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Monetary Economics

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26: Transmission Mechanisms of Monetary Policy

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Monetary Economics

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FIGURE 27-1 The Link Between Monetary Policy and Aggregate Demand: Monetary Transmission Mechanisms

This figure shows the different channels through which monetary policy affects aggregate demand.

26.1 Transmission Mechanisms of Monetary Policy

- Examines whether one variable affects another by using data to build a model that explains the channels through which the variable affects the other

- Transmission mechanism
  - the change in the money supply affects interest rates
  - interest rates affect investment spending
  - investment spending is a component of aggregate spending (output)

26.1 Traditional Interest-Rate Channels

Macroeconomic Objectives
1. Full employment
2. Price Stability
3. External Equilibrium
4. Economic growth
5. Equitable income

Supply

Make

Producers

Buy

Sell

Price

Price

EAP

Trough | ↑swing | Peak | ↓swing

PPI

4 Business Cycles

Factor Market

Imports

Exports

1 Unemployment

2 Inflation

Goods Market

Imports

Exports

4 Growth

5 Equality

U%

Lorenz Curve

Gini Coefficient

CPI

Interest-rate transmission mechanismmemphases real nterest rate as the rate that affects consumer and business decisions

The real long-term interest rate (not the real short-term interest rate) has the major impact on spending

Price

Sell

Price

Buy

GNI

Consumers

Use

26.2 Other Asset Price Channels

- In addition to bond prices, two other asset prices receive substantial attention as channels for monetary policy effects:

  - foreign exchange rates
  - the prices of equities (stocks)

26.2.2 Tobin's *q* Theory

- Theory that explains how monetary policy can affect the economy through its effects on the valuation of equities (stock)

- Defines *q* as the market value of firms divided by the replacement cost of capital

- If *q* is high, the market price of firms is high relative to the replacement cost of capital, and new plant and equipment capital is cheap relative to the market value of firms

- When *q* is low, firms will not purchase new investment goods because the market value of firms is low relative to the cost of capital

26.2.3 Wealth Effects

- Franco Modigliani looked at how consumers' balance sheets might affect their spending decisions

- **Consumption** is spending by consumers on nondurable goods and services

- An important component of consumers' lifetime resources is their financial wealth, a major component of which is common stocks

- When stock prices rise, the value of financial wealth increases, thereby increasing the lifetime resources of consumers, and consumption should rise

26.3 Credit View - Origins

- Dissatisfaction with the conventional stories that interest-rate effects explain the impact of monetary policy on expenditures on durable assets has led to a new explanation

- Credit View is the new explanation based on the problem of asymmetric information in financial markets that leads to financial frictions

- It proposes that two types of monetary transmission channels arise as a result of financial frictions in credit markets:
  - those that operate through effects on bank lending
  - those that operate through effects on firms' and households' balance sheets

26.3 Credit View - Types

26.3.1 Bank Lending Channel

based on the analysis that demonstrates that banks play a special role in the financial system because they are especially well suited to solve asymmetric information problems in credit markets

26.3.2 Balance Sheet Channel

like the bank lending channel, the balance sheet channel arises from the presence of financial frictions in credit markets

26.3.4 Cash Flow Channel

another balance sheet channel operates by affecting cash flow, the difference between cash receipts and cash expenditures

26.3.4 Unanticipated Price Level Channel

another balance sheet channel operates through monetary policy effects on the general price level

26.3.2 Consumer Balances | Great Depression

- The years between 1929 and 1933 witnessed the worst deterioration in consumers' balance sheets ever seen in the United States

- Because of the decline in the price level in that period, the level of real debt consumers owed also increased sharply (by over 20%)

- Consequently, the value of financial assets relative to the amount of debt declined sharply, increasing the likelihood of financial distress

26.3.5 Household Liquidity Effects

- Another way of looking at how the balance sheet channel may operate through consumers is to consider liquidity effects on consumer durable and housing expenditures

- If, as a result of a bad income shock, consumers needed to sell their consumer durables or housing to raise money, they would expect a big loss because they could not get the full value of these assets in a distress sale

- In contrast, if consumers held financial assets (such as money in the bank, stocks, or bonds), they could easily sell them quickly for their full market value and raise the cash

26.4.1 Why Are Credit Channels Important?

A large body of evidence on the behavior of individual firms supports the view that financial frictions of the type crucial to the operation of credit channels do affect firms' employment and spending decisions

There is evidence that small firms (which are more likely to be credit-constrained) are hurt more by tight monetary policy than large firms, which are unlikely to be credit-constrained

The asymmetric information view of credit market imperfections at the core of the credit channel analysis is a theoretical construct that has proved useful in explaining many other important phenomena, such as why many of our financial institutions exist, why our financial system has the structure that it has, and why financial crises are so damaging to the economy

26.4.2 Application: The Great Recession

- With the advent of the financial crisis in the summer of 2007, the Fed began a very aggressive easing of monetary policy

- At first, it appeared that the Fed's actions would keep the growth slowdown mild and prevent a recession

- However, the economy proved to be weaker than the Fed or private forecasters expected, with the most severe recession in the post-war period beginning in December of 2007

- The rising level of subprime mortgage defaults, which led to a decline in the value of mortgage-backed securities and CDOs, led to large losses on the balance sheets of financial institutions

- With weaker balance sheets, these financial institutions began to deleverage and cut back on their lending

- With no one else to collect information and make loans, adverse selection and moral hazard problems increased in credit markets, leading to a slowdown of the economy

- Credit spreads also went through the roof with the increase in uncertainty from failures of so many financial markets

- The decline in the stock market and housing prices also weakened the economy, because it lowered household wealth

26.5 Lessons for Monetary Policy

1. It is dangerous always to associate the easing or the tightening of monetary policy with a fall or a rise in short-term nominal interest rates

2. Other asset prices besides those on short-term debt instruments contain important information about the stance of monetary policy because they are important elements in various monetary policy transmission mechanisms

3. Monetary policy can be effective in reviving a weak economy even if short-term interest rates are already near zero

4. Avoiding unanticipated fluctuations in the price level is an important objective of monetary policy, thus providing a rationale for price stability as the primary long-run goal for monetary policy

26.5.1 Application
Applying the Monetary Policy Lessons to Japan

1. First lesson suggests that it is dangerous to think that declines in interest rates always mean that monetary policy has been easing

2. Second lesson suggests that monetary policymakers should pay attention to other asset prices in assessing the stance of monetary policy

3. Third lesson indicates that monetary policy can still be effective even if short-term interest rates are near zero

4. Fourth lesson indicates that unanticipated fluctuations in the price level should be avoided

26.6.1 Approach
Critique of 1-variable only models

Keynesian models and ISLM

Focus on interest rate as primary mechanism to transmit effects

$\Delta M \rightarrow \Delta i \rightarrow \Delta I \rightarrow \Delta Y$

- monetary mechanism affects Y and can use M to change Y
- Keynesians prefer Fiscal to Monetary Policy because $\Delta M \rightarrow \Delta i$ and $\Delta i \rightarrow \Delta I \rightarrow \Delta Y$?

Monetarists

Focus on evidence of $\Delta M \rightarrow \Delta \pi$

- to fight $\Delta \pi$, contain ΔM

Structuralist

Focus on the many channels of operation

26.6.2 Mechanisms in South Africa Critique of Mishkin

Originally, mechanism of $\Delta M \rightarrow \Delta y$, ignored Δi or ΔE

Causality in SA (vs Mishkin 2012)

$i\downarrow \rightarrow M\uparrow$ (M_d before M_s), not $M\uparrow \rightarrow i\downarrow$

Monetary policy aims at demand for credit and thus M by Δi, not ΔM

SARB controls i directly, not M, $i\downarrow \rightarrow M\uparrow$, $i\downarrow \rightarrow$ bank credit$\uparrow \rightarrow$ deposits$\uparrow \rightarrow M\uparrow$

Effects in SA (vs Mishkin 2012)

$i\downarrow \rightarrow \Delta Y\downarrow \rightarrow \Delta YP$ (nominal income) $\rightarrow \Delta\pi\downarrow$, not just $i\downarrow \rightarrow M\uparrow$

- to fight $\Delta\pi$, SARB Δi

Exchange Rate in SA **(vs Mishkin 209 | 2012)**

$\Delta E \rightarrow \Delta P$ (ignored in Mishkin 2009)

26.6.3 Mechanisms in South Africa
Operation of SARB
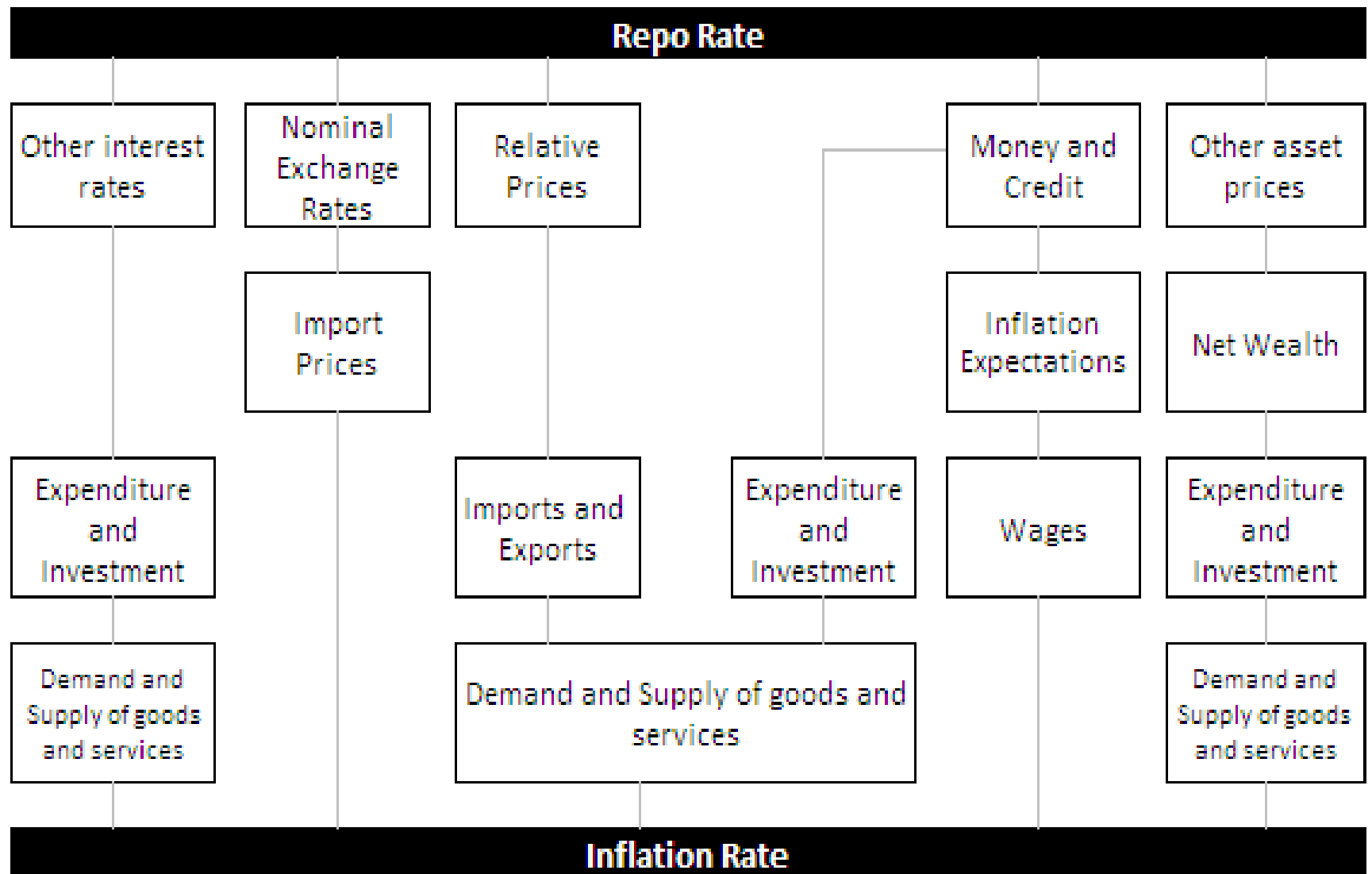
26.6.3 Mechanisms in South Africa Operation of SARB

Originally, mechanism of ΔM→ Δy, ignored Δi or ΔE

Interest Rate channel
↑repo rate → ↑i (prime, fixed deposits) → (I↓→, C↓) → Y↓
↓repo rate → ↓i (prime, fixed deposits) → ↓ER → ↑NX → Y↑

Other financial assets
Exchange Rate
↓repo rate → ↓i (prime, fixed deposits) → ↓ER → ↑Cost of Imports → ↑P
Equity Prices
↓repo rate → ↑Equity Prices → ↑I → ↑Y
Household Wealth
↓repo rate → ↑Prices (Equity, Property, Land) → ↑C → ↑Y

Credit
↓repo rate → ↑ bank deposits → ↑ bank loans → ↑(I, C) → ↑Y

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