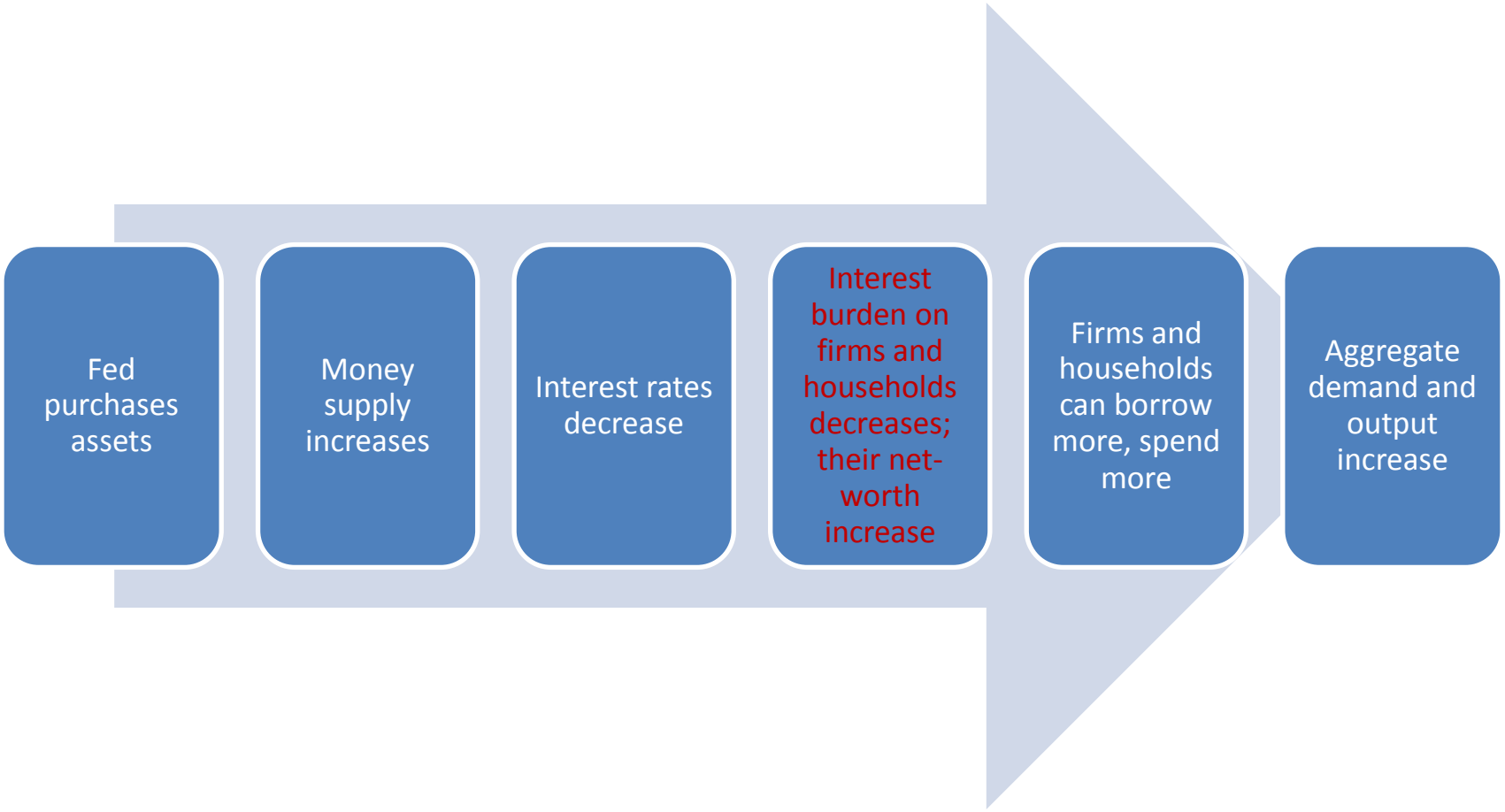
Bank lending channel. Example: OMO - LSAP



Notes: (1) If the Fed had instead cut the **discount rate**, the impact on the economy would primarily operate through the **"price effect"**

(2) If the Fed had reduced the **required reserve ratio**, the impact would primarily operate through the **'quantity effect'**

Balance sheet channel. Example: OMO - LSAP



Notes: The impact would be **qualitatively** similar if the Fed had, instead, cut the **discount** rate.