

EE 452 International Monetary Economics

6. Floating Exchange Rates & Internal Balance

Euamporn Phijaisanit
Thammasat University
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Outline

- Monetary Policy under Flexible Exchange Regime
- Fiscal Policy under Flexible Exchange Regime
- Shocks
 - Internal Shocks
 - International Capital-Flow Shocks
 - International Trade Shocks
- Internal Imbalance and Policy Response
- International Macroeconomic Policy Coordination

Objectives

- The effectiveness of monetary policy under flexible exchange rates
- The effectiveness of fiscal policy under flexible exchange rate
- Which exchange rate regime performs better in the face of internal shocks?
- Which exchange rate regime performs better in the face of external shocks?

Floating Exchange Rates & Internal Balance

- Changes in exchange rate are the “automatic” mechanism for adjusting to achieve external balance.
- However, even if a floating exchange rate is used to achieve external balance, this still eaves the problem of achieving internal balance.
- With a floating rate, the exchange rate brings overall balance of payments into equilibrium by affecting people’s choices about whether to buy goods and services abroad or at home and whether to invest in this country’s financial assets or another country’s financial assets.
 - The impact on demand for goods and services then has a feedback effect on the country’s domestic product.

Floating Exchange Rates & Internal Balance

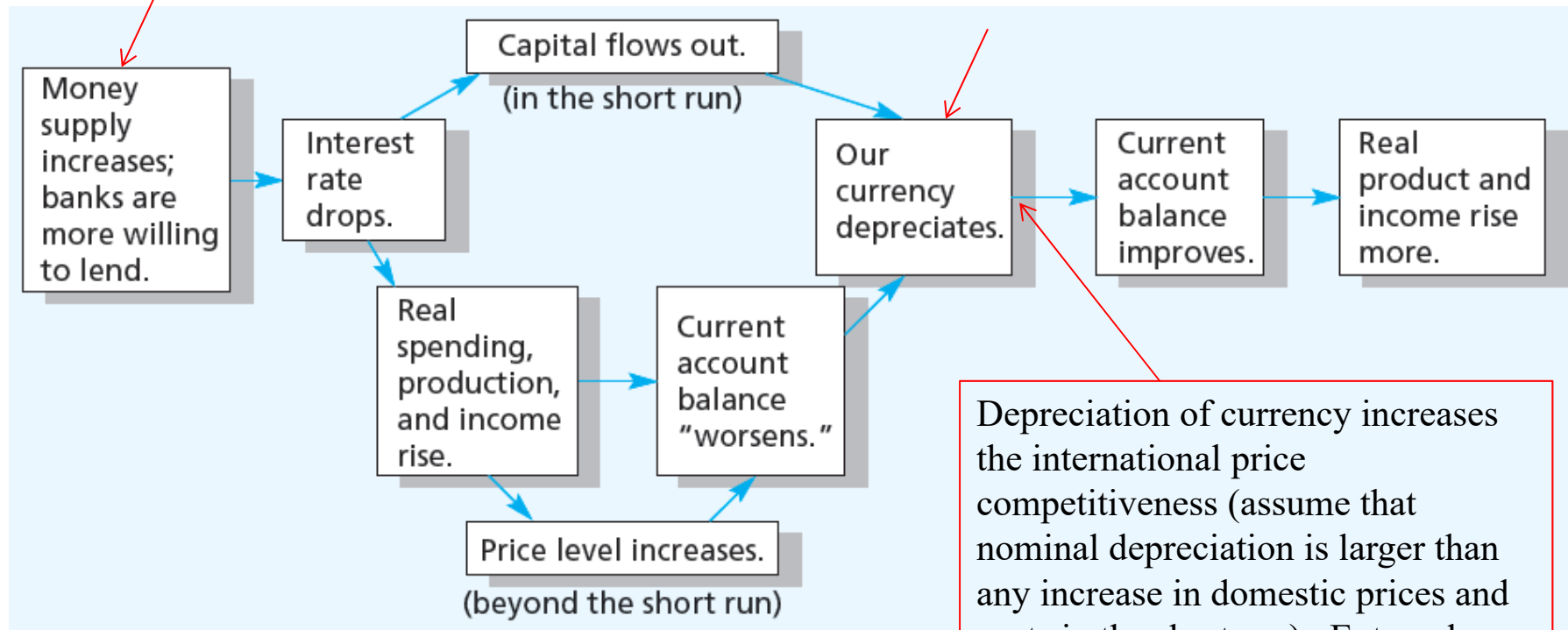
- The analysis of how a country with floating exchange rate responds to a policy change or shock can usefully proceed through three steps:
 1. What are the effects of shocks on the country's economy (and official settlements balance)?
 2. Would there be appreciation or depreciation needed to move the official settlements balance back to zero?
 3. What are the additional effects on the country's macroeconomy of this change in the exchange rate?

MONETARY POLICY WITH FLOATING EXCHANGE RATES

Effects of Expanding the Money Supply with Floating Exchange Rates

For example, monetary authority might use OMO to buy domestic securities. $MB \uparrow$, $MS \uparrow$

Under flexible exchange, no government intervention.



Depreciation of currency increases the international price competitiveness (assume that nominal depreciation is larger than any increase in domestic prices and costs in the short run). External balance is restored through the exchange-rate change.

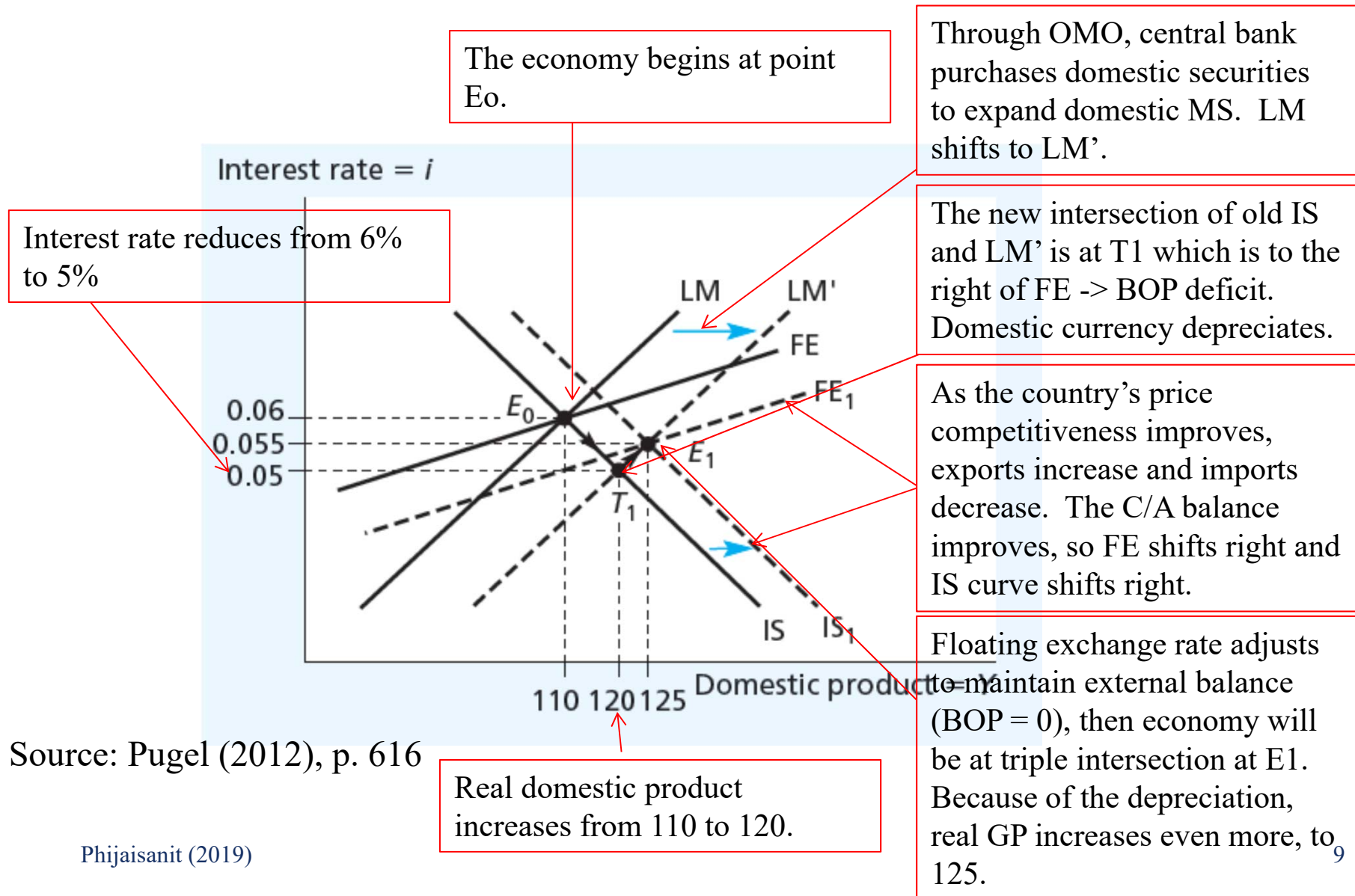
Source: Pugel (2012), p. 615

The Effect of Depreciation on Monetary Expansion

	Change in the Country's Real GDP after Two Years	
	Holding the Exchange Rate Steady	Allowing the Floating Exchange Rate to Depreciate
United States	0.5%	0.8%
Japan	0.7	0.9
Euro area	0.6	0.9

Source: Pugel (2012), p. 616

Expansionary Monetary Policy with Floating Exchange Rates



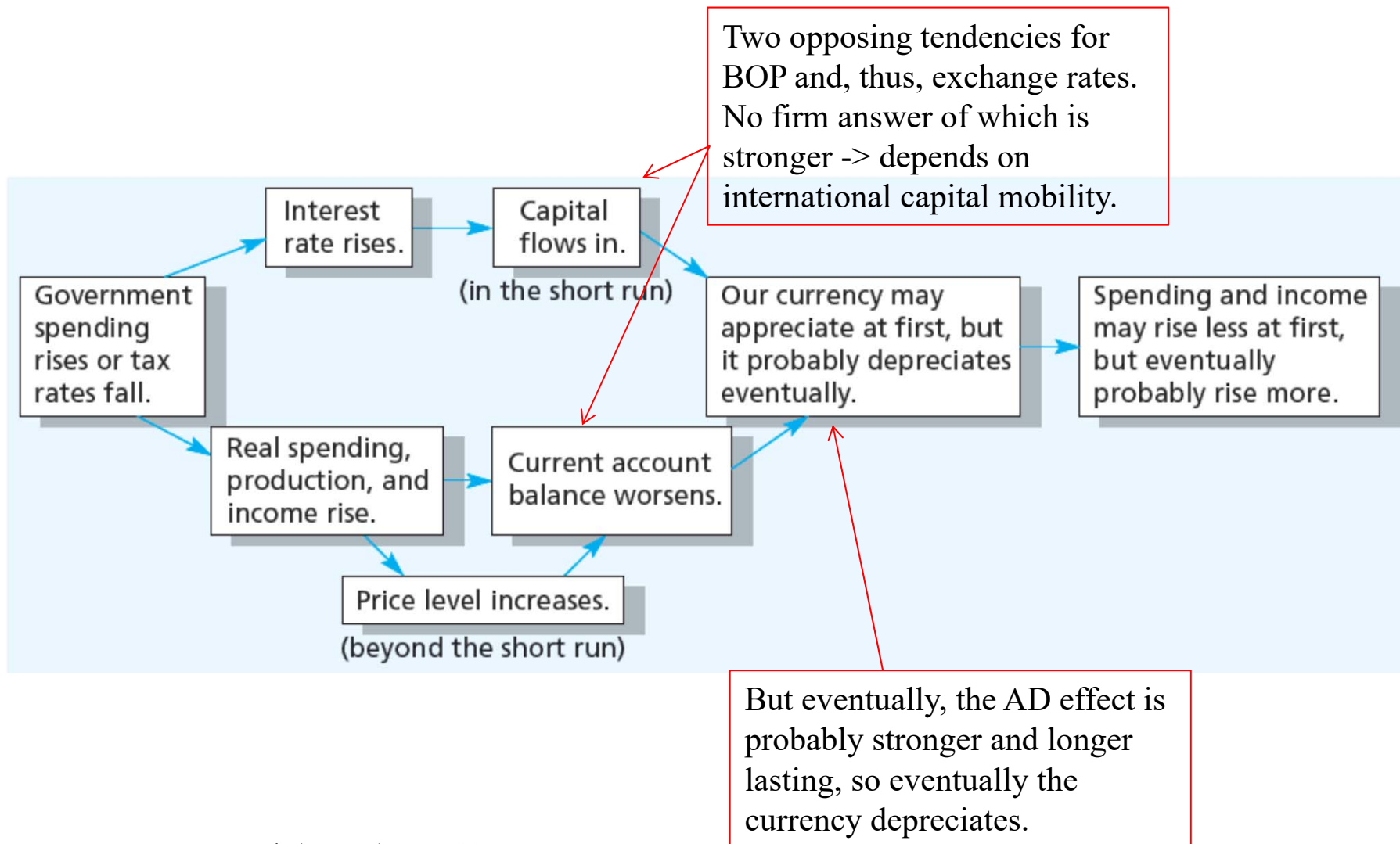
Source: Pugel (2012), p. 616

Monetary policy with Floating Exchange Rates

- With floating or flexible exchange rates, monetary policy exerts a strong influence over domestic product or income.
- *Monetary policy is powerful in affecting real GDP in the short run under floating exchange rates.*

FISCAL POLICY WITH FLOATING EXCHANGE RATES

Effects of Expansionary Fiscal Policy with Floating Exchange Rates



Source: Pugel (2012), p. 617

Effects of Expansionary Fiscal Policy with Floating Exchange Rates

- If the country's currency at first appreciates, then the country loses price competitiveness.
- The country's exports decline and its imports increase. -> C/A deficit.
 - C/A deficit reduces the expansionary effect of the fiscal change on the country's domestic product.
 - That is, the expansionary effect is reduced by “international crowding out” – the appreciation of the country's currency and the resulting decline in the C/A.

Effects of Expansionary Fiscal Policy with Floating Exchange Rates

- If the country's currency depreciates, then the country gains price competitiveness.
- The country's exports increase and its imports declines. -> C/A surplus.
 - C/A surplus increases the expansionary effect of the fiscal change on the country's domestic product.
 - The enhanced price competitiveness and resulting increase in C/A give a further trade-based stimulus to domestic production.

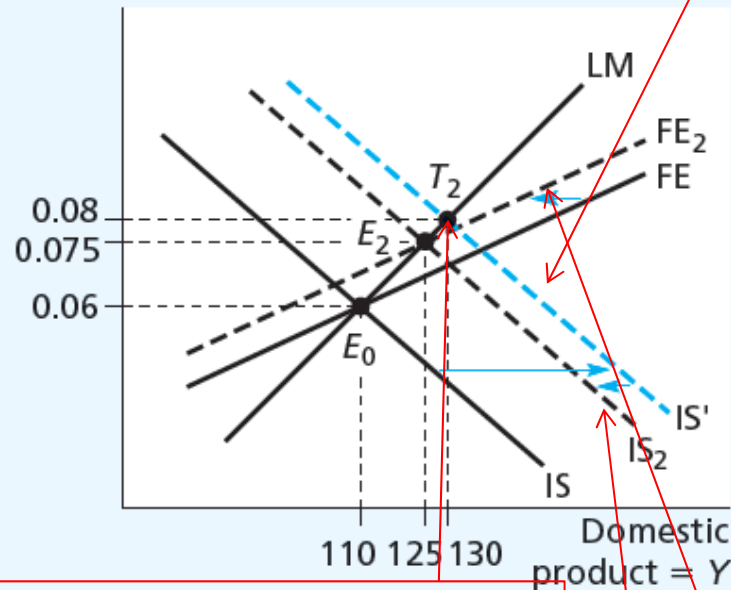
Expansionary Fiscal Policy with Floating Exchange Rates

The economy begins at point E_0 .

Fiscal expansion shifts IS to IS' , increasing interest to 8% and boosting domestic production to 130

A. Responsive International Capital Flows

Interest rate = i

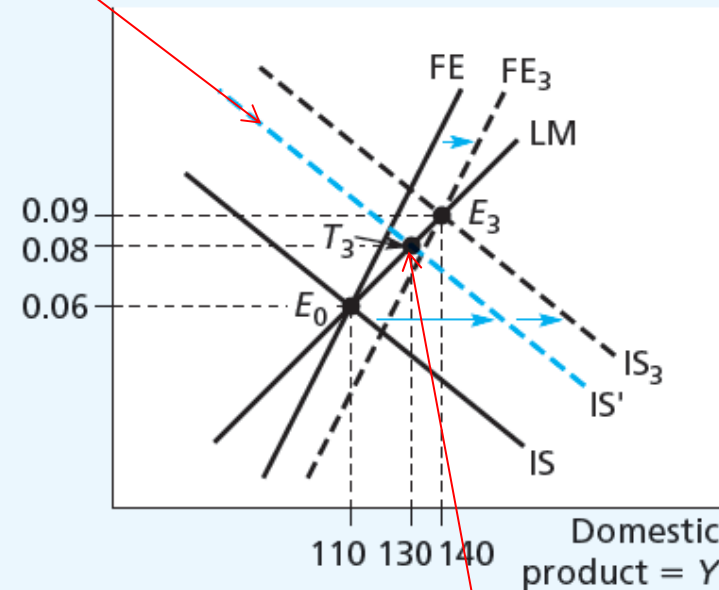


BOP surplus because the effect of capital inflow is larger.

Currency appreciates and C/A worsens so FE shifts left and IS shifts left. New intersection at E_2 . Y declines to 125.

B. Unresponsive International Capital Flows

Interest rate = i



BOP deficit because the effect of capital inflow is smaller. The currency depreciates, CA improves so FE and IS shift right. New E_3 , Y increases to 140.

Source: Pugel (2012), p. 619

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SHOCKS TO THE ECONOMY

Internal Shocks

- Domestic monetary shocks affect the equilibrium relationship between money supply and money demand, causing a shift in the LM curve.
 - Example, a change in monetary policy.
 - Domestic monetary shocks have powerful effects on an economy with floating exchange rate.
 - If the monetary shock tends to expand the economy, then the exchange rate tends to depreciate, further increasing domestic product (causing upward pressure on the price level, too.)
 - If the monetary shock tends to contract the economy, then the country's currency tends to appreciate, further decreasing domestic product.

Internal Shocks

- Domestic spending shocks alter domestic expenditure, causing a shift in the IS curve.
 - A change in fiscal policy is an example.
 - The effect of fiscal shock depends on which changes more: international capital flows or the country's current account.

INTERNATIONAL CAPITAL- FLOW SHOCKS

International capital-flow shocks

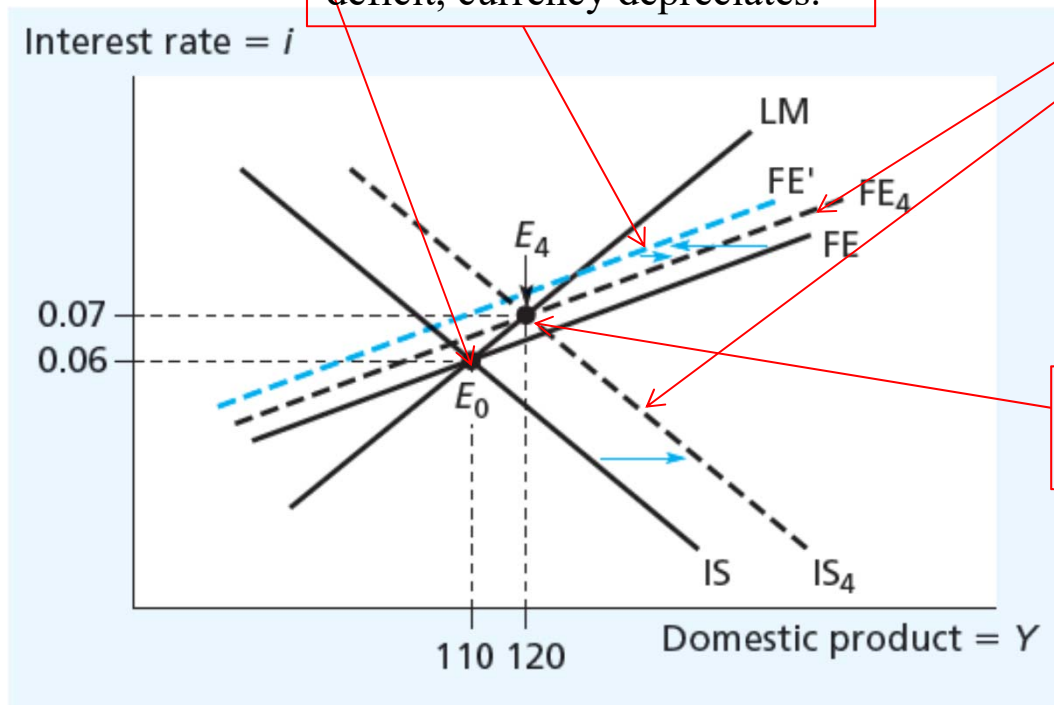
- International capital-flow shocks occur because of changes in investors' perceptions of economic and political conditions in various countries.
 - Example, an adverse shock leading to capital outflow from our country can occur because foreign interest rates increase.

An Adverse International Capital-Flow Shock

Economy begins at E_0 .

Adverse international capital-flow shock causes the FE curve to shift to FE' . BOP deficit, currency depreciates.

FE and IS shifts right to FE_2 and IS_4 .



New intersection is at E_4 with higher i and Y .

Source: Pugel (2012), p. 622

International capital-flow shocks

- Under floating exchange rates, external capital-flow shocks can have effects on internal balance by altering the exchange rate and the country's international price competitiveness.
- However, it is risky to conclude, on the basis of the simpler IS-LM-FE analysis that an adverse capital-flow shock is simply good for the economy!

International capital-flow shocks: Precautions

- Reasons for capital outflow.
 - If capital is flowing out because of political or economic problems, then these problems may cause the economy to contract even though the exchange-rate depreciate.
- Effects on domestic financial market.
 - If the capital outflow disrupts the domestic financial markets in a way beyond our basic analysis, then the broader domestic economy may be harmed.

INTERNATIONAL TRADE SHOCKS

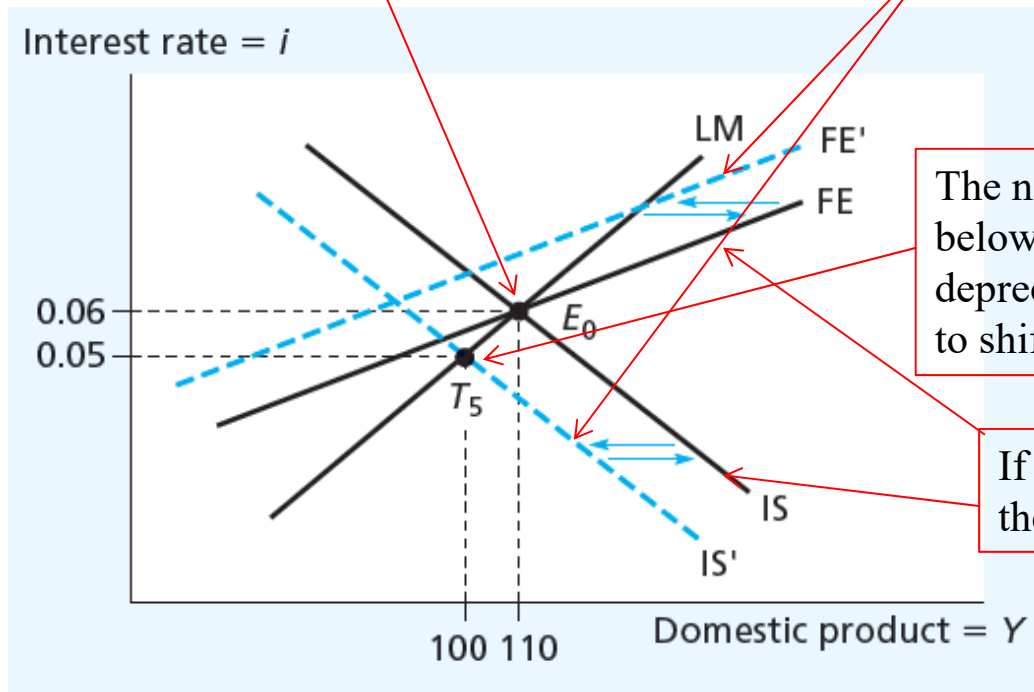
International Trade Shocks

- International trade shocks cause the value of the country's current account balance to change. Examples:
 - A decline in foreign demand for our exports
 - An increase in our taste for imported goods
 - An increase in price of our important imports such as oil.

An Adverse International Trade Shock

Economy begins at E_0 .

The shock causes FE and IS to shift left.



The new intersection at T_5 is below the new FE' . Currency depreciates, causing FE and IS to shift back.

If nothing else changes, then the curves shift back to E_0 .

Source: Pugel (2012), p. 624

Phijaisanit (2019)

International Trade Shocks

- With floating exchange rates, the effects of international trade shocks on internal balance are mitigated by the effects of the *resulting change in the exchange rate*.
- An adverse trade shock tends to depreciate the country's currency, and this reverses some of the effects of the shock.

INTERNAL BALANCE AND POLICY RESPONSES

International imbalance and policy responses

- With floating exchange rates, a change in the exchange rate takes care of achieving external balance following a shock.
 - Example: If the country's overall BOP goes into deficit, then the currency depreciates, reversing the tendency toward deficit. If BOPs tend to surplus, then appreciation reverses the tendency to surplus.

International imbalance and policy responses

- A floating exchange rate does NOT ensure that the country achieves internal balance, but changes in the floating rate do affect the country's internal balance.
 - Depreciation tends to expand the economy.
 - Example: If the country begins with excessive unemployment before exchange rate changes, then expansionary thrust of depreciation is welcome, reducing internal imbalance.
 - Appreciation tends to contract the country's economy.
 - Example: If the economy begins with inflationary pressure, then this may be welcome. However, if the economy is facing recession and excessive unemployment, then the exchange rate change adds to internal balance.
- Monetary or fiscal policy can be used to address any internal imbalances.
 - Monetary policy is powerful with floating exchange rates, so relatively small change may be enough to reestablish internal balance.
 - Fiscal policy may be difficult to predict in the case of floating exchange rates.

INTERNATIONAL MACROECONOMIC POLICY COORDINATION

Uncoordinated policies

- The policies adopted by one country have effects on the other countries.
 - Income repercussions as changes in incomes alter demands for imports
 - Changes in international price competitiveness as floating exchange rates change.

One Danger

- Policy change that benefits a country may harm other countries.
- Example: Expansionary monetary policy causes the other country's currency to appreciate. Other country will lose price competitiveness. – *Beggar-thy-neighbor policy.*

Another Danger

- Each country acting individually may fail to make a policy change whose benefits go mostly to other countries.
- If a number of countries could coordinate so that they all would reap substantial benefits.
- Example: Global stock market crash in Oct 1987
 - Global financial system needed additional liquidity to counteract decline in banking and financial activity.
 - If any one central bank added liquidity, the rest of the global system would benefit, so they may individually be reluctant.
 - Fortunately, several central banks coordinated their actions to inject liquidity and the financial markets stabilized.

International macroeconomic policy coordination

- International macroeconomic policy coordination is the joint determination of several countries' macroeconomic policies to improve joint performance.
 - Example, 1987 Louvre Accord among the G-7 countries.
- G-8 countries include Canada, France, Germany, Great Britain, Italy, Japan, Russia and US. These countries first coordinated to intervene in the exchange rate markets with the Plaza Accord in 1985.