

# Chapter 21

## The Global Capital Market: Performance and Policy Problems

### ■ Chapter Organization

The International Capital Market and the Gains from Trade

Three Types of Gains from Trade

Risk Aversion

Portfolio Diversification as a Motive for International Asset Trade

The Menu of International Assets: Debt versus Equity

International Banking and the International Capital Market

The Structure of the International Capital Market

Growth of the International Capital Market

Offshore Banking and Offshore Currency Trading

The Growth of Eurocurrency Trading

The Importance of Regulatory Asymmetries

Regulating International Banking

The Problem of Bank Failures

Difficulties in Regulating International Banking

International Regulatory Cooperation

*Case Study: When the World Almost Ended: Two Episodes of Market Turmoil*

How Well Has the International Capital Market Performed?

The Extent of International Portfolio Development

The Extent of Intertemporal Trade

Onshore-Offshore Interest Differentials

The Efficiency of the Foreign Exchange Market

Summary

## ■ Key Themes

The international capital market, involving Eurocurrencies, offshore bond and equity trading, and International Banking Facilities, may seem at first as one of the more esoteric and enigmatic topics covered in this course. Much of the apparent mystery of the international capital market is (hopefully) dispelled in this chapter. This chapter also demonstrates that issues in this area are directly related to other issues already discussed in the course including macroeconomic stability, the role of government intervention, and the gains from trade.

Using the same logic that we applied to show the gains from trade in goods or the gains from intertemporal trade, we can see how the international exchanges of assets with different risk characteristics can make both parties to a transaction better off. International portfolio diversification allows people to reduce the variability of their wealth. When people are risk-averse, this diversification improves welfare. An important function of the international capital market is to facilitate such welfare-enhancing exchanges of both debt instruments, such as bonds, and equity instruments, such as stocks.

In discussing the growth of the international capital market, the chapter introduces an important concept, the policy trilemma. This is the notion that governments cannot maintain more than two of the following three policy stances: fixed exchange rates, domestically oriented monetary policy, and international capital mobility. This is an important theme hinted at in many parts of the book. The capital market has grown in part because countries have sacrificed either fixed rates or monetary sovereignty to allow more capital mobility.

Offshore banking activity is at the center of the international capital market. Central to offshore banking are Eurocurrencies (not to be confused with euros), which are bank deposits in one country that are denominated in terms of another country's currency. Relatively lax regulation of Eurocurrency deposits compared with onshore deposits allows banks to pay relatively high returns on Eurocurrency deposits. This has fostered the rapid growth of offshore banking. Growth has also been spurred, however, by political factors, such as the reluctance of Arab OPEC members to place surplus funds in American banks after the first oil shock.

The text also introduces issues of regulating capital markets. Central to this task is the notion of how banks fail, and what can be done to prevent bank failures. Deposit insurance, regulations, and lenders of last resort can all help prevent the lack of confidence in a banking system that can generate a run on the banking assets. International banking presents additional challenges as rules are not uniform, responsibility can be unclear and enforcement is difficult.

Industrialized countries are involved in an effort to coordinate their bank supervision practices to enhance the stability of the global financial system. Common supervisory standards set by the Basel Committee were developed. Potential problems remain, however, especially regarding the clarification of the division of lender-of-last-resort responsibilities among countries and the increasingly large role of nonbank financial firms which makes it harder for regulators to oversee global financial flows. The text highlights these regulatory difficulties using a case study of the near collapse of the hedge fund LTCM and the problems in the subprime mortgage market in the United States. This case study is also used to illustrate the difficult balance that regulators face between creating moral hazard and maintaining financial stability.

The evidence on the functioning of the international capital market is mixed. International portfolio diversification appears to be limited in reality. Studies in the mid-1980s cited the lack of intertemporal trade, as evidenced by small current account imbalances, as evidence of the failure of the international capital market. The large external imbalances since then, however, have cast doubt on the initial conclusions. Studies of the relationship between onshore and offshore interest rates on the same currency also tend to support the view of well-integrated international capital markets. The developing country debt crisis represents a dramatic failure of the world capital market to funnel world savings to potentially productive uses, a topic taken up again in the next chapter.

The recent performance of one component of the international capital market, the foreign exchange market, has been the focus of public debate. Government intervention might be uncalled for if exchange-rate volatility reflects market fundamentals, but may be justified if the international capital market is an inefficient, speculative market drifting without the anchor of underlying fundamentals. The performance of the foreign exchange markets has been studied through tests of interest parity, tests based on forecast errors, attempts to model risk premiums, and tests for excess volatility. Research in this area presents mixed results that are difficult to interpret, and there is still much to be done.

## ■ Key Terms

Define the following key terms:

1. Risk Aversion \_\_\_\_\_  
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2. Portfolio Diversification \_\_\_\_\_  
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3. Eurocurrencies \_\_\_\_\_  
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4. Lender of Last Resort \_\_\_\_\_  
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5. Offshore Banking \_\_\_\_\_  
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6. Debt Instrument \_\_\_\_\_  
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7. Equity Instrument \_\_\_\_\_  
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■ **Review Questions**

1. Suppose that you have three assets available for purchase in early May, and each asset pays a return at the end of the summer. The return on two of the three assets depend upon whether it is a rainy or a dry summer. The return on the third asset does not depend upon the weather. There is a 50 percent chance that the summer will be rainy and a 50 percent chance that it will be dry.

Asset	Payment If It Is	
	A Rainy Summer	A Dry Summer
A. Share in an Umbrella Store	\$8	\$4
B. Share in a Sunglasses Store	\$4	\$6
C. Share in a Steel Mill	\$5	\$5

Suppose that your utility,  $U$ , is equal to the expected return,  $ER$ , minus some number times the volatility of returns;

$$U = (ER) - B \times (\text{Volatility of Returns})$$

where the expected return,  $ER$  is the average of the two possible outcomes, and the volatility of returns ( $VR$ ) is measured as follows:

$$VR = 0.5 \times [(\text{return if rainy}) - (ER)]^2 + [(\text{return if dry}) - (ER)]^2.$$

If  $B = 0$  then you are risk-neutral. If you are risk-averse then  $B$  equals some positive number (say  $B = 1$  if you are risk-averse).

- a. Complete the following table:

Asset	Expected Return	Volatility of Return	Risk-Neutral	Risk-Averse
			Utility ( $B = 0$ )	Utility ( $B = 1$ )
A. Share in an Umbrella Store	_____	_____	_____	_____
B. Share in a Sunglasses Store	_____	_____	_____	_____
C. Share in a Steel Mill	_____	_____	_____	_____

- b. Suppose all three assets cost the same. If you could purchase only one type of asset, which one would it be if you were risk-neutral? Which asset would you pick if you were risk-averse?

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- c. Suppose now that you can either pick either one type of asset, or one of the following three combinations:
- (i) Half of your assets are in steel mills and half are in umbrella stores.
  - (ii) Half in steel mills and half in sunglasses stores.
  - (iii) Half in umbrella stores and half in sunglasses stores.

Complete the following table;

Asset Combination	Expected Return	Volatility of Return	Risk-Neutral Utility ( $B = 0$ )	Risk-Averse Utility ( $B = 1$ )
i	_____	_____	_____	_____
ii	_____	_____	_____	_____
iii	_____	_____	_____	_____

- d. Which asset combination provides you with the highest utility if you are risk-neutral? Which if you are risk-averse?

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2. Both deposit insurance and lenders of last resort have been said to increase the need for banking regulation, but for different reasons. What about each requires more regulation?

- a. Lender of Last Resort.

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- b. Deposit Insurance.

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3. Previous chapters have discussed the costs of being unable to aim exchange rate and or monetary policy towards domestic goals. If a country decides to maintain flexibility in these areas and institute capital controls instead, what are the costs?

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4. Why do some people claim the bailout of Mexico in 1994 is responsible for the financial crisis in East Asia in 1997? (*Hint*: Think of the LTCM case study.)

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5. One way researchers have tested for efficiency in the foreign exchange market has been to use statistical techniques to find the values of  $a$  and  $b$  in the following equation;

$$((E_{t+1} - E_t)/E_t) = a + b ((F_{t+1} - E_t)/E_t) + u_t$$

where  $E_{t+1}$  is the exchange rate in period  $t + 1$ ,  $E_t$  is the exchange rate in period  $t$ ,  $F_{t+1}$  is the forward exchange rate in period  $t$  for delivery of foreign exchange in period  $t + 1$ ,  $a$  and  $b$  are numbers that will be estimated through statistical techniques, and  $u_t$  is a random error term since the equation does not fit the data exactly.

- a. Suppose that the forward exchange rate accurately measures people's expectations about the actual future value of the exchange rate and that, on average, people guess this value correctly. If foreign exchange markets are efficient, what values will  $a$  and  $b$  have?

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- b. If we expect to find a constant risk premium, what values would you expect to find for  $a$  and  $b$ ?

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- c. Much of the empirical research on this topic has found that  $b$  is less than one. What does this imply for the risk premium if the forward exchange rate is a good predictor of the actual future value of the spot rate?

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- d. An alternative explanation for the finding of a value for  $b$  that is less than one is that people's expectations of the future value of the exchange rate are not well-represented by the forward rate. If  $b$  is less than one, do people think that the exchange rate is more volatile or less volatile than it actually is?
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## ■ Answers to Odd-Numbered Textbook Problems

1. The better diversified portfolio is the one that contains stock in the dental company and the dairy company. Good years for the candy company may be correlated with good years for the dental company, and conversely. The return from a portfolio consisting of these stocks would be more volatile than the return from a portfolio consisting of the dental and dairy company stocks.
3. The main reason is political risk—as discussed in the appendix to Chapter 13.
5. This is again an open-ended question. The main criticism of Swoboda's thesis is that foreign central banks held dollars in interest-bearing form, so the United States extracted seigniorage from issuing reserves only to the extent that the interest it paid was less than the rate it would have paid were the dollar not a reserve currency. The high liquidity of the dollar make this plausible, but it is impossible to say whether the amount of seigniorage the United States extracted was economically significant.
7. Banks are more highly regulated and have more stringent reporting requirements than other financial institutions. Securitization increases the role played by nonbank financial institutions over which regulators have less control. Regulators also do less monitoring of nonbank financial institutions. As the role of nonbank financial institutions increases with securitization, the proportion of the financial market that bank regulators oversee declines as does the ability of these regulators to keep track of risks to the financial system.
9. No, real interest rate equality is not an accurate barometer of international financial integration. As we saw in Chapter 15, there is a real interest parity condition which is that  $r = r^* + \% \Delta^e q$ . Where  $r$  is the home real interest rate,  $r^*$  is the foreign, and  $\% \Delta^e q$  is the expected percentage change in the real exchange rate. If there are real differences between countries' productivity or trends in world demand which lead to expected changes in the real exchange rate over time, we may see different real interest rates despite perfectly functioning integrated financial markets.
11. U.S. gross foreign liabilities rise as the Brazilian has a claim on the fund and U.S. foreign assets rise as the fund buys more Brazilian equity. Likewise, Brazil's foreign assets and liabilities rise. But, no U.S. citizen has altered its foreign holdings and the Brazilian has bought Brazilian stocks. It is true that the market is more globalized, but individual agents are no more diversified.

