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978-0-521-63317-8 - Global Capital Markets: Integration, Crisis, and Growth

Maurice Obstfeld and Alan M. Taylor

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Part one

Preamble

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This first part of the book introduces the main argument. An overview of the functions of an international capital market, the problems it raises, and the historical development of capital mobility through the nineteenth century sets the scene for our study. We then move to a summary of developments in the twentieth century and look ahead to the economic and institutional history that follows in the next part of the book.

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Global Capital Markets: Overview and Origins

At the turn of the twenty-first century, the merits of international financial integration are under more forceful attack than at any time since the 1940s. Even mainstream academic proponents of free multilateral commodity trade, such as Jagdish Bhagwati, argue that the risks of global financial integration outweigh the benefits. Critics from the left such as Lord Eatwell, more wary even of the case for free trade on current account, claim that since the 1960s “free international capital flows” have been “associated with a deterioration in economic efficiency (as measured by growth and unemployment).”¹

Such a resurgence of concerns about international financial integration is understandable in light of the multiple crises seen since the early 1990s in Western Europe, Latin America, East Asia, Russia, and elsewhere. Supporters of free trade in tangible goods have long recognized that its net benefits to countries typically are distributed unevenly, creating domestic winners and losers. Recent international financial crises, however, have submerged entire economies and threatened their trading partners, inflicting losses all around. International financial transactions rely inherently on the expectation that counterparties will fulfill future contractual commitments; they therefore place confidence and possibly volatile expectations at center stage.² These same factors are present in

¹ See Bhagwati (1998) and Eatwell (1997, 2). For alternative skeptical perspectives on the prospects for different facets of international economic integration, see Rodrik (2000) and Stiglitz (2002). More recently, the economically liberal *Economist* newspaper has endorsed the use of capital controls in some circumstances (see “A place for capital controls,” May 3, 2003). The position of the International Monetary Fund (IMF) has also moved in this direction (see *IMF Survey*, “Opening up to capital flows? Be prepared before plunging in,” May 19, 2003). Prior to the financial turbulence of the late 1990s, which we discuss further below, the IMF had considered amending its Articles of Agreement so as to promote the further easing of capital-account restrictions among its members. See Fischer (1998).

² The vast majority of commodity trades also involve an element of intertemporal exchange, via deferred or advance payment for goods, but the unwinding of the resulting cross-border obligations tends to be more predictable than for assets, and transaction volumes are smaller.

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purely intranational financial trades, of course, but the relatively higher costs of trading goods and assets internationally make the adjustments to market shocks more costly. Furthermore, problems of oversight, adjudication, and enforcement all are orders of magnitude more difficult among sovereign nations with distinct national currencies than within a single national jurisdiction. And because there exists no natural world lender of last resort, international crises are intrinsically harder to head off and contain than are purely domestic ones. Factors other than the threat of crises, such as the power of capital markets to constrain domestically oriented economic policies, also have sparked concerns over greater financial openness.

Yet we must be careful not to allow the potential risks to obscure the potential benefits. In this introductory chapter we will outline the efficiency gains that international financial integration offers in theory; to a great extent these correspond to those attainable through financial markets even within a closed economy, although the scope is global. We will then turn to the practical problems that arise in trying to realize the gains from asset trading at the level of the global economy. To place theory in a historical context, we conclude the chapter with a brief survey of the evolution of modern international capital markets starting in the late middle ages.

Our goal in this chapter is to set out the core themes of the book. The ebb and flow of international capital since the nineteenth century illustrates recurring difficulties, as well as the alternative perspectives from which policymakers have tried to confront them. Subsequent chapters are devoted to documenting these vicissitudes quantitatively and explaining them. We believe that economic theory and economic history together can provide useful insights into events of the past and deliver relevant lessons for today.

1.1 Theoretical benefits

Economic theory leaves no doubt about the potential advantages of global financial trading. International financial markets allow residents of different countries to pool various risks, achieving more effective insurance than purely domestic arrangements would allow. Furthermore, a country suffering a temporary recession or natural disaster can borrow abroad. Developing countries with little capital can borrow to finance investment, thereby promoting economic growth without sharp increases in saving rates. At the global level, the international capital market channels world savings to their most productive uses, irrespective of location. The other main potential role of international capital markets is to discipline policymakers who might be tempted to exploit

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a captive domestic capital market. Unsound policies – for example, excessive government borrowing or inadequate bank regulation – would spark speculative capital outflows and higher domestic interest rates under conditions of financial openness. In theory, at least, a government's fear of these effects should make rash behavior less attractive.

1.1.1 International risk sharing

A basic function of a world capital market is to allow countries with imperfectly correlated income risks to trade them, thereby reducing the global cross-sectional variability in per capita consumption levels. In a world of two economies, for example, a pure terms-of-trade change redistributes world income away from the country whose exports cheapen and, in equal measure, toward its trading partner. If the countries exchange equity shares in each other's industries, however, the redistributive effect of terms-of-trade fluctuations is dampened. Both countries benefit from the exchange because both can enjoy consumption streams that are less variable after trade. This pooling of risks can be accomplished through a diversity of financial instruments: stock shares, foreign direct investments, insurance contracts, or even nominally non-contingent securities whose real values are subject to exchange-rate risk. In addition, many derivative securities based on some of these underlying assets are also traded internationally.

As a simple example that conveys the intuition behind the risk-pooling function of a global capital market, imagine a one-period world endowment economy made up of N countries, each populated by a representative individual. Every country or individual i has a random output Y_i of a single perishable world consumption good; for all i , Y_i has mean μ and variance σ^2 , and national outputs are uncorrelated. If there is no trade in assets, the representative individual from country i has a consumption level of $C_i = Y_i$, and thus a consumption variance of σ^2 . In contrast, suppose that there is an international asset market in which people from different countries can trade claims to national outputs at the start of the period, prior to the realization of the random national outputs. Then the resident of country i , say, will sell off a fraction $(N-1)/N$ of his claim on the domestic output process to residents of other countries, while using the proceeds to purchase a fractional claim $1/N$ of Y_j , for all $j \neq i$. This leaves everyone in the world holding the same global mutual fund with payoff $\sum_{i=1}^N Y_i/N$. This payoff, in turn, equals C_i for all countries i , but now the variance of this consumption level for each individual or country is only σ^2/N , far below the variance σ^2 of autarky consumption.

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For analytical purposes, economists often think of uncertainty as representable by a set of possible “states of the world” on every date, one of which will be randomly chosen by Nature. In that setting, the most basic type of contingent contract is an Arrow-Debreu security that pays off 1 unit of consumption in a specified state of the world, but 0 in all other states. Asset markets are said to be “complete” when a full set of such Arrow-Debreu contracts, one for each possible state on every date, is traded. Under a hypothetical complete-markets regime with free international asset trade, agents the world over can pool risks to the utmost (technologically feasible) extent. The relative prices of Arrow-Debreu securities are common to all countries, and everyone trades so as to equate his or her marginal rate of substitution between consumption in different states to a common relative-price ratio. This process fully exhausts all potential gains that existed prior to trade. Figure 1.1 displays an efficient, post-trade allocation in an economy with two agents (think of them as countries) and two goods, the “goods” being consumption in the two states of nature. In Figure 1.1, the length of the Edgeworth box’s horizontal edge measures the total world output available in state 1, that of the vertical edge total state 2 output. We have drawn the box to have horizontal and vertical edges of equal length, meaning that there is no *systematic* uncertainty about world output, only *idiosyncratic* uncertainty about national output shares. Thus, the “contract curve” of Pareto optimal allocations is the linear diagonal connecting the domestic and foreign origins O^H and O^F . Given the absence of systematic risk, the equilibrium price of the two Arrow-Debreu assets is unity and agents trade at that price from an initial endowment point such as E to the equilibrium consumption allocation at C.³

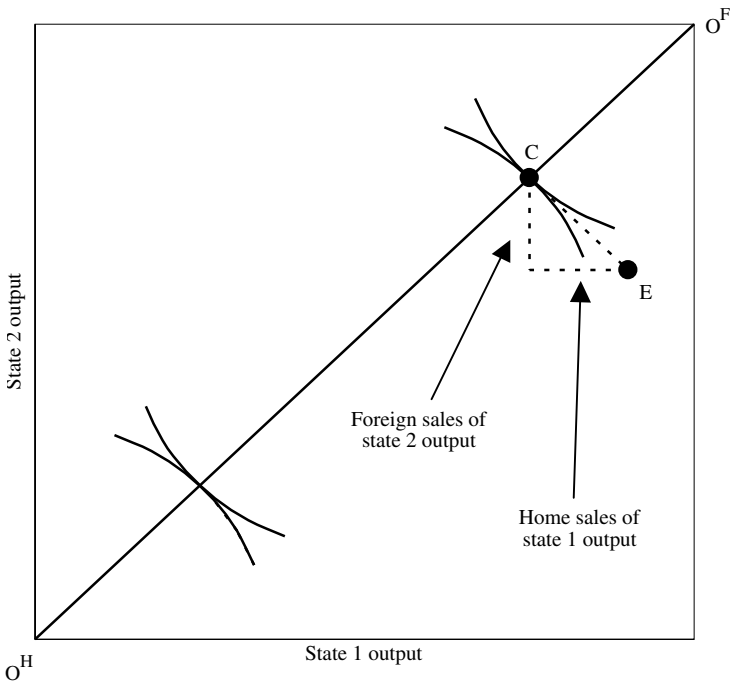
The effect of global asset markets on *production* decisions may offer even greater gains than their function in allocating exogenous consumption risks more efficiently. As Arrow observes, “the mere trading of risks, taken as given, is only part of the story and in many respects the less interesting part. The possibility of shifting risks, of insurance in the broadest sense, permits individuals to engage in risky activities that they would not otherwise undertake.”⁴ In one economic model, the ability to lay off risks in a global market induces investors to shift their capital toward riskier but, on average, more profitable activities. The result is a rise in the average growth rate of world output and, possibly, high welfare gains.⁵

³ See Obstfeld and Rogoff (1996, chap. 5).

⁴ See Arrow (1971, 137).

⁵ Obstfeld (1994a).

Fig. 1.1. Asset trade in an economy with two agents and two goods



Notes: As shown in this Edgeworth box, identical agents home (H) and foreign (F) have different endowments of the state-contingent output in a two-state world. They can trade Arrow-Debreu state-contingent output claims on the two goods shown in the diagram, consumption in state 1 and consumption in state 2. Agents' allocations are measured from their respective origins (home up and right from the lower left, foreign down and left from the upper right). Trade allows them to shift allocations from endowment point E to consumption point C via the trade triangle (broken line); it thus raises the utility of both agents (iso-utility lines are solid curves). We have illustrated the case of no systematic (or aggregate) uncertainty: the box's edges are of equal length.

1.1.2 Intertemporal trade

The risk-sharing function of capital markets is to improve the allocation of resources across different random states of the world. That function, conceived in the abstract, need have no dynamic dimension; but capital markets also reallocate resources over time in ways that can raise efficiency. In principle, this second function of intertemporal reallocation can be understood without reference to uncertainty. So we temporarily abstract from it and imagine a world of perfect foresight. In such a world, an international capital market allows countries to smooth out over time the dynamic consumption effects of

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predictable income fluctuations. A country whose output is temporarily low, for example, can borrow to support consumption, repaying the loans later after the anticipated output increase. The borrowing opportunity allows a less variable consumption path than would be available in autarky.

As in the case of risk sharing, purely intertemporal trading opportunities will also affect the production activities that agents undertake, contributing further to efficiency in the absence of distortions. A country that has rich investment opportunities, but that generates little saving of its own, can tap the international capital market to exploit its investment potential without massive short-run consumption cutbacks. Conversely, countries with abundant savings but more limited investment prospects at home can earn higher returns to wealth than they would domestically. Both borrowers and lenders gain as capital flows to its most productive uses worldwide. In particular, developing countries can invest more than they could if closed, while simultaneously enjoying higher consumption and wages. The process of economic convergence is hastened by capital flows from rich to poor countries.

Under conditions of uncertainty, even trades of noncontingent assets (that is, consumption-indexed loans) can help countries mitigate the effects of the risks that they face. Countries that suffer random but temporary income shortfalls, such as crop failures, can blunt their impacts by borrowing abroad until better fortune returns. The capacity of loans to substitute partially for an absence of risk-sharing markets simply reflects the fact that the economy faces ongoing uncertainty. However, the degree of risk shifting that loan markets permit is generally far inferior to what truly complete asset markets would allow. In the complete-markets case, countries would lay off all idiosyncratic output risk in world insurance markets, and an idiosyncratic shock to national *output* therefore would not affect national *income* at all (and would induce no international borrowing or lending response). Of course, international trades involving assets with random payoffs, such as foreign direct investments, can also serve to exploit the gains from intertemporal trade. In reality, the scope of world asset trade is intermediate between the cases of noncontingent loans and complete markets, though still probably closer to the former, as we shall see.

1.1.3 Discipline

An open capital market can impose discipline upon governments that might otherwise pursue overexpansionary fiscal or monetary policies or tolerate lax financial practices by domestic financial intermediaries. The prospect of rising interest rates and capital flight may discourage large public-sector deficits; the

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sharp reaction of exchange rates to investor expectations and interest rates may restrain inflationary monetary moves. Tirole (2002) puts discipline effects at the heart of his framework for analyzing proposed international financial reforms.

There is considerable evidence that during the period up to 1914, countries that adhered to the international gold standard were rewarded by lower costs of borrowing from abroad. Countries with lower public debts were similarly rewarded during the years of the restored interwar gold standard, 1925–31. In more recent data, developing countries' external borrowing spreads reflect, at least partially, certain macro fundamentals.⁶ Markets seem to try, as well, to divine the economic implications of national foreign policy moves. In 1998, for example, Moody's and Standard and Poor's downgraded India as an investment destination in reaction to the country's controversial announcement of nuclear tests. As Thomas L. Friedman wrote in the *New York Times*, "This is far more important than any U.S. sanctions, because it will raise the cost of borrowing for every Indian company and state government seeking funds from abroad."⁷

Unfortunately, market discipline often seems insufficient to deter misbehavior. Capital markets may tolerate inconsistent policies too long and then abruptly reverse course, inflicting punishments far harsher than the underlying policy "crimes" would seem to warrant. And in some cases, capital-market openness has constrained the official pursuit of arguably desirable economic goals. These problems and others are critical to understanding both perception and reality in the historical evolution of the modern global capital market.

1.2 Problems of supranational capital markets in practice

In a world of multiple sovereign states, an integrated world capital market necessarily straddles several distinct political jurisdictions that may differ in economic infrastructure, legal institutions, and commercial culture, as well as in the trade-generating factors (endowments, technologies, preferences) stressed in textbooks. The existence of political entities smaller than the market itself can limit the market's effectiveness and even render market linkages counterproductive. Any overall assessment of the net gains conferred by the global capital market must therefore account for the market's extent over a number of sovereign states.⁸

⁶ We discuss the evidence on the pre-1914 and interwar gold standards in Chapter 6 of this book. On more recent developing-country borrowing, see, for example, Edwards (1986). See Haque et al. (1996) for an analysis of credit ratings.

⁷ See Friedman, "What goes around..." *New York Times*, June 23, 1998, A21.

⁸ Considerations of space allow only brief mention of a topic as important as it is vast. For an authoritative recent survey, see Bryant (2003).