

CHAPTER 32

A Macroeconomic Theory of the Open Economy

PRINCIPLES OF
Economics
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Premium PowerPoint Slides
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**In this chapter,
look for the answers to these questions:**

- § In an open economy, what determines the real interest rate? The real exchange rate?
- § How are the markets for loanable funds and foreign-currency exchange connected?
- § How do government budget deficits affect the exchange rate and trade balance?
- § How do other policies or events affect the interest rate, exchange rate, and trade balance?

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Introduction

- § The previous chapter explained the basic concepts and vocabulary of the open economy: net exports (NX), net capital outflow (NCO), and exchange rates.
- § This chapter ties these concepts together into a theory of the open economy.
- § We will use this theory to see how govt policies and various events affect the trade balance, exchange rate, and capital flows.
- § We start with the loanable funds market...

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The Market for Loanable Funds

§ An identity from the preceding chapter:

$$S = I + NCO$$

Saving Domestic investment Net capital outflow

§ Supply of loanable funds = saving.

§ A dollar of saving can be used to finance

§

§

§ So, demand for loanable funds = $I + NCO$

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The Market for Loanable Funds

§ Recall:

§ S depends positively on the real interest rate, r .

§ I depends negatively on r .

§ What about NCO ?

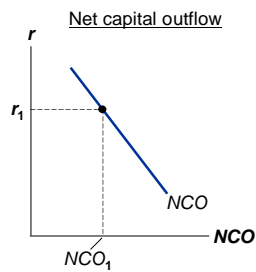
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How NCO Depends on the Real Interest Rate

The real interest rate, r , is the real return on domestic assets.

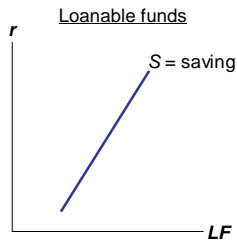
A fall in r



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The Loanable Funds Market Diagram



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ACTIVE LEARNING 1

Budget deficits and capital flows

- § Suppose the government runs a budget deficit (previously, the budget was balanced).
- § Use the appropriate diagrams to determine the effects on the real interest rate and net capital outflow.

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ACTIVE LEARNING 1

Answers

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The Market for Foreign-Currency Exchange

§ Another identity from the preceding chapter:

$$NCO = NX$$

Net capital outflow Net exports

§ In the market for foreign-currency exchange,

The Market for Foreign-Currency Exchange

§ Recall:

The U.S. real exchange rate (E) measures the quantity of foreign goods & services that trade for one unit of U.S. goods & services.

§ E is the real value of a dollar in the market for foreign-currency exchange.

The Market for Foreign-Currency Exchange

An increase in E makes U.S. goods more expensive to foreigners,



FYI: Disentangling Supply and Demand

When a U.S. resident buys imported goods, does the transaction affect supply or demand in the foreign exchange market? Two views:

1. The person needs to sell her dollars to obtain the foreign currency she needs to buy the imports.
2. The increase in imports reduces NX , which we think of as the demand for dollars. (So, NX is really the net demand for dollars.)

Both views are equivalent. For our purposes, it's more convenient to use the second.

FYI: Disentangling Supply and Demand

When a foreigner buys a U.S. asset, does the transaction affect supply or demand in the foreign exchange market? Two views:

1. The foreigner needs dollars in order to purchase the U.S. asset.
2. The transaction reduces NCO , which we think of as the supply of dollars. (So, NCO is really the net supply of dollars.)

Again, both views are equivalent. We will use the second.

ACTIVE LEARNING 2 The budget deficit, exchange rate, and NX

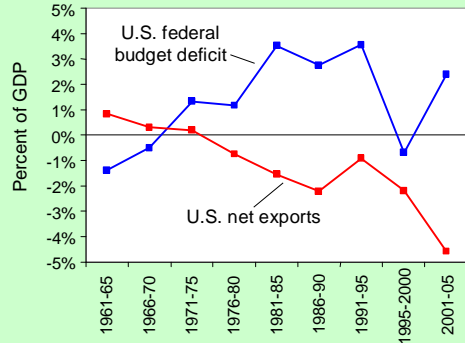
§ Initially, the government budget is balanced and trade is balanced ($NX = 0$).

§ Suppose the government runs a budget deficit. As we saw earlier, r rises and NCO falls.

§ How does the budget deficit affect the U.S. real exchange rate? The balance of trade?

ACTIVE LEARNING 2
Answers

The "Twin Deficits"



SUMMARY: The Effects of a Budget Deficit

- § National saving falls
- § The real interest rate rises
- §

SUMMARY: The Effects of a Budget Deficit

§ One other effect:

§ Due to many years of budget and trade deficits,

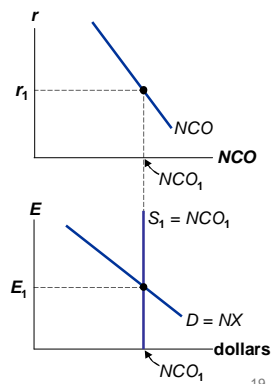
International investment position of the U.S. 31 December 2007	
Value of U.S.-owned foreign assets	\$17.6 trillion
Value of foreign-owned U.S. assets	\$20.1 trillion
U.S.' net debt to the rest of the world	\$2.5 trillion

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The Connection Between Interest Rates and Exchange Rates

Anything that increases r



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ACTIVE LEARNING 3 Investment incentives

§ Suppose the government provides new tax incentives to encourage investment.

§ Use the appropriate diagrams to determine how this policy would affect:

- § the real interest rate
- § net capital outflow
- § the real exchange rate
- § net exports

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ACTIVE LEARNING 3
Answers

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Budget Deficit vs. Investment Incentives

§ A tax incentive for investment has similar effects as a budget deficit:

§ But one important difference:

- § Investment tax incentive
- § Budget deficit

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Trade Policy

§ **Trade policy:**

§ Examples:

- § **Tariff**
- § **Import quota**
- § **“Voluntary export restrictions”**

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Trade Policy

§ Common reasons for policies to restrict imports:

§ Do such trade policies accomplish these goals?

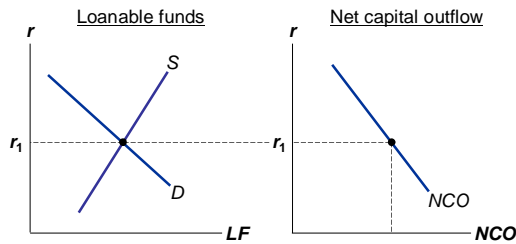
§ Let's use our model to analyze the effects of an import quota on cars from Japan designed to save jobs in the U.S. auto industry.

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Analysis of a Quota on Cars from Japan

An import quota

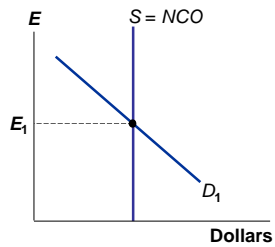


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Analysis of a Quota on Cars from Japan

Market for foreign-currency exchange



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Analysis of a Quota on Cars from Japan

What happens to NX ?

§ If E could remain at E_1 , NX would rise, and the quantity of dollars demanded would rise.

§ But the import quota does not affect NCO , so

§ Since NX must equal NCO ,

§ Hence, the policy of restricting imports

Analysis of a Quota on Cars from Japan

Does the policy save jobs?

The quota reduces imports of Japanese autos.

But

CASE STUDY: Capital Flows from China

§ In recent years, China has accumulated U.S. assets to reduce its exchange rate and boost its exports.

§ Results in U.S.:

§

§

§

§ Some U.S. politicians want China to stop, argue for restricting trade with China to protect some U.S. industries.

§ Yet, U.S. consumers benefit, and the net effect of China's currency intervention is probably small.

Political Instability and Capital Flight

§

- § People worried about the safety of Mexican assets they owned.
- § People sold many of these assets, pulled their capital out of Mexico.

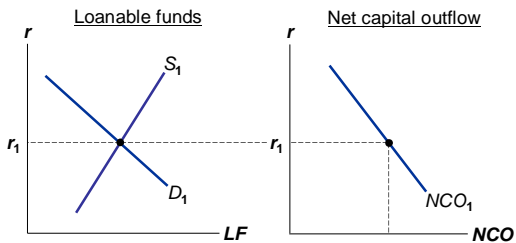
§ **Capital flight:**

§ We analyze this using our model, but from the perspective of Mexico, not the U.S.

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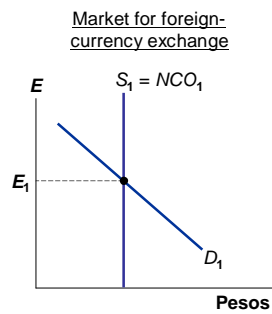
Capital Flight from Mexico



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Capital Flight from Mexico



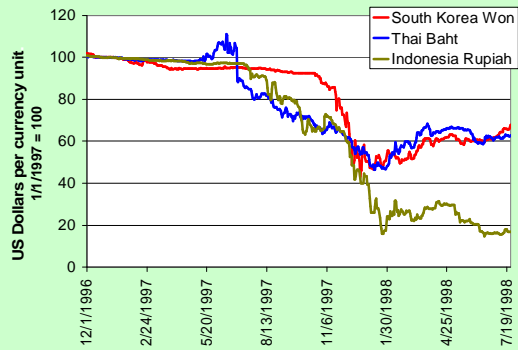
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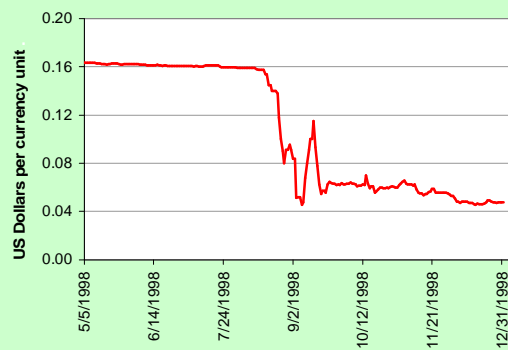
Examples of Capital Flight: Mexico, 1994



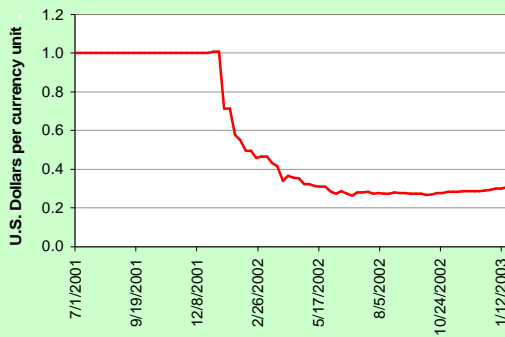
Examples of Capital Flight: S.E. Asia, 1997



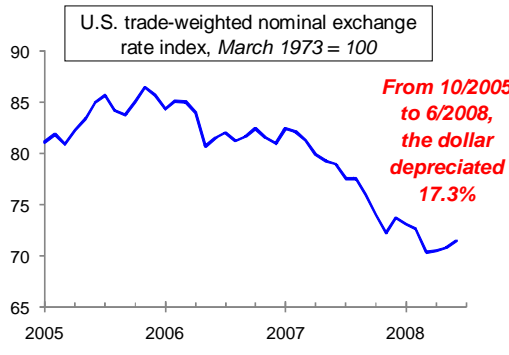
Examples of Capital Flight: Russia, 1998



Examples of Capital Flight: Argentina, 2002



CASE STUDY: The Falling Dollar



CASE STUDY: The Falling Dollar

Two likely causes:

§

§ Reduced confidence in U.S. mortgage-backed securities

§

§

§ From 7/2006 to 7/2008, Federal Funds target rate reduced from 5.25% to 2.00% to stimulate the sluggish U.S. economy.

§

CONCLUSION

- § The U.S. economy is becoming increasingly open:
- § Trade in g&s is rising relative to GDP.
- § Increasingly, people hold international assets in their portfolios and firms finance investment with foreign capital.

CONCLUSION

- § Yet, we should be careful not to blame our problems on the international economy.

- § When politicians and commentators discuss international trade and finance, the lessons of this and the preceding chapter can help separate myth from reality.
