Government Intervention in Globalization

Regulation, Trade and Devaluation Wars

Carlos M. Peláez and
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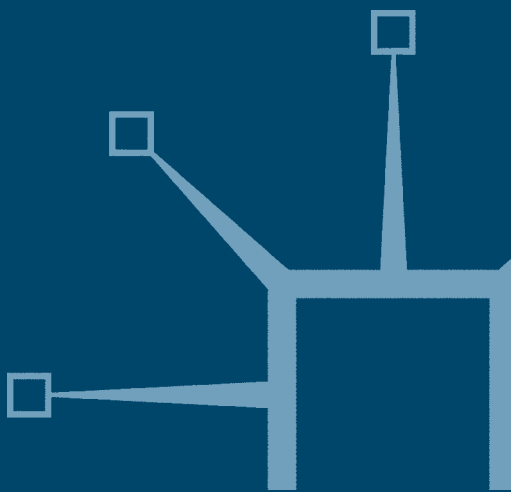


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Also by Carlos M. Peláez and Carlos A. Peláez

INTERNATIONAL FINANCIAL ARCHITECTURE: G7, IMF, BIS, Debtors and Creditors

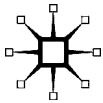
THE GLOBAL RECESSION RISK: Dollar Devaluation and the World Economy

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Carlos M. Peláez
and
Carlos A. Peláez

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To Magnolia and Penelope

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List of Abbreviations

A	Annuity
AIM	Alternative investment market
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of South East Asian Nations
AUM	Assets under management
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BOE	Bank of England
BOJ	Bank of Japan
BRIC	Brazil, Russia, India and China
CA	Current account
CAD	Current account deficit
CCMR	Committee on Capital Markets Regulation
CDS	Credit default swap
CDO	Collateralized debt obligation
ECB	European Central Bank
ECC	European Economic Community
EMU	European Monetary Union
EUR	Euro
FDI	Foreign direct investment
FRB	Federal Reserve Bank
FRBO	Board of Governors of the Federal Reserve System
FRS	Federal Reserve System
FSA	Financial Services Authority
FSAP	Financial Sector Assessment Program
FSFDI	Financial sector FDI
FTA	Free trade area
FX	Foreign exchange
GDP	Gross domestic product
GHG	Greenhouse gas
GNI	Gross national income
G7	Group of Seven
G10	Group of Ten
HIPC	Highly indebted poor countries
IBRD	International Bank for Reconstruction and Development

IDA	International Development Association
IEI	International economic integration
IFA	International financial architecture
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IPL	International poverty line
IPO	Initial public offering
IRB	Internal ratings based
JPY	Japanese yen
LBO	Leveraged buyouts
LDC	Less developed countries
LSE	London Stock Exchange
M&A	Mergers and acquisitions
MD	UN Millennium Declaration
MDG	UN Millennium Development Goals
MERCOSUR	Common Market of the South
MFN	Most-favored nation clause
MKC	McKinsey & Co.
MTM	Mark-to-market
NAFTA	North American Free Trade Agreement
NIE	New Institutional Economics
NIIP	Net international investment position
NYE	New York stock exchanges
OCC	Office of the Comptroller of the Currency
OPEC	Organization of Petroleum Exporting Countries
OTC	Over the counter
PCAOB	Public Company Accounting Oversight Board
PTA	Preferential trade agreement
RSRA	Reverse sale and repurchase agreement
SARS	Severe acute respiratory syndrome (Avian flu)
SDR	Special Drawing Rights
SEC	Securities and Exchange Commission
SIV	Structured investment vehicle
SRA	Sale and repurchase agreement
SRO	Self-regulatory organizations
SOX	Sarbanes-Oxley Act of 2002
TNC	Transnational Corporation
UN	United Nations
USCC	US Chamber of Commerce

USD	US dollar
USITC	US International Trade Commission
USTR	US Trade Representative
WTO	World Trade Organization
YTD	Year-to-date

Acknowledgments

This is the sixth book around this subject that we have published over a decade. It is an abridged, more accessible form of the two volumes on *Globalization and the state*. We are very grateful to Taiba Batool, Economics Editor of Palgrave Macmillan, for the suggestion of the volume and for important improvements. Two perceptive reviewers of Palgrave Macmillan also contributed extremely valuable suggestions. We are most grateful to Alec Dubber at Palgrave Macmillan for steering the manuscript to publication and to Ian Evans at Palgrave Macmillan for its production. Vidhya Jayaprakash and her team at Newgen Imaging Systems revised the manuscript with highly useful suggestions and competent typesetting for final publication.

We began work on this volume already during the publication of *The global recession risk by* Palgrave. Hard times undermine international cooperation, accentuating the damage of economic and employment losses. Currently, we are working on another volume on the regulatory wars of finance that are already beginning.

We are grateful to many friends who helped us in this effort. A partial list includes Professor Antonio Delfim Netto, Ambassador Richard T. Mccormack, Senator Heráclito Fortes, Professor Paulo Yokota and Eduardo Mendez. Magnolia Maciel Peláez, DDS, reviewed the manuscript providing many suggestions deriving from her long experience of health regulation.

Our intention is providing a comprehensive source for the reader to acquire tools with which to analyze and develop own views on what may be the most important current event, government intervention in national affairs.

In writing this volume we remembered dear friends and colleagues who helped and motivated in the interest on scholarly work and international affairs, Clay and Rondo Cameron and Otilia and Nicholas Georgescu-Roegen. We are solely responsible for the shortcomings and errors in this work.

Carlos M. Peláez and Carlos A. Peláez
Atlantic City and New York City

Introduction, Scope and Content

Globalization is a broad term with multiple meanings. It must be narrowed to focus on real issues that affect daily lives. The interest here is on the economic causes and consequences of globalization, that is, how it affects economic welfare or the wellbeing of individuals in a country, region and the world. In a broad sense, globalization consists of the effects on the economy of the country in which we live of what happens in other countries.

Wealth is a stock of accumulated capital in the form of money available for investment or goods in inventory. A flow is a stream of money or goods during a period of time, such as a year. Wealth is the stock of capital of a country and income is the flow obtained yearly from that wealth. For example, the money invested in a certificate of deposit in a bank is part of the wealth of an individual and the interest payments are income flows derived from that wealth. The international flow of goods, services, capital and ideas is the subject of this book. The flow of goods and services is international trade, imports or the buying of goods and services from other countries and exports or the selling of goods and services to other countries, all measured in a time period, from a day through a month to a year. For example, the US imports or buys toys and textiles from China and exports or sells airplanes to China. That is trade in goods. The US imports services such as programming from Bangalore in India and exports services such as health advice to Africa. That is trade in services performed by humans. The US exports capital in the form of investment in an automobile plant to Brazil and imports capital in the form of investment in an automobile plant from Japan. This type of investment is called foreign direct investment (FDI).

There are also international imports and exports of financial investments in loans and securities. International property rights in patents

and copyrights are examples of the flow of ideas among nations. Patents protect inventions for a period of time to encourage the application of knowledge that can increase production. The owner of a patent receives fees for its use and can obtain judgments on violators in courts of law. A significant part of the conflict between the US and China is that the US claims that it does not receive royalties for the use of intellectual property developed in the US and protected by patent and copyright laws. Political organization of countries, such as representative democracy with checks and balances, and managerial structure of business, such as corporations and chains of production, also constitutes examples of ideas shared by countries.

A country's economy consists of the institutional arrangements that provide for the production, consumption and distribution of goods and services. Automobiles constitute an example of a good. General Motors (GM) is a publicly traded corporation engaged in the production of automobiles. There are two important institutions in this description. A corporation is a legal entity with limited liability, that is, the owners of shares in GM are not personally liable in courts for losses or other harms by GM. An individual or an entity such as another corporation can only obtain compensation for damages from GM but not from the shareholders. The development of the limited liability corporation was essential in raising capital from multiple investors in an entity that could take the risks required for implementing the new inventions, which caused the accelerated progress after the industrial revolution beginning in 1750. The liability of the investors was limited to the value of their investment.

The second institution in the description is the organized stock exchange where shares of GM are publicly traded. The New York Stock Exchange is one such institution. In the process of describing the corporation another institution surfaces, courts of law, where individuals and entities seek compensation for damages. There are multiple other entities such as privately held companies, partnerships and associations that produce goods. The US developed a system for protection of rights of minority investors that permitted its corporations to raise the huge amounts of money required to build factories using the new inventions. The system allows many people to share in the profits of the inventions by investing directly in the stock of corporations or in mutual funds and pension plans.

Goods can be consumed directly by individuals or used in production by other companies. For example, GM uses auto parts produced by a manufacturer, such as Delphi, and steel, robots, electronics,

rubber, plastic and other components. The modern assembly plant was a revolutionary process of adding small parts of work in successive productive tasks in a chain of production until completion of the final product. The assembly plant allowed Ford to produce automobiles at an affordable price to the masses of consumers. The benefits of progress are distributed when the factories produce nylon stockings for the workers instead of only silk stocking for the royalty.[1] The assembly plant decreased significantly the time and costs of producing autos.

An important conflict of globalization originates in the offshoring of some of these tasks, such as the production of steel in India, electronic components in Japan, etc. The vertical integration of production, where all components are produced in the same or affiliated entities in one country, is being replaced by vertical specialization, with many tasks outsourced to other companies in the same country and in many cases offshored to other countries. Vertical specialization causes dramatic changes in job markets within the life span of the ordinary person and constitutes one of the key conflicts in globalization in the form of displaced workers.

A law firm is an example of services. It also has physical resources such as offices, digital services and legal information. However, the most important service is acquired legal knowledge or human capital. The law firm is as good as the legal expertise and reputation of its attorneys. GM obtains a flow of goods in the form of autos by using its installed capital of production plants. There is an important human capital in GM, the knowledge and expertise of its engineers in designing quality autos and of its management in organizing production.

The law firm provides services to a corporation such as GM in the form of advising on issues such as corporate governance, patent protection, regulation and liability. An important part of corporate governance is that the senior managers of GM must comply with complex laws such as the Sarbanes-Oxley Act of 2002 (SOX), which protects shareholders and investors from damages caused by managers. The attorneys advise senior managers and the board of directors of GM on compliance with SOX. The creativity of the scientists and engineers at GM results in new products and the company sells cars based on its reputation. The inventions of the products and the reputation of the brand GM are protected by patents and trademarks that again require legal advice. The government regulates safety of autos and protection of the environment. GM requires legal advice on compliance with regulation to avoid costly

investigations, litigation and fines. Labor unions engage in continuing negotiations with GM that require advice on labor contracts.

There is a paramount institution in the economy: the government. It provides the essential service of defining, legislating and protecting property rights. There would not be a corporation if the owners of shares did not have clear rights to their property and the judicial process to enforce those rights. Buyers of autos register them with state motor vehicle commissions to guarantee their rights in the form of the official title of ownership. Buyers also have access to the records of used cars to avoid purchasing an unsafe car, or lemon, which was involved in an accident. The government also consists of the courts of law where individuals and entities can enforce their claims to property. The courts also consider disputes of liability such as claims that family members lost their lives in dangerous accidents of vehicles originating in careless manufacturing. Business transactions and contracts can be enforced in courts to obtain nonpayment of obligations. Shareholders can sue corporations for mismanagement or misappropriation of their property by managers. Labor unions can sue employers for not honoring their labor contracts. Owners of patents and trademarks can sue in court for infringement of their rights by other producers or individuals.

The government has coercive powers not enjoyed by any other institutions in our economy and society. Coercion means the capacity of the government to enforce its will by force. The government at federal, state and local levels can impose taxes by which they take part of our income or wealth. It can also impose physical limitations such as curfews, zoning, import quotas and alternate daily parking. Government can also spend in activities that do not result in profit and, in most cases, without effective accountability for efficiency. It can also engage in diplomatic relations with other countries and even in war. The government commands the only organized armed forces, from the army to the local police. It also manages penitentiaries and jails where individuals are incarcerated. The government can deprive citizens of their freedom and even execute them. In the US, only the government can initiate criminal proceedings in courts.

Nearly every economic activity in which we engage contains a measure of government regulation. The law creates formal agencies to regulate and supervise economic activities. The supervisors and regulators of banking in the US are the most numerous, powerful and complex in the world, including but not limited to: the Federal Reserve System, the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, the Office of Thrift Supervision, the Office of Federal

Housing Enterprise Oversight, the National Credit Union Administration and numerous state agencies such as the powerful New York State Banking Department.

It is possible for entities and individuals to freely engage in financial contracts at the interest rate mutually agreed. However, that interest rate is actively influenced by the Board of Governors of the Federal Reserve Bank (FRBO). The seven governors of the Fed are distinguished experts in the field chosen by the President and confirmed by the Senate. Together with regional presidents of the Federal Reserve Banks (FRB) they form the Federal Open Market Committee that instructs the FRB of New York of the desired interest rate for fed funds or bank reserves. This Committee reaches its decisions independently from any branch of government. The fed funds rate is the primary cost of funding of banks on a daily basis.

Interest rates for mortgages declined abruptly when the Committee lowered the target fed funds rate to 1 percent in 2003–4 together with the earlier discontinuance of the 30-year Treasury bond. The lowest interest rates in four decades encouraged a housing boom that ended in the recession threat of 2007–8. The announced commitment by the fed that interest rates would remain low created the expectation that prices of houses would increase indefinitely because of cheap financing. Borrowers and lenders entered into mortgage loans that were thought to have no risk because the owners of the houses could always sell them at a higher price, avoiding increasing monthly payments of teaser rates and adjustable rate mortgages. After a period of around two years, the monthly payments on these mortgages increased to levels that could not be afforded by homeowners. The government has the power to move the entire economy of the US and even that of the world in a desired direction. There is no single private institution or market segment that has such power.

There are many examples of government regulation because of the nearly limitless imagination of using the government for a specific purpose. Industry has been regulated by such instruments as oil import quotas, restrictions of routes and fares by airlines, taxi medallions in New York City, public utility rates and many others. Services are regulated by state professional, health and environmental boards and agencies.

There are three approaches of how much government to allow in an economy. The *invisible hand doctrine* originates in the work of Adam Smith.[2] In the contemporary interpretation of this view, the businessman produces at lowest cost the highest output by trying to obtain the

maximum profit. Intervention by the government would prevent the highest efficiency, which means that private business produces most of the time the maximum quantity of goods at the lowest cost. The government would provide the basic definition and protection of property rights, the court system to enforce them and goods of public utility such as police, diplomatic relations, passports, etc. The economy with relatively less government would be the most prosperous.

The *public interest view* argues that there are market failures that motivate government intervention to attain the best outcome for the economy. A market failure occurs when there are discrepancies in reality from the idealized world of Adam Smith. An important example is the natural monopoly. Suppose there is only one source of spring water in a community. The owner of the water source would have market power, that is, would be able to sell at a price higher than what would be socially desirable. People would pay more than the cost of producing and marketing the water together with reasonable profits for the service to continue in the future. In this case, the government of the town would regulate the price of the water to prevent excess profits by the owner in detriment of the community. Education benefits all members of society and improves their ability to produce and earn higher income. However, the private market by its own would not produce sufficient education for the best interest of society, requiring that the government invest in educational capacity. The buyer of a used car has less knowledge about the quality of the vehicle than the seller, what is called imperfect information. The invisible hand process breaks if there is less than perfect information. The registry of car accidents evens the information of buyers with that of sellers.

The *private interest view* proposes that industries capture the process of regulation for their self-interest and those of government officials and politicians. It is relatively simple to organize a lobby of a few producers with significant combined financial resources. The organization of millions of consumers is much more difficult because of free rider problems, that is, some will not bear the cost thinking that others will pay for their part. The organized industrial group influences with political contributions the nature of regulation that serves the self-interest of the producers, government officials and politicians but not the general interests of the population. The manipulations of the Civil Aeronautics Board and of railroad regulation are typical examples of this possible regulatory capture. A more extreme case is the *grabbing hand* in Russia and other countries, where cronies of government officials bought state enterprises in rigged auctions with subsidized government financing.

The approaches differ on whether the economy is organized by allowing more private initiative or more collective action, which consists of measures by the government on behalf of society. The invisible hand and the private interest view propose that more private initiative promotes prosperity and fairness by allowing the private sector to control resources for the most efficient production. The public interest view contends that collective action by government is required in attaining prosperity and preventing inequities that could not be accomplished with only private initiative.

The objective of this book is to provide the structure for analyzing the conflicts of globalization by means of the approaches to government intervention. Ultimately, the role of the government is invoked in reality to permit globalization or restrict it for specific or general purposes. The conflicts of globalization can be reduced in nearly all cases to the dilemma of free markets or collective allocation by government intervention.

There is hardly much difference in globalization conflicts from those encountered in closed economies without international trade. In fact, those conflicts would exist even if the world had no frontiers. It is extremely difficult to separate globalization from technological progress. Universities, laboratories in corporations and other private individuals and entities produce scientific and organizational knowledge. Technology consists of the application of this knowledge to practical problems of production. The automobile constitutes a scientific application and the assembly plants and product divisions in the modern corporation a related organizational discovery. Innovations are the major breakthroughs in technology that permit economies to grow more rapidly than normal. The steam engine opened the West of the US with railroads; steamboats promoted trade in the prosperous Atlantic economy. These innovations flattened the world to a trip in 80 days and currently to a matter of hours or instantaneously through the Internet.

Consider the example of a world without frontiers. There is major change in the form of innovation in products and organization. Companies could produce more goods at a lower price, that is, people would be able to have more at a lower buying cost. However, there is an initial distribution problem, resulting in gainers and losers. The owners of the new technology would gain more than others because of sharply higher profits. Workers with the new skills would experience an increase in their wages. Unskilled workers that retained their jobs would earn relatively less and some would be laid off. There would be a worsening of income distribution in favor of those with the capacity in the form of

professional training or capital of benefitting from the new technology. The higher inequality would eventually diminish as the increasing productivity of the economy spreads among sectors. There would still be a social cost in terms of the displacement of workers from their jobs and lower wages for many.

In the world without frontiers there would be proposals to use the government. One proposal would be a social safety net to facilitate the transition of displaced workers by providing for their retraining. A safety net prevents the workers from becoming destitute. There would be social pain for many people and some may suffer significantly in an imperfect transition. Safety nets do not rescue everybody and some may be left behind in the social drama of permanent unemployment.

There could also be more aggressive forms of collective action. The government could impose a minimum wage for unskilled workers. Labor unions could organize to obtain more generous contracts from the increasingly profitable producers. The government could also impose taxes on the producers to assist displaced workers in social programs. Public education could increase to broaden the opportunities of benefitting from a society experiencing technological progress. The prices of the goods could be subject to regulation to prevent excess profits. There have been alleged detrimental effects resulting from these policies. Minimum wages could result in less employment. Labor unions eventually threaten the existence of companies and even industries, such as the problems of the Detroit auto industry and airline companies such as Eastern. Regulated industries actually capture the process by restricting entry of new producers, which allows them to sell without competitors at prices that generate excess profits. Public education may be as costly as private education with less effective results.

Consider now a country in a world with frontiers. A specific example consists of textile workers in factories in South Carolina. Competition of products from low-wage countries in Asia and Latin America causes the closing of factories and the displacement of workers. The argument in favor of trade or no government intervention would be to buy from the lowest cost producers with benefit to consumers. The US would specialize in exporting goods in which it has lower costs such as high-technology and construction materials with greater benefit to the entire population. In free trade, US output and prosperity would be higher.

The argument against free trade would propose government intervention. This would consist of quotas on imports, higher tariffs, anti-dumping measures, safeguards, quality controls and many others that restrict the entry of foreign goods at lower price than those produced in

the US. The restriction of the entry of foreign goods would allow high prices and profits for domestic textile producers, maintaining the employment and wages of their employees. The arguments on the conflicts of globalization become arguments on the benefits and costs of government intervention in the economy.

This book provides a self-contained exposition of the conflicts of globalization relating them to the intervention by the government. The chapter content is as follows.

Chapter 1 provides the dimensions of the world economy. Gross domestic product (GDP) measures the production of goods and services in a country during the year. There are measurements of this production for individual countries and for the world as a whole. Production is concentrated in a few countries with only a small share of the world population, creating the pleas for inclusion of countries that do not benefit from world technological progress. Economists have made less progress in identifying the factors of economic growth, which consists of the percentage rate of increase of GDP over time. Technology, education and institutional change are important determinants of economic growth, which ultimately cause increasing prosperity. It is feasible to distribute better when there is more to distribute. Reduction of poverty and differences in income among social classes requires growing national production.

The countries that were victorious in World War II created international institutions that would prevent political and economic conflicts. Chapter 2 analyzes the organization and actions of these institutions. The international financial institutions provide for stability in the financial affairs of nations. They try to prevent financial crises from occurring and provide for the resolution of those that occur. These financial crises are characterized by decline of production and unemployment that cause significant social problems. The World Trade Organization (WTO) is engaged in creating agreements of trade among most nations of the world. These agreements limit the policies of countries to individually restrict trade and capital. The International Labor Organization promotes human rights and labor conditions. The United Nations (UN) attempts to prevent armed and political conflicts among its members and also engages in development goals and protection of the environment. The prevention and resolution of the financial crises of major countries is processed through the system of central banks.

There are important private institutions that operate on a global scale. Chapter 3 provides the background and analysis of the major private institutions: commercial banks, investment banks, hedge funds and

private equity. The integration across countries of the activities of these private institutions is an important characteristic of globalization. The chapter also focuses on the legal framework of mergers and acquisitions (M&A) that provide for the restructuring of corporations required in a world of rapid technological change, which influences the rate of economic growth. The US system emphasizes protection of shareholders.

The major dimensions of trade and capital flows in the world economy are introduced in Chapter 4. There is additional discussion of the financial risks in the world economy. The growth of trade and capital flows has been very high in recent decades. The financial systems of loans and securities of most nations have become highly connected. There is a benefit in this closer integration that facilitates the capital required for investment in projects that increase the rate of growth.

The principles of the intervention of the government in the economy are provided in Chapter 5. There is no unique theory but multiple approaches that provide the tools to analyze the conflicts of globalization. The first best of Adam Smith has been developed by economists in rigorous theorems under highly idealized assumptions. The relaxation of these assumptions leads to the formal consideration of market failures such as the effects of climate change, monopoly and imperfect information. A pragmatic approach is in the field of applied welfare economics that answers practical questions such as the desirability of building a bridge and the alternatives for its financing. The private interest view argues that businessmen capture regulation for their self-interest and those of politicians and government officials. The argument that the government can correct a market failure requires assumptions that are as restrictive as those of the theorems of the first best. The new institutional economics (NIE) focuses on the critical issue of the institutional requirements of economic organization and progress. There is a marriage of theory and reality in an approach emphasizing transparency of disclosure and effective regulation while allowing the private sector to work efficiently.

One of the major conflicts of globalization occurs through trade in goods and services, or buying and selling goods in exchange with other countries, the subject of Chapter 6. Economists are more successful in persuading themselves that trade is better for a country than no trade. Part of the problem of convincing noneconomists is that the arguments are not intuitively evident. There are also, as in all economic issues, gainers and losers, creating tough choices for society. One of the major issues of globalization is whether trade causes unemployment of unskilled workers and lower wages for those that remain employed.

Most policy proposals attempt to prevent employment and wage losses. The digital revolution in recent decades has also created the loss of jobs to offshore locations, such as telemarketing and programming.

Almost all the trade in the world is within preferential trade agreements (PTA), covered in Chapter 7. The members of a PTA provide concessions to trade among the members but not to nonmembers. The North American Free Trade Agreement (NAFTA) of the US, Mexico and Canada is a reaction to the European Union. However, there are hundreds of such agreements promoted aggressively by the US and the European Union. Many economists argue that such agreements are not beneficial to the individual countries and to the world as a whole.

There are issues of income distribution, poverty and the environment that create conflicts among and within nations, which are discussed in Chapter 8. The argument for international collective action is to provide fair opportunities for poorer countries to benefit from globalization and to reduce world poverty. Climate change is analyzed by the UN with proposals to engage in collective action to prevent damaging effects of global warming to individual countries and the world.

The consensus on the benefits from trade among economists does not extend to financial globalization or the free flow of capital and finance among nations. Chapter 9 provides the analysis for and against intervention by the government in international flows of capital and finance. It also focuses on the prevention and resolution of international financial crises to avoid the loss of output and employment.

The international financial institutions were reorganized to provide soft law, or standards and codes, to strengthen local institutions throughout the world, subject discussed in Chapter 10. The most important standard is the Basel II capital requirement for international banks, that is, how much own capital should banks have to compensate for losses in loans and trading securities. Major losses in banks jeopardize the deposits by the public and the purchase of shares and bank products by investors. Moreover, they can trigger financial crises that spread to other banks and countries, threatening output and employment. The deterioration of the competitiveness in finance of the US and various proposals for its reversals are also analyzed.

There are major vulnerabilities in the world economy. The credit contraction of the US is creating a global recession risk. Chapter 11 discusses this risk and the damage caused by the credit squeeze to international finance. The credit/dollar crisis has eroded the strength of international financial institutions and central banks in preventing and resolving financial crises. The depreciation of the dollar is required

to reduce its dependence on two-thirds of world savings by increasing exports but causes major adjustments in other countries.

The Conclusion summarizes some general results. The notes to individual chapters provide references to vast literature. Several textbooks can provide support.[3] There are a few appendixes covering more technical issues. The index locates the main terms in the text.

1
The World Economy, Prosperity and Conflicts

Introduction

The world produces over $44 trillion per year. There is significant inequality among nations, with most production and wealth concentrated in countries that have only a small share of the world's population. The application of science to practical problems of production, or technology, remained relatively subdued until around 1750. Technology surged around the industrial revolution first occurring in England in the second half of the eighteenth century, spreading to Europe, the US and other regions. Growth of production accelerated rapidly not only by the use of more labor and capital but mainly by more efficient methods of production and the organization of business and nations caused by waves of innovation. A significant part of progress originates in improving education and training of the labor force, or human capital. Institutions also play an important role in the progress of nations. There are numerous conflicts in globalization and multiple views on resolving them.

The world economy

World GDP, or the value at market prices of all final goods and services produced by the world, was $44,645 billion dollars in 2005, as shown in the first column and line of Table 1.1. In that year, the world's population was 6437 million. The second column of the table shows the Gross National Income (GNI) per capita, obtained by adding net payments for assets held abroad by a country and deducting indirect business taxes. It measures the income per person in the world as $7011. Major improvements in health have increased the life expectancy of the population of the world to 68 years.

Table 1.1 Indicators of the world economy (2005)

	GDP $ Billions	GNI per Capita $	Population Millions	Population Life expectancy years	Percent primary school
World	44,645	7,011	6,437	68	
High income	34,687	35,264	1,010	79	94.2
EMU	9,984	32,098	314	80	98.9
UK	2,198	37,740	60	79	98.7
USA	12,416	43,560	296	78	92.4
Japan	4,534	38,950	128	82	99.9
HIPC	223	380	554	49	
LDC	306	382	2,352	59	78.0
Low/Middle income	9,969	1,753	5,426	65	
Middle income	8,553	2,647	3,074	70	

Notes: GNI: Gross National Income; EMU: European Monetary Union; UK: United Kingdom; HIPC: Highly Indebted Poor Countries; LDC: Less Developed Countries.

Source: World Bank, Key development data and statistics.
http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20535285~menuPK:1192694~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html

A striking characteristic of the world economy is that the group of high-income countries produces 77 percent, or $34 trillion, of the world's GDP of $44 trillion. This group has a total population of about 1 billion, or 15 percent of the world population of 6.4 billion. The GNI per capita of the group of high-income countries is $35,264 per year, five times higher than that of the world as a whole. In contrast, the highly indebted poor countries (HIPC) have a population of 554 million with per capita income of $380 per year or $31 per month. There are 751 million people in less developed countries (LDC) surviving on an average of around $31 per month. Evidently, an important conflict of globalization is that most of the people of the world do not benefit equally from the benefits of improving technology. There are multiple efforts through international institutions and foreign aid by individual countries to assist poorer regions in attaining higher income and standards of living. There is more detailed analysis of poverty and inequality in Chapter 8.

The causes of prosperity

The firm combines inputs to obtain an output. For example, GM uses labor or employees. The employees use machinery and equipment such

as robots, factories, tools, etc. There are also ingredients that have an origin in natural resources as for example steel that originates in the mineral iron ore and plastic that originates in the fossil fuel oil. Many of the natural resources are called commodities because they are relatively uniform in quality and have observable prices that are traded for current and future delivery in organized exchanges. There are technical relationships that combine these inputs—labor, capital and natural resources—to obtain an output, which consists of vehicles in the case of GM. The corporation also has important organizational processes that facilitate production. The technical or engineering relationship of obtaining output from inputs is called the production function. In this example, the production function is at the level of an individual company, GM.

An important generalization is the production function for an economy as a whole. It is a technical relationship by which the economy obtains output or GDP by using labor, capital and natural resources. Economic growth is growth of GDP in absolute terms or per capita, that is, dividing GDP by population. Prosperity in the past 250 years has consisted of persistent or self-sustained economic growth. To be sure, there have been booms and busts of the economies of the major industrial countries. However, the rate of growth over the long term has been high and sustained, allowing for the distribution of an increasing output.

Modern economic growth is defined as the persistent increase of the capacity of the economies of the advanced countries to provide diverse goods to their population.[1] Technology and institutional change have been key drivers of this increase in capacity. A society develops a stock of knowledge through its universities and research institutions. Innovations are applications of scientific knowledge to practical problems of increasing capacity of production of diverse goods. Technology is indispensable to the process of economic growth but not sufficient for its sustainability. There are organizational arrangements of societies in the form of institutions that facilitate or retard growth. Modern economic growth is manifested in the form of high rates of growth of GDP and GDP per capita in the developed countries. Productivity is the increase of output per unit of all inputs that accelerates in the process of growth.

The economies of the developed countries experienced significant structural changes in the form of movement away from agriculture toward urban-industrial activities and subsequently toward services. Production of industry such as in vehicles and tractors replaced agriculture as the

dynamic sector of the economies and is being replaced by services such as information technology.[2] Change eventually brings significant progress to a nation. However, there is significant conflict and resistance because the shares in income of different groups are altered by technologically driven economic growth. The labor in urban centers that learns the new technology and the businessmen that own the factories increase their standard of living relative to the agricultural sector. That is, there is increasing inequality in the distribution of income, with more prosperous city dwellers enjoying higher standards of living relative to those that remain behind in agriculture. Eventually, the high-skilled labor and business in services such as information technology increase their remuneration and standard of living relative to industrial workers and industrialists. A society requires a political system and institutions to conciliate the conflicts brought about by change to avoid wasteful disruptions.

Another important characteristic of modern economic growth consists of the expansion of the advanced countries into overseas operations. The increasing capacity to deliver more and newer goods requires distribution in foreign markets. In historical analysis, England was considered to be the workshop of the world and the countries in the new world, such as the US, Australia, Brazil, Canada and New Zealand, as the suppliers of foodstuffs and raw materials. The entry of Europe, Japan and the emerging countries in Asia into modern production required a market in advanced countries for their increasing capacity to produce cheaper goods. The initial conflict was between the workshop and food-producing countries once the latter developed their own industry. The current conflict is the flood of cheaper products and services from countries such as China and India to Europe and the US. Consumers in developed countries benefit from the lower prices but less skilled workers feel that they are displaced from their jobs or suffer lower wages.

The concept of human capital constitutes an important advance. There is education, training and skills that permit a laborer to contribute to increasing the output per unit of work time. Thus, human capital is an important contributor to increasing productivity and the growth of an economy. Investments in education, training, skills and the health of the labor force have high returns in the form of increasing productivity and economic growth. Another conflict arises in economic growth from the different ability of individuals to increase their stock of human capital. Imperfections in the access to education may diminish the chances of social mobility. A child from an inner city school may have

less of a chance to enter into one of the better-ranked colleges than the one attending a private school.

Institutions

Technology, innovation and human capital are insufficient for a country to ignite and sustain modern economic growth. The process of growth can be facilitated or retarded by the social and political system of incentives and institutions.

Property rights constitute an important foundation of modern institutional development. The definition and protection of property rights is essential to investment for expanding capacity to produce more and increasingly diverse goods. The legal codes or laws of a country define property, its acquisition and rights to preserve it. A farmer is less inclined to invest in new fertilizers and tractors to increase output of food if the farm can be confiscated or invaded arbitrarily without a legal process guaranteeing its ownership. Modern accumulation of capital is characterized by the rights to its ownership.

The modern corporation with its limited liability provision requires the definition and protection of the rights of its shareholders. Increasing capacity in the process of modern economic growth requires significant investments. Minority shareholders in corporations are guaranteed their rights against appropriation of assets of the corporation by its delegated managers. These shareholders are also protected that their personal property beyond the ownership of shares is not subject to judgment in a court of law. The capacity to raise huge amounts of capital by pooling many small individual investors is an important source of generation of the funds required for investing in expanding capacity. The process of raising investment funds would be jeopardized by a system that did not protect the rights of ownership. Who would invest in shares if there were no protection of the rights to ownership in the corporation? Many retirement funds invest in corporations and retirees would seek alternatives if they could not have valid claims on their investments. Thus, the system by which savings are allocated to investments rests on the definition and protection of property rights.

The government is the key institution that can facilitate or retard modern economic growth. There is no unique organization of government for accelerating progress. In the advanced countries, an important change was the development of constraints on the power of the executive with an independent parliament and judiciary in England around the industrial revolution.[3] The important transition consisted of

the end of confiscation of the funds of investors in financing the government. The maintenance of property rights to creditors of the government extended credibility to deposits in banks that were essential in the financing of the industrial revolution. Parliament and the judiciary acted to restrain the confiscation of investors by defaults or nonpayment by the government. A credible system of borrowing and lending by private institutions facilitated the investments required by the innovations of the industrial revolution.[4]

Historical reversals of globalization

There is the misconception that globalization is irreversible. The analysis of economic history shows that there have been reversals of globalization. A reversal consists of government policies closing the economies to flows of trade, capital, humans and ideas. For example, trade can be interrupted by means of a tariff, which is a tax on the import of goods and services produced in other countries, such as a tax on imported steel. Another impediment to trade consists of quotas, or a maximum amount of a commodity imported from another country such as sugar and orange juice in the US. Countries may also impose taxes or entry restrictions on foreign investment in sensitive areas such as banks and ports. The flow of humans has been restricted by border controls and immigration laws. Countries such as Cuba and China limit the use of the Internet by their citizens, thus effectively restricting the communication of ideas.

The globalization of the nineteenth century created significant gains in the form of convergence of income, diminishing the gap between poor and rich regions. There were multiple benefits to export sectors. However, there is historical evidence of the conflicts of wealthy landowners demanding protection from cheap imports.[5] There were also complaints of cheaper imported goods made in regions with lower wages. Workers were unhappy about immigrants taking their jobs. Owners of industries competing with foreign-produced goods requested compensation from the harm of cheaper imports. Policymakers began to feel insecure about their ability to control financial and industrial crises spread by the integration of the world economy. Globalization reversed between 1914 and 1945 and was reconstructed after World War II.

The two world wars and the Great Depression of the 1930s, covering nearly 20 years, reversed the globalization of the nineteenth century. During the Great Depression, the output of the US declined by more than 25.7 percent in 1930–3 and unemployment exceeded 20 percent

of the labor force. Countries followed policies called "beggar-my-neighbor remedies for unemployment."[6] Increasing tariffs or taxes on imported products and restricting them by quotas shifted production and, thus, employment, to producers at home.

The Great Depression was a brutal test causing a major reversal of globalization with a return to self-sufficiency in production and national economic management.[7] The global economy was not recreated until the 1960s and 1970s. There is, according to historians, an unconvincing argument that the Great Depression was a once and for all episode that would not be repeated. The pre-1914 globalization system contained the seeds of its eventual demise. The period of integration created major increases in income and wealth. There were moral reactions to the inequalities in sharing in growth. These inequalities constitute the seeds of self-destruction of globalization. The rise of a "xenophobic populism" cannot be ruled out. There are current doubts as to the system of world trade and finance emerging from the current credit/dollar crisis that could result in trade and foreign exchange (FX) wars.

The view of economic historians is that globalization is not irreversible even if the individuals gaining from the process outnumber the losers.[8] It is possible for the losers to create a backlash that will erode international economic integration. The long-term gains should not obscure the advance of the welfare of some groups while others experience deterioration. There can also be resentment of how decisions in other countries affect the national economy.

There are differences in the current global integration and that ending in 1914.[9] There is currently wide dissemination of the gains from trade, suggesting that the gainers from the process may outweigh the losers. There are more mechanisms for reduction of tension in trade legislation in the current world. Trade disputes can be resolved within the WTO. There are retraining programs and policies to assist in the transition of the losers of economic openness. Finally, countries have learned to use aggregate economic policy to prevent the disruptions that plagued the earlier globalization.

The human face

There are strong contrasts in the views about globalization. The issues extend beyond the pure economic realm into more ethical and social concerns. Globalization has political, technological, cultural and economic dimensions.[10] The European third way seeks to provide a human

face to globalization. However, the subject of globalization needs to be narrowed for substantive analysis.[11]

After street protests, two new groups have surfaced, "stake-wielding" and "stake-asserting" critics of globalization.[12] The "stake-wielding" groups want to stop the process of international economic integration. The "stake-asserting" groups want to increase the inclusion of stakeholders in the benefits of globalization. There are numerous arguments of a social nature, such as that globalization causes harm to social agendas of reducing child labor and poverty and strengthening women's rights and sovereignty. Other arguments point to the destruction of the environment and the maintenance of high labor standards. Some of these arguments are discussed in Chapter 8. There are proposals to solve these issues by more humane or ethical globalization.

The broad definition of economic globalization is that trade, capital flows, FDI, international migration and technology integrate countries into a world economy.[13] This process is significantly important and has strong implications for the issue of adequate governance. The acceptance of the proposition that globalization does not have a human face leads to the need for policy interventions to restrain the process. The acceptance of the proposition of a human face for globalization leads to policies that preserve the good outcomes of globalization, supplementing them and addressing the distortions. In this view, globalization does not conflict with social agendas and its social impact is more benign than malign. The concrete issue is how to create a policy framework and institutions that improve the benign outcomes of globalization. The challenge is how to make globalization work better.

There are good aspects of globalization.[14] Freer trade created opportunities for many countries to grow faster than under strict protectionism. Asia followed a policy of growing through aggressive exporting, improving the welfare of millions of people. These opportunities permitted people to have longer lives with more goods and services. While some people in advanced countries regard wages in producing clothing and shoes as extremely low, those wages are higher than those received earlier in primitive agriculture. Population in developing countries has surfaced from isolation, enjoying communication with the rest of the world. Foreign aid resulted in many benefits to millions of people in developing countries.

While the critics of globalization sometimes do not recognize its benefits, the defense of globalization ignores even more important imperfections.[15] Globalization is proposed as the way of progress in the form of American capitalism. However, the alleged benefits of the process

have not been realized. The number of people in poverty increased by 100 million in the 1990s at the same time that world income grew at 2.5 percent per year. In addition, there were multiple crises in Asia and Latin America that caused significant loss of production and employment, requiring several years for recovery. Globalization, in this view, cannot ignore the promotion of social justice by the government. There is a positive role for government in education, infrastructure, the legal system and regulation. It could be a matter of assessment. The market fundamentalists believe that market imperfections or failures are minor relative to those of government. This view proposes a balanced assessment of the failures of markets and government to make them work together.

Taxation

The proponents of increasing international economic integration claim that there are significant gains to individual countries and the world. The critique of globalization is based on the differential effects on countries, industries and individuals. Income distribution has worsened in the US mostly because of technology but also partly because of globalization. There are new arguments of taxation of the gainers from globalization to soften the opposition that could reverse the process of integration.

There is an argument that the share of the global wealth and income of the middle is diminishing.[16] This view identifies two gainers in the process of integration. Low-income countries in Asia, especially China, have capitalized on the combination of low wages, effective diffusion of technology and greater access to capital markets. In these countries, the standards of living of a generation have been significantly higher than for the preceding one, with a doubling of per capita income. The growth rates of China in the past 30 years effectively raised living standards by a multiple of a hundred in a lifetime. The second gainers of global integration have been the owners of valuable assets. These gainers have been owners of scarce commodities (such as oil), businesses that can use cheap labor to sell in larger markets (such as toys in China) and financial entrepreneurs that have revalued assets related to globalization (such as taking a company private to optimize its global distribution).

The losers have been those in the middle, such as middle-class workers and their employers in every country.[17] These losses would explain the lag in median family income relative to productivity in the US. Average family income has not grown significantly in Mexico since

NAFTA while it is difficult for middle-income countries to find activities in which they have comparative advantage. This middle group does not have the capital or opportunity to benefit from globalization. However, the current world economic order cannot survive without the support of the middle group. The current process of capitalism based on sophisticated technology and integration redistributes wealth to the very rich or the very poor but ignores the middle. There is no simple solution.

There is renewed interest, during presidential campaign politics, in taxing the wealthy to alleviate the hard times for the less fortunate that originate in globalization.[18] There are alarming characteristics of income distribution in the US.[19] Income has declined or stagnated for most workers with very few experiencing improvement. In 2000–5, there were less than 4 percent of workers in educational classes that experienced gains in real money earnings. Workers with doctorates and professional graduate degrees experienced increases in real money earnings but other workers suffered declines. There were declines even for workers with college degrees and nonprofessional master's degrees. According to this view, inequality is worse currently than in any period since the 1920s.

The income of the wealthiest 1 percent of the US population was equal to that of the bottom 26 percent in 1979, increasing to 45 percent in 2004.[20] In this argument, the most important factor of income concentration is technological change. However, other contributing factors are the decline of union membership, the reduction in the real minimum wage, increasing immigration and globalization in general. The taxes paid by the wealthiest 0.1 percent of households, earning above $1.3 million in 2005, declined from 60 percent in 1960 to 34 percent in 2004. The decline for the top 1 percent was from 38 percent in 1960 to 32 percent in 2004.

Financial globalization

There is perhaps more divergence of views on the merits of free capital flows than on free trade of goods and services. Capital flows consist of the movements among countries of money for investment in securities (such as shares and certificates of deposit) or for expanding production as in factories. The growth of financial integration in the world economy is a fact. The debate focuses on the distribution of the benefits and particularly on the contribution of these capital flows to financial crises that can cause unemployment.

The process of creative destruction[21] explains how innovation transforms the productive structure of market or capitalist economies. Technology constantly changes the organization and technical characteristics of products, markets, firms and even individuals. The companies that were the industrial leaders in the 1960s in the US, such as steel producers, are currently minute in comparison with Microsoft and high-tech companies. This revolution occurred in the span of one generation.

There is similar creative destruction in financial markets.[22] It is transforming not only financial markets but also the entire organization of production. Traditional business consisted of the interaction of elites, corporate control by managers and relations with financial entities.[23] This structure of institutions is being replaced by global instead of national focus and the dominance by finance over managers and production. There is a transition from management-oriented capitalism into global financial capitalism.

The effective functioning of the financial system is essential to the economic success of nations.[24] Financial institutions constitute the allocating brain of the economy, channeling savings to the most productive activities by households and businesses. Growth will decline if there is no financing for activities that contribute to the long-term growth of the economy or its recovery during downturns. There are important benefits to developing countries from globalization. The opening of financial markets will lower the cost of capital, increasing investment that causes economic growth. Foreign financial flows and institutions bring in more efficient methods that result in improved allocation of capital. Increasing competition in domestic markets in the financial system leads to better property rights and institutions.

Economic development

There is concern about the progress of developing countries in reducing the gap in income and living standards relative to advanced countries. An influential school of thought finds an inferiority of developing countries in obtaining a fair share of the benefits from globalization.

There are two sides of the effects of globalization on the poor.[25] The group on the side of developed countries includes most mainstream economists, international institutions (International Monetary Fund (IMF), World Bank and the UN), most finance ministers and central bank governors in poor and rich countries and most professional scholars in the field of development. The argument of this group is that

globalization is not the cause of global poverty and inequality because it does not affect the poorest of the world. The opposing group includes most social activists, the popular press, members of organizations that work on the environment, human rights and relief projects and sensible highly educated individuals. The opposing argument is that benefits of globalization are enjoyed by rich countries and the richer individuals in those countries.

Globalization in this view harms the poorer countries and the poorest in those countries. There are proposals to reconsider if the world's distribution of economic and political power is fair. There may not be equal opportunities for the poor and inadequate representation for the powerless. The proposal advocates the inclusion of the arguments of the opposing group in those of the established group. There would be an improvement in world politics, with more effective representation of the poor in the management of the world economy. The adverse effects of globalization would be ameliorated.

Summary

The world economy produces goods and services that amount to more than $44 trillion per year. However, there is significant concentration of economic wellbeing. A group of advanced countries with 15 percent of the world population produces about 77 percent of world output.

The advanced countries have experienced a process of modern economic growth since around 1750 with the industrial revolution. Output has increased because of the use of more labor, capital and natural resources. However, technology, human capital and institutions have played an important role.

There is also broad analysis of important social, cultural and ethical dimensions of globalization. The benefits of closer economic integration among countries are recognized. However, critics propose social policy and economic regulation to spread the benefits and avoid the tensions.

2
International Official Institutions

Introduction

The major countries that won World War II created international official institutions to facilitate cooperation among nations during peace. Significant part of the dialogue occurs in two restricted groups. The Group of Seven (G7) consists of the wealthier industrialized countries that discuss periodically political and economic affairs to maintain world stability. The Group of Ten (G10) consists mainly of the central banks and monetary authorities of the wealthier countries that design policies and institutions for international economic and financial stable progress. The main institution of the G10 is the Bank for International Settlements (BIS). The design for stability in the world economy consists of two types of institutions. The international financial institutions are the IMF, the World Bank, the BIS and the multilateral development banks. The IMF provides a safety net for crises in individual emerging countries and LDCs. The World Bank initially financed infrastructure in Europe and subsequently in emerging countries, shifting its focus recently to alleviating world poverty and inequality. The multilateral development banks engage in projects of interest at the regional level in the Americas, Europe and Asia. The responsibility for stability in the more advanced countries rests with the individual central banks. The WTO engages in negotiations among most countries in the world in promoting freer international trade. The UN provides the forum to prevent conflicts among nations and engages also in promoting the alleviation of poverty and inequality. These institutions are discussed in turn.

The G7 and the G10

The G7 started initially as the Group of Six, meeting for the first time in 1975 in Rambouillet, France, including the UK, the US, France, Germany, Italy and Japan. Canada joined in 1976, converting the forum into the G7. The Group of Eight (G8) is the G7 including Russia, which attends meetings since 1991 but became a full member only in 1998. Originally, the meeting was a forum for trade and economic issues but gradually included political and security matters.[1] The critical economic forum is the meeting of G7 finance ministers and heads of central banks that meets periodically.[2] The institutional structure of the international financial institutions and the international adoption of standards and codes, or what is called international financial architecture (IFA),[3] originate in these meetings.

The G10 includes a group of industrial countries—Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the UK and the US. The central banks of this group cooperate to regulate international finance. The BIS originates and hosts most of these consultations.

The international financial institutions

The disruption of international financial arrangements following the two world wars led to the creation of institutions that would coordinate world finance in preventing crises. These institutions are the IMF, World Bank, BIS and the multilateral development banks, which are the Inter-American Development Bank, the European Investment Bank and the Asian Development Bank.

There are several important roles of the international financial institutions: provision of the global public good of information, surveillance of financial affairs of individual countries to prevent crises, safety net of catalytic financing to resolve financial crises in individual countries, maintaining forums for dissemination of best standards and codes, financing infrastructure and promoting economic development.

A global public good is one that would not be provided by privately owned business. The consumption of the good does not reduce the availability to others that cannot be excluded from its consumption. The provision of the good would not be forthcoming from an individual country, requiring collective action by many countries. For example, an epidemic in one country may spread to others, requiring collective action to contain it that benefits all countries involved in the effort. All

international financial institutions provide international public goods in different ways.

The IMF

Article I of the IMF defines its major responsibilities. The role of the IMF is to promote international monetary cooperation, facilitating growth of international trade with exchange stability. It would assist in creating a multilateral system of payments. The IMF would make resources available, under safeguards (conditionality), to member countries that experience problems in making payments to other countries. Currently, the prevention of crises and resolution of those that occur are the most important functions of the IMF. The tools of the IMF are surveillance to prevent crises, technical assistance to strengthen countries and catalytic financing to facilitate crisis resolution. The endorsement by the IMF of the recovery program of a country in crisis could renew lending by the private sector, providing the bridge of financing toward more stable conditions. The country would avoid loss of production and employment.

The abrupt collapse of foreign financing during crises in the 1990s posed a major challenge to the international financial system. These crises occurred in emerging markets—Mexico 1994–5, Asia 1997–8, Russia 1998, Turkey 2000 and Argentina 2001–3.[4] The crises were different in nature and scale, occurring after liberalization of financial flows. Crises worsen rapidly and require immediate policy measures and assistance. Foreign investors lose confidence in the ability of the emerging country to service its debt. Even if economic policy is sound, there is reversal of capital flows. Catalytic financing by the IMF intends to improve investor expectations on the capacity of the country to service its debt. However, the support of a program by the IMF is no longer a guarantee for recovery of investor confidence as shown by the recent crisis in Argentina 2000–2.

As of the end of March 2007, the IMF has 185 members that contributed $327 billion in quotas. The total usable resources are $246 billion and the one-year forward commitment capacity is $190 billion. The IMF has outstanding loans of $28 billion to 74 countries. The staff of the IMF totals 2716 in 165 countries. In 2006, the IMF concluded 128 surveillance consultations of member countries, of which 122 published voluntarily the reports. The IMF provided 429.2 person years of technical assistance in 2006.[5]

IMF resources originate in quota contributions by members. The economic position of a member relative to other members largely

determines its quota. The IMF denominates quotas in terms of its unit of account, Special Drawing Rights (SDR). The United States is the largest contributor with a quota of SDR 37.1 billion, approximately $56.1 billion.

The highest decision body of the IMF is the Board of Governors. There is one governor and one alternate governor for each country. The member country appoints the governor, usually the finance minister or the governor of the central bank. The Board of Governors meets once a year. It can delegate to the Executive Board all except certain reserved powers.[6]

The Executive Board conducts the daily business of the IMF. Member countries or groups of countries appoint its 24 Directors. The Managing Director of the IMF is the Chairman of the Executive Board, which meets several times each week. The IMF management and staff prepare papers used for decisions by the Executive Board. The G7 countries have combined 44.05 percent of voting power, of which 16.79 percent by the United States alone.[7]

The "governance" or representation of member interests in management of the IMF is the subject of intense debate. The IMF has been managed by a European and the World Bank by an American during most of their history.[8] The critique of the system leads to proposals of more representation in the management of the institutions by their major clients/borrowers, which are emerging and developing countries. This change in governance would make the IMF more responsive to the needs of countries other than the ones that have more advanced economies. A counter argument would be that borrowers do not have representation in their creditor institutions because of the inherent conflict of interest or self-lending.

The World Bank

The World Bank has the same origin as the IMF in the Bretton Woods conference in July 1944. Its first loan was $250 million in 1947 to help France in war reconstruction. Currently, the focus of the World Bank is on poverty reduction. There are also 185 member countries in the World Bank Group. It has a multi-disciplinary staff of 10,000 in 109 country offices, including headquarters in Washington, DC.[9]

The World Bank provides grants, interest-free loans and technical assistance to countries. Loans have terms of 35–40 years with 10-year grace periods. The International Development Association (IDA), part of the World Bank Group, provided $161 billion in credits and grants since beginning operations in 1960, at the rate of $7–9 billion per year.

About 50 percent of IDA assistance is to the poorest countries in Africa. Approximately 40 high-income countries contribute to the IDA every three years. The contributions by these donors account for more than one half of the $33 billion in resources for the fourteenth replenishment that finances projects over the three-year period ending on June 30, 2008. This replenishment amounted to an increase of 23 percent, the largest in more than two decades.

The initial member of the World Bank Group, the International Bank for Reconstruction and Development (IBRD), provides loans to higher-income developing counties. It is structured as a cooperative for the benefits of its 185 members. The objective of the IBRD is "to reduce poverty in middle-income and creditworthy poorer countries by promoting sustainable development through loans, guarantees, risk management products and analytical and advisory services."

Another arm of the group, the International Finance Corporation, promotes private investment with support to high-risk projects and countries. The Financial Sector Assessment Program (FSAP) is a joint program of the IMF and the World Bank, being the most important surveillance document. The teams in missions to countries combine highly trained specialists from many institutions in a large variety of fields, an important global public good.

The BIS

The objective of creating the BIS in 1930 was managing the Young Plan on war reparations that the Treaty of Versailles imposed on Germany at the end of World War I. However, the BIS focused rapidly on cooperation among central banks and, eventually, with other agencies in promoting monetary and financial stability. The BIS is also the forum for central bank governors and experts on central banks and other agencies. This forum is the most important source of standards and codes in the world. One of the most important standards is the Basel capital requirements of financial institutions by the Basel Committee on Banking Supervision (BCBS) that is adopted by most major banks in nearly all jurisdictions. The Bank conducts its own research in financial and monetary economics and contributes to collection, compilation and dissemination of economic and financial statistics.[10]

The BIS has been a banker for central banks, providing banking functions for gold and FX transactions. It has played an important role in European payments and exchange rate arrangements. The BIS provided financial assistance in cases of currency crises and in IMF programs in Mexico in 1982 and Brazil in 1998.

The multilateral development banks

The Inter-American Development Bank is the oldest regional development bank.[11] It started with a proposal by Brazilian President Juscelino Kubitschek in 1958. The Organization of American States drafted the Articles of Agreement creating the bank. It approved $129 billion in loans and guarantees to finance projects with investments totaling $291 billion. It also provided $1.95 billion in grants and technical cooperation financing. The Inter-American Development Bank derives its financial resources from its members, borrowing in financial markets, trust funds under administration and by engaging in co-financing ventures. It has $101 billion of ordinary capital, 4.3 percent of which is paid in directly by member countries. The remaining 95.7 percent is callable capital guaranteed by member country governments. This capital structure, together with preferred creditor status provided to the bank by borrowing member countries, allows the bank to issue bonds in global financial markets. The bank has triple-A credit rating and issues $4.7–4.9 billion of bonds yearly. It has never had losses in its loans and never had to use callable capital to pay off debt.

The Asian Development Bank (ADB) dates to 1966 and has 67 members, of which 48 are from the Asian region and 19 from other parts of the world. Loan approvals have increased from $5.3 billion in 2004 to $7.9 billion in 2006. About two thirds of loans in 2006 were to China, Pakistan and India. It also engaged in $2.5 billion of co-financing. Sovereign loans totaled $6.82 billion in 71 loans for 59 projects and programs. Net income was $436 billion in 2003, declining from $978 billion in 2002. The Bank has $53.2 billion of authorized and subscribed capital as of December 2006. Its gross income in 2006 was $1.9 billion and enjoys triple-A credit rating.[12] The objective of the ADB is shifting to poverty reduction.

The Treaty of Rome created the European Investment Bank.[13] The objective of the group is promoting smaller business by medium and long-term financing jointly with the banking sector. It is also a source of venture capital in the region. Members of the European Investment Bank are members of the European Union, all of whom subscribed capital. It works closely with banks in the region providing long-term finance for specific capital projects. In January 2007, the subscribed capital was €164.8 billion. Germany, France, Italy and the UK have equal shares in that capital equivalent to 16.17 percent. In 2006, the European Investment Bank approved projects for total value of €53.4 billion. Standard & Poor's and Moody have rated it as triple-A since the first rating in 1975, the same as Fitch since the first rating in 2003. The

25 members of the European Union own the European Investment Bank; three-quarters of these members have triple-A rating.

The WTO

The WTO[14] has unique governance and organization. The member countries run the WTO. The decisions are by consensus of its members, either by the ministers that meet at least once every two years or by their ambassadors or delegates, meeting in Geneva. There is no delegation of authority to an executive board as in most of the international financial institutions. The benefit of reaching decisions by consensus is that they are acceptable to all the members. However, it is far more difficult to reach decisions by consensus of around 150 members. Proposals have been made by members to create a smaller executive body, such as a board of directors, but have not moved forward.

Trade rounds have been the vehicle for reducing tariffs and trade impediments. Tariffs consist of taxes on imports and sometimes exports of goods and services. Tariffs can be ad valorem (a percentage of unit prices) or specific (a dollar value per unit). Impediments consist of quantitative limits, such as quotas, on the importing or exporting of goods and services. There were eight trade rounds in 1947–94. The number of participating countries was 23 in 1947, declining to 13 in 1949 and increasing gradually until jumping to 62 in the Kennedy Round of 1964–7 and to 123 in the important and inclusive Uruguay Round of 1986–94. The Kennedy Round marked the broadening of the agenda to include tariff and antidumping measures.

Multilateral trade agreements are lengthy and quite complex. There are a few important general principles. By the most-favored-nation clause (MFN), a special condition granted by one country to another must be granted to all other WTO members. The principle of equal national treatment provides the same treatment to foreign goods entering the country as to goods produced internally. There is emphasis on moving the world toward freer trade. Rules can promote competition that is fair, open and without distortions. The WTO intends to contribute to economic development.[15]

The central banks

Banks and other financial institutions use leverage to obtain profits. Banks borrow by issuing liabilities, such as demand and time deposits. Their own capital is only a fraction of their total assets, such as lending.

The extra borrowing of banks by taking deposits from the public permits them to increase their lending above their own capital. There have been financial crises in the past in which the threat or actual bankruptcy of one or several banks has spread panic on the soundness of other banks and financial institutions. The government intervenes through central banks to prevent banking crises. It also imposes regulations on what banks can actually do in practice and supervises them by inspection and sanctions.

The traditional function of central banks was to provide the service of lender of last resort. The main principle was to lend to temporarily illiquid but solvent banks at a punitive rate on the basis of collateral of high-quality bills of commerce.[16] A bank could be viable or solvent in the future but could require liquidity temporarily to face unusual withdrawals of cash by its depositors. Its portfolio of loans would include bills of commerce discounted from its borrowers. The bank would discount the debtor bills, that is, exchange them with the central bank for liquidity at an interest rate. The rate would be punitive, or higher than the market rate, to discourage moral hazard, that is, for banks not to engage in irresponsible behavior in the expectation of a government bailout.

Current thought postulates that central banks can influence the level of current GDP in the short-term of a year or two by changing interest rates. In the long term, GDP depends on technology, human capital and other factors. Thus, it is feasible for central banks to stabilize the economy. Stabilization means attaining a full-employment rate of growth of the economy without excessive inflation. Central banks would lower interest rates during periods of recession, by increasing liquidity or money, to promote the recovery of the economy. They would increase interest rates during periods of inflation to cool the economy, lowering inflation.

An important early criticism of central bank policy points to the insufficient information available to central banks on the functioning of the economy and the impact of interest rates.[17] This view claims that there are three lags in the effect of monetary policy. The first lag is between the need for action and the recognition of the action. For example, the US economy was moving toward deceleration of economic growth early in 2007 but the FRBO did not recognize the need until mid year. The second lag is between the recognition of the need and the taking of the action. The Fed only took measures after August when it lowered the interest rate charged at the rediscount window. The third lag is between the taking of the measures and their impact on actual

variables in the economy such as current GDP, which could take almost a whole year. For these reasons, the Fed manages monetary policy with a view of the state of the economy six months ahead. This is quite difficult and plagued with errors because there are no accurate forecasts of anything in economics.

There are three types of analyses that are important to central banking. The theory of the financial accelerator postulates that there is a premium on external sources of financing by households and business.[18] For example, a household has savings and assets such as housing, which are internal sources, and external sources in the form of credit cards, consumer loans and loans using the collateral of assets as in home equity loans. The external sources are more expensive than the internal ones. Business has retained earnings and assets as internal sources and borrowing in financial markets as external source. When interest rates decline, the financial position of households and business improves. For example, the decline in interest rates may increase the price of houses, which can be used as collateral for home equity loans. The opposite is true of increases in interest rates that may trigger decline in house values. The home equity loan may default when the value of the mortgage exceeds the resale price of the house.

The second analysis is the credit channel of monetary policy. The financial position of lenders depends on that of their borrowers. For example, the combination of declining house prices, lower economic growth and the threat of unemployment causes home prices to fall below the value of the second mortgage, creating an incentive for default. Weaker balance sheets and capital of banks and other lenders reduce the amount of credit with adverse effects on consumption and investment. This was the origin of the credit/dollar crisis after 2007.[19]

The third analysis is asymmetry of information.[20] Lending banks do not have enough knowledge of the actual financial situation of their potential borrowers. During a recession, banks find increasing difficulty in identifying sound projects that would take the economy out of contraction. As a result, those projects do not receive financing, which is known as adverse selection, and the economy does not recover from recession.

The Federal Reserve System and US regulators and supervisors

The US has a complex system of regulation and supervision of financial institutions. There are three types of banks in the US according to the government agency that provided the charter and whether they are

members of the Federal Reserve System (FRS).[21] The banks that receive their charter from the federal government through the Office of the Comptroller of the Currency (OCC) in the US Treasury are national banks and by law must be members of the FRS. There are banks chartered by the states that are members of the FRS and others that are not members of the FRS. There is no mandatory membership requirement for state-chartered banks of becoming members of the FRS but they can elect for membership if they meet the requirements by the FRBO. There were approximately 7700 commercial banks in March 2004, according to the FRBO, of which about 2900 were members of the FRS, about 2000 being national banks and 900 state banks. Member banks must subscribe 6 percent of their capital and surplus as stock of the corresponding regional FRB, 3 percent as paid-in capital and the rest subject to call by the FRBO. There is no control power in this capital subscription, which is simply a legal obligation of FRS membership.

The Federal Deposit Insurance Corporation supervises 5250 banks and is the primary federal supervisor and regulator for state-chartered banks that are not members of the FRS. It administers the $49 billion insurance fund of financial deposits. The Office of Thrift Supervision is entrusted with providing charters, supervision and regulation to the savings and loans institutions. The Office of Federal Housing Enterprise Oversight examines and determines the capital adequacy of two large publicly traded companies, Fannie Mae and Freddie Mac, which are engaged in the mortgage business. The National Credit Union Administration provides the charters of federal credit unions and administers the insurance of deposits in those institutions. There are also multiple supervisors and regulators at the state level.

The three objectives of US monetary policy by the FRBO—stable prices, maximum employment and moderate long-term interest rates—may be conflicting in practice. After the second oil price increase in 1980, inflation in the US rose to double-digit levels, prompting the FRBO to increase interest rates close to 20 percent per year. Maximum employment and moderate long-term interest rates were sacrificed to focus policy on preventing inflation from running out of control. In a way, it could be argued that inflation control was ensuring adequate employment and lower interest rates in the medium term. Central banks have traditionally been more concerned with inflation control and this emphasis has gained strength in the past 15 years with the movement toward transparency and inflation targeting.

The fed funds rate is the interest rate paid on unsecured overnight loans of funds deposited at the accounts of depository institutions in

FRBs, constituting the policy rate of the US central bank. Open market operations constitute the main instrument used by the FRBO in fixing a fed funds rate that is around the desired target of monetary policy. The FMOC authorizes the desk at the FRBNY to conduct open market operations to maintain the desired fed funds rate. The desk engages in transactions with primary dealers that are qualified by capital and other standards. The operations with primary dealers are conducted in the form of auctions. On the basis of information and analysis, the desk continuously assesses the level of bank reserves that would maintain the desired fed funds rate. These reserves consist of cash in vault at the banks and their deposits at the regional FRB.

The FRBO has been extremely active in raising and lowering interest rates in the recent past. The range is high, from a peak of 8 percent in the more inflationary period around 1990 to 1 percent during the period of fear of deflation around 2003. The fed funds rate increased to 5.25 percent per year, where it remained unaltered after June 29, 2006. When the economy weakened, the Fed lowered the fed funds rate beginning with 4.75 percent on September 18, 2007, to 2.00 percent on April 30, 2008.

The European Central Bank

On January 1, 1999, the conversion rates of the currencies of the members of the European Monetary Union (EMU) were fixed; the European Central Bank (ECB) assumed the responsibility for monetary policy in the euro area; and the euro replaced the national currencies.[22] The 11 original members of the EMU are Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland. Greece joined in 2001, raising the number of members to 12.

The ECB has exclusive authorization for the issue of banknotes within the euro area. The ECB will cooperate with the authorities that are responsible for prudential supervision of credit institutions and the stability of the financial system in the individual states. Thus, the euro area has a single authority for monetary policy but continues to have prudential supervision as a responsibility of domestic regulators and supervisors.

The ECB Governing Council chose a quantitative definition of price stability in October 1998 to make monetary policy transparent, providing a yardstick for the public to evaluate the ECB and to guide price expectations.[23] Price stability, according to the ECB, is a year-on-year increase of less than 2 percent of the harmonized index of consumer prices for the euro area. This definition was refined by the Governing

Council in May 2003. The ECB also tries to maintain full-employment growth within the euro area. Open market operations constitute the main instrument of implementation of policy by the ECB. The mechanics are similar to those of the FRBO.

The Bank of Japan

Japan established the Bank of Japan (BOJ) in 1882 as a central bank.[24] The Bank of Japan Law was promulgated in 1998 with significant revision of existing statutes. The BOJ conducts monetary policy and acts as lender of last resort, being the bank of banks, the bank of the government and the authority issuing banknotes. Article 2 of the 1998 law stipulates that the BOJ will use monetary policy to maintain price stability, guaranteeing the sound development of the economy. Articles 3 and 5 provide for autonomy by the BOJ in conducting required monetary policy.

The policy rate of the BOJ is the uncollateralized overnight call rate.[25] Financial institutions make the final daily adjustment of their current account balances at the BOJ in the call market. The objective of monetary policy is to influence other interest rates and ultimately transactions in the economy. The Policy Board takes decisions on interest rates at its monetary policy meetings based on the evaluation of economic and financial conditions. The decisions and the evaluation are released to the public. Open market operations constitute the major tool of influencing the level of current account balances to attain the overnight call rate decided at the monetary policy meeting. If the BOJ desires to increase the level of current account balances, it buys securities or engages in financing positions of securities. If the BOJ desires to reduce the level of current account balances, it sells securities. The mechanism is similar to that used by the FRBO.

The Bank of England

The Bank of England (BOE) was established in 1694, nationalized in 1946 and became independent in 1997. It is the central bank of the UK. The BOE is independent from the Treasury in its conduct of monetary policy. Its objective is to maintain price stability, supporting the government's economic policy of growth and employment but subject to attaining price stability. There is a separation of power in that every 12 months the Treasury defines price stability, in terms of a target rate of inflation, and the economic policy of the government. The BOE is independent in the policy formulation of how to attain its objectives but

not in defining them. The act created the Monetary Policy Committee that formulates the BOE's monetary policy.

The BOE created the system of inflation targeting. This system is based on transparency of decisions. The BOE releases as much information as possible. It sets interest rates in such a way as to attain the targets of inflation while maintaining an acceptable level of economic activity.

The UN

The UN charter was drawn by 50 countries meeting in San Francisco at the UN Conference on International Organization in 1945.[26] The official beginning of the UN occurred on October 24, 1945, when a majority of signatories—including China, France, the USSR, the UK and the US—ratified the charter. This charter establishes the rights and obligations of the member states and the organs and procedures of the UN. The purposes of the UN in the charter provide that it is the center for harmonious actions of nations in attaining multiple ends of international peace and security, friendly relations among nations and cooperation in solving international economic, social, cultural and humanitarian problems. The UN also promotes respect for human rights and fundamental freedoms.

The Millennium Declaration (MD) of the UN[27] contends that the current "central challenge" is ensuring that globalization benefits all the people in the world. It argues that there are "great opportunities" in globalization but that benefits and costs are unevenly shared and distributed. The UN monitors progress in attaining the Millennium Development Goals (MDG). The major difficulties are encountered by developing countries and the countries in transition. An inclusive and equitable process of globalization requires sharing the benefits among all the people. The process requires policies that benefit developing and transitions countries and engage their participation in designing them. The MD made a commitment to the eradication of poverty. The multilateral trading and financial system would have good governance. The financial, monetary and trading systems would be transparent, open, equitable, rules-based and predictable. The MD resolved to halve by 2015 the proportion of the world population earning incomes of less than $1 per day and the proportion of people suffering hunger and unable to reach or afford safe drinking water. It also resolved to provide by 2015 full primary education to children everywhere,

boys and girls alike. The MD resolved to reduce maternal mortality by three-quarters of current rates and mortality of children under five by two-thirds of current rates. The MD also proposes to preserve environmental resources.

Summary

A network of international institutions provides for cooperation among nations in economic, social and political affairs. These institutions soften conflicts among nations. Different events contributed to shaping the institution in ways different than those intended. The flexibility of the institutions is essential to satisfying new demands on their services.

Appendix: open market operations in practice

Assume that the desk of the FRBNY decides that more bank reserves are needed to maintain the fed funds rate at the target. When significant injection is required, the desk could engage in outright purchase of authorized securities, such as US treasuries (bonds, notes and bills), federal agencies' securities and mortgaged-backed securities with guarantee of federal agencies. The typical needs are not that sizeable and the desk would normally engage in financing the position in treasuries of a primary market dealer in a sale and repurchase agreement (SRA). The dealer sells the security to the treasury in exchange for cash with the agreement to repurchase it the following day at a specified price that includes the one-day interest. There can also be an agreement for a longer term in case the desk anticipated the need for many days ahead. In both cases, the desk of the FRBNY injects money into circulation: to pay for the securities it acquires and to finance the position of the dealer. The larger availability of bank reserves would tend to lower the fed funds rate.

Assume that the desk decides that the level of bank reserves is excessive, probably causing a decline in the fed funds rate. The desk would then withdraw reserves by means of the sale of securities to the dealers or by financing its securities with the dealers. In the outright sale of securities, the dealers pay with cash for the securities, contracting the amount of reserves. The instrument for financing positions of the FRS is to engage in a reverse sale and repurchase agreement (RSRA). The desk of the FRBNY would sell its securities to a primary dealer with the agreement to repurchase them in one day at a specified price plus

one-day interest. Funds would flow from the account of the dealer to that of the FRBNY, contracting the level of reserves. The desk could also arrange a longer-term financing period for the RSRA according to the estimate of reserves in the days ahead. In both cases, funds flow into the FRS: by the payment for the purchase of the securities sold and by the financing of the securities of the FRS. The level of reserves would tend to contract, increasing the fed funds rate toward the desired target.

3
Banks and Capital Markets

Introduction

An important characteristic of the current process of globalization is the integration of banking and capital markets. The earliest and still critically important financial institution is the commercial bank. It was also the first to establish business over many jurisdictions around the world. Commercial or specialized banks take deposits from the public and provide loans to companies and individuals. Investment banks provide services of insurance and securities, both equities and debt. Different structures of universal banking provide services of insurance and securities together with commercial banking activities. Hedge funds use a flexible business model to take large positions based on leverage or borrowings well above their capital. Private equity groups borrow funds to turn public companies into private entities that can improve the business model.

Commercial banks

The oldest and most common financial institution is the commercial bank. Banks engaged in foreign banking at an early stage in the process of international economic integration. This section consists of a brief analysis of commercial banking. The subject recurs in Chapter 5 on state intervention, in Chapter 9 on financial globalization, Chapter 10 on bank capital requirements and Chapter 11 on the credit/dollar crisis after 2007.

Finance is one of the most quantitative fields in economics. An important approach focuses on the services provided by banks.[1] The balance sheet of a bank has assets, such as the mortgage or loan to purchase a

house. The assets consist of claims that can be legally enforced on borrowers of the bank. If the debtor does not service the mortgage, the bank can enter into foreclosure to sell the house and recover part of its loan. The liabilities consist of obligations of the bank. Demand deposits are claims of depositors on the assets and capital of the bank. The bank has only limited capital of about 11 percent of its assets. The creation of liabilities such as deposits permits the bank to engage in lending that exceeds its capital. There is risk that the borrowers do not pay the bank that in turn may have difficulty in paying the depositors.

There are three types of services provided by banks.[2] Banks obtain important information on their clients by means of their asset services. Suppose there is a company that has a project that it cannot finance in part or all with its available financial resources. This company contacts its bank with the project that includes analysis of the business model and forecasts of sales, costs and expected profit.

Asset services provide key information to the bank. Adverse selection occurs when the bank finances a project that does not contribute to the efficient growth of the economy and instead chooses one that may eventually cause default of the loan contract. Default occurs when the borrower does not comply with one or several of the conditions in the contract. For example, borrowers may delay the payment of interest and principal for more than 90 days, causing the classification of the loan in default. The information gathering by the bank in the process of evaluating and approving the loan reduces adverse selection. Another key asset service is monitoring the loan by periodic inspection of the balance sheet and operations of the borrower. The information provided by monitoring clients restricts moral hazard. In this case, moral hazard occurs when the borrower uses the proceeds of the loan to engage in activities that have significantly higher risk of default than those proposed to the bank. For example, the funds borrowed by a client to purchase equipment that could increase sales are used in speculation of an increase in the price of land not used for business purposes. Banks promote economic growth by financing projects with high future returns and monitoring their execution.

Banks also provide liability services. A key service is the clearing function. The client deposits checks received in payment of goods or services with the bank that obtains the funds from another bank and deposits them promptly in the account of its client. In many countries, wages, salaries, pensions and other payments are made by electronic bank transfers. There is significant convenience, lower cost and time saving in clearing deposits with your bank. The client also receives

another service in depositing cash in bank accounts of multiple types—money market ready funds, demand deposits (current account), time deposits, funds managed by the bank, pension accounts, and so on. Banks provide the function of storage of liquidity to their clients.

A third function of banks is the transformation of liquidity.[3] A demand deposit in a bank is a liquid asset of the depositor, that is, it can be converted immediately into cash or, equivalently, used for payments. Liquidity permits consumption at different times. The traditional assets of the bank in the form of loans are illiquid because the borrower has spent the funds in a project and cannot convert them into cash at will. The bank then transforms the illiquid assets such as loans into liquidity that can be consumed earlier than at maturity when the loan is repaid. A bank run occurs when depositors demand the cash equivalent of deposits or its transfer to another bank. A bank run does not occur when the value of liquidating the loans is equal to the value of the demand deposits. The transformation function of banks, converting illiquid assets such as loans into liquid liabilities such as demand deposits, makes them vulnerable to bank runs. Investment and productive activities are interrupted by bank runs because of credit restrictions. The reduction of investment and output can cause declines in employment with adverse social effects.

Legislation has rushed after bank runs to implement government intervention to prevent them and their effects on employment. Government intervention has taken diverse forms. Governments have created deposit insurance to encourage depositors to maintain their deposits in periods of stress. Central banks have been created to provide liquidity to banks during crises, bridging illiquid but solvent banks to a period when depositors are more relaxed. A solvent bank can recover to profitability with the bridge of liquidity but the insolvent bank cannot be recovered and should be liquidated. Another vehicle is the imposition of minimum capital requirements: a bank must hold a certain amount of capital relative to assets with which it can compensate for losses in loans and other operations. Central banks and other government agencies inspect the quality of bank management and of assets to prevent excessive risks that can lead to losses. There is active debate on whether this intervention prevents or contributes to bank instability. Banks operate in many countries, creating the need for cooperation among agencies that regulate them.

Table 3.1 provides data on selected international banks. There is no intention to rank them by size, strength or relative importance. There is an ongoing change in bank assets and structure because of the credit/dollar crisis beginning in 2007. The largest commercial banks have traditionally been among the most international institutions with

Table 3.1 Selected international banks ($B) (2006)

	Assets	Market value	NIBT
Citigroup	1,884	263	29
Bank of America	1,459	226	32
J P Morgan Chase	1,351	178	20
UBS	1,965	45	10
Credit Suisse	1,029	35	9
HSBC Holdings PLC	1,712	220	22
Deutsche Bank AG	1,486	43	8
Royal Bank of Scotland	1,707	79	17
Credit Agricole	957	27	5
BNP Paribas	777	23	4
Mitsubishi UFJ Financial Group*	1,196	56	0.1
Santander Central Hispano STD	633	86	8

*Fiscal year ending Mar 07.
Note: US banks' data are market value on May 11, 2007; the other banks are shareholders' equity.

Sources:
US banks: http://online.wsj.com/home/us
HSBC: http://a248.e.akamai.net/7/248/3622/04269761a2506b/www.img.ghq.hsbc.com/public/groupsite/assets/investor/hsbc2006ar0.pdf
Mitsubishi:
http://www.mufg.jp/english/ir/fs/backnumber/2007mufg-mar/pdffile/highlights0703_e.pdf
http://www.mufg.jp/english/ir/fs/backnumber/2007mufg-mar/pdffile/financial_info0703_e.pdf
Credit Agricole: http://www.credit-agricole-sa.fr/IMG/pdf/CAG010_DRF06_GB_PDFi.pdf
Royal Bank of Scotland: http://www.shareholder.com/Common/Edgar/844150/950103–07-1017/07–00.pdf
BNP Paribas: http://invest.bnpparibas.com/en/financial-reports/documents/Registration_document_2006.pdf
Santander Central Hispano:
http://www.santander.com/csgs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobheadername1=Content-Disposition&blobheadervalue1=filename%3DInformacion+Economico-Financiera.pdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1178829910482&cachecontrol=immediate&ssbinary=true
UBS: http://www.ubs.com/1/e/investors/topics.html
Credit Suisse: http://www.credit-suisse.com/investors/en/index.jsp
Exchange rates from FRBNY: http://www.ny.frb.org/markets/fxrates/historical/home.cfm

business around the world. Table 3.1 illustrates one of the main alleged reasons for state intervention. Bank capital is relatively small compared to bank assets. Banks leverage their operations by issuing liabilities, the most traditional being demand deposits. This borrowing allows banks to create assets well above their capital. The recurring banking crises have resulted in strict regulation.

Investment banks

Pure commercial banks are considered as "specialized banks." They are regulated by the central banks as depository institutions. Deposits can be of demand type, where the depositor can withdraw at any time, or time deposits, in which there is a date when the funds and accumulated interest can be withdrawn as cash. The traditional business of specialized banks is lending to business and individuals.

There are also investment banks. The field of operation of investment banks is the entire capital structure of corporations. Companies can choose to be privately owned or publicly owned, that is, with shares negotiated in stock exchanges. Investment banks provide advice on the value of the company according to whether it is privately owned or publicly traded. They also advise on whether the value of the company to shareholders is higher under the current form or by selling individual business segments. For example, Citigroup has business in multiple segments: insurance, investment banking, commercial banking (services to business large and small), consumer banking (services to individuals), private banking (services to wealthy individuals), international banking (services in multiple jurisdictions), and so on. Citigroup could retain an adviser, or work within its own investment bank, to determine if the model of business would result in higher value for its stockholders by selling some segments and focusing on others.

Companies also have a choice of their capital structure, consisting of choosing the proportion of equity, or issue of stock, and debt. The investment bank advises on the value of the company under various proportions of stock and debt. The debt can be in the form of bonds or loans with different maturities. Companies and banks raise resources in capital markets, primarily stock exchanges, and debt markets, such as the markets for corporate bonds, asset-backed securities and commercial paper. There is a wide choice of maturities and timing for issuing corporate bonds, which consist of obligations by the company to pay investors (buyers of the bonds) periodic interest, or coupons, and the principal at maturity.

Investment banks also provide the services to implement the decisions of the companies on their capital structure. They establish over time distribution channels for their products. These distribution channels are relations with investors such as pension and mutual funds, other financial institutions and investors that acquire equity and debt. Investment banks also have close relations with major companies. Through their relations and distribution capacity, investment banks can assist companies in M&As with other companies and sales of business

segments. They provide the valuation of the business to be merged, acquired or sold and the vehicles for financing the transactions. Another important service is underwriting of equity and debt securities. Underwriting consists of the valuation of the security, such as the initial price of the offering of equity or the interest rate and maturity of the bonds, and the launching and distribution. Investment banks also have brokerage units that distribute the securities through their client base.

The universal bank combines within one company the services of specialized and investment banks.[4] There have been several forms of universal banks. In addition to specialized banking, they provide, under various structures, services of insurance and securities.

The US restricted commercial banks from engaging in investment banking beginning in 1933 with the Glass-Steagall Act. The signing into law of the Gramm-Leach-Bliley Act by President Clinton on November 12, 1999, repealed the Glass-Steagall Act.[5] There is significant empirical evidence showing the errors of the Glass-Steagall Act.[6] Damaging regulation is typically rushed during periods of economic stress and it takes decades before their reversal. US banks are engaging in commercial and banking activities. US investment banks possess competitive advantages in skills, capital and distribution that dominate global investment banking. After the US loss of competitiveness in finance, US investment banks were already deriving significant part of their business, if not the major part, from overseas markets.

Table 3.2 provides some data on major global investment banks. There is no intention to rank the institutions by any criteria. The value of

Table 3.2 Global investment banking ($B) (2006)

	Assets	**NIBT**
Goldman Sachs	838	14.6
Merrill Lynch	841	10.4
Morgan Stanley	167	6.6
Lehman Brothers	503	5.9
Citigroup	1,884	29.6
J P Morgan Chase	1,351	19.9
Deutsche Bank AG	1,486	8
UBS	1,965	10
Credit Suisse	1,029	9

Sources:
US banks: http://online.wsj.com/home/us
UBS: http://www.ubs.com/
Credit Suisse: http://www.csfb.com/home/index/index.html
Deutsche Bank: http://www.db.com/index_e.htm

assets camouflages the actual management of assets and movement of funds and capital. Investment banks have limited but highly specialized staff and use the most advanced financial technology. Together with other financial institutions, they provide an essential service in restructuring companies and markets to maximize opportunities and the benefits from efficient allocation of resources. The benefits of finance as well as the critique of these benefits are analyzed in greater detail in Chapter 9 on financial globalization. The data are for the end of 2006 because the credit turmoil distorts values that may still change significantly.

Governance and exit

The essence of capitalism is the process of creation and destruction.[7] A third industrial revolution beginning in the 1970s has created excess capacity by technology, organizational change, government policy and globalization.[8] Imperfect information about internal costs and those of competitors do not warn managers of the need to exit in market segments. High-cost producers need to exit the markets. A capital markets exit by M&A is less traumatic than bankruptcy. The increase in value caused by M&As can derive from increasing efficiency and also from wealth transfers.

There are four control forces that can soften the difference between the decisions by managers and what is socially optimal: capital markets, government, markets for products and factors of production and the system of internal controls of corporations under the responsibility of boards of directors.[9] The board is responsible for the entire viability of the firm. It selects, hires, fires and awards compensation to the CEO. However, boards have taken action too late, when bad performance was evident. CEOs may influence boards in such a way that they create an unfavorable culture, rendering them ineffective. Boards may not be informed adequately by the firm and some members may not be knowledgeable about financial or production issues. There may be more concern in boards about downside issues and adverse publicity than with value maximization. Board members typically have very small or no holdings of shares of the company. Ideally, the CEO should be the only member of management in the board. Excessive size in boards may subject them to easier control by CEOs. Typically, the CEO is the chairman of the board but separation of the two functions may result in better governance for the board.

Venture capital and leveraged buyouts (LBOs) provide examples of effective governance.[10] The organization in limited partnerships delegates

the role of active investors in managing the corporation to the general partners by the investors in the funds. The managers and board members hold significant parts of the shares. Board members represent significant holdings. Boards are relatively small, typically with less than eight members. The CEOs rarely chair the boards. The information problem is diminished because the active investors become familiar with the entire business during the due diligence in acquisition or investment and bring in their staff. The active investors also link the corporation with capital markets and investors.

An important part of the business of investment banks is advice to clients on the issue of debt and equity. In a way, this is complementary to the advice on restructuring the corporation by M&As. Companies depend on investment banks for the type of securities to issue, the evaluation of the financing available in markets, the timing of placement of securities and the geographical distribution of the market. Investment banks conduct the underwriting and distribution of the securities.

M&A

Change in technology, population, growth rates, investment and integration with other countries affect business models. Companies require changing their strategies or business models according to changes in the profitability of different activities. A company may find that it increases the value of the shareholders by merging with another company. For example, Microsoft could merge with Yahoo to provide better services to users and higher value for the shareholders of both companies. A corporation may find higher value within its business model by acquiring another company in the same or different market and at home or overseas. Ford and General Motors acquired similar foreign companies with this objective and then sold them after conditions changed. There have to be institutions that provide for the sound and fair implementation of changes required in corporate ownership and structure. These institutions facilitate the use of scarce resources—capital, labor and nature—in the most efficient way, that is, in maximizing growth and the availability of goods for satisfaction.

US investors have given trillions of dollars to corporations whose managers have discretion on their fortunes and profits. This power given to people who are not owners of the property has been studied intensely with the rise of the corporate form. The earliest warning would suggest investment in bonds instead of equities.[11] However, the returns on equities have surpassed those in bonds and the system of

managers of corporations with many shareholders has worked effectively. This is a key issue of corporate law. The traditional explanation of corporate law for the system to work rests on three types of arguments.[12]

There are legal constraints. The courts enforce legal prohibitions of theft, embezzlement, insider trading and others. They also enforce more vague legal constraints such as the duty of care and the duty of loyalty. Managers are caught by the courts in violation of these legal constraints, which act as deterrent of misconduct.

There is an institutional structure. Managers are checked by boards of directors, outside directors, shareholder voting, proxy contests and resulting law suits.

There is market monitoring. Managers are also checked by markets in products, labor, capital and corporate control. Ineffective or corrupt managers can lose their jobs when the companies are restructured or sold.[13]

The community of the corporate system is relatively small. It consists of several thousand senior managers and directors of large, publicly held corporations.[14] There is an additional small group of lawyers, mainly in New York and Wilmington but with some in Chicago and Los Angeles. The court in charge of oversight for the most part, because of Delaware's attractive franchise of corporate form, is the Delaware Chancery Court with judicial review by the Delaware Supreme Court. The small legal community has close to only five decision makers. In short, a small community imposes sanctions on its members of various types, formal, informal, legal and nonlegal.[15]

The essence of Delaware fiduciary law is that boards have freedom of discretion as long as they follow the right procedural process and act in good faith.[16] This can be in marked difference to other countries where protections have a stronger substantive approach. In Delaware, the courts define good faith by means of descriptions of the conduct of manager, director and lawyer that are based on facts and have norms. Delaware fiduciary law is characterized by standards that are generated in a narrative process. The stories of this process cannot often be reduced to a rule. Instead, the Delaware courts provide parables of what are good and bad managers and lawyers to define their job descriptions. Judges may add value by being more preachers than police officers.[17]

Leveraged buyouts

The Leveraged buyouts (LBO) consists of the acquisition of a company financed mainly by debt of the company.[18] In the typical LBO, the

company is taken private and in many cases significant new owners are members of management and even employees in some cases. LBOs can be attractive during periods of low interest rates. The LBO can take a company private while providing value to its shareholders. The success of the LBO depends on the business plan of the acquirers relative to the debt they issue. A sound business strategy would result in present value of benefits higher than the present value of debt, making the LBO highly successful. The rationale for LBOs is the need for restructuring corporations to promote efficient resource allocation. A dynamic economy benefits from opportunities to take a company private to improve its business model. At a future date the company can again become public to realize the value of the successful strategy. In a world of rapidly changing technology and competitive advantage of markets, the flexibility of LBOs is required.

There are displaced workers in LBOs, a cost that must be balanced with the increases in employment and efficiency of successful business strategies. Another important feature of contemporary industry is the focus of companies on specific areas of the production chain instead of on all the possible activities. There may be significant value in breaking up a company to focus on its most productive activity that could be compromised by keeping activities that are performed more efficiently in other companies.

There is a potential conflict of interest in the case of the acquisition of a company by managers and employees using the LBO process. The interests of the shareholders may not be adequately represented by the acquiring management.[19] The reduction of these conflicts of interests occurs through procedural mechanisms, including special committees of independent directors with direct advice from their own investment bankers and lawyers.

Hedge funds

There is unusually bad press for hedge funds, typically characterized as notorious speculators in financial markets.[20] Hedge funds evoke remunerations of millions of dollars, esoteric mathematical models and computer programs, opacity of balance sheets and strategies and offshore tax avoidance paradises. They also became synonymous with the threat of crises of banks in various countries, causing recession and unemployment after the collapse of the large hedge fund Long Term Capital Management in 1998. Hedge funds have also been identified with large losses in financial markets during the credit/dollar crisis after 2007.

The explosive growth of assets under management (AUM) in hedge funds, from $200 billion in 1998 to $1.25 trillion in 2006, is partly explained[21] by sophisticated financial theory and technology that allowed specialization into components parts of complex investment products. Some of these products were divided into components for trading in specialized markets and are explained in the next chapter. Professionals that could understand and attempt to manage the complexities of the new financial theory and technology established firms of their own. The response of financial institutions was to create their own hedge funds. Prime brokers and investment banks derive high returns from complex trading and became important participants in the industry.

The appendix to this chapter explains the mechanism of hedging. Although some hedge funds operated with hedges, this is not the most common current practice. The typical hedge fund has a flexible business model that includes leverage, or borrowing to take risk positions in multiples of the fund's capital, strategies in multiple global markets and frequent trading of positions.[22] There are benefits and risks of hedge funds. The main benefit is that hedge funds provide markets in distressed securities, preventing the collapse of prices during crises. The main concern with hedge funds is that they could take similar positions with high leverage at the same time, contributing to worsening financial crises. There is indirect regulation of hedge funds by means of regulation of their counterparties, prime brokers and investment banks.[23] In the credit/dollar crisis after 2007, some hedge funds closed or had problems but they were not at the center of the financial crisis.

Private equity

Private equity firms obtain funds from large investors such as pension funds, endowments, and so on. The contributors of these funds are the limited partners. The managers of the funds are the general partners. Private equity firms, sometimes called private investment firms, use the funds to buy publicly owned companies, that is, with stock owned by many shareholders and traded in stock exchanges. The objective is to increase the value of the firms with the intention of realizing high profits in making them public again. Another alternative is to sell them at a profit without turning them public.

There are several important considerations in the case against private equity.[24] Private equity does not provide significant diversification relative to a portfolio of equities; it is less transparent; it has risks of high

leverage; and the fees are quite high. The deduction of debt from taxes while dividends are taxed subsidizes LBOs. Managers of private equity groups may make deals in their self-interest but not necessarily in the interest of investors.

There are arguments in defense of private equity.[25] Private equity consolidates management and shareholder, eliminating the conflict of interest of management promoting its self-interest and not those of the shareholders. There are numerous benefits in going private: avoidance of excessive regulation, expensive shareholder suits and quarterly reporting. Debt costs are also deductible from taxes in the case of private companies. The level of debt forces managers to focus on making the company efficient. However, there is a new conflict of interest between the limited partners investing in private equity companies and the general partners that receive a management fee of 1.5–2 percent plus 20 percent contingent on profits. There is an incentive to go broke when the fund is having trouble. The issues cannot be solved theoretically and the empirical evidence is mixed as in all economics.[26]

There are three conclusions.[27] Private equity investment is of such level of risk that it should be considered only by sophisticated investors. There is still not sufficient knowledge on how private equity improves the efficiency of companies. However, the process of capitalism is characterized by trial and error; there are costs of learning. There is a strong case for eliminating the biases in taxation for deducting debt relative to taxing dividends to equity. Private equity has become large and transparency may become an advantage.

Some of the major private equity groups are shown in Table 3.3. The Carlyle Group was established in 1987.[28] It engages in global operations, originating, structuring and acting as lead equity investor. Its transactions include "management-led buyouts, strategic minority equity investments, equity private placements, consolidations and buildups and growth capital financings." The Blackstone Group manages $32.4 billion in private equity funds in more than 100 companies in many industries.[29] It has five capital partners' general funds. The transactions have included LBOs, joint ventures, partnerships, recapitalizations and growth capital investments in multiple industries.

Kohlberg, Kravis, Roberts & Co. or KKR was established in 1976, completing over 150 transactions with aggregate value of $279 billion.[30] The equity investments were valued at $74 billion at the end of 2006. This represented a multiple of 2.5 times of invested capital of $30 billion. Investment funds originate in pension funds, financial entities, insurance companies and universities.

Table 3.3 Private equity groups

Assets Under Management (AUM)	
Blackstone Group	79
Carlyle Group	57
Bain Capital	40
Kohlberg, Kravis Roberts & Co.	30
Texas Pacific Group	30

Sources:
Carlyle Group http://www.thecarlylegroup.com/eng/company/index.html
Blackstone Group http://www.blackstone.com/private_equity/index.html
http://online.wsj.com/article/SB117974471829909375.html?mod=sphere_ts
Bain Capital http://www.baincapital.com/pages.asp?b=1
Kohlberg, Kravis, Roberts & Co. http://www.kkr.com/who/who.html
Texas Pacific Group http://www.texaspacificgroup.com/about/index.html

Summary

Government regulation is more intensive in commercial banking because of the history of financial crises that are accompanied by significant losses of output and employment. Central banks regulate and supervise commercial banks. The government also regulates securities markets, a subject treated in more detail in Chapter 10. Thus, the activities of commercial and investment banks are closely regulated and supervised in most countries. Hedge funds and private equity groups are regulated indirectly through their relations as counterparties with commercial and investment banks.

Appendix: security prices, yields and hedges

It is convenient to consider the definition and mechanism of hedge. Consider the data for the Fannie Mae mortgage-backed security provided in the index of Merrill Lynch as reported by the *Wall Street Journal* on Friday March 14, 2008.[31] Fannie Mae and Freddie Mac are the two federal housing enterprises with charters granted by Congress. Their business is to insure and finance mortgages. They are publicly traded companies with triple-A rating. Their securities are perceived as having slightly more risk than the comparable treasury securities. A mortgage-backed security is a bond in which the interest and principal payments

are derived from original mortgages insured by Fannie Mae. The insurance covers the risk of default, that is, the nonpayment of interest and principal.

The Fannie Mae security had a yield of 5.141 percent on March 14, 2008. The yield is the effective interest rate at the moment of quoting the security assuming that there were no changes in interest rates until maturity. Interest rates do change and affect the prices of bonds. Consider a simple example of a one-year security with an interest payment of 10 percent. An investment of $100 in that security now yields $110 in a year, consisting of the principal of $100 and the interest of $10 (10 percent of $100). Thus, the yield is 10 percent. Suppose there is an instantaneous change in the interest rate to 20 percent. What is the new price of the security with principal of $100 paying $10 in a year? The new price requires the use of the new interest rate of 20 percent. To obtain $110 in one year with interest of 20 percent the security would have to be priced at $91.666. The interest of 20 percent on $91.666 is 0.20 times $91.666, which is equal to $18.333. At maturity, the buyer of the security would receive the $91.666 invested plus the interest of $18.333 equal to $109.999. In shorthand calculation, $110 divided by 1.20 equals $91.666. Thus, the original buyer at $100 with 10 percent interest would only be able to sell the security at $91.666 because the interest rate increased to 20 percent. The loss of principal would be $100 less $91.666 divided by $100 equal to 8.3 percent. Thus, the prices of bonds decrease when interest rates increase. If the interest rate were to decrease from 10 percent to 5 percent, the price of the bond, in the shorthand calculation, would be equal to $110 divided by 1.05, which is equal to $104.762. In this case there would be a capital gain of $104.762 divided by $100, which is equal to 4.762 percent.

Consider now a security paying 10 percent in year one and 10 percent in year two when it returns the principal of $100. The price of that security is calculated as:

$$P = \frac{\$10}{(1.10)} + \frac{\$10 + \$100}{(1.10)\,(1.10)} = \frac{C_1}{(1+r)} + \frac{C_2+N}{(1+r)^2}$$

$$= \$9.09 + \$90.91 = \$100 \qquad (3.1)$$

That is, the price of a security paying two yearly coupons of 10 percent and the principal of $100 would be worth today $100.

Consider a five-year bond paying interest in the form of coupons every six months and returning the principal in the sixtieth month.

The formula for the price or net present value of such a security would be:

$$P = \frac{C_1}{(1+r)} + \frac{C_2}{(1+r)^2} + \frac{C_3}{(1+r)^3} + \ldots + \frac{C_{59}}{(1+r)^{59}} + \frac{C_{60}+N}{(1+r)^{60}} = \sum_{t=1}^{60} \frac{C(t)}{(1+r)^t} \qquad (3.2)$$

The variables are as follows: P is the price of the security; r is the discount rate or yield in proportion such that 10 percent would be 0.10; C_t is the cash flow at time t, which are from 1 to 60; N is the principal; and Σ is the summation notation that expresses in shorthand the sum of all the discounted individual terms or cash flows from 1 to 60. The denominators of 3.2 are discount factors, bringing to present value the cash flow. The first one, $C_1/(1+r)$, is the same as in the example of \$110/1.10 equal to \$110/(1+0.1). The second coupon payment, C_2, must be brought to present value by two discounts of $(1+r)$ over two semesters as in 3.2. The same is true for the remaining cash flows. The discount rate connects present and future cash flows.

Equation 3.2 is one equation with two unknowns, P and r. Suppose that a broker quotes the discount factor, or yield, r as 10 percent. Then equation 3.2 can be used to compute the price to pay for the security. If the dealer quotes the price, then the equation can be solved to obtain the yield or r. The discount factors enter the formula in the denominator. Thus, the higher the yield the lower the price or what is the same, the higher the price the lower the yield.

There is a more complex and useful concept. Duration is the interest elasticity of the price of a security. It measures the sensitivity of price to yield, or the percentage change in price in response to a percentage change in the yield. Securities with more distant cash flows and return of principal have higher duration. For example, the 30-year bond has much higher duration than a 10-year bond.

The price of a security paying principal and interest, or fixed-income security, declines after an increase in interest rates and increases after a decrease in interest rates. There is an equivalent statement that the yield of a fixed-income security decreases after an increase in price and increases after a decrease in price.

Securities are quoted in terms of risk spreads relative to the Treasury security that has the same maturity. In the example here, the Fannie Mae mortgage-backed security had a spread of 132 basis points. A basis

point is one hundredth of one percent. That is, one basis point is 0.01 percent and one hundred basis points is 1.00 percent. Thus, the comparable Treasury security had a yield of 5.141 percent less 1.32 percent equal to 3.82 percent. The spread of an additional yield of 1.32 percent measures the perception of the market of the extra risk of owning the Fannie Mae mortgage-backed security relative to the comparable Treasury.

There were wide fluctuations in spreads in the 52 weeks ending on March 14, 2008. The yield on the Fannie Mae mortgage-backed security was as low as 3.73 percent, equivalent to a spread over the comparable Treasury of 27 basis points, and as high as 6.324 percent, corresponding to a spread of 180 basis points. The significant increase in spreads over the 52-week period ending on March 14, 2008 was the result of the weakening of the quality of mortgage securities, that is, fear of default. The *Wall Street Journal* reported that the stock price of Freddie Mac declined in that period by 65.1 percent, that of Fannie Mae by 58.3 percent and the segment of mortgage finance by 66.2 percent.[32] The higher risk of debt issued by Fannie Mae and Freddie Mac was reflected in widening spreads of the debt securities they issued as well as in the price of their stocks.

Consider now the example of a hedge. The view would assume that the spread of the Fannie Mae mortgage-backed security had reached too high a level and that mortgage payments would improve with stability in housing prices. The spread of the Fannie Mae security would decline somewhere between the current 132 basis points and the earlier low of 27 basis points. Thus, the yield of the Fannie Mae security would drop from the current 5.141 percent closer to the earlier low of 3.73 percent. There would be a capital gain in buying the Fannie Mae security at a high yield to sell it at a higher price corresponding to a lower yield.

The risk of the strategy would be a general rise in interest rates, reducing the price of both the Fannie Mae security and the comparable Treasury, which could be the hedge vehicle. The objective of the hedge is to obtain an offsetting cash flow in case of an increase in interest rates. The combined portfolio consists of a long position in the Fannie Mae Security together with a short position in the comparable Treasury to lock in the gain from the decline in spread. If interest rates increase, the price of the Fannie Mae security declines but the investor gains from the short position that pays the difference between the prices of the comparable Treasury before and after the increase in yield.

There are two major problems in hedging. The prices of the Fannie Mae mortgage-backed security and the comparable Treasury may not move in the same direction by the same proportion. In more technical terms, these prices are imperfectly correlated. The second and related problem is measuring how much hedge is required.

4
Risk Management and World Trade, Investment and Finance

Introduction

The creativity of finance professionals in developing and marketing new products is moving far ahead of the technical capacity to measure their risks and rewards. Risk management is still a challenge to most financial institutions, supervisors and regulators.

Separate sections below provide analysis of risk management, the standard of the financial industry (value at risk), credit risk models and stress tests. The following sections introduce the dimensions of world trade, FDI and financial markets, providing essential background for discussion of the analytical and empirical issues of international economic and financial policy in subsequent chapters. The summary at the end of the chapter collects some conclusions. An appendix illustrates financial risk.

Risk management

Every decision taken by individuals and companies requires an evaluation of what is expected in terms of reward, or the expected return, and the chances of not realizing that return, or its risk. This section considers general principles of methods and practices to manage financial risk. The standard of the industry is value at risk. There are many models for measuring credit risk but no standard. Many institutions and investors are relying on tests of their investments in extreme events, which are named stress tests. There are also stress tests of economies used by the IMF and international and national institutions.

The data in Table 4.1 illustrate the concepts of risk and return. There are three groups of companies by business field. The first two companies are the Brazilian mining company Vale do Rio Doce, with one-year return of 40.25 percent on March 20, 2008, and the UK-Australian mining Company Rio Tinto with 75.67 percent. High return does not come without high risk. For example, buying at the 52-week high and selling at the low would have caused a loss of 45.7 percent for Vale and 54.7 percent for Rio Tinto. The measure of risk is the volatility, or 50.49 percent for Vale and 58.30 percent for Rio Tinto. The volatility captures the uncertainty of the return of the stock, providing a measurement of the dispersion of possible returns.[1]

The second group in Table 4.1 provides the data for two oil companies. An investment in the state-owned integrated oil and gas company of Brazil, Petrobrás, at the 52-week high selling at the low would have lost 55.7 percent. Investing at the high and selling at the low for Exxon would have lost 24.6 percent. Petrobrás had a one-year return of 78.10 percent compared with only 18.05 percent for Exxon.

The final group of companies includes two banks. J P Morgan Chase avoided the mortgage-related products that caused significant pain in financial markets. Its one-year return was −3.26 percent and buying at the 52-week high and selling at the low would have lost 32.4 percent. Bear Stearns is an investment bank established in 1923. It encountered difficulties in financing its positions of securities during the week of March 10, 2008, and J P Morgan Chase agreed to acquire it with support from the FRBNY on March 16, 2008. The one-year return was −96.05 percent and investing at the 52-week high and selling at the low would have lost 98.2 percent.

Table 4.1 Data on selected stocks US$ per share and percent

	$ Per share			Annual percent	
	3/20/08	High	Low	One year return	90-Day volatility
Vale do Rio Doce	52.37	66.80	36.25	40.25	50.49
Rio Tinto	387.50	484.21	219.12	75.67	58.30
Petrobrás	83.25	105.00	46.50	78.10	56.20
Exxon	85.00	95.27	71.87	18.05	31.10
J P Morgan Chase	45.97	53.25	36.01	−3.26	47.16
Bear Stearns	5.96	159.36	2.84	−96.05	257.05

Source: www.bloomberg.com

The example with actual data illustrates the importance of calculating how much can be gained from an investment and how much can be lost. The measurement of risk is a highly technical process that requires specialized professionals with practitioner experience. It may require consulting with commercial vendors and academics when problems become difficult to resolve internally. Risk measurement is inexact. Bear Stearns has highly competent and experienced professionals but was unable to anticipate the liquidity risks that caused the loss of its independence as an investment bank after 85 years of successful operations. Many US households did not estimate correctly the returns and risks of investments in houses and stocks, suffering in some cases foreclosure and losses.

Risk management identifies the sources of risk in the operations of financial companies. The process provides measurement of the risks of individual transactions and the institutions as a whole. For example, in the case of Bear Stearns it would measure the possible losses from taking positions or exposures in securities backed by mortgages. The payment of principal and interest by mortgage debtors is transferred as cash flows to the owners of the mortgage-backed bonds. It would also provide measurement of the potential losses of these positions relative to the capital of the company. The process would find forms of mitigating the risk, such as hedges and limits relative to capital.

There are various types of risks. The appendix provides illustrations with actual data, covering concepts used in several chapters. Market risk consists of the possible losses from positions in fixed-income securities, such as the decline in prices of Treasury and corporate bonds after an increase in interest rates.

Currency risk originates in variations of exchange rates. The exchange rate is the units of domestic currency required to buy a unit of foreign currency. The appendix illustrates the following important propositions using actual data. Devaluation of the dollar cheapens the price of exports of the US in other currencies and increases the price of imports into the US in dollars. For example, the US is trying to sell American-made cars overseas because dollar devaluation has decreased their prices in foreign currencies. Invoicing exports to the US in dollars during dollar devaluation causes a decrease in the value of domestic currency for the exporter. For example, sales of German cars in the US invoiced in fixed dollar prices result, after dollar devaluation, in lower revenue in euros for a German manufacturer. Devaluation of the dollar increases the dollar value of assets held abroad by US residents, such as US FDI in Germany, and decreases the value in domestic currency of

assets held in the US by foreign residents, such as German FDI in the US.

Credit risk results from default, or the non-compliance with the clauses of timely and full repayment of an obligation, such as 90-day past due mortgage payments that can cause foreclosure. Liquidity risk occurs when a position cannot be re-financed, such as the case of Bear Stearns, which can cause the sale of the securities by the creditor to recover the loan. Operational risk consists of errors or fraud in the operations and systems of companies, such as the unauthorized trades by a rogue futures trader in Singapore that caused the bankruptcy of Baring Bros.

Risk measurement alone does not ensure an effective risk management process.[2] The first-class standards such as Basel II capital requirements, covered in Chapter 10, require the involvement and accountability of senior management and the board of companies for the risk management process and its inputs. This requirement is important because some of the measurements of risk management may reveal the impairment of the capital position of the company under certain portfolio strategies. The company's survival is threatened by the erosion of its capital.

The ideal company of some size must have a dedicated risk management group. The manager of this group should be a member of senior management. The risk management group and its decisions must be entirely independent of risk-taking and trading units. This independence ensures the integrity of the process and its credibility. It is similar to the separation of accounting from the profit centers. The group must be capable of finding the information on exposures required for measurement of risk. It should report directly to senior management while maintaining the process of gathering reliable information with risk-taking units.

The company determines risk policies that are clear in meaning and implementation. The senior management and board should approve these policies. There should be dissemination of the policies in internal documents that are widely available and frequently updated.

The risk process should have its code of conduct and discipline. The senior management and the board are accountable for discipline because of the potential impact on capital of careless risk decisions. Managers should have incentives for following risk policies and procedures.

There is no substitute for the market experience and knowledge of professionals in the company. The management of risk requires decisions that cannot be based alone on risk measurements. The ideal combination of risk and return for the company must be evaluated by professionals with significant market experience.

Value at risk

The standard of the financial industry for reporting risk to the public and senior management is value at risk.[3] It is reported to management and regulators in the form of a simple statement, such as: the bank has the risk of losing at most $100 million per day 99 percent of the time. The statement has a value of the risk, $100 million of possible losses. It has a time horizon, one day. There is also a "level of confidence" about its occurrence, 99 percent. In other words, the bank will lose more than $100 million only in 1 percent of possible occurrences.

The measurement of value at risk is complex. The financial company conducts exercises of how changes in prices of financial assets—bonds, commodities, currencies and equities—affect its investments. For every assumption about prices of financial assets there is a corresponding profit or loss in one or several of the investment positions. There is a likelihood or probability of occurrence of all these scenarios of prices of financial assets. The value at risk determines the maximum loss in combined probability of occurrence of 99 percent of the scenarios. The concept has intuitive appeal, answering the question of management of how much can the bank lose in a day most of the time. There are extreme events of the exceptional 1 percent that are captured by the method of stress testing described below.

Banks report their measurements of value at risk, an excellent vehicle to inform investors. J P Morgan Chase reported an increase in its value at risk from $83 million per day with 99 percent confidence in the first quarter of 2007 to $123 million in the fourth quarter.[4] The largest component of the possible daily losses originated in $103 million in fixed-income trading in the fourth quarter relative to only $45 million in the first quarter. The second highest component was $63 million in equities in the fourth quarter relative to $42 million in the first quarter. The credit portfolio showed a value at risk of $26 million in the fourth quarter more than offset by a diversification opposite effect of $27 million. Value at risk takes into consideration that different asset classes vary in opposite direction such that diversification can provide gains that offset losses.

Credit-risk models

There is credit risk when the debtor does not comply with one or several of the clauses in the agreement with the creditor. A credit agreement is delinquent when payment is not made on time up to 90 days. Typically, the debtor is in default after 90 days. There has been phenomenal growth of credit-risk products since 2000. The purpose of credit-risk

models is to determine the likelihood of the incidence of default, which is the percentage of credit agreements that actually default and the losses caused by default. Credit-risk models also price financial securities to account for the likelihood and losses of default. These models are used in the capital requirements of Basel II considered in Chapter 10.

A basic credit-risk product is the credit default swap (CDS). In a CDS, a *buyer* of protection pays a specified periodic fee to a *seller* in exchange for a payment in case of a *credit event* of a *referenced credit*. Some types of credit events include bankruptcy, merger, cross acceleration, cross default, downgrade, failure to pay, repudiation, restructuring and currency inconvertibility. Referenced credits could include a named issuer, a corporation, a private borrower and a sovereign. The buyer pays a periodic annuity (A) to the seller. In case of a credit event, such as default, the seller pays typically the face value less the market value at default.

There are two pricing problems.[5] First, there is need of a price at origination, which consists of choosing A such that the market value of the CDS is zero. Second, the CDS changes value after origination because of movements of interest rates and credit quality, causing the need to find a market price with which to value the security in the balance sheet, what is known as mark-to-market (MTM). There are exchanges where the credit spreads are traded. A major problem in the credit crisis beginning in 2007 was the increase in the payment by the seller to the buyer of credit protection. The increase is a loss to the seller that pays more to the buyer that gains the increase. The accounting of the losses caused by CDS constituted an important part of the crisis.

The second, more complex credit-risk security is the collateralized debt obligation (CDO).[6] The hypothetical example consists of a synthetic (not based on actual securities) CDO of $1 billion with three tranches.[7] The unrated junior tranche absorbs the first losses; the second or mezzanine tranche the subsequent losses and the third or senior tranche the remaining losses. The three tranches are sold to different investors. The reference portfolio consists of 100 single-name CDS of $10 million each and average credit rating of single-A. A bank could select the credits of the reference portfolio to hedge loans on its balance sheet, issuing such a synthetic CDO. An investment bank could create the synthetic CDO on behalf of an asset manager that chooses the reference portfolio based on fundamental credit analysis. There were tough problems of accounting in pricing CDOs rich in mortgage-backed securities in the crisis after 2007. After origination, different models provide different prices and they are entirely different with the rare

observation of market prices. Many banks created special purpose entities, called structured investment vehicles (SIV), to hold CDO portfolios off the balance sheet. Eventually, banks had to incorporate the CDOs in the balance sheets with large losses.

Stress tests

Value at risk is less reliable when there are big jumps in the variables, such as the collapse of prices of stocks, bonds and commodities and the fluctuation of exchange rates.[8] There can be extreme events with low probability that may evaporate capital, such as the liquidity crisis of Bear Stearns.

There is a survey of stress tests in 64 banks and securities firms in 16 countries.[9] The institutions reported 960 stress tests, involving over 5000 risk factors. Central banks had subsequent meetings with the participants in the survey to discuss the practice of stress testing. A general conclusion is the existence of a wide diversity across firms of stress tests and their role in risk management. The scope and sophistication of the tests vary in accordance with the scale and complexity of operations of the different companies.

The major role of stress tests is as complement of value at risk, revealing potential losses in extreme events. The major financial companies continue to use traditional historical events such as Black Monday (the sharp decline in the stock market in 1987), the bond market losses in 1994 when the Fed increased sharply interest rates, the Long Term Capital Management episode and the Russian default in 1998. There is growing interest in the Asian crisis of 1997 because of the greater participation of Asian firms in the survey. The crises in emerging markets are covered in Chapter 9. The fluctuations of markets following the terrorist attacks in the US in 2001 are also used in stress tests of fixed income, equities and credit. Many tests using hypothetical scenarios focus on changes in the potential of economic growth, using such events as faster increase in interest rates in industrial countries. The decline of growth in the advanced countries leads to tests of widening credit spreads and decline in stock prices of emerging countries.

Changes in oil prices are widely used in stress tests. Parallel changes in interest rates and even shifts in yield curves are used in the most common sensitivity tests. The yield curve plots yields of securities according to maturity. More than one-half of the tests use increases in interest rates. The net long duration exposure of financial firms may explain the concern of testing interest rate increases. Duration measures

the sensitivity of losses of positions with long maturity as a result of increases in interest rates. The future trend is likely to consist of greater focus on credit derivatives and the integration of risks, both of which pose major challenges of measurement, analysis and judgment. The credit/dollar crisis after 2007 is likely to be used in future stress tests.

The IMF and central banks conduct stress tests of entire financial systems of countries to guide policies of preventing and resolving financial crises.[10] The objective of macro stress tests is to evaluate the resilience of domestic financial systems of countries to wide fluctuations in financial variables.

World trade

The benefits of trade and its relation to economic growth constitute one of the most actively debated issues in international economic policy and in globalization. The analysis and empirical research relating to trade are considered in Chapters 6, 7 and 8. The objective of this section is to provide background on the volume of world trade and its growth rate.

Exports and imports of merchandise and services are shown in Table 4.2, which also provides the distribution by regions. In 2005, total exports of merchandise and services reached $12,574 billion, about 27 percent of world output of around $44 trillion. The share of Europe

Table 4.2 World trade by regions ($B) (2005)

	Merchandise				Services			
	Exports	**%**	**Imports**	**%**	**Exports**	**%**	**Imports**	**%**
World	10,159	100.0	10,511	100.0	2,415	100.0	2,345	100.0
North America	1,478	14.5	2,285	21.7	422	17.4	366	15.6
USA	904	8.9	1,732	16.5	354	14.6	281	11.9
South America	355	3.5	298	2.8	68	2.8	70	2.9
Europe	4,372	43.0	4,543	43.0	1,245	52.0	1,120	48.0
Africa	298	2.9	249	2.4	57	2.0	69	3.0
Middle East	538	4.1	322	3.1	55	2.3	85	3.6
Asia	2,779	21.8	2,599	24.7	525	21.7	573	24.4
China	762	7.5	660	6.3	74	3.1	83	3.5
Japan	595	5.9	515	5.8	108	4.5	133	5.7
CIS	340	3.3	216	2.1	42	1.7	62	2.6

Sources:
http://www.wto.org/english/res_e/statis_e/its2006_e/section3_e/iii01.xls
http://www.wto.org/english/res_e/statis_e/its2006_e/section3_e/iii02.xls
http://www.wto.org/english/res_e/statis_e/its2006_e/section3_e/iii04.xls
http://www.wto.org/english/res_e/statis_e/its2006_e/section3_e/iii05.xls

in exports of merchandise is about 43 percent, which is equal to the share in exports of services. In contrast, the share of North America in exports of merchandise is only 14.5 percent and 21.7 percent in exports of services. The significantly high trade deficit of the US is shown by exports of $904 billion in 2005 compared with imports of $1732 billion. This is one of the critical vulnerabilities of the world economy, analyzed in Chapter 11.[11] Another important feature of world trade is the significant share of China in world exports of 7.5 percent, not much less than 8.9 percent for the US. However, there is an issue of the actual value added in China, which imports semi-finished goods to re-export them with finishing touches in production. Another key feature of world trade is the small share by developing countries in Africa, only 2.9 percent of world exports of merchandise. There is an issue of fair trade in the form of greater access to markets by developing countries, especially in agricultural products that receive high protection in developed countries.

The leading exporting countries in 2005 were Germany with $969.9 billion (9.3 percent of the total), the US with $904.4 billion (8.7 percent of the total) and China with $762.0 billion (7.3 percent of the total).[12] The leading importing countries were the US with $1723.4 billion (16.1 percent of the total), Germany with $773.8 billion (7.2 percent of the total) and China with $$660 billion (6.1 percent of the total). In 2005, the breakdown of exports by products was:[13]

- 8.4 percent in agriculture,
- 17.2 percent in fuels and mining products with fuel accounting for 13.8 percent of total world exports,
- 72 percent in manufactures (of which 37.9 percent machinery and transport equipment).

In 2005, the breakdown of world exports of commercial services was 23.6 percent in transportation, 28.4 percent in travel and 48.1 percent in other commercial services.[14]

The yearly average growth rates of world trade and output are shown in Table 4.3. The data on value reflect growth of volume and of inflation. The high numbers in the 1970s reflect the environment of inflation resulting from the oil price increase. An important characteristic of the growth rates is the higher rate of growth of export volume relative to production and world GDP. For the period as a whole, 1950–05, the average yearly rate of growth of trade volume was 6.2 percent, much higher than the rate of growth of world GDP of 3.8 percent.

Table 4.3 Growth of world trade 1950–05 average percent per year

	Value exports			Volume exports			Volume production			
Year	Total	Agric	Manuf	Total	Agric	Manuf	Total	Agric	Manuf	World GDP
1950–63	7.4	3.7	10.1	7.7	4.5	8.6	5.2	2.9	6.6	4.7
1964–9	9.9	4.3	9.6	8.9	4.6	11.8	6.3	2.4	7.9	5.7
1970–9	19.6	16.1	19.1	5.9	3	7.4	4.3	2.4	11.3	4.3
1980–9	6.3	4.3	8.3	3.8	2.1	5.6	2.4	2.3	2.9	3.2
1990–9	6.3	3.2	7.3	5.7	3.7	6.4	2.3	2.2	2.3	2.1
2000–5	10.6	7.6	9.4	5.6	3.6	6.3	2.7	2.1	2.9	2.8
1980–05	7.3	4.6	8.2	4.9	3.0	6.1	2.4	2.2	2.7	2.7
1950–05	9.7	6.3	10.7	6.2	3.6	7.6	3.9	2.5	5.7	3.8

Source: Calculated from data in WTO http://www.wto.org/english/res_e/statis_e/its2006_e/its06_longterm_e.pdf

An important characteristic of trade is that the long-term average yearly growth rate of manufacturing exports, 7.6 percent, is much higher than those of manufacturing production, 5.7 percent, and growth of world GDP, 3.8 percent. The growth rate of manufacturing exports in the long term of 7.6 percent is twice the rate of growth of agricultural exports, 3.6 percent.

Financial flows and FX

The BIS data on bank assets and external assets and domestic and international debt securities are shown in Table 4.4. The dollar values in 2006 are quite high. The average yearly growth rates of bank assets have been in excess of 13 percent. There has been more than a doubling of bank assets per decade in the past 40 years. The growth of international debt securities in the past 20 years has been 16.2 percent per year on average.

The BIS has conducted multiple triennial surveys of FX and derivatives. The 2007 survey reported by BIS included transactions in 54 countries and jurisdictions.[15] The FX data cover spot (same day) transactions, forward contracts (an agreement to convert an agreed value in one currency into another currency at a pre-specified FX rate at a future date) and FX swaps (an agreement to exchange cash flows in different currencies at a future date). The over the counter (OTC) data cover currency and interest rate derivatives. OTC transactions are directly among companies and, thus, outside formal exchanges. The data also cover outstanding values of OTC derivatives in FX, interest rates, equity, commodities and credit.

Table 4.4 Bank assets and external assets and domestic and international debt securities

		Average yearly growth rate % per year	
	2006 $B	**Year**	**%**
Bank assets	29,381	1977–06	13.4
Bank external assets	26,094	1977–06	13.8
Domestic debt securities	48,715	1989–06	7.5
International debt securities	18,434	1987–06	16.2

Sources:
Bank assets: http://www.bis.org/statistics/pcsv/prov1.csv
http://www.bis.org/statistics/provbstats.pdf#page=7
International debt securities: http://www.bis.org/statistics/qcsv/anx12a.csv
Domestic debt securities: http://www.bis.org/statistics/qcsv/anx16a.csv

A derivative security pays in accordance with the performance of an underlying security based on a "notional" or "face" value. For example, the futures contract for delivery of 1000 barrels of "light sweet" crude oil on May 8, 2008 at the petroleum exchange NYMEX closed on April 9, 2008 at $110.87/barrel.[16] If in the following trading day on April 10, 2008, the contract closed at $111.87, the holder of one long contract would have a gain of $1000 (1000 barrels x $1/barrel) and the holder of a short contract a loss of $1000. The exchange would collect $1000 from the short and credit the same amount to the long. Thus, the futures derivative pays in accordance with the performance of the underlying price of oil less commission.

There are other derivatives such as a call option, the right but not the obligation to purchase crude light oil at a specified strike price. For example, on April 9, 2008, the settlement price of a call option to buy 1000 barrels of light sweet crude oil at $111/barrel expiring in May 2008 was $2.57/barrel.[17] Suppose that the price increases to $116/barrel by the date of expiration in May 2008 or earlier. The buyer of the call option at $111/barrel can sell a call option for $116/barrel, earning $5000 (1000 barrels $\times$ $5/barrel) less the cost of $2570 ($2.57 $\times$ 1000) or $2430 less commission. Options afford high leverage. In this case there is a gain of 94.5 percent ($2430/$2570). If the price at expiration is $111/barrel or less, the entire price of $2570 plus commission would be lost, that is 100 percent of the investment. There are much more complex options and a huge variety. Significant volumes of derivatives are traded OTC among entities and individuals without using formal exchanges such as NYMEX.

The BIS reports an increase in daily turnover of traditional FX transactions in 2004–7 by 69 percent, reaching $3.2 trillion in April 2007.[18]

At constant exchange rates, the increase is by 63 percent. Market sources suggest that the growth is driven by the combined trading activities of hedge funds, mutual funds, pension funds and insurance companies. The composition of FX trading was dominated by the dollar relative to other currencies with 88 percent of all transactions. The UK continues to be the most important center of trading with 34.1 percent of total turnover, 16.6 percent for the US and 6 percent for Japan.

The BIS also reports an increase of global daily turnover of combined FX and interest rate derivative contracts by 73 percent in the three years ending in 2007, reaching $4.2 trillion.[19] The increase at constant exchange rates is 65 percent, higher than the 50 percent experienced in the earlier three-year period. The rapid growth in interest rate derivatives drove daily turnover to $1.7 trillion, still behind turnover in FX derivatives, which reached $2.3 trillion in April 2007. Exchange-traded derivatives reached daily activity of $6.2 trillion, growing by 36 percent in the three-year period ending in April 2007.

FDI, equities, securities and derivatives

The benefits of FDI constitute another important issue of international economic policy. FDI is the investment of a company in one country in the economy of another. For example, the establishment by Toyota of a factory in the US is FDI. The benefits of the openness to FDI and financial flows are considered in Chapter 9 on financial globalization. The objective of this section is to provide data on the dimensions of FDI and securities.

The data of UNCTAD of the UN are shown in Table 4.5.[20] There has been strong dynamism in the world's inflow of FDI, jumping from $59 billion in 1982 to $916 billion in 2005, at the average yearly rate of 12.7 percent, shown in Table 4.5.

The share of developed countries in FDI in 1980–05 has been quite high. The data of UNCTAD show that the developed countries had a

Table 4.5 Average yearly growth rates of FDI 1982–05

	2005 $B	**Average growth rate 1982–05 % per year**
Inflows	916	12.7
Outflows	779	15.6
Inward stock	10,130	12.7
Outward stock	10,672	13.3

Source: UNCTAD, *World investment report 2006* (New York: UN, 2006), 9.

share of 75.6 percent of the inward stock in 1980 that declined slightly to 70.3 percent in 2005 while the outward stock was relatively stable at 87.3 percent in 1980 and 86.9 percent in 2005. The share of the outward stock of the European Union rose from 37.2 percent in 1980 to 51.3 percent in 2005. The developing countries increased their share in the inward stock from 24.4 percent in 1980 to 27.2 percent in 2005 while their outward stock declined from 12.7 percent in 1980 to 11.9 percent in 2005. Asia and Oceania increased their share in the inward stock from 10.5 percent in 1980 to 15.4 percent in 2005 while the share in the outward stock also rose from 2.9 percent in 1980 to 8.2 percent in 2005.

There are about 70,000 transnational corporations (TNC) in the world with 770,000 foreign affiliates, according to the UNCTAD.[21] The number of TNCs in developing countries is around 20,000. UNCTAD finds that FDI has grown faster than gross fixed capital formation, or domestic investment. The share of value added by foreign affiliates in world GDP, which measures the share of international production in world output, is increasing, being about 10 percent of world GDP in 2005 compared with 7 percent in 1990.

The BIS also conducts a semiannual survey of the OTC statistics of derivatives markets.[22] The information of the BIS survey originates in the G10 countries and Switzerland. The notional amounts of all OTC derivatives contracts increased from $257 trillion in December 2004 to $415 trillion in December 2006, or by 61.4 percent. The gross market value, which is the actual risk, increased from $9.4 trillion in December 2004 to $9.7 trillion in December 2006, or by 3.2 percent. The gross market value is similar to the option price in the example above, which is the true cost of replacing the contract, instead of the much higher notional value. The increase in notional amounts was much larger than the increase in the actual risk in the contracts. The gross credit exposure declined from $2075 billion in December 2004 to $2045 billion in December 2006. There was significant growth in credit derivatives. The gross value of CDS increased from $133 billion in December 2004 to $470 billion in December 2006, or by 253.4 percent. The credit/dollar crisis began with the difficulties with CDS value and accounting. Contracts linked to equity grew in gross value from $498 billion in December 2004 to $851 billion in December 2006, or by 70.9 percent. Interest rate contracts declined in gross value by 10.7 percent to $4.8trillion. FX contracts declined in gross value by 18.4 percent to $4.8 trillion. The notional value of CDS increased from $6.4 trillion at the end of 2004 to $28.8 trillion at the end of 2006, or by 350 percent.

The market for asset-backed securities illustrates current activity in financial markets. The revenue to banks in 2006 from asset-backed securities reached $30 billion.[23] It was equivalent to revenue from equity derivatives or trading in cash equities. Financial institutions bundle assets such as CDOs, mortgages and loans in securities that are sold to investors. The growth of this market originates in the demand for higher yields by investors and in the desire of lenders to transfer their credit risks through the capital markets. There are estimates that the volume in these markets has grown from around $500 billion in 2000 to over $3000 billion in 2006, with 77 percent originating in the US.[24] The revenue from this business to US banks was $19.9 billion while that of European banks was $7.5 billion.

Summary

Risk measurement is still imprecise. However, it appears that financial institutions require a formal risk management process that may prevent excessive risk relative to the capital base. Senior management is accountable for the risk management process because of the potential impact of careless risk exposures on capital and the survival of the institution.

Appendix: financial risk

The exchange rate is the units of domestic currency required to buy a unit of foreign currency. The exchange rate is also quoted for some currencies as the units of foreign currency required to buy a unit of domestic currency, which is simply the inverse of the first concept. Consider the illustration of exchange-rate risk in Table 4.6. Part A shows the exchange rates of the US dollar (USD) versus the euro (EUR) and the Japanese yen (JPY) on two dates separated by one year, April 2 in 2007 and 2008. The definition of depreciation is the change in value of a currency relative to another. Devaluation has the meaning of change in value of a currency that is controlled by the government but the terms are used interchangeably. The currency abbreviations are used only in this appendix.

Part B considers three types of exchange-rate risks based on the actual data in Part A. The note to the table explains the care needed in using the appropriate dimensions to convert values in one currency into another. In Table 4.6, the first line after effect on trade shows the conversion into EUR of an export of USD 10,000 on April 2, 2007: USD 10,000 divided by USD/EUR 1.3374 equals EUR 7477. After one year that export would equal EUR 6403 (10,000/1.5618). The price of the export

Table 4.6 Impact of devaluation on trade, capital and dollar invoicing

A. *Exchange rates*			
Date	USD/EUR	JPY/USD	
04/02/2008	1.5618	102.7700	
04/02/2007	1.3374	117.6900	
B. *Exchange risks*			
Transaction	04/02/2007	04/02/2008	Percent change
Effect on trade			
USD 10,000 export			
To Germany	EUR 7477	EUR 6403	−14.4
To Japan	JPY 1,176,900	JPY 1,027,700	−12.7
EUR 10,000 export			
To US	USD 13,374	USD 15,618	16.7
JPY 10,000 export			
To US	USD 84.97	USD 97.30	14.5
Risk of dollar invoicing			
USD 10,000 export			
Germany to US	EUR 7477	EUR 6403	−14.4
JPY 10,000 export			
Japan to US	JPY 1,176,900	JPY 1,027,700	−12.7
Effect on investment			
USD 10,000 principal			
To Germany	EUR 7477	USD 11,677	16.7
To Japan	JPY 1,176,900	USD 11,415	14.2
EUR 10,000 principal			
To US	USD 13,374	EUR 8563	−14.3
JPY 10,000 principal			
To US	USD 84.96	JPY 8713	−12.8

Note: To change a EUR value into USD multiply by the (USD/EUR) rate; to change a JPY value into USD divide by the (JPY/USD) rate; to change a USD value into EUR divide by the (USD/EUR) rate; and to change a USD value into JPY multiply by the (JPY/USD) rate.

Source: Exchange rates from Board of Governors of the Federal Reserve System.

of USD 10,000 declines in EUR by 14.4 percent (6403/7477 –1)100. The devaluation of the dollar in that year decreased the EUR price of US exports into Germany by 14.4 percent and into Japan in JPY by 12.7 percent. An export of EUR 10,000 to the US on April 2, 2007, converted into USD 13,374 (10,000 times 1.3374) and into USD 15,718 on April 2, 2008, for an increase of 16.7 percent. The price of importing a Japanese good would jump by 14.5 percent.

There is exchange-rate risk of dollar invoicing, which is quite common in imports into the US. The export of USD 10,000 from Germany to the US would convert into revenue for the German exporter of EUR 7477 (10,000 divided by 1.3374). However, in a year the revenue to the German exporter would be EUR 6403 (10,000 divided by 1.5618). There would be a loss in EUR to the German exporter of 14.4 percent (6403/7477 – 1)100. The Japanese exporter would suffer an exchange rate loss of 12.7 percent. Car exporters to the US contracted exchange-rate hedges of the dollar to maintain their revenues in domestic currency. One hedge would be to buy the EUR relative to the USD for delivery in months ahead to ensure the exchange rate for conversion of the revenue of selling in the US. The forward contracts would offset the USD devaluation. USD invoicing prevails in US imports such that their prices are sticky in USD. This is an important issue in the adjustment of the US external accounts considered in Chapter 11.

A final example of exchange rate risk is the effect on investment. The first line considers USD 10,000 of principal invested by US residents. On April 2, 2007, the USD 10,000 converted or were carried in books as EUR 7477 (10,000 divided by 1.3374), increasing to USD 11,677 (7477 times 1.5618), for an increase in value of 16.7 percent. The same investment in Japan would increase in value by 14.2 percent. There would be an exchange loss in conversion of the assets of foreigners in the US, −14.3 percent for EUR and −12.8 percent for JPY. The decimal of the percentages differ in the example because of rounding, or approximation of the decimal points, but are actually identical because they are simply divisions and multiplications by the exchange rates.

Other types of financial risk are illustrated by the actual data in Table 4.7. There is market or rate risk in the fluctuation of interest rates. An increase in yields causes decrease in the price of bonds and vice versa, as analyzed in the appendix to Chapter 3. The *Wall Street Journal* reported on April 2, 2008, that the triple-A rated corporate bond had a year-to-date (YTD) return of −0.73 percent and of 2.25 percent in the past 52 weeks. The junk bond had a return of −5.91 percent YTD and of −9.78 percent in 52 weeks. The safer Treasury security earned 1.80 percent YTD and 7.54 percent in 52 weeks. The credit/dollar crisis after 2007 had differential impact on securities, with gains for Treasury securities that are considered safer. There is no memory of default of Treasury securities but there are higher risks in junk bonds and even in highly rated corporate bonds.

Equity risk is measured in the YTD index returns published by the *Wall Street Journal* referring to May 9, 2008. The US equity market turned

Table 4.7 Types and dimensions of financial risk

Rate risk (in percent)						
	AAA Corporate		Junk		Treasury	
Date	YTD	52 Weeks	YTD	52 Weeks	YTD	52 Weeks
04/02/2008	−0.73	2.25	−5.91	−9.78	1.80	7.54

Equity risk (in percent)	YTD 05/09/2008
Index	
USA	−5.5
UK	−3.9
France	−11.6
Germany	−13.2
Japan	−10.8
BRIC	
Brazil	−9.0
Russia	−0.3
India	−17.5
China	−31.3

Commodity risk	Oil USD/ barrel	Gold USD/oz
04/02/2008	104.48	892.16
04/02/2007	64.39	674.05

YTD: Year to date.

Source: *Online Wall Street Journal*.

out the second lowest losses among the more advanced countries in the first quarter of 2008. Part of the market folklore is that BRIC countries (Brazil, Russia, India and China) provide better investment opportunities because of the growth potential in their large population and still low consumption as percentage of GDP relative to the advanced countries. With the exception of Brazil, investment in BRICs in the first quarter of 2008 turned out major losses.

Marketing folklore argues that commodities provide a hedge against inflation. Table 4.7 shows that the price of oil jumped from $64.39/barrel on April 2, 2007, to $104.48/barrel a year later, or by 62.3 percent and the price of gold from $674.05/ounce to $892.16/ounce, or by 32.3 percent. Another possible interpretation is the hunt for profits in the financial markets. Most of the increase of the price of commodities occurred after the Fed began to lower interest rates in August 2007. The differential of interest rates of the US widened relative to those of Europe, the UK and Japan. Traders shorted the USD relative to the EUR to benefit from USD devaluation while simultaneously taking leveraged

positions in commodities. There were exits of these positions when prospects improved for the stock market of the US. In the first week of April, US inventories of crude increased for the twelfth week out of 13 consecutive weeks. The futures price of oil increased. After the release of the employment report at 8:30 AM on April 4, 2008, showing a fourth consecutive month of loss of jobs in the private sector and the third consecutive monthly loss of jobs for the entire economy, commodity prices increased again, defying the lowering of demand during recession. At 12:50 PM, the stocks of oil companies increased, Exxon by 1.17 percent and Petrobrás by 2.0 percent, and metals companies also increased, Vale do Rio Doce by 2.03 percent and Rio Tinto by 4.36 percent. These increases appeared to be based more on financial transactions seeking fast profits than on weakening demand for oil and metals during recession or hedging inflation.

5
The Theory of the State

Introduction

Almost all the arguments in favor or against a specific aspect of globalization are analyzed by appeal to some form or other of the economic theory of the state. It is possible to find a precise relationship to this theory in cases when it is not argued explicitly. There is no unique theory of the state in economics. There are several approaches. The objective of this chapter is to provide a comprehensive survey of these approaches that helps to understand the issues relating to globalization.

The first best of efficiency and satisfaction

Adam Smith launched economics in 1776 with his *Wealth of Nations*. This is book rich in analysis of the interactions of humans in economic affairs. It would be interesting to learn what Adam Smith would think of the contemporary interpretation of his concept of the invisible hand. The proposition is that individuals in seeking their self-interest promote the public good.[1] Perhaps it would be more appropriate to relate the ideas of Smith to the reaction during his times to mercantilism and excessive intervention by the state in economic affairs. Economists have concentrated in analyzing the conditions under which the allocation of resources in markets, without intervention by the state, would result on its own in maximum efficiency and optimum welfare or satisfaction. It took two centuries after Adam Smith to rigorously prove this proposition.

Individuals derive satisfaction or welfare from the consumption of goods and services. An objective of an economic system is to attain optimum satisfaction, that is, that individuals feel the happiest possible

in enjoying the consumption of goods and the use of services. Production consists of using the available technology to combine inputs or resources of production—capital, labor and natural resources—in producing goods and services. The task of the economic system is to attain efficiency, which consists of combining technology and resources or inputs to obtain the maximum output possible subject to costs.

All theory is merely an attempt to explain reality with a simplified set of assumptions. The application of logic to these assumptions provides a compact or shorthand explanation and prediction of reality. The theory of the first best departs from ideal or simplified conditions that permit the derivation of simple but powerful principles. The basic assumption of the first best is the perfectly competitive model or the lack of "frictions." There is no "market power" by buyers or sellers of goods and services, which means that no individual buyer or seller is large enough to influence market prices. Goods and services are perfectly divisible in small quantities, such that huge investments are not required to establish production in certain goods, which would prevent entry of producers. If investment is indivisible, such as an auto factory, the first producer to enter can gain market or monopoly power to set prices because of the huge investment required by competitors. There are no "externalities." For example, the increase in output of a steel factory does not cause pollution that soils the production of the nearby laundry. Buyers and sellers of goods and services have perfect information. For example, bankers know exactly the economic/financial conditions of borrowers such that there is no adverse selection, which means that banks finance the projects that result in economic efficiency. A significant part of the text below consists of relaxing these assumptions to explore the rationale for government intervention.

The proof of the first-best outcome requires the concept of "Pareto optimality." There is Pareto optimality in consumption when it is not possible to improve the satisfaction of one consumer without reducing that of another. There is Pareto optimality in production when it is not possible to improve the output of a good or service without reducing that of another. There is overall Pareto optimality when it occurs both in consumption and production.

There are two fundamental welfare theorems in economics.[2] The first theorem states that the allocation of inputs under perfect competition results in an optimum of satisfaction and maximum efficiency, that is, in overall Pareto optimality. The second theorem states that every state of overall Pareto optimality can be converted into a perfectly competitive allocation of resources by "lump sum" transfers of

resources. The economics of welfare explores alternative economic states. A state differs from another one, for example, in the conditions or not of perfect competition, taxes, subsidies, and so on. Welfare in economics is wellbeing or efficiency in consumption and production. It does not have the connotation of the welfare programs such as social security, health benefits, and so on. However, those programs can be analyzed with welfare economics: the comparison of the "welfare" or wellbeing of the society in the states of having or not having those programs.

The theory of second best

The first best is unlikely to occur in reality if judged by the unrealistic assumptions. The theory of second best throws cold water on economics. In general, it states that if one of the conditions for the first best is not attained, it does not necessarily improve welfare (in the wellbeing sense) to try to enforce the other conditions. It becomes nearly impossible to assess in theory or practice what is the second-best solution.[3]

An example serves to illustrate the theory. Under perfect competition price is equal to marginal cost. This is a basic condition for attaining economic efficiency in the long-run. Marginal cost is the addition to cost of increasing production by an extra or marginal unit. The costs include "normal profits," or those minimum profits that the producer must receive in order to engage in production. Economic profits, or those in excess of normal profits, are zero. Producing an extra unit brings in revenue in its price and increases costs by marginal cost. If price were higher than marginal cost, the producer would gain by producing an extra unit because it would bring more, price, than what it costs. If price were lower than marginal cost, producing an extra unit would lose money. Thus, the perfectly competitive producer would produce exactly the output corresponding to price equal to marginal cost. Under Pareto optimality, prices equal marginal cost in all activities.

Under market power, the monopolist produces an output corresponding to a price higher than marginal cost. The theory of second best states that when one condition is violated in the first best, such as equality of price and marginal cost, it is nearly impossible to evaluate, theoretically or empirically, the second best allocation of resources. Complying with marginal conditions of the first best does not necessarily improve economic wellbeing or welfare.

The public interest view

Market failure occurs when the market on its own cannot attain the first best of efficiency and welfare. The public interest view recommends policies of ameliorating market failures to obtain Pareto improvements over a free-market allocation. That is, public policy may increase satisfaction of some agents without reducing the satisfaction of others. The coercion powers of the government may be used to tax and subsidize economic activities to obtain results that are superior to those occurring under free markets. The public interest view focuses on identification of market failures and policies that can ameliorate their effects. Moreover, the public interest view predicts that government intervention occurs in response to market failures.

There are two classical cases of market failure in "neoclassical economics."[4] There could be positive or negative externalities in production. A second set of market failures originates in the occurrence of "market power," as, for example, the existence of only one source of spring water in a community, such that the owner can set the price to obtain excess profits.

There is a negative externality or nuisance when the output of one factory increases the cost of another factory. Suppose there is a laundry shop in a community that dries the clothing with the heat of the sun. A new steel factory is then established such that its pollution soils the laundry. In this case:

$$\begin{aligned}\text{Marginal cost of steel producer} &= \text{private marginal cost } \textit{lower than} \\ &\quad \text{marginal social cost} \\ &= \text{marginal cost of steel producer} \\ &\quad \text{plus cost of pollution}\end{aligned}$$

The solution is a per unit tax on the price of steel to make output lower, corresponding to marginal social cost. There is an important application of negative externalities to the issue of global warming, discussed in Chapter 8.

There is a positive externality when the output of one good or service reduces the cost of others. Education increases the efficiency of most other economic activities, lowering their costs. However, education provided by a free market without government intervention may not be sufficient for attaining Pareto optimality. Intervention could be in the form of a subsidy to increase education to the socially desirable level.

In the case of market power, output is lower than under perfect competition because price exceeds marginal cost. The solution in terms of government intervention would be regulation to administer the prices of monopolies in a way that output is at the socially desirable level.

Public goods

The cost of providing a public good to another individual is zero and it is not feasible to exclude persons from consuming it. There are two properties of public goods, lack of rivalry and exclusion. The lack of rivalry means that consumption by an individual does not reduce the ability of others to consume it. The lack of exclusion means that nobody can be excluded from consuming it. There is a proposition that markets do not ensure the production of public goods.[5] Collective action in the form of government intervention is required to surmount the lack of action by the private sector.

National defense is an example of a public good. It would not be forthcoming from the private sector. The consumption by an individual does not preclude others from consuming it and no individual can be excluded from its consumption.

There are regional, international and global goods, considered in various chapters. The provision of information, standards, codes, surveillance and a forum for negotiation is an important global public good provided by international organizations. These valuable services would not be available from the private sector.

Imperfect information

The model of perfect competition requires perfect information. All agents have the same information on prices, technology, credit, etc. Several economists writing after 1970 focus on incorporating in models asymmetry of information, consisting of the assumption that some agents have information that others do not possess.[6] These efforts prove that in case of imperfect information, the free market does not attain Pareto optimality on its own. Thus, there is the possibility that collective action in the form of government intervention may implement Pareto-improving policies.

The initial intention in analyzing asymmetry of information was to explain the illiquidity or lack of a market for used cars because sellers had better knowledge of the vehicle than potential buyers.[7] Imperfect

information could result in extremely thin markets. This illiquidity could explain the fluctuations in output and sales of new cars that were important determinants of economic activity in the first decades after World War II. Asymmetric information had solutions in some markets by means of repeat sale and reputation. However, there were other markets, such as insurance and credit that could experience serious breakdowns. Important examples were the difficulty of the elderly in obtaining health insurance and small business in receiving credit. Underdevelopment is significantly caused by the failure of credit markets.

The interpretation is that the incorporation of asymmetric information in price theory constituted part of a revolution to derive postulates from more realistic assumptions than in the first best. In standard economics, markets are Pareto efficient unless there are market failures. Thus, Pareto efficiency is not attained under imperfect information.[8] In this view, asymmetry of information requires a new paradigm of economics as well as new avenues of political economy. Asymmetry of information is widespread in the economy. It consists of the proposition that knowledge differs among people.[9] For example, the individual buying insurance has knowledge of her health habits, such as regular exercise, which are not available to the insurance company. The borrower knows more about her financial situation and the viability of a project than the lender and the owner of the firm knows more than the potential investor. Market equilibrium with imperfect information may have undesirable characteristics. In the credit market, there may be credit rationing, as lenders do not lend to borrowers above a certain interest rate because of the uncertainty that borrowers will default. This uncertainty is caused by the lack of information on the creditworthiness of those borrowers. In the labor market, the wage rate may be above the rate at which demand and supply of labor are equal, resulting in unemployment.

Government failure

The correction of market failures by designing policies that attain efficient allocation appears quite difficult. Once the economy is in the world of second best, policy design may be frustrating. The authorities would themselves need perfect information, that is, the regulators must be omniscient, knowing everything, and omnipotent, capable of doing everything, similar to the "benevolent dictator" in the theory of welfare economics. The possibility of government failure is actively debated in the technical and policy literature.

The proponents of the public interest view may be excessively enthusiastic in comparing intervention by a government that never makes mistakes with a "blackboard" or textbook case of market failure. This is the "Nirvana Fallacy," comparing theoretical markets that have imperfections with flawless government intervention.[10] If the markets fail because of imperfect information, government intervention will also fail for the same reason. There is no superiority of information by the government in intervention. For example, there is no reason why government-owned banks would give fewer loans to defaulting companies than privately owned banks. In fact the traffic of political influence may result in more bad loans in government-owned banks because of the need to avoid bankruptcy with bad loans in privately managed banks.

The estimate of the cost of inefficiencies caused by the government in intervention to ameliorate market failures is in the hundreds of billions of dollars.[11] In cases of actual existence of market failures, there were successes at the expense of diminishing significant benefits and there were reductions of welfare or economic wellbeing in various instances. Government failures occur because policies are erroneous or ineffectively implemented, being subject to influence by interest groups against the general social interest. There are cases when there is evidence favoring government measures but politics and ineffectiveness of the relevant agencies prevents sound policy and implementation.

Transaction costs and property rights

Neoclassical economics and the theory and policy of market failures ignored the existence of transaction costs. This is not uncommon when developing theories from abstract assumptions; a change in assumptions leads to a different proposition. The fact is that transaction costs are significantly large and cannot be ignored in the analysis of the firm and in their relation to property rights.

An important turning point in the debate is that the conventional approach to externalities identifies a perpetrator and a victim and takes actions to make the perpetrator compensate the victim.[12] This approach is wrong because of the essentially reciprocal nature of externalities. The principle should be preventing the most serious harm.

The *first case* considered is that of the pricing or market system working effectively *with liability for damage and without costs*.[13] In this case, the damaging business has to pay for the cost of the damage and there is the explicit assumption of no costs of transactions. It is important

to incorporate these costs in the decision by firms, revealing their implications for allocation and public policy. The costs consist of almost everything that is not included in the costs of physical production and transportation. They include the costs of negotiation, legal counsel, litigation and enforcement of judgments, among many. If there are no such costs, the party that is liable would bargain with the other party and enter into an agreement that would internalize the externalities. For example, internalizing by the steel factory would take into account the price of clean air, which would allow measurement of marginal social cost, determining output at the socially desirable level. This is basically the idea in climate change: finding a price for carbon that would signal companies output that slows global warming.

Thus, transaction costs are the expenses incurred in bargaining the effects of externalities or could be considered as the costs of internalizing the externalities. Internalizing means that the output is equivalent to that with taxes or subsidies. The discovery in this case of liability and no transactions costs is that if property rights are well defined and there are no transaction costs the perfectly competitive market would attain efficient allocation without need of government intervention. There is no claim that this case occurs in reality but it simply brings in relief the neglect of the costs by neoclassical economics and the derived market failure analysis and how they affect property rights and a solution to the problem. It is not a new theorem but rather the qualification of an important proposition of neoclassical economics.

The *second case* maintains the assumption of no transaction costs.[14] However, in this case there is no rule of liability for damages. The pricing system has no liability for damage and no transaction costs. In this case, there may still be bargaining between the parties in the externality but a solution is uncertain. The competitive pricing system may or may not internalize the externalities.

The approach uses the assumption of no transaction costs in the first two cases but that it is considered to be very unrealistic.[15] The third case describes the types of transaction costs. These costs include discovering the party for the transaction, communicating the desire to bargain and the terms of bargaining, engaging in the negotiations to reach a settlement, drafting the contract, ascertaining by inspection that there is compliance with the terms of the contract and many other transaction activities. These transaction costs are quite high in the real world, close to one half of GDP in the US,[16] such that they would preclude the transactions hypothesized in the model with no transaction costs. In cases of high costs the government may use its coercion powers to force a

solution. However, such a solution is not costless because the government also faces costs, which in some cases may be extremely high. The arrangements to find a solution may differ from case to case. The theory of second best resurfaces in the analysis.

The new institutional economics

There are two distinguishing characteristics in the NIE, the claims that institutions are important and that they can be analyzed by economic theory. The second characteristic distinguishes the NIE from the initial US institutionalists.[17] The focus is not the traditional economic concerns of allocation but the use of economic tools to analyze how institutions developed the way they did.

Table 5.1 shows the stages of institutional development that require different forms of social analysis.[18] Institutional research is concerned with the two intermediate stages, institutional environment and governance. The final stage is the subject of the theory of choice or mainstream economics.

The research on the economics of property rights focuses on the issues of the second stage of institutional environment. According to a strand of thought, the system of private enterprise needs property rights to function adequately.[19] The user of a resource has to remunerate the owner. There must be definition of property rights and a process of arbitration of disputes for optimum allocation of resources.

An important characteristic of the NIE is the criticism of ideals based on omniscience, benevolence, nil transaction costs and similar assumptions. Various works challenged the proposition of omniscient and benevolent governments that could ameliorate all market failures.[20] All

Table 5.1 Stages of economic institutions

Stage	**Institutional characteristics**
I Embeddedness	Informal institutions, customs, traditions, norms, religion
II Institutional environment	Game rules: property (polity, judiciary, bureaucracy)
III Governance	Game play: contract, relating governance structures and transactions
IV Allocation/Employment	Prices, quantities, incentives

Source: Oliver Williamson, The new institutional economics: taking stock, looking ahead. *Journal of Economic Literature* 38 (3, 2000): 595–613.

forms of organization are subject to failures, including markets and the government.[21]

The analysis of transactions costs[22] leads to the concept of the firm as a governance structure.[23] Governance and transactions are aligned in accordance with their economies of transaction costs, requiring descriptions of transactions, governance structure and the process of economizing transaction costs. The fundamental transaction cost is vertical integration. There are multiple consequences for policy arising from labor, capital, corporate governance, regulation/deregulation, multinational and public sector transactions.

The economic theory of regulation

The economists of the University of Chicago developed what came to be known as the economic theory of regulation. This theory is the essence of the private interest view of regulation with predictions that are different than those of the public view. The public view predicts that regulation will occur in response to market failures. The excess profits charged by a monopolist or the externalities of pollution cause government intervention to find an efficient allocation that cannot be obtained in a free market. The private interest view claims that the regulated industrialists, politicians and government officials interact to create regulatory agencies and measures to optimize their self-interests. It is common for regulation to have outcomes that are different from those intended by regulation.[24]

The departing point for what came to be known as the economic theory of regulation is that the state has the power to help or harm many industries.[25] The theory intends to analyze the parties receiving the benefits or costs of regulation, the shape of regulation and its impact on efficiency or resource allocation. The main proposition is that the regulated industry manipulates the government agency for its benefit. This aspect of the theory became known as regulatory capture or the control of the regulatory body by the regulated industry for its self-interest.

The state has unique strength in its power to coerce.[26] Taxation permits the government to seize money. The state does not require the consent of individuals and companies to organize resources and take decisions of households and companies. Thus, an industry can capture the state to increase its profits. The industry may obtain four different types of favors from the government:[27] direct subsidy of money; restriction of entry in the industry by a rival to create market power, obtaining excess profits; interference with substitute and complementary

goods to enhance market power; and fixing advantageous prices by regulatory agencies.

The objective function for maximization includes attaining and maintaining political power.[28] The representative politician has the power of deciding the variables in regulation such as prices, numbers of firms, and so on. Votes and money are the two objects of choice of politicians. Groups may vote for or against the representative politician depending on the effects of a regulatory measure. The politician prefers decisions that result in favorable votes because his goal is obtaining and maintaining power. There are multiple forms by which regulatory decisions can secure campaign funding, free efforts to get out the vote, bribes or well-remunerated political appointments.

The representative politician values wealth and knows that the successful election bid requires campaigns that have financing and qualified staff. Thus, the politician will focus on the consequences of regulatory measures for obtaining votes as well as money for electoral purposes. The essence of the theory is that the representative politician does not maximize the welfare of the constituency but rather her very own. Optimization of aggregate welfare is important only in increasing the economy to obtain a larger share of its growth. In short, the politicians and regulators exchange regulatory measures for votes and money. The delivery of the benefits requires some form of group organization.[29]

The target of regulation is one or a few producers operating in monopolistic or oligopolistic markets. These producers do not have to create costly organizations to raise the funds required to bid for the regulatory measures because they are individually financially strong. The producers will likely win the bidding for regulatory measures because of the strength of their financial position and the ease of organization. Regulatory capture is more likely by producers than consumers.

Rent-seeking and public choice

The basic idea of rent-seeking is that the monopolist spends resources in seeking the rents from regulation and in maintaining them.[30] These expenditures in rent-seeking are a waste of resources.

Rents are excess profits, that is, profits higher than those that are required for the firm in perfect competition to start production. Monopoly profits are rents. The existence of rents causes the issue of the consequences of their distribution,[31] which does not exist in a situation of no rents. The distribution of rents could occur in the political area, affecting the politics of democracy. Rents also affect the governance of

corporations because of their internal distribution. Higher rents increase agency costs for principals. The agency problem is the manipulation of the firms for the interest of management instead of shareholders, causing structures within firms to restrain those costs. Similarly, higher rents increase political struggle to distribute them within the national economy.

The view of disclosure and regulation

There is a highly empirical approach by many writers seeking to find an intermediate position.[32] There could be an excessive interest on the malevolent, incompetent regulator and the competent, benevolent judicial system. Regulators and judges are government servants, experiencing political pressures, incentives and limitations. The regulators may not be a solution but that could also be argued about the court system. There are cases in which regulation may be beneficial. For example, investors may prefer the prevention of excesses by issuers of securities obtained through a regulatory body. There is an alternative in blending the Chicago objections to the public interest view with recognition of public intervention in some activities.

Suppose that a country desires to have stable and sound financial and banking markets.[33] There can be reliance on the interests of banks in preserving their reputation by disclosing all information about their operations and guaranteeing its accuracy. There is here the least involvement possible by the government with competition and private agreements determining the outcomes.

The government can rely on the enforcement of laws through the judicial system, with depositors and investors recovering their misappropriated funds in civil litigation.[34] There may be use of custom and common law, resulting in less involvement by the government in dictating laws. However, there is decision authority by judges that are government agents. The judicial system is a public good.

The regulatory approach would consist of capital requirements, supervision, regulation and rules of disclosure, as in Basel II, which is discussed in Chapter 10.[35] Government intervention significantly increases in this strategy. The government writes the rules as in dictating the application of Basel II to local conditions; supervises their implementation (through a central bank or other monetary and securities authorities); and imposes penalties (as provided in local legislation and recommended in Pillar II).

Applied welfare economics

The practical usefulness of economic advice does not originate in a desire for elegant economic optimum analysis. Economists face in real practice decisions on such things as different choices of agricultural programs, the effects of new taxes and the merits of building a new bridge. The decisions need to recognize the existence of departures from market allocations that cannot be controlled.[36] Typically, the practical question involves ranking alternatives in terms of their potential damage and benefits.

The state of the art in applied welfare economics is as follows.[37] The three following principles are accepted.[38] The value of a unit of a good for a demander should be measured by the competitive demand price. The value of a unit for a supplier should be measured by the competitive supply price. The costs and benefits of a group, such as a nation, should be added in the evaluation of projects, programs or policies without consideration of who receives the benefits. The demand price is a measure of the benefit while the supply price is a measure of the cost. Efficiency considerations dictate that it does not pay to engage in activities where supply price (extra cost) exceeds demand price (extra benefit). Similarly, it pays to expand into activities where extra benefit (demand price) exceeds extra cost (supply price). Economists use technical methods in calculating costs and benefits to determine practically the desirability of multiple projects and policies.

Summary

There is a wide spectrum of arguments in favor and against government intervention. The main analysis for departure is the first-best of efficiency. Under ideal conditions, allocation of resources in free markets is a Pareto efficient allocation. With suitable lump-sum transfers every Pareto optimal allocation can become a free-market allocation. There are two cases for government intervention in neoclassical economics. Producers could earn excess profits by using their market power, resulting in lower welfare relative to perfect competition. In addition, negative externalities result in more output than the social optimum and positive externalities in less output than the social optimum. The remedies range from regulation to government ownership and control of industries. The theory of second best illustrates the difficulty of finding an ideal allocation when even one of the conditions for the first-best of efficiency is violated in theory or practice.

The public interest view generalizes the case of government intervention by introducing the concept of market failure. The breakdown of the assumptions of the first-best of efficiency opens the possibility of Pareto-improving policy. An important development is the extension of the breakdown of competition to cases of imperfect information. The theory of public goods introduces classes of goods that are required but only the government would provide them.

The private interest view affirms that regulation originates and perpetuates itself by the self-interest of politicians, government officials and the regulated industries. In practice, regulation frequently attains results that are opposite to those intended by policy. The NIE incorporates transaction costs and the role of institutions to explain long-term growth and market organization. Various theories explain the distortions resulting from rent-seeking activities and the promotion and defense of government programs.

Recent research is focusing on a modified private interest view in which institutions play an important role. This new current of analysis emphasizes general contributions on multi-country differences in the rule of law. Theoretical research is accompanied by empirical verification. Disclosure is important for monitoring the financial sector by the market and regulators.

6
International Trade of Goods and Services

Introduction

In a rare consensus, economists tend to agree, with important exceptions, that there are benefits from trade in the form of more efficient resource allocation. The first section below provides the important analysis of the gains from trade. The relaxation of the conditions of the first-best of efficiency leads to the analysis of distortions or market failures that motivate more analysis. The main principle is to correct domestic distortions with domestic policy instruments, allowing the economy to obtain the benefits from trade. It is difficult to relate empirically trade openness and economic growth.

The US uses antidumping and safeguard sanctions that many consider to be disguised protectionism. One of the most debated issues in policy is whether employment and wages of less skilled workers in advanced countries decline because of trade in goods produced by cheap labor, which are exported by developing countries. In 2004, the issue of losses of services jobs to offshore locations received disproportionate attention in the press and public debates. The summary provides some conclusions.

The gains from trade

The basic analysis of the desirability of international trade focuses on the gains from trade. It is one of the first analyses of welfare economics: the wellbeing of the state of free trade of goods and services with other nations versus the state of no trade. There is the important proposition that some trade is better than no trade. Even trade with restrictions such as quotas and tariffs is better than no trade. A quota is a quantitative

limit on imports, which are purchases from other countries, or exports, which are sales to other countries. A tariff is a tax on imports or exports.

Economic progress after the industrial revolution of the mid seventeenth century was viewed as influenced by specialization in small tasks of production that resulted in higher economic activity than when all tasks were performed by the same individual or workshop. Specialization was limited by the extent or size of the market. It would be advantageous for a country to specialize in those activities in which it had an absolute advantage in production.[1] Absolute advantage means that the country can produce those goods at a cost lower than any other country. An efficient allocation would require that countries specialize in the production of those goods in which they have absolute advantage, which would increase the extent of the market beyond what would exist within a country's frontiers.

Two classical economists are credited with the discovery of the doctrine of comparative advantage in the beginning of the nineteenth century.[2] This doctrine was a major improvement over the absolute advantage proposition. It is difficult to explain it intuitively. Nobel Laureate Paul A. Samuelson considers it to be one of the most counter-intuitive propositions in economics.[3]

Classical economists assumed for analytical simplicity that labor was the only cost of production, what is known as the labor theory of value. Moreover, labor was mobile within the country but not among countries. Thus, costs of production were expressed in terms of units of labor per time period. Table 6.1 shows the famous example of Ricardo. Portugal has an absolute advantage in the production of both wine and cloth; that is, it can produce either good at a lower price, in terms of men per year, than England. There would still be an advantage for both countries to engage in trade. England can produce cloth at a relatively lower cost than wine, 0.83 men per year (100/120), than Portugal, 0.88 men per year (90/80). Portugal can produce wine at a relatively lower cost, 0.88 men per year, than England, 1.2 men per year. Thus, it pays for England to specialize in accordance with comparative costs (or comparative advantage), producing the commodity that is relatively cheaper to produce at home, cloth, and exchanging it for the commodity that is relatively more expensive to produce at home, wine. England would be able to consume wine with trade at the cost of 0.88 men per year relative to 1.2 without trade. Similarly, Portugal would be able to consume cloth with trade at the cost of 0.83 men per year relative to 1.125 without trade.

Table 6.1 Trade example of David Ricardo

Cost of production of wine and labor in England and Portugal		
	Men per year	
	England	**Portugal**
David Ricardo		
Absolute costs		
Wine	120	80
Cloth	100	90
Relative costs		
Cloth/Wine	100/120 (0.83)	(90/80) 1.125
Wine/Cloth	120/100 (1.2)	80/90 (0.88)

Source: Paul A. Samuelson, A Ricardo-Sraffa paradigm comparing gains from trade in inputs and finished goods. *Journal of Economic Literature* 39 (4): 1204–14, original data in David Ricardo, *On the principles of political economy and taxation* (London: John Murray, 1817). In Piero Srafa, ed. *The works and correspondence of David Ricardo, Vol. I* (Cambridge: Cambridge University Press, 1951).

The principle of comparative advantage states that countries should specialize in the commodities that they can produce at relatively lower costs exchanging them for those they can produce at relatively higher cost. The progress in economic analysis relative to absolute advantage is that under certain restrictive assumptions it is possible to gain from specialization according to comparative advantage. If the world consists of only one country with two regions England and Portugal, it is evidently better for the world to produce cloth in England at 0.83 men per year and wine in Portugal at 0.88 men per year. The theory explains why countries trade—because of differences in relative costs—but does not explain why relative costs differ among countries. The determination of relative costs by differences in factor endowments, capital, labor and natural resources, is the result of subsequent work.[4]

Modern theory has proved the gains from trade using more complex methods. There is an appealing intuitive argument. Every country faces a frontier of production determined by its technology and endowment of productive resources. In a Pareto-optimal allocation, under perfect competition, the country produces and consumes in that frontier of production, attaining maximum efficiency and optimum satisfaction. Specialization according to comparative advantage permits the country to escape the constraints of its production frontier. Exporting the goods on which it has a comparative advantage (lower relative costs) in exchange for the goods that it produces at comparative disadvantage

(higher relative costs), the country can attain a higher level of satisfaction than under no trade. The tools of welfare economic prove that the state of trade is superior to that of no trade.[5]

Distortions

The recurring problem in economics is that the first-best outcome requires the assumptions of the perfectly competitive model. The relaxation of assumptions leads to the theory of the second best. Restoring one or several of the marginal conditions will not necessarily improve welfare because of non-measurable effects on other markets and distortions. The terms market failure and distortion are interchangeably used in the literature for assumptions that are different than those of perfect competition. Significant part of economic theory consists of analyzing outcomes in the presence of distortions. Economic policy focuses on the outcome of different instruments used to correct distortions.

An immediate assumption that is questioned is the existence of monopoly power. A country with monopoly power in a commodity could impose an optimum export tax or tariff and gain in welfare by improving its terms of trade. Thus, free trade is not optimum from the point of view of an individual country that has monopoly power.[6] The terms of trade of a country consist of the ratio of the price of exports to the price of imports. A country gains if the price of the good it sells abroad improves relative to the price of the good it buys, that is, if the terms of trade improve. A tariff can improve the terms of trade. However, other countries may retaliate, creating a trade war. It is possible but not necessarily likely for a country to gain by an optimum tariff that improves its terms of trade even in the presence of retaliation.[7]

There are many types of distortions identified by economists that defy analysis within limited space. The mere classification of the distortions is challenging by itself. Fortunately, there is an important and classic general result.[8] The optimum policy in the presence of distortions is not to interfere with trade. Distortions should be corrected at their source and not in trade flows. That is, the presence of market imperfections requires domestic regulation, not trade policy such as by means of tariffs. The existence of unemployment should be alleviated by fiscal and monetary policy together with perhaps safety nets not by interfering with trade. The correction of domestic distortions, such as pollution, should be by means of domestic policy instruments not by trade-related instruments. The country would correct the distortions and still gain from trade.

Trade openness

The openness to trade of countries constitutes an important issue of practical policy and academic debate. One of the classical arguments for diminishing the openness to trade was the infant industry argument. Interruption of trade was advisable if there were dynamic learning effects for an industry. Free trade could be restored once the infant industry matured. The initial postwar period was dominated by aggressive promotion of development by means of trade and exchange policies restricting imports. The objective of these policies was the development of domestic import-competing industries. This initial period was followed by approaches and policy measures on liberalization or elimination of trade restrictions. There have been numerous studies attempting to measure the relationship between trade openness and economic growth but the evidence is not conclusive.

The advice to developing countries typically emphasizes that reducing trade barriers is more effective in promoting economic growth than tightening the restrictions. However, policy recommendations have not concentrated exclusively on trade openness but have also included advice on the exchange-rate system and prudent macroeconomic policy.[9] Other economists argue that trade liberalization could be on balance positive solely on the basis of comparative advantage and that there is no evidence contrary to this view. What they consider inadequate is the claim that trade openness on its own is sufficiently strong to promote economic growth, replacing entirely development strategies.[10] The important development strategy is developing domestic industry with trade restrictions.

The political economy of trade

The struggle of interests for benefits from trade policy is as old as its analysis by economists. The theories of economists on self-interest within the private interest view can be complemented with those of political scientists on the social interests of voters and officials.

There are two approaches to the analysis of the political economy of international trade: the economic self-interest of political agents and the social interests of the electorate and government functionaries.[11] The support or opposition of an individual for a specific trade policy depends on the effects of the policy on the individual's real income. In the case of a good produced with labor-intensive techniques under perfect competition, workers would prefer an import duty to protect their

wages and capitalists would support free trade to gain from lower wage costs. With majority rule, workers would outvote capitalists. However, if the capitalists that gain from free trade could compensate the workers for their losses, assuming costless income redistribution, free trade would be chosen. The capitalists could include the redistribution in the outcome of voting. If there were costs of redistribution, the majority would choose protection. If the numbers of workers affected by protection are small, many would not be interested in the outcome and the vote is not assured. There are the normal free rider problems[12] that may prevent the vote for protection unless the numbers are small, which favors producers in effective organizations supporting their interests.

The social concern view argues that trade policies depend on the regard of the government for the welfare of specific groups and the promotion of national and international objectives.[13] There are several objectives such as attaining political power by alliances and influencing the distribution of income. The basic principle is that the re-election prospects of politicians depend on the support of the general public for these objectives.

Trade policies that receive support by voters are influenced by the lobbying of economic interest groups and by the government.[14] At the level of the individual interest, much depends on the impact of the trade policy on the individual's welfare. It is unlikely that workers in the textile industry would vote against textile import quotas because they would increase the prices of textiles and thus perhaps their wages. However, in a trade policy with minimal effects on a textile worker, the evaluation of national objectives may be important. Elements of both theoretical approaches are required to design an effective framework of analysis of decisions on trade policy.

Economists and political scientists analyze political decisions by different models.[15] Public policies reducing social welfare are explained in economic models by campaign contributions of organized interest groups. The models of political scientists discard the view that campaign contributions are exchanged for political concessions; instead they support the proposition that access to a legislator is the vehicle by which contributions influence congressional voting behavior. Economists and political scientists coincide in the determining role of the interests of the constituency in the vote of legislators.[16] Ignoring these interests could lead to electoral defeat. Political scientists also include the pressure of leaders in the legislature as well as personal ideology.

The US House of Representatives voted in 1993–4 on three trade bills: NAFTA, the Uruguay Round agreement of GATT and the MFN status of

China. GATT was the predecessor of the WTO. The empirical evidence shows that labor and business groups significantly influenced the outcome of voting on the NAFTA and GATT trade bills.[17] There were extra votes obtained by labor contributions or access to legislators by means of these contributions: 67 against NAFTA and 57 against the Uruguay Round of GATT. There were extra votes resulting from business contributions: 41 in favor of NAFTA and 35 in favor of GATT. Had there been no contributions by business, NAFTA would not have passed. The estimate is that changing one vote against NAFTA cost $325,000 and changing one vote against GATT cost $313,000. The President exchanged concessions for 11 votes favoring NAFTA.[18] The evidence shows that legislators also respond to the economic and social interests of their constituents in addition to those of their main contributors.

Competition for political concessions determines the structure of trade protection policies in the model of protection for sale.[19] As in the economic theory of regulation, politicians maximize their self-interest instead of the welfare of the population. The special interest groups defend only their interests while the government's objective has both its own interest and the welfare of voters. Contributions are used to influence government policy. The financing of campaigns and parties in democracies generates strong incentives for politicians to sell their favors. The vector of trade policies reflects the interest of the lobbying groups.

Antidumping and safeguards

A seven-term senator in the US advocates that the job of Congress is protectionism.[20] In this view, protectionism from foreign competition explains US economic history and progress.

An important mechanism of protectionism in the US is by means of laws on antidumping and safeguards. Dumping is the sale of foreign goods in the US at less than cost. Safeguards are measures of the US to protect its internal economic activities from unfair practices in the production of goods by foreign countries that are sold in the US. The US International Trade Commission (USITC) works in conjunction with the International Trade Administration of the US Commerce Department.[21] A fundamental function is the determination if foreign products are sold in the US at less than fair value or if foreign products are subsidized by foreign governments in investigations of countervailing duty and antidumping. Countervailing duties are charges imposed by the US on countries that subsidize their exports. US industries can petition the

government for relief of alleged injury originating in imports sold at less than fair value and subsidized by foreign government programs. The Commerce Department determines the existence of dumping and the level, called "dumping margin." The USITC determines if there is material injury to the US industry by alleged subsidies or dumping. If there is positive USITC determination of material injury and affirmative Commerce Department determination of subsidy or dumping, the US Custom Service is ordered by the Commerce Department to impose duties. There are five-year (Sunset) reviews in which the USITC and Commerce determine if the termination of the antidumping or countervailing duty is likely to result in continuing dumping or subsidies. The relief measures can be continued for another five years or terminated.

In addition, the USITC can evaluate serious injury to US industries by fairly traded imports, recommending to the President relief that could be in the form of tariffs or quotas on imports and/or assistance to the US industry. The USITC can determine if increasing imports of products from China are causing or threaten to cause disruption of markets. US producers can obtain relief in case of affirmative determination by the USITC. In case of affirmative determination, the USITC proposes a remedy to the President that makes the final decision on whether to provide relief for the US industry and the type and time period of such relief.

The consequence of the antidumping statutes is to prevent reduction of prices by competition. Consumers of food and housing ultimately suffer the most from the antidumping measures. The US imposed a tariff of 50 percent on imported ball bearings that caused price benefits to producers in the US but raised the prices to other producers that used them as intermediate products, thus raising prices to consumers.[22] Antidumping duties are 10–20 times higher than ordinary tariffs, perpetuating themselves: Commerce eliminated the duties in only two of the 314 cases reviewed in 1998–2000. Antidumping measures in force in April 2005 in steel numbered 158 of a total of 294. Steel prices increased by 45 percent in 2003–5. The steel industry employs only 160,000 workers but over 1.5 million workers are employed by companies that produce metal products, 1.1 million workers in firms that produce machinery and 1.8 million in transportation equipment such as cars and parts. Saving a job in steel caused the loss of three jobs in other occupations, creating distortions valued at $450,000. The US imposed antidumping tariffs of 62.7 percent in 1991 on flat-panel displays; producers of computers relocated production to East Asia because

there were no similar duties on the finished computer. The US lost high-paying jobs in high tech.[23]

Trade and employment

Suppose a country rich in capital, such as an advanced country, imports goods from developing countries that use unskilled labor intensively. There is a theoretical argument on the impact of trade on the employment and wages of less skilled workers.[24] The wages of unskilled labor decline relative to the wages of skilled labor. In addition, the wages of unskilled labor decline relative to the prices of non-skill-intensive goods and also of skill-intensive goods. Thus, the wages of unskilled labor decline in real terms or after adjusting by inflation. Conversely, the wages of skilled labor increase relative to the prices of both types of goods and, thus, in real terms after adjustment by inflation.[25]

In 2001–4, US manufacturing employment declined by 2.8 million, reaching the lowest level since 1950 for the strongest cyclical decline since 1960.[26] These job losses are not unique: Japan experienced a decline of employment in manufacturing of one-sixth in 1995–04 and China had a loss of 15 percent, or 15 million jobs, in the same period. Part of the sharp drop in US manufacturing jobs originated in two short-term factors: the sharper than usual decline of business investment and the decline of exports. There is also a long-term trend of increasing productivity: manufacturing productivity increased in the US at 2.8 percent per year on the average in 1950–2000, such that an hour of work in manufacturing in 1950 produced four times more output in 2000.[27] Another common misunderstanding is that the flood of imports from China has caused the loss of manufacturing jobs in the US. Imports from China increased only recently, thus not being responsible for earlier losses in jobs. In addition, the heavier losses in manufacturing jobs in the US have not been in sectors competing with Chinese imports and imports from China merely replaced imports from other countries.[28]

Trade causes job losses because of imports of textile and furniture from developing countries. However, trade also increases jobs such as by importing inputs that are cheaper and/or of higher quality, lowering domestic costs of production and increasing productivity.[29] There is theoretical reasoning and empirical evidence showing that the net impact of trade on employment creation is minor. In this view, long-term factors—population growth, education, training, changes in labor force participation and labor market institutions—determine employment

creation. There does not appear to be a long-term impact of trade on employment.

The conventional economic model assumes that labor reallocates from less productive to more productive activities. In practice, there is the problem of displaced workers.[30] The conventional model does imply problems of distribution resulting from imports, lowering wages in unskilled occupations and the need of reallocating workers to jobs in skilled sectors. There should be emphasis on the neglect of the costs to workers instead of the focus of the literature on the numbers of jobs lost to globalization because total jobs depend on macroeconomic events and policy. Calculations show that there was displacement in 1977–99 of 17 million workers in manufacturing and 6.4 million in import-competing industries.[31] The losses in import-competing industries were concentrated in a few sectors: electrical machinery, apparel, motor vehicles, nonelectric machinery and blast furnaces.

There are important characteristics of the displacement of workers in import-competing activities. Although there is no difference except for age between manufacturing and import-competing workers, women comprised 45 percent of displaced import-competing workers compared with 37 percent for all of manufacturing. Displaced women workers were quite high as percent of the total in some industries where they are heavily employed: 80 percent in apparel, 66 percent in footwear and 76 percent in knitting mills.[32] The lower re-employment rate of women in overall manufacturing explains their lower rate of re-employment in import-competing industries of 63.4 percent versus 65.8 percent for men. There is significant employment and displacement of women in import-competing activities. There was decline of 13 percent of average weekly earnings of displaced workers in import-competing industries. There is wide dispersion: 36 percent of displaced workers in import-competing industries earned the same or more in the new job while 25 percent experienced losses of 30 percent or more. The workers with less education in low-skilled occupations with long period of service had losses above 30 percent. The largest portion of displaced workers, 50 percent, is re-employed in manufacturing; the lowest wage losses are for those re-employed in import-competing sectors.

Trade and wages

Conventional theory would suggest an adverse impact of trade with developing countries on the wages of unskilled labor in advanced countries. There are arguments that the decline in wages of unskilled

labor relative to those of skilled labor originate in rapid technological change. The specialization of labor during the industrial revolution occurred within the same factory. Globalization is accompanied currently by specialization of tasks in the chain of production in multiple countries, affecting unskilled labor. There is evidence of higher productivity and wages in exporting activity.

The prime factor of downward pressure on wages of unskilled workers is technological change. Innovations have been saving the quantity of labor used in production, thus exerting pressure on the wages of the unskilled.[33] However, past experience suggests the existence of a J-curve: after an initial decline the effects of productivity increases will eventually lead to higher wages. Productivity is the marginal product of labor, or the amount of output contributed by the use of one more unit of labor. The combination of more capital and better capital because of technology raises the marginal product of labor. Under perfect competition, labor is paid the value of its marginal product, or the marginal product times the market price of the product. The entrepreneur earns normal profits, that is, the level of profits required for the start and maintenance of production. There would be distortions only in extreme labor market imperfections.

There is a puzzle in that statistics do not reflect the effects of productivity increase on wages after two decades of globalization. The explanation is the impact of displacement of unskilled labor by the rise of information technology.[34] In addition, innovations in historical periods occurred in bunches; there were long periods of few or no innovations. The current innovation process is continuous, causing a succession of J-curves that delay the effects of productivity on wages.

There is a proposal of a new view to understand structural changes in worldwide production. In this new framework, activities are transferred to other countries, in the same way as with outsourcing. Workers with more skills in all countries gain because of increasing location of activities offshore.[35]

This approach ranks activities, for purposes of analyzing offshoring, in the value chain of production according to the type of labor skills required. At one extreme is assembly of vehicles that uses low quantities of skilled relative to unskilled labor, followed by intermediate use of skills such as in components and then on to research and development that is rich in skills. The firm will try to offshore to other countries that have ample supplies of low-cost unskilled labor those activities that are more intensive in unskilled labor while producing at home the activities that are more intensive in skilled labor. There is thus a rise in

demand for skilled labor, increasing its employment and wages, consistent with the behavior in US manufacturing in the 1980s. It also explains the behavior of the labor market in Mexico: the offshored activities from the US in assembly and especially components require more intensive skills in Mexico. The offshoring process increases the relative demand for skilled labor in both countries.

An important issue in the debate on trade is whether exporting firms in the US are better than non-exporting firms. There is significant and wide empirical information on this issue by focusing at the individual plant level.[36] There are numerous characteristics of performance in which exporters excel relative to nonexporters. The exporting plants use capital more intensively, being more productive and larger in size. The wages paid by exporters are 14 percent higher than those of nonexporting firms and the benefits are a third higher in exporting plants than in nonexporting ones. In 1976–87, the production workers in an exporting plant with size of 250–499 employees had earnings on the average higher by $3429 than a production worker in a plant of the same size that did not engage in exporting; and nonproduction workers earned $2479 more in the exporting plants of the same size than in the nonexporting plant. Successful companies engage in the exporting business.

Econometric research shows that there is no empirical relation between exporting and an increase in productivity of individual manufacturing plants in the US.[37] There is high correlation between exporting and plant productivity. High correlation means that growing exports coincide with increases in plant productivity. However, the high correlation is explained by the fact that there is greater likelihood that high productivity plants will enter the exporting business. There is an increase in plant productivity for exporters before and during entry into exporting but no change after entry into the exporting business. Another important finding is that the rates of growth of employment and output are higher for exporting plants. Moreover, the rates of growth of employment and output continue to increase after entry. The combination of higher productivity and faster growth of employment and output is an important vehicle by which exporting increases growth of aggregate productivity of the US economy. These effects are of significantly high magnitude. The change of shares of output across plants caused more than 40 percent of the growth of total productivity in US manufacturing. Most of these effects originated in the faster growth of high-productivity exporters than of lower-productivity nonexporters. Trade does not increase the productivity of

plants after they enter the export business but it affects welfare by permitting the growth of high-productivity plants engaged in exporting.

Offshore employment

In 2004, the outsourcing of jobs to other countries, or offshoring, became an important political issue in the press. There are not complete data on the issue but the effects on employment appear to be very limited.

There are virtually no reliable data on jobs lost to offshoring.[38] The available data claim that the job losses amounted to 830,000 jobs by 2005 and the forecast was a loss of 3.4 million by 2015, which is insignificant relative to the estimate of job creation of 160 million jobs by 2015 by the US Bureau of Labor Statistics.[39] In the decade ending in 2005, the gains of 35 million jobs were immensely larger than the alleged loss of 830,000 jobs to offshoring. Unfortunately, the issue became politicized. In addition, the US net surplus of exported services has been growing. There have not been major impacts of trade flows on labor marketing resulting from job offshoring. However, the problem of job displacement should not be ignored. There could be an improvement in adjustment assistance of displaced workers and an environment of robust economic and job growth.

Another view finds that there could be an industrial revolution in systems manifested in offshoring of production tasks.[40] As in past similar cases, the industrial revolution in England and the more recent revolution in services, there are likely to be profound changes in the way of working and living of people across the world. According to this argument, but there are no accurate data, the jobs lost to offshoring in the US could amount to a little less than one million, which is about two weeks of job growth in economic expansions. Offshoring will continue in impersonal services that can be provided by electronic transmission over long distances without loss of quality. The US and other industrial countries should not stop future growth of offshoring because of their ability to reap significant gains from trade in the past. However, there could be major reorganizations in politics, social welfare programs, education, trade policies and systems of national data.

Summary

There is an unusually strong theoretical case for the proposition that trade is better than no trade. The existence of gains from trade is widely

believed by many professional economists, at least those in mainstream economic research. However, as in all issues in economics, there is dissent of what appears to be a majority view on the gains from trade. There is an equally strong case for the correction of domestic distortions with domestic policy instruments to reap the benefits of trade.

Economists have been more successful in convincing themselves than politicians and the public. The political economy of trade could combine the propositions of the private interest view with the political influence of political science to explain the politics of trade policy. Antidumping and safeguard policies are detrimental to trade and of dubious merit for domestic welfare.

There is not a strong case that trade lowers employment and wages of less skilled labor. However, there are costs of displacement of workers that can be addressed more effectively by domestic policy. The allegations of major losses of jobs because of offshoring do not have merit. In fact, there is new evidence that offshoring increases better-paid jobs at home.[41]

7
Trade Agreements

Introduction

A majority of economists seems to prefer a multilateral system of trade within the WTO. In practice, most trade in the world is processed through trade agreements among countries. There appears to be also a majority of economists that criticizes not only the system of trade agreements but also individual trade agreements. The first section below introduces the characteristics of the various types of trade agreements. This is followed by the analysis of whether trade agreements promote the welfare of the members and of the world. Several sections consider the major trade agreements: the European Union, NAFTA, the Asia-Pacific Economic Cooperation (APEC), the Association of South East Asian Nations (ASEAN) and the Common Market of the South (MERCOSUR). The final section considers the Organization of Petroleum Exporting Countries (OPEC), which coordinates output and price policies of the major oil-producing countries. Some conclusions are listed in the summary.

Characteristics of trade agreements

The effort of multilateral trade negotiation continues through first the GATT and subsequently the WTO. However, the world is composed of multiple PTAs. Table 7.1 shows the WTO data for world exports and imports of merchandise with the corresponding data for the major PTAs. It is difficult to include APEC because it is mainly a forum of consultation with voluntary movement toward reduction of barriers to trade and investment. Nearly all the world's trade is processed through PTAs. It is possible to improve the welfare of the countries engaged in a customs

Table 7.1 World exports and imports of merchandise (US$B) (2005)

	Exports		Imports	
	Value	**%**	**Value**	**%**
NAFTA	1,478	14.5	2,285	21.7
US	904	8.9	1,732	16.5
European Union 25	4,001	39.4	4,135	39.3
MERCOSUR	163	1.6	114	1.1
ASEAN	653	6.4	594	5.7
Asia	2,779	27.4	2,599	24.7
Japan	595	5.9	515	4.9
China	762	7.5	660	6.3
World	10,159	100.0	10,511	100.0

Source: World Trade Organization, http://www.wto.org/english/res_e/statis_e/its2006_e/its06_byregion_e.pdf

union and a PTA without reducing the welfare of the world, as analyzed in the following section. This does not mean that it is technically feasible or common. Many economists distrust the possible excuse of PTAs to disguise protectionism, especially behind complex rules of origin of traded goods and services. PTAs have become a reality for world trade.

The PTA consists of a group of countries that impose the same tariff rates on the trade of goods produced in member countries and a common higher tariff (or tax) on trade produced in non-member countries.[1] The free trade area (FTA) is a PTA in which the tariffs of goods produced in member countries are entirely eliminated. In the customs union there are no tariffs on goods produced in member countries, as in an FTA, but there is a common tariff on any good produced in a non-member country. The difference between an FTA and a customs union is that the customs union imposes the same tariff on nonmembers while the FTA member can have different tariffs on goods and services produced in nonmembers.[2] This difference can result in what is called trade deflecting, which consists of imports shifting to enter the FTA through the lowest tariff member.[3] As a result, there are additional negotiations on rules of origin to prevent imports of all goods through the lowest tariff country; these rules define the conditions under which a good is considered to have its origin in the member of the area. These negotiations are the target of lobbies of producers. For example, there are 200 pages of rules of origin in the final NAFTA agreement.[4] Protectionism occurs when the rules favor higher cost producers of intermediate products, such as auto parts, to gain access to a member country in detriment of lower cost producers.

Economic wellbeing and trade agreements

A critical issue of trade agreements is if they promote the welfare or wellbeing of their members. In addition, it is important to determine if trade agreements promote the welfare of the world as a whole.

The analysis departs from the classification of trade-creating and trade-diverting effects.[5] Consider two countries entering in a trade agreement, the US and Mexico, and the rest of the world, World, and that the US imports pins. The cost of producing pins in the US is higher than in Mexico that also has a higher cost than the World. There is initially a tariff in the US on imports of pins, such that, the cost of pins in the US is higher than the cost of pins in Mexico plus the tariff that is also higher than the cost of pins plus tariff of imports from the World. Thus,

> US cost of pins *higher than* Mexico cost of pins *higher than* World cost of pins plus tariff

In this case, the US is importing from the lowest cost producer, the World.

Suppose the US eliminates the tariff on Mexico but maintains it against the World at such a level that the cost of the pins from the World plus tariff is higher than the cost of the pins in Mexico. The US would shift its imports of pins from the World, the lowest cost producer, to Mexico, a higher cost producer. The trade agreement is trade-diverting, because it diverts imports from the lowest-cost producer, the World, to a higher cost producer, Mexico. There is a loss of welfare for the US and the world because trade originates in a producer with higher costs.

Suppose another possibility in which the US has a tariff such that the cost with tariff of the World is higher than the cost with tariff of Mexico that is higher than the cost of producing pins in the US. The pins consumed in the US would be produced in the US because its producers have the lowest cost when adding the tariff. Suppose the US eliminated the tariff with Mexico but maintained it with the World. The US would then import pins from Mexico. This trade agreement would be trade creating, shifting production from a higher cost producer, the US, to a lower cost producer, Mexico.

The determination in practice of the welfare effects of trade agreements would be quite difficult by using this analysis. It would require the measurement of complex trade creating and trade diverting effects. In fact, the analysis is even more complex. It is possible to argue theoretically that a trade agreement could improve the welfare of its members

without reducing that of the rest of the world.[6] The welfare effects are likely to differ according to trade structure with the rest of the world, level of tariffs before the PTA and economic structures. There are not very meaningful arguments on when PTAs will likely improve the welfare of members. It becomes difficult to assess a situation when a PTA increases welfare for its members while being neutral in welfare outside the area.[7]

The proliferation of PTAs is considered to be a systemic problem. World and regional maps have become similar to "spaghetti bowls," full of connecting lines and curves, resembling noodles connecting geographical regions.[8] There is an alert that "the great economists who warned us against preferences during the 1930s when competitive tariff-raising was creating fragmented markets worldwide would have been horrified to see that, in the name of free trade, we are now re-enacting such fragmented markets on a parallel scale, and feeling virtuous about it."[9] The proliferation of bilateral agreements, in this view, weakens the resolve to continue multilateral trade negotiations. Bilateral agreements between the US and developing countries require that they use US products, such as fabrics in textiles. The negotiations on textiles and agriculture have suffered because of the unwillingness of countries to engage in MFN negotiations that would erode the preferences of PTAs. Conditions on capital controls, labor and environmental standards are included in the PTAs, thus building an unfavorable template for multilateral trade negotiations. Trade negotiations are used to promote agendas that do not have relation to the economic criteria of efficiency and welfare and that should be pursued in different forums, which are specialized to solve those issues.

In 1930, the average European tariff was 30.4 percent and that in the US 37 percent. By 2000, the average European tariff declined to 4.2 percent and that for the US to 4 percent.[10] Japanese average tariffs declined from 18 percent in the early 1960s to 3 percent in 2000. Brazil lowered its average tariff from 99 percent in the early 1960s to 17 percent in 2000.[11] There is interest in developing a political economy explanation of how the spaghetti bowls of PTAs can become building blocks toward free trade. Offshoring is the driving force that motivates regionalism toward multilateral liberalization of trade.

The European Union

The European Union (EU) is the most complex agreement because it is leading to full economic and political integration of the members.

There are more complex institutions in the European Union than in other PTAs. It also is the largest PTA in terms of total trade. The entire agenda of the EU is centered on an increase in productivity by renewed R&D investment and reorganization of its production and use of knowledge. The renewed Lisbon strategy is a set of policies at the national and community level designed to recover the leadership of Europe in innovation and its competitiveness in the individual countries and in world markets.[12]

The effort of integrating the economies and societies of Europe began in 1952 with the establishment of the European Coal and Steel Community. The European Economic Community (EEC) was created by the Treaties of Rome in March 1957.[13] The initial six members were Belgium, Germany, France, Luxembourg and the Netherlands. Subsequently, other members joined the community: Denmark, Ireland and the UK in 1973, Greece in 1981, Spain and Portugal in 1986 and East Germany in 1990 with the reunification of Germany. There were two objectives in the creation of the EEC. The common market would change trade and manufacturing in the EEC.[14] The second objective was the development of a political Europe, constituting a step toward the unification of the continent. The elimination of the barriers dividing Europe would provide better living and working conditions to the members, with balanced trade and fair competition. The common trade policy would lead to the elimination of all barriers to trade.

The purpose of the ECC was to establish a customs union or common market. The treaty abolished quotas and customs duties among the member states and imposed an external frontier for products that replaced the tariffs of the members. A common trade policy complemented the customs union and would be managed at the community level instead of the state level. The common market would be established over a transition period of 12 years composed of three stages of four years each.

The treaty of 1992 provided new powers and duties to the institutions of the community, creating the European Union.[15] It also provided cooperation in different ways. In 1995, Austria, Finland and Sweden joined the European Union. The disintegration of the USSR brought ten more members to the European Union, raising the total to 25 members. The territorial extension of the European Union is about two-fifths of the US but its population is 57 percent larger, standing at around 457 million. Table 7.2 provides the dimensions of the European Union. It is the largest PTA in force in terms of total trade.

Table 7.2 GDP, GDP per capita, exports and imports of the European Union countries

	GDP per capita		GDP		Exports	Imports
	PPP US$ 2003	PPP EU25 = 100	US$B 2005	Exports %GDP	US$B 2005	US$B 2005
Austria	29,506	123	306	53.2	163	146
Belgium	28,132	118	371	70.0	260	253
Denmark	29,874	122	259	48.6	126	114
Finland	27,428	113	193	38.9	75	68
France	27,760	107	2,126	26.0	555	575
Germany	26,302	110	2,795	40.1	1,121	982
Greece	19,411	85	225	20.9	47	63
Ireland	32,975	139	202	80.2	162	136
Italy	26,119	99	1,762	26.3	464	465
Luxembourg	51,088	257	36	158.3	57	49
Netherlands	29,105	126	624	71.1	444	393
Portugal	18,320	70	183	28.4	52	68
Spain	23,825	98	1,125	25.4	286	344
Sweden	28,119	116	358	48.6	174	146
UK	29,032	117	2,199	26.1	574	660
Total EU			12,764		4,560	4,462
US	37,765	150	12,456	10.5	1,303	2,020

Sources: PPP US, EUROSTAT.
http://www.unece.org/stats/trends2005/Sources/127_GDP%20per%20capita,%20PPP%20USD.pdf
EU25 PPP, UN European Commission for Europe.
http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,39140985&_dad=portal&_schema=PORTAL&screen=detailref&language=en&product=Yearlies_new_economy&root=Yearlies_new_economy/B/B1/B11/eb011
GDP, Exports and Imports, United Nations.
http://unstats.un.org/unsd/snaama/countryList.asp

Table 7.3 GDP, GDP per capita, exports and imports in NAFTA 2005

	GDP US$B	GDP per capita US$	Exports US$B	Imports US$B
Canada	1,131	35,073	519	467
Mexico	768	7,180	250	264
US	12,456	41,768	1,303	2,019
Total	14,335		2,072	2,750

Source: United Nations, http://unstats.un.org/unsd/snaama/countryList.asp

NAFTA

The FTA among Canada, Mexico and the US, NAFTA, has combined GDP of $14,335 billion. NAFTA was signed by the US, Mexico and Canada on December 17, 1992, taking effect on January 1, 1994. There is no PTA in the world with this immense output, shown in Table 7.3. Even total trade is significantly high. There have been few FTAs that created such political debate in the member countries. NAFTA became an important electoral issue in at least Mexico and the US. The rules of origin in the agreement required about 200 pages, raising intriguing issues of political economy.

The US Trade Representative (USTR) provides data, not necessarily reflecting causality, of the performance of trade and investment flows and economic indicators in the first decade of NAFTA:[16]

- Trade among members increased by 173 percent in 1993–05, from $297 billion to $810 billion; the daily trilateral trade of members is $2.2 billion
- The merchandise exports of the US to NAFTA members increased by 133 percent in 1993–05, much higher than growth of 77 percent with the rest of the world
- Canada and Mexico accounted for 36 percent of US foreign markets and for 36 percent of US export growth to the world
- Canada and Mexico were responsible for 55 percent of the increase in US agricultural exports since the creation of NAFTA in 1993
- Mexican agriculture benefited from NAFTA in 1993–05, with agricultural exports to and from the US increasing by $5.6 billion
- Real GDP growth in 1993–05 was 48 percent for the US, 40 percent for Mexico and 49 percent for Canada

- US employment increased by 22.6 million jobs, or 20.1 percent, from 112.2 million jobs in December 1993 to 134.8 million jobs in February 2006. The average unemployment rate declined from 7.1 percent in 1982–93 to 5.1 percent in 1994–05
- The average real compensation of manufacturing workers in the US increased at the average yearly rate of 2.3 percent in 1993–05 in contrast with a yearly growth rate of only 0.4 percent between 1987 (when data become available) and 1993
- The rate of productivity growth in the US business sector increased at 2.6 percent per year in 1993–05, totaling 36.2 percent. In contrast, in 1981–93, the yearly rate of growth of productivity was 1.8 percent for a cumulative 24.3 percent
- US non-residential fixed investment increased by 104 percent in 1993–05 in contrast with an increase of 37 percent in 1981–93.

Evidently, there is no attempt to claim that NAFTA contributed to these economic conditions. However, it is difficult to argue that NAFTA could have been detrimental to economic performance because of its huge share in US trade of about one third. Adverse effects from such a large share of trade could have affected aggregate economic performance. However, there is still the elusive counterfactual in economics of whether the US and its partners could have grown more rapidly and efficiently without NAFTA.

APEC

There is no FTA similar to APEC with its forum of consultations and voluntary agreements. The dimensions of APEC are the largest of any similar undertaking. It would concentrate more than 50 percent of world output and a significant part of its trade. The challenge of definitively creating APEC is as large as its dimensions. Table 7.4 shows the dimensions of APEC. It would weld into one trading bloc the entire North America and the largest countries in Asia, excluding India.

APEC is a unique form of dialogue and cooperation. It "operates as a cooperative, multilateral economic and trade forum."[17] Its uniqueness consists of the lack of legally binding obligations. There is a commitment to reducing trade barriers and increasing investment among its members. Dialogue is the vehicle for promoting trade and investment. The members engage in individual and collective actions designed to liberalize markets and foster economic growth.

Table 7.4 GDP, GDP per capita, exports and imports in APEC 2005

	GDP US$B	GDP per capita US$	Exports US$B	Imports US$B
Australia	709	35,199	135	150
Brunei	6	16,800	6	2
Canada	1,131	35,073	519	467
Chile	111	6,833	48	39
China	1,981	1,533	655	604
Hong Kong	173	24,521	341	322
Indonesia	281	1,263	94	82
Japan	4,559	35,593	652	589
Korea	787	16,472	335	315
Malaysia	131	5,159	161	131
Mexico	768	7,180	250	264
New Zealand	109	27,209	307	334
Papua New Guinea	5	905	2	2
Peru	76	2,739	18	15
Philippines	97	1,176	45	46
Russia	766	5,349	270	164
Singapore	117	26,997	284	249
Taiwan (2006)	354	15,391	215	205
Thailand	177	2,749	130	133
US	12,456	41,768	1,303	2,019
Vietnam	53	631	36	39
Total APEC less US	12,591		4,233	4,152

Source: United Nations, http://unstats.un.org/unsd/snaama/countryList.asp

ASEAN

The initial establishment of ASEAN was in the 1960s because of political interests. Eventually, economic motives reshaped ASEAN into an FTA and gradually into an intention of greater integration. Table 7.5 shows the diversity of members of ASEAN in terms of level of economic development, from the sophisticated Singapore to countries with relatively low per capita GDP. The ambition of ASEAN is to provide a framework for greater growth and progress to its members. There could be alliances with the US, the European Union and countries in Asia, such as China, India, Japan and Korea. The economic motives are mixed with political interests and the special nature of relations in Asia.

ASEAN was established by a treaty, the ASEAN Declaration, signed in Bangkok, Thailand, on August 8, 1967, by the foreign ministers of

Table 7.5 GDP, GDP per capita, exports and imports in ASEAN 2005

	GDP US$B	GDP per capita US$	Exports US$B	Imports US$B
Brunei	6	35,199	135	150
Cambodia	5	384	3	4
Indonesia	281	1,263	94	82
Laos	3	485	0.8	0.9
Malaysia	131	5,159	161	131
Myanmar	10	217		
Philippines	97	1,176	45	46
Singapore	117	26,997	284	249
Thailand	177	2,749	130	133
Vietnam	53	631	36	39
Total	934		889	835

Source: United Nations, http://unstats.un.org/unsd/snaama/countryList.asp

Indonesia, Malaysia, the Philippines, Singapore and Thailand.[18] Other countries subsequently joined ASEAN: Brunei Darussalam in 1984, Vietnam in 1995, Lao PDR and Myanmar in 1997 and Cambodia in 1999. The combined population of ASEAN is about 500 million. The goals of the Declaration of 1967 were the acceleration of economic growth, social progress, cultural development and regional peace and stability.

The goal of the ASEAN Vision 2020 is regional free flow of goods, services and investment with reduced poverty and social and economic differences by the year 2020.[19] The ASEAN economic region would be dynamic and competitive. The strategy of ASEAN is to use the diversity of the region to form an ASEAN Economic Community, consisting of integration of the members to enhance economic competitiveness. The ASEAN Free Trade Area was established in 1992 to obtain the benefits of competitive advantage by creating a single production unit. The instrument is the elimination of tariff and non-tariff barriers, promoting efficiency, productivity and competitiveness. The average tariff for the ASEAN-6 has been reduced from an initial 12 percent to 2 percent. The newer members with lower GDP have reduced most of their tariffs to the 0–5 percent level. The complementary agreement in services is the ASEAN Framework Agreement on Services and the agreement on investment is the ASEAN Investment Area. The ASEAN has selected sectors for accelerated integration by 2010, including air travel, agribusiness, automotive, e-commerce and electronics. The community is also facilitating the movement of business persons, skilled labor and talent across the

region. It is improving the ASEAN Dispute Settlement Mechanism to provide fast and legally binding resolution of economic claims.

ASEAN is planning integration in capital markets, currency cooperation and the liberalization of capital accounts and financial services.[20] There are also plans to develop the transportation network of the region, including air travel. Integration plans also cover telecommunications, energy, infrastructure, information technology and tourism.

MERCOSUR

The beginning of MERCOSUR was merely a customs union with four countries—Argentina, Brazil, Paraguay and Uruguay—with the interest that common effort would strengthen external negotiation. Venezuela joined in 2006 and other countries have become associate members. Table 7.6 shows that there is significant diversity in the size of GDP and level of development among the countries. Brazil has a significantly larger industrial sector that is competitive internationally in some areas together with a formidable agricultural sector that is the subject of intense negotiations for access to markets in developed countries. It is difficult to reconcile the interests of the members of the customs union. The European Union has been trying to negotiate an agreement with MERCOSUR for more than half a decade.

MERCOSUR has operated in stop-go fashion according to macroeconomic and exchange rate disruptions that interrupt its functioning.[21]

Table 7.6 GDP, GDP per capita, exports and imports in MERCOSUR 2005

	GDP US$B	GDP per capita US$	Exports US$B	Imports US$B
Argentina	183	4,731	45	35
Brazil	799	4,289	132	102
Paraguay	7	1,248	3	3
Uruguay	17	1,187	49	46
Venezuela	132	4,949	44	24
Subtotal	1,138		273	210
Associate Members				
Bolivia	9	1,059	3	3
Chile	111	6,833	48	39
Colombia	122	2,673	26	28
Ecuador	33	2,499	9	9
Total	1,413		359	289

Source: United Nations, http://unstats.un.org/unsd/snaama/countryList.asp

The history of these interruptions is revealing.[22] Economic plans and conditions in Argentina and Brazil have caused temporary distortions of the agreement.

OPEC

The Baghdad Conference of September 10–14, 1960, created OPEC as an intergovernmental organization.[23] There were five founding members: Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. Other members joined in subsequent years: Qatar in 1961, Indonesia and Libya in 1962, UAE in 1967, Algeria in 1969, Nigeria in 1971, Ecuador in 1973–92, Gabon in 1975–94 and Angola in 2007. The headquarters moved from Geneva to Vienna, Austria, on September 1, 1965. The combined GDP and trade of OPEC members, Table 7.7, mask the significant impact of the oil trade in the world economy and politics. The objective of creating OPEC was to obtain stable and fair prices for oil producers by means of coordinating and unifying the petroleum policies of its members. Other objectives consist of maintaining regular, economic and efficient supply of petroleum to consuming countries. An added objective is to maintain a fair return on capital to investors in the petroleum industry.

The highest level of OPEC is the Meeting of the OPEC Conference that meets twice a year in March and September or in extraordinary sessions whenever required. Every member has a vote in the Conference and decisions must be unanimous. The main decision is the matching

Table 7.7 GDP, GDP per capita, exports and imports in OPEC 2005

	GDP US$B	GDP per capita US$	Exports US$B	Imports US$B
Algeria	102	3,112	47	25
Angola	29	1,810	23	18
Indonesia	281	1,263	94	82
Iran	217	3,117	66	53
Iraq	33	1,159	34	37
Kuwait	74	27,621	49	19
Libya	37	6,351	29	12
Nigeria	113	863	63	26
Qatar	42	51,809	29	14
Saudi Arabia	314	12,779	193	86
UAE	134	29,751	113	79
Venezuela	132	4,949	44	24
Total	1,508		784	475

Source: United Nations, http://unstats.un.org/unsd/snaama/countryList.asp

of oil production to the expectations of demand by OPEC. The decisions are communicated via a press release. The materials used by the Conference members evaluate current oil market conditions and the forecasts of fundamental variables, including the rate of economic growth and scenarios of petroleum demand and supply. The Conference decides on applications for membership to OPEC and on recommendations submitted by the Board of Governors. It elects the Chairman of the Board and approves appointment of governors and the budget submitted by the Board. The Conference uses the advice of an Economic Commission on how to promote stability in the oil market.

Summary

The ideal policy for economists is the movement toward multilateral trade negotiations reducing trade barriers in general. Many of the proposals emphasize the importance of the WTO's Doha Development Round for developing poorer countries.

In reality, the world economy is divided into relatively tight compartments of PTAs. Trade economists are frustrated with the growing complexity of preferential arrangements and complex rules of origin. Unfortunately, most of trade in the world occurs through PTAs. Moreover, while the Doha Development Round stalls, the movement for more PTAs may gain momentum.

There is a tough theoretical and practical challenge of whether the system of PTAs could be managed toward multilateral trade negotiations with the MFN clause. The increase in world oil prices is becoming a potential issue of conflict between consuming and producing countries.

8
Poverty, the Environment and Climate Change

Introduction

One of the most hotly debated issues on globalization is the actual path of world poverty and inequality and its relation to openness. The analysis of public goods of Chapter 5 is extended in a specific section to regional, international and global public goods.

An individual section considers the economics of analysis of the environment and its relation to openness. Climate change is allegedly the largest market failure in history, generating a debate on the types of required economic policies.

Poverty and inequality

There is no conclusive evidence on the relationship of globalization to poverty and inequality among and within countries. There is no evidence that openness, or freer trade and capital movements, causes an increase in poverty. Theory suggests that economic growth diminishes poverty. Openness is one of various forms of increasing economic growth. There are many factors operating on growth at the same time, preventing isolation of the effects of openness. The literature is vast and conflicting. In addition, various arguments are based on value judgments, which consist of explicit moral positions. The differences in judgments prevent comparisons. On a narrow definition of a poverty line, or dollars per day of income, poverty has decreased. There is controversy on the definition of poverty that limits the research design and conclusions. A significant portion of the poor of the world concentrates in China and India because of the large population of these countries. The increase in the rate of growth of these two countries, especially in

China, accounts for a major part of the reduction of world poverty. The issue of inequality, or differences in income levels among social classes, is more complex. There appears to be a strong case for the argument that economic growth is the only way for the poor to escape poverty.

A comprehensive and deep survey of the literature on trade liberalization and poverty concludes that the accepted view by most economists is that open economies have better performance than closed economies and that policies of freer trade make significant contributions to economic development.[1] This survey is aware of the concern of many analysts that the poor may suffer from liberalizing policies and that even in the long-term some people remain in poverty. Distributional effects are likely to occur in shocks of openness. An important research issue is the nature and extent of these effects. If there were cases in which liberalization is the only shock, it would be possible to isolate effects of openness on distribution and poverty. As in all economics, many shocks occur simultaneously.

A key result from systematic analysis of the empirical literature is that it is not possible to obtain a general conclusion on the relationship between trade liberalization and poverty.[2] According to theory, trade liberalization will alleviate poverty on average and in the long-term, with broad supporting empirical evidence. There is no empirical support for the proposition that trade liberalization worsens poverty. However, the evidence does not indicate that trade liberalization is one of the key factors of reduction of poverty or that the gains from trade always benefit the poor. The essence of the explanation is the familiar displacement of some people and firms in the short term, which may include some of the poor.

The empirical evidence strongly supports the view that trade liberalization has significant positive effects on productivity, that is, increasing output per worker.[3] There is not strong empirical support for the view that liberalization has general adverse effects on employment or wages of the poor. However, there is insufficient evidence on transitions of employment and the transfer of price effects resulting from trade liberalization.

A distinguishing characteristic of the nineteenth century was innovation, consisting of the application of science to developing new goods and improving production.[4] This effort began in Great Britain during the industrial revolution and then spread to Europe.[5] Human capital was paramount in the twentieth century because the success in improving a country's living conditions depended on its success in developing and using knowledge, health and skills of the population.[6] Human

capital consists of education, on-the-job training, other training and health; it accounts for about 80 percent of the capital or wealth of the US and other developed countries. The countries in East Asia, such as Japan, Taiwan, Hong Kong and South Korea, compensated with human capital their lack of natural resources and the discrimination against their products in the West. Policies of improving human capital cut across cultural barriers, producing success stories in Latin America and Africa. Machines are important in this view but they require human capital to operate them and manage the firms.

One of the best ways to evaluate the impact of growth on poverty is by analysis of China and India where most of the world's poor live.[7] World Bank data show that China grew at the average yearly rate of 10 percent in 1980–2000 and India at 6 percent per year. China had the largest growth rate in the world and less than 10 countries grew more rapidly than India. Data from the Asian Development Bank and the government of India show that the incidence of poverty declined in China from 28 percent in 1978 to 9 percent in 1998 and in India from 51 percent in 1977–8 to 27 percent in 1999–2000.[8] In those 20 years, India and China increased their external integration. Poverty in India oscillated around 55 percent in 1950–80 when there was extreme intervention by the government in the economy.

Because of conflicting reports on the evolution over time of poverty data, economists at the World Bank recalculated the numbers using consistent data and methods.[9] The data originate in nationally representative surveys whenever possible. They use the conventional poverty line of $1 per day. There were 200 million fewer people in the world in poverty in 1998 compared with 1980, creating the controversy. Their new calculation shows that there were 1.1 billion poor people in 2001, close to 400 million less than in 1981. The data show that the poor in China declined by 400 million. Most of the decline in the poor in China occurred in the early 1980s. The number of poor outside China increased slightly. They project that the number of poor on $1 per day will be reduced by one half by 2015. However, the reduction will be concentrated in East and Southeast Asia.

The international poverty line (IPL) used by World Bank economists[10] is $32.47 per month, equivalent to $1.08 per day. Other economists argue that the World Bank uses the US as base country.[11] The US consumer price index increased by 34.3 percent in 1985–93 while the increase in the IPL was from $30.42 in 1985 to $32.74 in 1993, implying change in consumer prices of 8 percent. This caused a lowering of US national poverty lines by 20 percent. Examples of the resulting poverty lines

show lowering by 30 percent for Nigeria and increase by 157 percent for Mauritania. Because of these and other methodological objections, these other economists contend that the IPL would have to be significantly higher to provide resources required for the nourishment of a human being.

In 1980–2000, the rate of growth of trade was twice that of world income.[12] A study focuses on the impact of trade on growth and inequality in a group of 24 countries that experienced significant openness in 1980–2000. The ratio of trade to GDP doubled to 33 percent for this group of countries, which contains more than one-half of the population of developing countries because it includes China and India. There are four conclusions from the experience of this group of countries:[13] growth rates increased from 1.4 percent in the 1960s to 5.0 percent in the 1990s; there is no evidence that inequality increases with growing trade; growth with stable inequality contributed to lowering poverty; and the poorer countries in the sample lowered their gap relative to rich countries because of comparatively higher growth rates.

Criticism of this view claims that advanced countries with 14 percent of the world population held almost three-quarters of the income of the world at the beginning and end of the 1990s.[14] According to this argument, international trade reinforces income inequality among nations. The shares in world trade are reflected in the pattern of world income distribution. Exports have a strong influence on world income because of the faster rate of growth of exports than world GDP. Advanced countries receive $0.75 of every $1 of exports. Poorer countries receive about $0.03.

Advanced research shows that in 1970–98 the rates of poverty declined: from 40 percent to 18 percent for the $2 per day line and from 17 percent to 6 percent for the $1 per day line.[15] There was decline in the number of people in poverty in 1976–98 from 600 million to 350 million for the $1 per day line and from 1.4 billion to 1 billion for the $2 per day line. Moreover, poverty declined in 1970–98 for every conceivable poverty line. The debates on the choice of poverty line are fruitless. Any poverty line chosen will show a decline in poverty.

Another aspect of the debate is the argument that when China and India are excluded poverty increases. There are calculations showing that poverty declined in China, in the rest of Asia and in Latin America.[16] Poverty increased in Africa. There could still be an argument that globalization was stronger in East Asia, South Asia and Latin America compared with Africa. Using the $1 per day line, people in poverty decreased by 309 million for the globalizing countries but increased by 79 million for the non-globalizing countries. The $2 per day line shows

decline in poverty counts of 478 million for the globalizing countries and increase by 80 million in the non-globalizing countries.

Regional, international and global public goods

The need for collective action at various levels originates in the existence of regional, international and global public goods. The market may not supply these goods. There are also threats to nations such as financial instability and wars that require collective action. The discussion below consists of an analysis of the reasons contributed by various economists for the provision of public goods at the international level and the classification of those goods. There is strong warning on the need of providing public goods; the current governance of international financial institutions may not be conducive to an adequate provision of public goods.[17]

Health is one of the earliest and most important concerns and involvement of many countries in public goods. A well-known example is preventing the spread of contagious diseases, requiring cooperation by nations and international organizations, such as the World Health Organization. The key characteristics are that the benefits of public goods are non-rival and non-payers cannot be excluded.[18] In the case of many nations, the consumption of one good is non-rival if consumption by one country does not diminish the consuming opportunities of other nations for the same unit of the good. The property of not being excludable means that once the good is supplied, the benefits are enjoyed by payers and non-payers alike. Global and transnational goods in preserving health can have these two properties in various forms.

Economic openness has been associated with cross-border flows of goods, services, capital and labor. There are other cross-border flows: pollutants, diseases, terrorism, knowledge, culture, financial crises, political turmoil, medical discoveries, innovations and computer viruses and worms.[19] Globalization and technology drive these flows, suggesting that collective action, sometimes influenced by international organizations, may be required beyond the boundaries of nations in controlling transnational public goods. These goods can benefit people in two or more countries. When the benefits or costs have global effects the goods are called global public goods. There are benefits and costs of goods that affect two or more countries in a specific location, being called regional public goods.

There are three key types of regional public goods.[20] Peace and security are important regional concerns. Regional conflicts have negative

externalities that can be reduced by regional public goods. Regional wars have very adverse effects on economic growth. The best results are obtained by concentrating efforts in research centers of excellence. Provision of knowledge as a public good requires coordination. Thus, knowledge that is specific to a region would be best developed by a global or regional institution. Governments give patents to these goods, in an exchange of a short-term monopoly for larger numbers of discoveries. There are short-term losses from the monopoly power given to a producer that must be compared with the long-term benefits of more active innovation. The third important regional public goods relate to the effects of communicable diseases. A disease such as avian flu (SARS) requires worldwide epidemic controls in the form of providing a global public good. There are region-specific diseases that require collective action in the form of regional public goods.

The environment

The conservation of the environment is the classic case for public intervention considered by neoclassical economists. The problem is the lack of a price for clean air. The most promising approach is applied welfare economics or cost/benefit analysis. Unfortunately, the economic arguments are quite appealing but have not convinced decision makers. Other criteria are used in environmental legislation, requiring the analysis of the political economy of decisions. Empirical research has not made great progress because of the lack of a theory of economic growth and the role of the environment in such theory. The issue becomes even more intractable when trying to relate openness to the environment. Developing countries complain that the imposition of environmental standards in trade agreements prevents them from improving their living standards.

There is no observable price for clean air. Pollution causes an externality, such as in the classic example of the laundry soiled by the emissions of the factory. The market failure caused by the negative externality of pollution prevents the market from attaining a Pareto optimal outcome.[21] The marginal social cost of the output of the factory, or increase in cost to the community from increasing factory output, is higher than the marginal private cost, or the increase in cost to the factory from increasing a unit of output. The problem is that the factory does not consider the cost of pollution. A tax would attain the Pareto-optimum outcome, which would lower output to that socially desirable. This is the case for regulation based on the public interest view.

With negligible transaction costs, there could be an agreement between the company affected by the pollution and the polluting company. Such an agreement would not occur in reality because of the large number of market players involved in environmental issues.[22] The hurdle becomes one of finding the second-best outcome in the presence of major transaction costs. The government also faces the same transaction costs as market players and regulation may cause government failure. An appeal to the methods of welfare economics, by calculating costs and benefits of regulation, was not incorporated in the early legislation on the environment.[23]

There are three major conclusions from the empirical literature.[24] There is evidence showing that increasing income positively influences the quality of the environment. An earlier professional view that environmental policy does not affect trade and investment flows is not warranted. There is some evidence of "pollution haven effects" but not confirmation of the pollution haven hypothesis. The pollution haven effect postulates that the weakening of environmental policy determines exports of goods that adversely affect the environment and the location of production in the country with such environmental policies.[25] According to the stronger version, the pollution haven hypothesis, activities that adversely affect the environment relocate from more advanced countries with stronger environmental policies to poorer countries without such policies. In this extreme version, the lack of environmental policy determines the location of pollution-creating industries. Thus, pollution increases in the developing countries and decreases in advanced countries. The alternative hypothesis is that conventional endowments of labor, capital and natural resources plus technology determine the pattern of trade, or the goods exported and imported by various countries.

Distinguished economists are voicing strong complaints against the environmental and labor restrictions in trade agreements because they deprive countries of the opportunity of development. There is characterization of the green movement as "ecological imperialism."[26] The historical evolution would provide support for this view. Initially, the West depended on organic agriculture. The progress of the economies of the advanced countries was achieved by changing their production into the exploitation of minerals and energy. The supply of minerals and energy would be unlimited.

A similar phenomenon occurs presently under the new values of ethical trading and foreign policies. These policies are imposed in trade and investment agreements, preventing the development of poorer

countries such as China and India.[27] According to this view, there is neither ethics nor logic in these ethical arguments that threaten to undermine the liberal world order that can bring progress to poorer countries. The Greens are opposed to the key forms of capitalism that can transform poorer countries—free trade and the continuing burning of fossil fuels. The elimination of these alternatives for development would simply condemn poorer countries to permanent poverty. The view recommends that developing countries resist the international treaties motivated by the agenda of the Greens.

Climate change

Global warming because of greenhouse gas (GHG) emissions allegedly is the largest market failure ever invoked. There is no private solution for the problem and it would require global collective action. There are two reviews of the problem by the UK and the UN, discussed below. There is strong criticism by economists of the use of near zero discount rates in the UK report. The comparison of welfare among individuals and over generations is quite challenging. The near zero discount rate would concentrate all the effort of adjustment in the current generation. Conventional economic analysis has used the "ramp" approach.[28] The adjustment would occur as in the rising slope of a ramp, allowing for economic growth to make the costs of the adjustment more amenable.

The HM Treasury review

The greenhouse effect consists of the world's climate change resulting from increasing GHGs that raise the infrared radiation, or heat energy, blocked by the atmosphere.[29] The burning of fossil fuels, deforestation and other changes in the use of land are the main causes of these concentrations. There have been concentrations of other GHGs, such as methane and nitrous oxide. The radiation of the sun increases the warmth of the earth. However, a major part of infrared radiation moves back to outer space, cooling the earth. Part of the infrared radiation is blocked by GHGs, with resulting cooling of the earth. The net effect is a trend of warming of the earth. The levels of GHGs surpass the highest in 650,000 years of history.

Scientists use the concept of global mean surface temperatures to measure climate change.[30] The warming of the earth since 1900, measured by global mean temperature, has amounted to 0.7°C, which means 0.7 degrees centigrade. The rate of warming has been about 0.2°C per decade, on average, in the past 30 years. The warmest ten years on

record have been experienced since 1990. The HM Treasury review claims that increasing concentrations of GHGs are the only reasonable cause of the trend of global warming in the past 50 years.[31] The climate models surveyed by HM Treasury suggest that the doubling of GHGs could lead to an increase in global mean temperatures of 2–5°C in 2030–60. There has not been similar experience in the world since the last ice age to the present. By 2100, there could be warming of the world by 3–10°C.

There would be significant effects of global warming.[32] There would be winners and losers of an increase of temperature of 1–2°C. There would be economic gains from longer growing seasons in northern latitudes, lower mortality from cold phenomena and new activities in energy and tourism. However, there would still be impact on indigenous communities in the Arctic Circle and the need for evacuation in tropical islands at low levels.

The estimate of resource costs by the HM Treasury is 1 percent of world GDP by 2050 to stabilize concentrations.[33] The range of forecasts is from –1 to 3.5 percent of GDP. The review concedes that there are numerous difficulties in this estimation, which requires the costs of various technologies in periods of half a century. It may be added that it could be impossible to foresee new technologies that are presently unknown. The estimates require trajectories of prices of fossil fuels, such as oil and coal, over the long term when it is almost impossible to forecast them for short periods. Demand cannot be ignored because people will certainly have behavior responding to price changes that is difficult to foresee. The proposal is based on a carbon-price signal of difficult estimation. The carbon price would be the social charge to the polluting entity, which is like a tax to reduce pollution. There are multiple other policies requiring effective regulation.

The UN IPCC

The World Meteorological Organization and the UN Environment Programme created in 1988 the Intergovernmental Panel on Climate Change (IPCC). Membership is open to all members of the UN and the World Meteorological Organization. The objective of the IPPC is to evaluate all aspects of climate change induced by human activities. The IPCC does not engage in original research or in monitoring climate data. Peer review and the technical and scientific literature constitute the elements for evaluation by the IPCC.

There is anthropogenic influence (that is, created by human beings) of the environment that has accelerated since the middle of the

eighteenth century following the industrial revolution.[34] The composition of the atmosphere is especially influenced by the combustion of fossil fuels for industrial or home use and burning of biomass. These activities generate GHGs and aerosols, which are small particles in the atmosphere. The GHG absorbs radiation generated by the surface of the earth and clouds. Then it emits infrared radiation at a level colder than the surface of the earth. As a result, it traps part of the energy, warming the surface of the earth. The ozone in the upper atmosphere filters damaging incoming ultra-violet radiation.

The stock of GHG content in the atmosphere was relatively constant in the thousand years preceding the industrial revolution but has increased since then by more than 30 percent. Infrared radiation absorption and emission is strengthened by increasing concentration of GHG. As a result, the emission of the earth's radiation is processed at higher altitudes where less energy is emitted because of lower temperatures, causing climate warming. The effects of aerosols are less known but they tend to offset the GHG effects.

The IPCC concludes categorically that the climate system is warming.[35] There are multiple reasons for this conclusion, in the form of increases in global average air and ocean temperatures, snow and ice melting and an increase in the global average sea level. Temperatures increased by 0.76°C from 1850–99 to 2001–5. The linear trend of warming per decade in the past 50 years of 0.13°C is almost twice that of the last 100 years. The 100-year linear trend of temperature increase in 1906–05 is 0.74°C. The IPCC concludes that anthropogenic GHG concentrations are very likely the cause of the increases in globally averaged temperatures and other aspects of climate change such as ocean warming, temperature extremes and wind patterns. The costs by 2050 of stabilizing GHG emissions are in the range of a 1 percent gain and a 5.5 percent loss of global GDP.[36]

The economics of climate change

There is disagreement by economists on the cost and benefit analysis of climate change.[37] An important criticism of the HM Treasury review is that it exaggerates the economic consequences of climate change. The worst outcome would be that income per capita increases in the future 9 times instead of 13 times. The consensus of economists is that climate change would not be an economic catastrophe. There is also the argument that future generations will adapt much better with scientific progress than what the review could model. There is a counterargument that environmental losses have value to people, are difficult to predict and become irreversible.

Another difference of opinion among economists is that there is high uncertainty in the costs of mitigation. The HM Treasury review uses risk and uncertainty, two words that evoke the suspicion of imprecision and error among economists, especially those engaged in financial transactions. The HM Treasury review has a wide range of a gain of 1 percent of world GDP by 2050 to a heavy loss of 3.5 percent of world GDP by 2050. The only way to find out is by allowing climate change to occur. However, there would be gains of new technology on using fossil fuel energy more efficiently.[38] The argument centers on the costs and benefits of that technology.

The critical issue of disagreement among economists is the calculation of net present value.[39] The net present value is the estimation of the upfront cost of making the adjustments, requiring inputs of benefits, costs and the most controversial, the appropriate value of the discount rate. The equation is similar to that of 3.2 in the appendix to Chapter 3. The Stern review uses a discount rate of 0.1 percent, which is about equal to zero. This assumption equalizes the welfare of future generations with the present generation.[40] For example, the price of carbon in 2005, or tax to polluting entities, using the near zero discount rate is $159 but it is only $17.12 using the ramp approach.[41] Factories creating pollution would have to pay the $159 carbon price now, concentrating all the adjustment in the current generation, in the form of much lower output of goods and services. The payment of only $17.12 would spread the adjustment over several generations. The literature on the economics of climate change finds that efficient economic policies of slowing climate change consist of lower rates of reduction of emissions in the short term followed by faster reductions in the medium and long terms. Economists label this policy as the climate-policy ramp. The policies become tighter as if climbing a positively sloped ramp over time.[42]

The decision on how to mix and time the reduction of emissions is determined by specific knowledge of costs, damages and the irreversibility of climate change and damages. The assumption of a near zero discount rate simply flattens the policy ramp, concentrating all the costs of adjustment in the current generation.

Summary

The evidence on the issues discussed in this chapter does not lead to very solid conclusions that are widely accepted. Empirical verification of causality in economics leaves much to be desired. There is a theoretical case for the provision of regional, international and global public

goods. The management of market failures by the government finds the same lack of information on prices of missing markets and major cost/benefit calculations and hurdles. The problem of the missing market is that there is not a directly observable cost of the price of carbon.

It is not possible to clearly relate deterioration of the environment to trade openness. Climate change is an important issue but the economics appears to be more promising in the ramp approach.

9
Financial Globalization

Introduction

Economists are in general in favor of the benefits resulting from greater global integration of trade. There is no agreement on the benefits of financial globalization.

The first section considers the arguments in favor of increased efficiency and growth caused by financial markets and institutions. Financial repression, in the form of intervention in financial markets, has been denounced as causing losses of efficiency and opportunities for growth. Financial liberalization consists of eliminating government controls of financial markets. There have been waves of financial liberalization in the past three decades.

A separate section considers the advantages and costs of liberalizing foreign access to domestic financial markets. The debate has focused on capital account liberalization, that is, unrestricted flows of capital among nations. The main argument against liberalizing capital flows is the incidence of financial crises with adverse effects on output and employment.

The role of finance in growth and efficiency

Adam Smith referred to the role of finance in terms of a parable.[1] Output was higher if the process of production was divided into small tasks performed by different workers and machines. Specialization was the driver of economic growth that Smith observed during the industrial revolution. The transition to specialization from a barter economy requires a medium of exchange and a unit of measurement, provided by money. There is no specialization in a subsistence economy in which all

production occurs within the family unit. Goods are exchanged for each other in barter transactions. The early characterization of economic development was the movement away from the subsistence to the money economy, which is not far from the parable of Smith. There is higher specialization in the money economy in which goods are exchanged for money.

A modern parable focuses on the need for the entrepreneur to escape the constraints of self-generating resources, such as savings and income, to obtain the appropriate risk, liquidity, and allocation of resources over time; the entrepreneurs obtain the volume of resources needed for heavy investments from financial markets and institutions.[2] External financing is the key opportunity and function provided by financial markets that permit individuals and even large corporations to escape the constraints of self-generated capital limited by profits and retained earnings. External finance requires financial markets and institutions and makes significant difference in modern technologically and organizationally driven economic growth. The functions of financial intermediation cannot be considered in isolation, except for specific analysis, but rather must be taken together to identify how they promote the two channels of capital and technological accumulation.[3]

There is a view that financial development, both of markets and institutions, is an important part of economic growth.[4] Empirical evidence shows that financial development successfully predicts future economic growth, capital accumulation and technological change. Evidence from cross-sections of many countries, individual case studies of countries and research at the firm and industry levels indicates that economic development is significantly affected by financial development in long periods. Financial crises cause significant losses of employment and output but the relation between financial development and economic growth is also of a long-term nature.

The financial system performs an important function of intermediation between savers and investors.[5] Modern companies require heavy initial investments just to begin operations that permit economies of scale characterized by initially declining average costs as output increases. Marginal cost is the increase to total costs resulting from producing an extra unit. Because of heavy investment in a factory, the first unit that is produced is very expensive but the average costs diminish as they are spread among additional units. The entrepreneurs that develop the project do not have sufficient funds to make these initial heavy investments. The money and capital markets agglutinate a multitude of savers to provide the funds required for investment in large

projects. In all periods, banks provided loans to companies for investment in profitable economic opportunities that promote growth and employment. Capital markets in bonds and stocks can access individual investors as well as institutional investors such as pension funds, endowments, mutual funds, and so on. The individual investors can invest their savings and retirement accounts in projects with higher long-term returns than those available when the saver has very limited funds.

Financial institutions such as banks, investment banks, brokerages and securities exchanges play a key role in efficient allocation of resources. They channel liquid savings of individuals to projects in industry and services that have returns only in the long term. They convert liquid funds into shares or stock in economic projects. There are benefits to the entrepreneurs that receive financing for the projects as well as to the savers that can share in higher returns in corporate stocks and bonds than those available in money market deposits. Intermediation converts illiquid projects with long gestation and high returns into assets, such as stocks and bonds, which can be exchanged in markets for immediate liquidity.

The savers do not know the quality of the projects of the entrepreneurs and have no resources to monitor their progress. The evaluation of the projects and the monitoring is performed by financial markets and institutions. The underwriting of the securities generates a key flow of information for savers; there is a reputation effect on the quality of the securities given by the endorsement of the underwriter. Markets monitor the quality of the investments by providing prices for the securities, which are based on analysis of current and future profits. Financial institutions also provide the means by which companies that are not effectively managed can be restructured to become more efficient.

Banks provide monitoring functions. There is an interesting view of delegated monitoring by financial intermediaries.[6] There are two doubts on the rationale for financial intermediaries. First, there is the issue of why investors do not lend directly to borrowers instead of lending to banks. Second, the nature of the financial technology of banks to serve as intermediaries must be clarified. Banks have the incentive of costly liquidation to coerce borrowers to repay their obligations. However, banks can selectively avoid inefficient (costly) liquidation of borrowers by monitoring. The function of monitoring could be extremely expensive if carried out by a multitude of potential inventors but it can be centralized in financial intermediaries such as banks. The nature of the contracts is important: banks issue unmonitored debt (deposits) and monitor loan contracts. The monitoring of loan contracts is required

while that of deposits is not required because of the financial engineering technology of financial intermediaries obtained by diversification. This financial engineering of diversification permits the mitigation of risk. Thus, banks provide "delegated monitoring." Depositors are not exposed to the risk of only one debtor in a loan but to the mitigated risk of many borrowers, delegating to banks the monitoring of loans. The conclusion is that financial intermediation and delegated monitoring are linked by debt, monitoring and diversification of debtors.[7] The financial engineering of diversification is essential to institutions such as banks that use leverage of about ten times of capital such that bad loans can bankrupt the institution. An example in the credit/dollar crisis after 2007 is the prudent diversification of lending risks by banks such as J P Morgan Chase and others.

One of the original and most impressive contributions to understanding economic development explains the process of development as long periods of disequilibrium of a model of perfect competition with shocks of technological innovation.[8] Banks play a key role in the allocation of credit to financing the projects of innovations that cause economic growth. This was the first argument that the financial sector allocates resources to efficient economic activities.[9] This allocation process does not have significant risk of losses due to moral hazard (or funds used by borrowers for riskier activities than those for which the banks lent them), adverse selection (or failure by banks to finance the projects with highest contribution to productivity and growth) and transaction costs. The allocation by financial institutions constitutes a key factor facilitating or inhibiting economic growth.

There is significant evidence on the facilitating role of banking in the early stages of industrialization.[10] There is caution of the result that the approach mainly analyzes how firms escape the constraint of internally generated profits to finance projects rich in innovation that can augment the rate of economic growth.[11] The historical approach explains economic development in terms of institutional factors, with financial institutions playing a key role in the early stages of modernization.

Financial repression and restraint

Various countries implemented legal restrictions on financial institutions that were considered detrimental to efficiency and development.[12] These restrictions are grouped into the term "financial repression."

A typical restriction was an interest rate ceiling on deposits and many times also on loans. For example, the central bank could prohibit an

interest rate in excess of 3 percent on deposits, loans or on both. The rate on loans could be set at 4 percent so that banks could make some profits required to pay for costs. There were excessive reserve requirements on bank liabilities as well as constraints on bank liquidity. For example, the central bank may require banks to hold 80 percent of their deposits as reserve requirement in the form of deposits at the central bank and cash in their vault. For every $100 of deposits, banks did not earn anything on $80 of reserves and could lend only $20 to earn income to pay the interests and costs of the deposits. Banks were required to lend to specific activities that the government considered to be strategic to economic development. In many cases, such as in Brazil, banks used official funds to lend to those activities at a fixed spread between the cost of the borrowing by the bank from the government and the loan to the protected economic activity. Brazil also had multiple state and federal commercial and development banks engaged in directed lending, that is, in loans to specific economic activities, such as to companies producing machinery. Capital requirements were also used to constrain bank activities. In this case, banks were forced to maintain high own capital relative to assets such as loans. Financial repression reduced intermediation, weakened financial institutions and in many cases increased interest rates.

The problems with financial repression are of two broad types. There is an important macroeconomic management problem. A depositor would require that the interest rate on a one-year certificate of deposit compensate for the inflation expected in a year plus a reasonable remuneration above inflation. If the maximum interest rate on deposits imposed by the central bank is 3 percent per year and inflation is 4 percent, there would be no incentive to invest money in one-year certificates of deposit. Banks would not be able to raise funds to lend, disrupting their function of intermediation. Depositors would invest in other assets yielding higher returns, in particular, non-financial assets, such as real estate. Higher expenditures would raise inflation and worsen further the situation. Eventual control of inflation with higher interest rates and government budget surpluses could reduce growth and employment. The economy would function better if depositors and banks negotiated freely the interest rate on deposits, avoiding inflationary pressures.

A second problem is the distortion in the allocation of resources. The fixed interest rate on deposits would discourage savings. Financial repression is equivalent to financial disintermediation, that is, a reduction in financial assets. The interest rate is a key variable in the allocation of resources in the economy to their optimal use. Interest rates are used in

estimating future cash flows from economic projects used by companies to make their investments. The formulas used are similar to 3.2, being very sensitive to interest rates. Control of interest rates by the government may distort efficiency and future growth potential by sending the wrong signals on investment and choice of projects for financing. Directing lending to specific activities may allocate resources to inefficient opportunities that restrict the potential of the economy. Government allocation of resources is plagued by favoritism and traffic of political influence, resulting in what some have labeled as crony capitalism. Privatization in Russia to friends and associates of the government with subsidized credit supplied by the government and similar episodes have been characterized as the "grabbing hand."[13] Financial repression was an important determinant of the flight of the US financial system to London and other centers, a subject considered in greater detail in Chapter 10.

According to a different view, the argument that financial repression causes misallocation of resources, in analogy with the goods sector, is misleading.[14] In conditions of credit rationing and bankruptcy the bank does not lend to potential creditors willing to pay the highest interest rate because that would increase the likelihood of bankruptcy.[15] Higher interest rates adversely affect incentives and the pool of applicants, which could include many projects that would default. Free-market interest rates under asymmetry of information need not result in allocation of resources to the best available alternatives. In this view, financial repression lowers the cost of capital to business. The lower interest rates decrease the cost of debt, making overall capital less costly, thus increasing the firm's equity. There is an added benefit in the decrease of the expectation of bankruptcy, which encourages firms to engage in projects with long gestation, high yield and risk. The conclusion of this view is that policy can use financial repression in promoting increasing savings and efficiency in allocating capital.[16]

Another form of intervention in credit markets consists of directed credit by the government to certain activities. The alternative view argues that without these programs there would not be allocation of credit to activities with the highest social returns. Technology is an important activity that should qualify for directed credit programs.[17]

The rapid economic growth of East Asian economies before the 1997 crisis is called the "East Asian Miracle." Authors contend that there were many causes of economic growth in this episode but that an important factor consisted of systematic government intervention in financial markets throughout every stage of development.[18] They document the market failures targeted by the authorities, rationalize the theoretical

justification for intervention in those failures and verify with data the impact of policy. The authorities abandoned ineffective policies; designed policies to improve the probability of success and reduce abuse; and successfully changed policy courses to accommodate changes in economic conditions.

The effects of the policies instead of the policies are important in the characterization of financial repression.[19] The typical policies are the interest rates and quantitative restrictions described above. The policies do not work without complementary restrictions on the flows of international capital. Otherwise, offshore financial intermediaries could offset the policies by capital flight. That is, depositors would seek higher interest rates in deposits in dollar or other hard currency in foreign countries.

The effectiveness of the restrictions on international capital flows is suspect. Brazil had all the financial repression policies in the 1970s that can possibly be designed together with capital controls. Trade and multinational companies, both local and foreign, permitted the capital flight through underinvoicing and lagging exports, which consists of using a lower price in the official invoice to keep the difference relative to the actual higher price in overseas accounts and delaying exports to wait for devaluation that would increase the local currency counterpart of dollars left overseas. There could be also overinvoicing and leading imports, which consists of charging more for a good bought abroad and anticipating purchases, leaving the difference in overseas accounts. There are also intercompany loans with excessive interest payments to keep dollars abroad, dividend remittances and price transfer or low prices in actual transactions to keep the difference in foreign accounts. The low interest rate stimulated the ingenuity to maintain deposits overseas paying higher interest rates. Such technology of capital flight was internationally available and marketed. By the 1980s Brazil had a GDP of a few hundred billion dollars and Brazilian nationals held close to $100 billion in offshore deposits. The only way to avoid capital flight is to define, protect and enforce property rights, allowing savings to receive an adequate remuneration. Periods of excessive taxation in the US have resulted in evasion of taxes with capital flight. Government intervention in finance can result in high costs in the form of lower efficiency and financial crises with lower employment.

Financial globalization

Financial globalization can be defined as the process of integration of the financial system of a country with international financial markets

and institutions.[20] The integration is usually accompanied with liberalization, or freeing of government controls, internal financial markets and the flow of international capital; there are no restrictions of the capital account of the balance of payments, which measures inflows of foreign capital and outflows of domestic capital to other countries. The liberalization of financial markets consists of the elimination of controls on financial institutions, such as interest rate ceilings on deposits and loans, reserve and liquidity requirements on deposits, restrictions on assets and conditions to allocate loans to certain economic activities. The liberalization of international capital flows consists of the elimination of controls on exchange rates and quantitative restrictions on foreign international transactions by domestic agents or foreign agents. Cross-borders movements of capital significantly increase during financial globalization.

Globalization is the result of the interaction of four agents—governments, borrowers, investors and financial institutions.[21] Governments promote globalization by eliminating restrictions on domestic financial markets and institutions and by allowing free flows of capital. Borrowers and investors can borrow and invest overseas, respectively. The diversification of financial transactions can be very important to weather crises. Borrowers can enjoy lower rates of debt obligations and improved terms. Investors can tailor their investments to their risk appetites. Financial institutions constitute another important agent of globalization. International financial institutions have actively engaged in financial sector FDI (FSFDI), with many favorable effects on host-country financial markets. FSFDI, for example, is the investment of a foreign bank in buying a share in a domestic bank, purchasing a local bank or establishing a wholly owned subsidiary. Citibank, the predecessor institution of Citigroup, established subsidiaries in many countries outside the US even before World War I.

There is analysis of the benefits of FSFDI.[22] A group of benefits originates in institutional change of the acquired banks. There are multiple exchanges of resources between the parent in a major overseas center, such as New York or London, and the acquired domestic bank, including the deployment of managerial and human capital from head office and the training of local staff. There are benefits to the market as a whole in that the quality and availability of experienced financial professionals increases. There are also benefits in infrastructure such as systems and relations with world capital markets, financing during crises and in the reputation of the parent that enhances the marketing efforts of the acquired institution. The process of decision-making improves because of the higher level risk-adjusted decision techniques

as well as more sophisticated risk-management approaches. The head office transfers its technology and processes of risk management. The integration with world finance drives efficiency because of the comparison with risk-adjusted returns worldwide.

The most important and controversial gains are in efficiency and capital allocation. Competition drives efficiency, which consists of reducing costs or its counterpart of increasing productivity. Higher productivity, or output per resource use, lowers prices and volumes of credit, augmenting the access to credit of the economy. There are complaints that subsidiaries of foreign banks engage in "cherry-picking" of the best clients, with adverse effects on domestic banks that are driven toward second-rate risk clients.

There are positive effects of financial globalization, especially FSFDI.[23] Foreign financial institutions introduce more rigorous credit-risk and portfolio management techniques. These enhanced tools increase competition and improve the quality of credit decisions. Prices and conditions of financial assets reflect the level of credit risk, reducing directed credit flows. In addition, FSFDI introduces new products such as derivatives and securities that develop local markets and provide alternatives to bank loans. Improved consumer loans benefit households. In addition, FSFDI contributes to the stability of local financial markets.[24] Local institutions become integrated with larger international banks and have access to equity and funding that strengthen the domestic operation. Another advantage is the creation of an active market for M&As that enhances incentives to management as well as the opportunity to reduce nonperforming loans.

However, there are concerns by policy makers on the benefits of FSFDI.[25] Conflicts of interest can develop between the domestic operation of a foreign financial institution and the policy objectives of the host country. In addition, there are new requirements of coordination of the supervisors in the host country and in the country of origin. The implementation of Basel II is trying to iron the issues of information not only with the G10 members of the Basel Committee on Banking Supervision (BCBS) but also with supervisors of 16 non-members.[26]

The transmission of foreign technology influences the development of local financial markets. FSFDI brings new products and markets such as in derivatives, FX and securities; it also brings new technology in the management of risks of these products. There are also gains in the development of hedge markets that serve to improve the function of transferring risks.

There is significant debate as to whether FSFDI contributes to greater financial and economic stability in the host country. There could be positive contributions in generating sounder financial markets in the host country because of the more advanced risk management and credit-risk based processes transferred to the local market.[27] Stronger banks soften the adverse impacts of the credit market. In periods of crisis, institutions with strong foreign parents may contribute to diminishing financial scarcities. However, if the evaluation of country risk by the parent deteriorates, the parent will engage in hedging country risk by all means, from reduction of exposures in credit portfolios to shorting country risk in derivative products, accentuating capital flight. A short position in derivatives products earns returns if the country risk deteriorates. Country risk is the spread a country pays above the normal interest rate.

There is a measurement of FSFDI using cross-border M&As with targets of banks in emerging market economies.[28] FSFDI increased from around $6 billion per year in 1990–6 to about $50 billion per year in 1997–2000 and the share of financial institutions from emerging market economies rose from 13 percent in 1990–6 to 30 percent in 1997–2000. There was high geographical concentration with Latin America receiving $46 billion or 56 percent of total cross-border M&As with banks as targets in 1990–03. The US accounted for 35 percent of the total FSFDI in Latin America, Spain for 46 percent and the UK for 8 percent. Central and Eastern Europe received 24 percent or $20 billion of all cross-border M&As and non-Japan Asia 17 percent, or $14 billion.

Capital account liberalization

While there is broad agreement among economists about the benefits of free trade, there is significant controversy on the convenience of freeing the capital account. Capital account liberalization consists of the elimination of restrictions on the movements of capital among nations. There are no exchange controls or restrictions on any type of transactions that require the remittance or the entry of foreign funds. The definition of the capital account below is followed by the controversy on the role of the IMF in capital account liberalization. There is high return in learning these concepts and measurement. The deficit in the current account is one of the most important threats to the economy of the US, the stability of the dollar and the prosperity of the world economy.[29]

The current and capital accounts of the US in 2007 are shown in Table 9.1. The accounts are prepared by the Bureau of Economic Analysis of the US Department of Commerce. The original data are in millions of dollars but the table summarizes the most important items in billions of dollars. Minor errors of rounding remain because of the elimination of fractions of billions. There are three accounts: current account (CA), capital account and financial account. Line 1 provides the goods and services sold by US residents abroad that are called exports of goods and services, plus income receipts from abroad. The income receipts include receipts from direct investment of the US in other countries, other private receipts, US government receipts and compensation of employees.

Line 4 provides the purchase of goods by US residents from abroad that are called imports of goods and services and the income payments to foreign-owned assets in the US. Line 7 is an important subject of analysis in economics, the trade account, or exports of goods and services less imports of goods and services, equal to lines 2 and 5. In 2007, the US had a trade deficit of $708.5 billion because its exports of goods and services of $1628.4 billion were lower by $708.5 billion than its imports of goods and services of $2336.8 billion. The summary measurement of US foreign financial needs is the balance in CA, equal

Table 9.1 US international transactions (US$B) (2007)

Current Account	
1. Exports of goods and services and income receipts	2,410.6
2. Exports of goods and services	1,628.4
3. Income receipts	782.3
4. Imports of goods and services and income receipts	−3,044.7
5. Imports of goods and services	−2,336.8
6. Income payments	−707.9
7. Balance on goods and services (2 and 5)	−708.5
8. Unilateral current transfers, net	−104.4
9. Balance on current account (1, 4 and 8)	−738.4
Capital and Financial Accounts	
Capital account	
10. Capital account transactions, net	−2.3
Financial account	
11. US-owned assets abroad, net	−1,206.3
12. Foreign-owned assets in the US, net	1,863.7
13. Statistical discrepancy	83.6

Source: US Department of Commerce, Bureau of Economic Analysis, http://www.bea.gov/international/index.htm#bop

to the exports of goods and services and income receipts (line 1) less the imports of goods and services and income payments (line 4) plus unilateral transfers (line 8). Income receipts include items such as interest and dividends of US assets owned in other countries; income payments include items such as interest and dividends of assets in the US owned by foreigners. The US experienced a current account deficit (CAD) of $738.4 billion in 2007. The capital and financial accounts show the flows of capital that financed the CAD of the US in the form of net claims (assets) of foreigners on the US, line 12 less 11, with adjustment for statistical discrepancy, line 13, and minor capital account transactions, line 10.

There is the claim that the benefits of free capital movements constitute a myth of inadequate comparison with the obvious gains from trade.[30] During the Asian crisis there was a sudden reversal of capital flows with detrimental consequences. In this view, capital flows are characterized by panics and manias.[31] The costs of these crises have been significant. The efficiency gains from capital mobility would have to be reconciled with losses during crises. Wall Street dominates Washington institutions and the US Treasury, what is called the "Wall Street-Treasury complex."[32] Thus, bankers contributed to the implementation of free capital flows because of self-interest without regards to the risks and losses of financial crises.

Financial markets have been characterized by repeated boom-bust cycles.[33] There are significant differences between financial markets and those for goods and services. Asymmetric information can result in excessive lending for projects with high risks. There is an intertemporal mismatch of assets and liabilities, with loans maturing farther out in the future than demand deposits readily available as cash and short-term certificates of deposits; because of this mismatch banks are vulnerable to runs as depositors demand cash that the bank may not have readily available. Financial asset prices may exhibit complex behavior, such as "bubbles" and devaluations. In fact, there are so-called bubbles in real assets such as real estate, both in the US in 2004–7 and in Japan during the 1990s. Models of financial markets change after every crisis. In short, this view argues that there will continue to be financial crises and that there is no set of tools to effectively resolve them. Financial markets have the risks of herding (or simultaneous exit by many investors to cash and other currencies), contagion (or spreading of crisis from one market, country or bank to others) and crises. The opening of the capital account has significant risks. The liquidity that is available to borrowers in a given country increases, thus magnifying the adverse

consequences of a capital reversal, which occurs when capital flows out instead of into a country. In addition, the spread of the crisis from one country to others, or systemic risk, increases. The argument claims that there is no verification of the benefits of freeing international capital flows.

The benefits of international trading of financial assets are well established in theory.[34] The pooling of risks by residents of several countries is more effective as risk insurance than only the more limited domestic resources. Foreign markets provide a borrowing opportunity for countries experiencing a recession. The limitations of capital for productive projects in developing countries can be overcome with foreign capital. This is similar to the opportunity of external financing to a company as compared with only self-generation of profits. The international capital markets allocate savings to their most productive opportunities, no matter where they are located. The model shows that risk diversification in financial markets allows producers to engage in opportunities that have higher yield and risk.[35]

There is another important role of international capital markets. Unsound fiscal and monetary policies may be disciplined by international capital flows.[36] Examples of such policies are excessive government deficit (or expenditures higher than revenues), causing borrowing, or deficient bank regulation. These policies would trigger capital flight and higher interest rates. The consequences of capital flight are tough and known such that governments would try to avoid them by not engaging in unsound policies.

Devaluations in developing countries could have a high personal cost. A sample of 103 developing countries in the period 1971–03 shows 188 currency crashes or high devaluations.[37] The position of chief executive changed in 27 percent of those crashes within 12 months. In normal times, the chief executive changed 21 percent of the time in 12-month periods. Devaluation increases by 32 percent the probability of chief executives losing their jobs. In normal times, the chief executive loses the job in six-month periods in 11.6 percent of the time but in 19.1 percent of the time after devaluation. The difference is statistically highly significant, that is, at the 0.99 confidence level. The probability of the minister of finance or central bank governor losing their jobs increases by 63 percent and is highly significant. The phenomenon concentrates in middle-income countries, being low for poor countries and having no cases for rich countries.

The report of the IMF Independent Evaluation Office[38] concluded that the Articles of Agreement were ambiguous about the involvement

of the Fund in the issues related to the capital accounts of members. The rise in cross-border flows in the 1980s and early 1990s caused an increase in the involvement of the IMF in the capital account issue. The staff advocated capital account liberalization in internal documents. The issue was included as part of Article IV consultations, creating a vehicle by which the IMF could influence the opening of the capital account.

The focus of the IMF on capital account opening changed toward risk factors in the second half of the 1990s as reported by the IMF Independent Evaluation Office.[39] The emphasis shifted toward understanding the relation between policies of industrial countries and world capital flows, searching for the factors of crises. The policy analysis concentrated on what countries should do to deal with the volatility of capital flows, including macroeconomic and exchange rate policy, sounder financial systems and fuller transparency. The exchange rate regime became an important issue in the reduction of moral hazard in excessive lending by international institutions and borrowing by local companies. There is no evidence that the IMF followed a dogmatic approach unique to the institution or to a school of thought in economics.[40] The IMF Independent Evaluation Office exempted the Fund, concluding that it could not find evidence of indiscriminate promotion of capital account liberalization. The IMF also emphasized the need of a sound financial system to control risks and optimize benefits of liberalization.[41]

Financial crises

There are differences in the objections to free flows of capital. Many economists argue that there are benefits in long-term investment, such as FDI, FSFDI and portfolio investment of a long-term nature in equities. The major differences in opinion originate in short-term capital movements, sometimes called hot money. There is another problem here. Trade integration requires trade finance, otherwise trade will be restricted. It is a fact that short-term lines of trade finance were highly volatile in Korea and in Brazil during crises. These lines are mostly less than a year in term and provided by international banks to their subsidiaries or to local banks. Because trade finance matures in a few months, banks do not renew them and do not provide new credit when there are adverse events affecting credit risk. Deducting FDI and trade finance from capital flows there is hardly anything left except for investments in fixed-income and stock markets.

Table 9.2 shows economic indicators for Thailand, Korea and Indonesia during the Asian Crisis. There was a dramatic reversal from high growth rates in 1996 to sharp declines in 1997–8. There were equally dramatic reductions in the CAD and in the fiscal balances. According to a summary of the experience, GDP growth in Mexico declined from 4 percent in 1994 to –6 percent in 1996. GDP in Thailand, Malaysia, South Korea and Indonesia decreased from more than 5 percent in 1996 to –5 percent in 1998. These swings of GDP by 10 percentage points are similar to those occurring in the Great Depression in the US.[42]

All countries had CADs, which is what would be expected in emerging countries borrowing to grow. The swings from growth to contraction were quite high, on the order of 10 percent or more. There are extremes in this adversity in the crises in Russia and Argentina. Russia's economy declined throughout the 1990s with extremely high rates of inflation. There were contractions of GDP of 14.5 percent in 1992 and 12.7 percent in 1994. Argentina suffered a contraction of 10.9 percent in 2002. The problem in attributing the crises to capital account liberalization is the elusive verification of causality in economics. The counterfactual experiment of performance without capital liberalization is quite difficult to specify and test.

The concept, analysis and empirical evidence of twin crises constitute a foundation of the interpretation of emerging market crises. A sample of 76 currency crises and 26 banking crises plus the Asian crisis out of sample shows that there were 18 twin crises of the domestic financial sector and the balance of payments in 1980–95 and one in 1970–79.[43] The occurrence of financial market and currency crises began in the 1980s after the liberalization of domestic markets. The analysis suggests that the problems in domestic banking occur before those of the balance of payments. Subsequently, the currency collapse augments the problems of the domestic financial system.[44] The critical aspect of twin crises is that output and employment effects of a currency crash can be magnified by domestic financial crises.

Banks perform important functions of monitoring, control and allocation of resources. Shocks to the financial system may worsen adverse selection and moral hazard, preventing banks from performing their functions. The breakdown of banking intermediation can have adverse effects on real economic activity, output and employment. There are four factors of increases in asymmetry of information, contributing to financial instability:[45] deterioration of balance sheets of financial institutions, increase in interest rates, shocks of uncertainty and deterioration of non-financial sector balance sheets.

Table 9.2 Thailand, Korea and Indonesia, indicators during the Asian crisis

	1996			1997			1998		
	Thai	**Korea**	**Indonesia**	**Thai**	**Korea**	**Indonesia**	**Thai**	**Korea**	**Indonesia**
Percent									
GDP growth	5.9	7.1	8.2	−1.7	5.5	1.9	−10.2	−6.7	−14.2
Consumer prices	5.9	4.9	5.7	5.6	6.6	12.9	8.1	4.0	64.7
Percent of GDP									
Fiscal balance	1.9	0.0	1.2	−0.9	−1.7	−1.1	−2.4	−4.4	−2.2
Current account	−6.0	−4.4	3.4	−7.9	−1.7	−0.9	−2.0	12.7	4.4
External debt	−31.6	54.5	−33.2	163.3	−46.9	129.0			
Billion Dollars									
External debt	90.5	164.4	127.4	93.4	158.1	135.0	86.2	148.7	149.9

Note: Thai is Thailand.

Source: International Monetary Fund Staff, Recovery from the Asian Crisis and the role of the IMF (Washington, DC, IMF, Jun 29, 2000).

Summary

The benefits of financial globalization are open to significant debate among economists. The virtues of free financial markets are questioned by the claims of imperfect information that results in adverse selection and moral hazard. Economists that propose liberalizing trade oppose free capital flows. There is a valid question if the legal controls are actually circumvented by freer capital flows in practice. Markets have experienced crises with significant losses of output and employment. The profession has developed imaginative models of how the crisis starts and propagates with various proposals of policies to prevent the crises and resolve those that occur. There is not yet a generally accepted model explaining the crises.

International institutions and many economists propose regulatory institutions that should precede liberalization of financial markets and capital flows. These reforms are not intended as a substitute of sound fiscal and monetary policy, in particular the sustainability of policy in regards to the exchange rate regime.

10
International Economic Law

Introduction

The efforts by the G7 and the international financial institutions to promote convergence of standards and codes can be characterized as the provision of a global public good. There are numerous advantages of this so-called soft law process in terms of negotiation and the process of creation and implementation of the standards.

The paramount standard is the framework of capital requirements of Basel II. The last three sections focus on regulation of securities markets, SOX and the highly debated issue of US competitiveness in capital markets.

Soft law, standards and codes

The emerging market crises of the 1990s, especially the crisis in Asia in 1997–8, motivated the G7 to implement international standards and codes through the IMF and World Bank. The standards and codes constitute soft law, that is, they are not binding. However, Article IV surveillance by the IMF includes the compliance with these standards in the process of country evaluations. A rationale for the international standards is that they increase the transparency of countries, contributing to maintaining capital flows and avoiding crises. Disclosure is essential for investors to commit funds to countries. This disclosure is also critical for the process of catalytic financing of the IMF, that is, for the private sector to renew lending to a crisis country because the IMF endorses and contributes funds to the recovery program. The material below provides the origins, standards and codes. This process is also considered a global public good. There are advantages in adopting and

implementing soft law because of less complex and conflicting negotiation.

Standards and codes

The failure of financial regulation, supervision and transparency in the five countries involved in the Asian crisis of 1997–8 (South Korea, Thailand, Malaysia, Indonesia and the Philippines) motivated finance ministers and central bankers of the G7 to transplant financial standards and codes of the advanced countries to emerging market countries.

The G7 yearly meetings gave impulse to the view that deepening twin exchange and domestic financial crises could originate partly in deficiencies in internal financial institutions in emerging countries.[1] In a relatively short period, various institutions generated core principles for strengthening standards and codes with corresponding methodology for evaluation.

Table 10.1 shows the major institutions that are active in strengthening financial systems. The BCBS contributed the Capital Accord or Basel I, the Amendment to include market risk and the New Capital Accord or Basel II, in process of implementation, the Basel Core Principles of Banking Supervision and the corresponding Methodology and their revisions after Basel II. Extensive consultations with specialists and supervisors in multiple countries contribute to generating guidelines. The principles remain at a general level to obtain consensus that would lead to implementation by many countries. Regulators issue the principles with complementary methodology, instructing how to evaluate them in practice.

Soft law

The terms in soft law are not binding. Typically, soft law consists of declarations of desired norms of international conduct.[2] The adoption of soft law can be easier than negotiating and adopting treaties. There are constitutional and legal requirements for the entry of treaties in force. Nation states prefer the flexibility of soft law because of the difficulty in anticipating the consequences of treaties.

A common reason for entering into nonbinding international agreements is to manifest the will of the international community to solve a pressing world problem caused by one of the states.[3] Soft law is used to denote an international act stating principles, norms, standards or statements of desired conduct. Political consequences can result from breaching agreements of soft law. Soft law is used as regulatory tool when there is no option to develop a formal treaty.[4]

Table 10.1 Institutions of strengthening financial standards and codes

Basel Committee on Banking Supervision (BCBS)	
Capital Accord (1988)	http://www.bis.org/publ/bcbs04a.htm
Amendment of Capital Accord to Incorporate Market Risks (1996)	http://www.bis.org/publ/bcbs24.pdf
New Capital Accord (2004)	http://www.bis.org/publ/bcbs107.htm
Basel II: International Convergence of Capital Measurements and Capital Standards: A Revised Framework (2005)	http://www.bis.org/publ/bcbs118.htm
Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework—Comprehensive Version (2006)	http://www.bis.org/publ/bcbs128.htm
Core Principles for Effective Banking Supervision (BCP) (1999)	http://www.bis.org/publ/bcbs61.htm
Methodology of Core Principles (1999)	http://www.bis.org/publ/bcbs61.htm#pgtop
Core Principles for Effective Banking Supervision (BCP) (2006)	http://www.bis.org/publ/bcbs129.htm
Core Principles Methodology (2006)	http://www.bis.org/publ/bcbs130.htm
Principles for the Management and Supervision of Interest Rate Risk (2004)	http://www.bis.org/publ/bcbs108.pdf
International Organization of Insurance Supervisors (IAIS)	
Insurance Principles, Standards and Guidance (2003)	http://www.iaisweb.org/358compilation_documentwithrevisionp53.pdf
Insurance Core Principles and Methodology (2003, 2007)	http://www.iaisweb.org/index.cfm?pageID=39
International Organization of Securities Commissions (IOSCO)	
Objectives and Principles of Securities Regulation (2003)	http://www.iosco.org/pubdocs/pdf/IOSCOPD154.pdf
Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation (2003)	http://www.iosco.org/library/pubdocs/pdf/IOSCOPD155.pdf
First Public Report of the Public Interest Oversight Board (2006)	http://www.bis.org/publ/bcbspiob01.htm

Continued

Table 10.1 Continued

Committee on Payment and Settlement Systems (CPSS)	
Core Principles for Systemically Important Payments Systems (2001)	http://www.bis.org/publ/cpss43.htm
Recommendation for Settlement Systems of Securities (2001)	http://www.bis.org/publ/cpss46.htm
Recommendations for Central Counterparties (2004)	http://www.bis.org/publ/cpss64.htm
Central Bank Oversight of Payment and Settlement Systems (2005)	http://www.bis.org/publ/cpss68.htm
General Guidance for National Payment System Development (2006)	http://www.bis.org/publ/cpss70.htm
General Principles for International Remittance Services (2007)	http://www.bis.org/publ/cpss76.htm
The Joint Forum (BCBS, IOSCO and IAIS)	
Supervision of Financial Conglomerates (1999)	http://www.bis.org/publ/bcbs47.htm
Core Principles Cross-Sectoral Comparison (2001)	http://www.bis.org/publ/joint03.htm
Trends in Risk Integration and Aggregation (2003)	http://www.bis.org/publ/joint07.htm
Operational Risk Transfer Across Financial Sectors (2003)	http://www.bis.org/publ/joint06.pdf
Outsourcing Guidance for Financial Services (2005)	http://www.bis.org/press/p050215.htm
International Monetary Fund (IMF)	
Special Data Dissemination Standard, SDDS (1996)	http://dsbb.imf.org
General Data Dissemination System, GDDS (1997)	http://dsbb.imf.org
Revised Code of Good Practices on Fiscal Transparency (2001)	http://www.imf.org/external/np/fad/trans/code.htm
Code of Good Practices in Transparency in Monetary and Financial Policy (1999)	http://www.imf.org/external/np/mae/mft/code/index.htm#goodtrans
Criteria for Management of Public Debt (2003)	http://www.imf.org/external/np/mfd/pdebt/2003/eng/am/120903.pdf
Criteria for Management of International Reserves (2001)	http://www.imf.org/external/np/mae/ferm/eng/index.htm

Continued

Table 10.1 Continued

World Bank (WB)	
Principles and Criteria for Effective Systems of Insolvency and Creditors Rights (2001)	http://www.worldbank.org/ifa/ipg_eng.pdf
Revised Principles for Effective Insolvency and Creditor Rights Systems (2005)	http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/LAWANDJUSTICE/GILD/0,,contentMDK:20774193~pagePK:64065425~piPK:162156~theSitePK:215006,00.html
2004-UNCITRAL Legislative Guide on Insolvency Law	http://www.uncitral.org/uncitral/en/uncitral_texts/insolvency/2004Guide.html
Organization for Economic Co-operation and Development (OECD)	
OECD Principles of Corporate Governance (1999, 2004)	http://www.oecd.org/dataoecd/32/18/31557724.pdf
International Accounting Standards Board (IASB)	
International Financial Reporting Standards (2007)	https://buy.iasb.org/timssecommerce/timssnet/Common/TNT_ShowDetail.cfm?subsystem=ord&related_prod_flag=0&primary_id=10093&action=long
International Federation of Accountants (IFA)	
International Standards of Auditing (2002)	http://www.ifac.org
Handbook of International Auditing, Assurance and Ethics Pronouncements (2007)	http://www.ifac.org/Members/DownLoads/2007_IAASB_Handbook.pdf
Financial Action Task Force on Money Laundering (FATF)	
Forty Recommendations of FATF on Money Laundering (1996)	
Forty Recommendations of FAFT on Money Laundering (2003)	http://www.fatf-gafi.org/document/28/0,2340,en_32250379_32236930_33658140_1_1_1_1,00.html#40recs
Recommendations on Terrorist Financing (2002)	http://www1.oecd.org/fatf/SRecsTF_en.htm
Nine Special Recommendations on Terrorist Financing (2004)	http://www.fatf-gafi.org/document/9/0,2340,en_32250379_32236920_34032073_1_1_1_1,00.html

Continued

Table 10.1 Continued

Initiatives by the BCBS, IAIS and IOSCO to Combat Money Laundering and the Financing of Terrorism: An Update (2005)	http://www.bis.org/publ/joint11.htm http://www.iosco.org/library/pubdocs/pdf/IOSCOPD181.pdf
Financial Stability Forum (FSF)	
12 Key Standards for Sound Financial Systems	http://www.fsforum.org/compendium/key_standards_for_sound_financial_system.html

Compliance is defined as the behavior of the state induced by international law.[5] The theory of compliance should consider international treaties, customary law, arbitration, adjudication and soft law. Soft law is not binding. An influential school claims that compliance increases in response to greater enforcement. However, in soft law there is no form of institutionalized enforcement. In cases of soft law, the option to adopt the convention without a specific commitment, treaty or accession mechanism is quite relevant. The importance is what countries and for what reasons implements a code or standard, that is, commit to soft law in regulation.

Relatively large and well-capitalized banks benefit more from capital requirements than smaller banks. These banks maintain high capital to enhance their reputation in the market as a form to attract business. Well-capitalized banks that benefit from the adoption of Basel requirements lobby domestic regulators to implement the agreement.[6] The international exposure of these banks positively affects the implementation and compliance with the international capital standard.

Basel II

The BCBS framework of capital requirements is one of the most important international standards, which is widely adopted by banks in most jurisdictions. The process of generating the framework took several years and the contributions of central bankers, academics, bank executives and technicians from many jurisdictions. The process was interactive with multiple consultative processes and quantitative studies of the possible impact of the change in the standard. It constitutes a marriage of central banking with actual practice in bank management. The implementation of Basel II is moving at a faster pace in the G10 countries than in the US. It extended all over the world with many countries such as Brazil actively working toward implementation.[7]

Basel II consists of three pillars:

- *Pillar I*: Minimum Capital Requirements
- *Pillar II*: Process of Review by Supervisors
- *Pillar III*: Market Discipline

A method of menus considers each category of risk:

- Menu of Approaches to Measure Credit Risk
  - Standardized approach (modified version of existing Capital Accord)
  - Foundation approach based on internal ratings
  - Advanced approach based on internal ratings
- Menu of Approaches to Measure Market Risk (unaltered)
  - Standardized approach
  - Approach of internal models
- Menu of Approaches to Measure Operational Risk
  - Approach of basic indicators
  - Standardized approach
  - Internal approach of measurement or Advanced Management Approach

Basel II seeks an appropriate capital approach based on sensitivity standards of risk and internal measurement by banks. New forms to treat credit risk and specification of capital requirements for operational risk constitute the most important changes in capital requirements. The Standardized Approach, the Foundation and Advanced Internal-Ratings Based (IRB) provide avenues for treating credit risk.[8] The objective is to encourage banks to improve management and measurement of risk, to apply the most advanced techniques for risk sensitivity and to determine adequate capital.

The objectives of Basel II consist of:[9]

- Promoting safety and soundness of the financial system, maintaining existing minimum capital requirements
- Strengthening equality in competition
- Providing more extensive approach to risk
- Implementing approaches to capital requirements that incorporate sensitivity to degree of risk and bank activities
- Focusing on banks with international operations but applicable to different levels of complexity and sophistication

Pillar I. Basel II retained the capital ratio and the definition of capital of Basel I, which is mainly equity capital plus reserves and supplementary forms of capital. The minimum capital requirement ratio continues to be 8 percent of risk-weighted assets. The following formula measures bank capital ratios:

$$\frac{\text{Total Capital (unchanged)}}{\text{Credit Risk + Market Risk + Operation Risk}} = \text{Capital Ratio (8\%)}$$

The denominator of minimum capital requirement consists of three components:

- Average weighted sum of risk for all assets
- Plus 12.5 times sum of capital charges for market risk and operational risk

For example, if a bank has $875 of assets adjusted for risk, a charge of $10 for market risk and $20 for operational risk, the denominator of the ratio of minimum capital requirement equals:[10]

$$\text{US\$875} + [(\text{US\$10} + \text{US\$}) \times 12.5] = \text{US\$1250}$$

Pillar I: standardized approach. Most of the work of Basel II concentrates on calculating the denominator in the capital requirements formula, credit risk and operational risk. There are three approaches to calculating credit risk with the intention that banks move from the initial approaches to the more advanced. Basel II provides weights, or percentages of actual exposure, for various asset categories, such as sovereigns (debt of countries), banks and corporations. The objective is to differentiate risk among the different credit exposures of banks by calculating risk-adjusted or weighted assets of banks to be used in the above formula for capital requirements. Riskier assets receive higher weights to apply higher capital requirements. Banks can deduct credit risk mitigation, such as hedges and collateral, to calculate assets subject to capital requirements.

Pillar I: IRB. The BCBS developed an IRB approach that reflects a bank's individual risk profile or capacity to measure credit risk.[11] It developed IRB for use by more sophisticated banks, but believes that the number and type of qualified institutions will increase. Every category consists of three elements:

- Risk components, for which the bank must use its own estimates or those of supervisors

- Function of risk weight that transforms risk components in weights to adjust assets
- Minimum requirements for banks to be eligible for IRB

The BCBS developed the IRB based on best existing practices in risk control. Assets without risk have a weight of zero, that is, they are not counted for capital requirements. Weights increase in accordance with the measured risk of the assets net of mitigating hedges.

Basel II has specific rules for treatment of expected losses and provisions. Banks calculate expected losses as:

$$\text{EL} = \text{PD} \times \text{LGD} \times \text{EAD} \tag{10.1}$$

for all exposures of classes (corporate, sovereign, bank and retail) not in default. *EL* is expected loss, *PD* the probability of default, *LGD* loss given default and *EAD* the exposure at default. Consider a hypothetical example. The probability of default is, say, 1 percent, such that *PD* is 0.01. *EAD* is $100, for simplicity. *LGD* is the part of the *EAD* that will not be recovered, say 80 percent, or 0.80. Thus, *EL* is equal to 0.01 times 0.80 times $100, which is equal to $0.80 or about $1 per every $100 of the loan. The formula calculates how much a bank would expect to lose in case of the default of an asset. Basel II provides risk-weight functions to calculate unexpected loss. The variables in formula 10.1 are the risk components. In the foundation IRB approach, regulators provide risk components while in the advanced IRB approach banks can use their own internal methods to calculate the risk components. Banks then calculate the risk-weighted assets for application of the capital requirements.

Treatment of operational risk is an important innovation of Basel II. Operational risk can originate in external events or failures of internal processes, people and systems. It includes legal risk but excludes strategic and reputation risks. The framework provides three incremental methods to calculate capital charges for operational risk: Basic Indicator Approach, Standardized Approach and Advanced Management Approach. Basel II encourages banks to upgrade toward the Advanced Management Approach.

Pillar II: review process by supervisors. The objective of the second pillar is to ensure that banks maintain adequate capital relative to risk and that they develop and use better risk management practices. Capital does not substitute for adequate internal controls and risk management methods. The BCBS has provided major contributions to supervisory

guidance, in particular the Basel Core Principles. Pillar II of Basel II provides four additional principles of supervisory review.

Principle 1 states that banks require a process to assess the adequacy of their capital in relation to risks and a strategy to preserve that capital. Principle 2 requires that supervisors evaluate internal capital adequacy assessments, strategies by banks and their compliance with regulatory capital ratios. Moreover, supervisors must take corrective action when unsatisfied with the process. Principle 3 specifies expectations by supervisors that banks maintain capital above minimum regulatory ratios. Principle 4 is a sort of pre-emptive strike. Supervisors should intervene early to avoid capital from falling below what would be required by the bank's risk profile. In addition, supervisors should have the authority to impose remedial action to maintain and restore capital. There are numerous available measures of monitoring and requesting immediate subscription of capital.

Pillar III: market discipline. Asymmetry of information of creditors and debtors, companies and investors and monetary authorities and financial institutions constitutes an important foundation of financial theory and policy. Surprises of distorted information generate adverse market events, such as lack of reserves and insolvency of banks in the Asian crisis and, more recently, accounting revaluations of Enron, WorldCom, Adelphia, and others. Financial markets are efficient in their functions of intermediation and monitoring when savers and investors have access to complete and transparent information.

The BCBS designed Pillar III to complement the minimum capital requirements of Pillar I and the supervisory review process of Pillar II. Banks must have a formal disclosure policy, approved by the board of directors, covering types of disclosure and required internal controls. Market discipline is disclosure by banks of significant information to market participants. This disclosure would allow market participants to assess risks of banks and their capital adequacy. Market discipline is part of the role of supervisors to ensure sound and safe markets.

Self-regulatory organizations, the SEC and the FSA

The private institutions operating in financial markets have their own regulation through self-regulatory organizations (SRO). The most conspicuous ones are the stock and futures exchanges shown in Table 10.2.

Table 10.2 Selected stock and futures exchanges

Stock Exchanges	
NYSE Euronext	http://www.nyse.com/ www.nyseeuronext.com
NASDAQ	http://www.nasdaq.com/
London Stock Exchange	http://www.londonstockexchange.com/en-gb/home.htm
Tokyo Stock Exchange	http://www.tse.or.jp/english/index.html
Frankfurt Stock Exchange	http://deutsche-boerse.com/dbag/dispatch/en/kir/gdb_navigation/about_us/20_FWB_Frankfurt_Stock_Exchange
Hong Kong Stock Exchange	http://www.hkex.com.hk/index.htm
Singapore Exchange	http://www.sgx.com/
Futures Exchanges	
Chicago Board of Trade Chicago Mercantile Exchange	http://www.cbot.com/ http://www.cme.com/
New York Mercantile Exchange	http://www.nymex.com/index.aspx
Chicago Board Options Exchange	http://www.cboe.com/
London Metal Exchange	http://www.lme.co.uk/
LIFFE	http://www.euronext.com/home_derivatives-2153-EN.html
Tokyo Commodity Exchange	http://www.tocom.or.jp/

The exchanges create governance, rules, conduct codes and a process of investigation, discipline, prosecution and enforcement. There are additional clearing houses that also have their own regulation. Securities regulators in turn impose supervision of the SROs. The two major systems of securities regulation are those of the US and the UK. The discussion in this section serves as background to more detailed analysis of the loss of competitiveness in finance of NYC and the US to London and other financial centers.

The objective of the Securities and Exchange Commission (SEC) "is to protect investors, maintain fair, orderly and efficient markets and facilitate capital formation."[12] The SEC is especially concerned with investor protection to ensure that citizens have a fair chance to preserve their resources. The SEC believes that the laws and rules that govern securities in the US derive from the simple principle that all investors, large or

small, should have accessible information about an investment before buying it and during holding and selling it. This basic right is ensured by requirements of disclosure of meaningful information, financial and otherwise, to the public. Investors can make adequate investment decisions only if they have the required information.

The SEC prevents fraud and ensures disclosure by overseeing major actors in the market of securities such as securities exchanges, brokers, dealers, investment advisors and mutual funds. The enforcement authority of the SEC empowers it to engage in civil enforcement actions for violation of securities laws, including fraud and misleading the public with erroneous information about securities and the companies issuing them. The SEC interacts with other areas of government such as Congress, federal departments and agencies, the SROs or stock exchanges, state securities regulators and private sector organizations.

Congress passed the Securities Act of 1933 and the Securities Exchange Act of 1934. In the exegesis of the SEC,[13] the intention of Congress was to restore confidence by investors in the stock market by means of "more structure and government oversight." In this view, the securities laws are based on two common sense principles. First, the issuing companies must inform the public about the securities, their business and the risks. Second, the distributors and traders of securities—brokers, dealers and exchanges—have to give fair and honest treatment to investors, placing the interests of investors above everything. In 1934, Congress established the SEC with the objective of enforcing the new laws, promoting market stability and protecting investors.

The SEC operates by making rules.[14] Rulemaking is the instrument for implementing legislation passed by Congress and signed into law by the President. The framework of oversight of the SEC consists of the Securities Act of 1933, the Securities Exchange Act of 1934 and the Investment Company Act of 1940. The statutes are quite broad in nature, consisting of basic principles and objectives. The evolution of securities markets requires rules by the SEC to protect investors, ensuring fair and orderly markets.[15] The process of rulemaking may start with a specific proposal or with a concept release in which the SEC requests views of the public on a given issue. The SEC then elaborates a rule proposal for the consideration of the Commission. After approval of the proposal by the Commission, the SEC presents it to the public for a period of time of 30–60 days for review and comment. The final rule takes the replies by the public as input into consideration for the final draft. The final draft is presented to the Commission; if adopted it becomes part of the official rules governing the securities markets. A

major rule may require congressional review and veto consideration before it becomes effective.

The approach of the UK is a unitary authority of regulation, the Financial Services Authority (FSA). According to the Director of Enforcement of the FSA, the London philosophy consists of a "light touch."[16] This approach has encouraged the rise of London as a major center for flexible capital. The FSA does not consider itself to be a regulator driven by high-profile enforcement. The leading aspect of regulation is the use of supervision and relations with the regulated firms. It has implemented a deliberate move to principles-based regulation.

There is significant difference in the approach of the FSA and regulation in the US. The FSA does not target a system of perfection where there are no failures. A main principle is that there are high costs to the industry and consumers of regulation eliminating all theoretical failures.[17] The regulation by the FSA is based on recognition that regulation should not attempt avoiding all failures.[18] The costs of enforcement are minute compared with the costs of foregoing business and employment because of the heavy costs of compliance imposed on firms and markets.

The approach followed by the FSA is to determine the amount of risk that the regulator is prepared to tolerate, given its objectives, and then to concentrate efforts on the risks that may be more important in terms of potential harm. There is minimization of risks with respect to a constraint of four objectives provided by the Financial Services and Market Act of 2000. The FSA restricts regulation to cases where markets are inadequate and regulatory solutions have reasonable costs.[19] The objective of the FSA is for regulation to work in favor and not against the market.[20] The US approach appears not to be focused on risk but rather on the elimination of every possible form of misconduct, large or minor.

Another important contrast between the US and UK approaches is in the attitude toward "market failure." The analysis of market failure is covered in detail in Chapter 5. In general terms, there is market failure when the market cannot deliver the optimum welfare and maximum efficiency, which could be provided with government intervention. Monopoly is a classic case of market failure because the market would deliver less output at a higher price than under perfect competition. There is an interesting approach by the FSA: even when empirical research proves existence of market failure, regulatory measures may not be the correction that is most efficient and with lowest costs.[21] In these cases, the FSA considers competition policy or the use of moral suasion with firms to change their behavior but not the hard hand of

rules.[22] Allegations of market failure trigger cost-benefit analysis and regulation in the US.

The outcomes-based approach of the FSA enables it to enhance its performance in improving markets.[23] The regulatory dividend of less intervention by the regulatory body is an incentive for firms to deliver compliance. The focus on compliance with rules detracts from sound judgment and enhanced knowledge of the business. The lack of flexibility and resulting opportunities causes a flight of skills out of an industry. The objective of the FSA is to maintain competent professionals in the financial services industry. Standards based on rules and authoritative enforcement do not prevent dishonesty. The acceptance of risks by the regulators and the regulated firms may create a range of outcomes of judgments that can enhance market efficiency. The FSA claims impressive results. By September 2006, the main market of the London Stock Exchange (LSE) raised $26.7 billion, more than the combined $26.4 billion by the NYSE and NADAQ, without including the $6.7 billion in the LSE alternative investment market (AIM).[24] International IPOs even provide sharper contrast. The LSE attracted 59 deals with combined value of $15.9 billion. In the same period, the NYSE and NASDAQ jointly had 17 deals in the combined value of $5.9 billion.

SOX

The SOX legislation was rushed in an election year after the WorldCom scandal. The costs of implementation are much higher in reality than anticipated and the benefits are difficult to measure. There is more emphasis in the literature on the excess of costs over benefits than the contrary view. The critical issue is whether SOX will affect governance in such a way as to create risk aversion in the management of public companies. If SOX were to affect the taking of risk by entrepreneurs it could retard the rate of economic growth of the US, causing major damage to the country's competitiveness. There is growing literature showing that SOX can have stronger impacts on small and foreign companies. Finally, a significant part of SOX centers on gatekeepers, attorneys and auditors, generating also differing views on the act.

The US President signed SOX into law on July 30, 2002.[25] SOX created the Public Company Accounting Oversight Board (PCAOB) to oversee professional accounting in the US. The objective of SOX was to strengthen corporate responsibility and financial disclosure, preventing corporate and accounting fraud. It was a reaction to the corporate scandals that followed the decline of the stock market after the high-tech

collapse. The US SEC issued numerous interpretations of rules and reports on SOX.[26]

SOX could be the "final act in regulation of corporate disclosure."[27] There is a critical issue if the costs of regulation have become sufficiently high to drive honest small and foreign companies from public registration. The costs of entirely eliminating fraud could be more expensive than allowing some fraud to exist. Fraud should be prevented until the marginal cost of prevention is about equal to the returns from prevention. There is a social loss if the cost of prevention exceeds the returns. The main cost increase from SOX originates in Section 404 that is strictly confined to financial statements. The remaining aspects of corporate disclosure are left unchanged.[28] Most of the controls in SOX already existed and did not prevent episodes such as Enron and WorldCom. Concerted action by employees can defeat such controls. Section 404 is merely due diligence instead of protection against fraud. The impact of SOX is to impose procedures that would not be selected otherwise.

The available surveys of increases in costs caused by compliance with SOX show higher costs for every new survey.[29] Most of these surveys are for larger companies. It is difficult to find accurate estimates for smaller companies. There are about 16,000 companies requiring compliance with SOX.[30] Assuming a conservative estimate of $500,000 per company, the costs of complying with SOX are at least $8 billion per year. The estimates of losses of investors in Enron and WorldCom are about $100 billion. These were highly unusual losses and it is fair to argue that a part would not have been prevented by SOX. The estimate of the present value of the costs of compliance reaches $266 billion, using a 3 percent per year discount rate and assuming that the costs are as certain as death and taxes.[31] There could be a loss of $1.4 trillion in market value from the most significant rule-making events. There is evidence of regulatory arbitrage with companies choosing other markets where to issue their stock.[32]

The analysis of research literature and data is used to support the view that SOX will not improve corporate governance or performance.[33] The emphasis of SOX on independent directors and independent audit committees is based on the presumption that independent directors receive fees as compensation instead of bonuses based on performance. There is a case for rewarding senior management in accordance to profits.[34] Independent directors will not feel tempted to falsify financial reporting. There is no empirical evidence in the research literature in support of the proposition that independent directors and audit

committees improve corporate performance.[35] Congress did not match the problem of the corporate scandals with a solution.

A fundamental flaw of SOX is that it does not address the essential problem relating to episodes such as Enron, which is the complexity of transactions in the current business environment. There is significant complexity of financial derivatives and the intangible nature of assets, both of which are bona fide vehicles of business.[36] Basel II was the result of almost a full decade of contributions by authorities in central banking, commercial and investment banking, the financial sector, academics, legal scholars and critiques of every occupation. SOX will not prevent future scandals because it does not focus on the accounting failures of complex transactions.[37] It is arguable that regulators and legislators may not be more adept to the task of solving the accounting hurdles than the private sector.

US competitiveness in capital markets

There is an important episode in financial history illustrating that US regulations can shift markets abroad.[38] Reserve requirements in the US in the 1960s caused significant costs of marginal bank funding. Interest-rate ceilings diminished bank revenues. London provided the opportunity for lower cost funding, motivating an exodus of transactions by US banks to the new Eurobond market. The experience is alarming. US regulators abolished Regulation Q ceilings on interest rates and permitted international banking facilities with lower reserve requirements. Meanwhile, the London market had already taken off. The interest equalization tax of the US also encouraged the rise of the Eurobond market. The changes in taxes and regulation did not slow the relative growth of the Eurobond market. There is the troubling suspicion of whether the current trends in securities markets are a repetition of the loss of banking markets to London by the US five decades ago.

There are three issues in this effort: the actual loss of competitiveness, the causes of the loss of competitiveness and proposals to solve the problems. These three issues are discussed below in turn.

The loss of competitiveness

The dimensions of the US and NYC capital markets are shown in Table 10.3 together with some of the worrisome details of the loss of competitiveness to overseas markets. The financial services industry of the US is about 8 percent of GDP, the third largest sector in terms of GDP contribution. Moreover, it has been growing at a high rate of 5 percent

Table 10.3 The loss of competitiveness of US capital markets

US Dimensions

Financial services industry
GDP: $1 trillion, 8.1% of GDP in 2005, third largest sector
Employment: 6 million, about 5% of total private sector employment in 2005
CCMR (2006, 23)
Growth rate 1995–05: average of 5% per year
CCMR (2007, 35)

Securities industry
$175 billion, 17 percent of financial services industry
CCMR (2006, 23)

Financial stock: equities, bonds, loans and deposits
2005 US: $51 trillion, Euro Area: $38 trillion, Japan: $20 trillion
2001–5 growth rates at constant exchange rates: US, 6.5%, Euro Area, 6.8%, UK, 8.4%, Non-Japan Asia, 15.5%
MKC (2007, 32)

New York City (NYC) and New York State (NYS) Dimensions

Employment: 194,000 in 1/2006, 89.5% in NYC, 24.5% of US securities industry employment
Employment: 2.2% of NYS, 4.7% of NYC
Wages: 2.5% of NYS, 20.7% of NYC
Annual gross income: 9.2% of NYS, 14.1% of NYC
Tax payments: $2.1 billion in 2005, 11% of non-property taxes
CCMR (2006, 27–9)
NYC financial services growth rate 1995–05: 6.6% per year
Share of NYC business income tax revenues in 2005: 36%
MKC (2007, 36)

Initial Public Offerings
US global share: 37 percent in 2000, 10 percent in 2005
CCMR (2006, 29)
Mega IPOs over $1 billion, US exchanges, 57% of the world in 2001, 16% in first 10 months of 2006
MKC (2007, 43)

Investment Banking
Global advisory and underwriting Fees
US global share: $27 billion, 58% in 1996, $59.1 billion, 42% in 2005
Compound growth rate 1996–05: 4 percent for US, 10 percent for Europe
CCMR (2006, 33)
6 of the top 10 financial institutions by market value are in NYC
Capital markets and M&A: 2006, US firms are in top 5 in combined capital markets and M&A;

Continued

Table 10.3 Continued

3 of top 5 in European deals
Investment banking sales and trading: US $109 billion (45% of the world), Europe $98 billion (40%)
Capital market revenue, 2005: US $92 billion, Europe $85 billion
MKC (2007, 34, 40–1)
Foreign listing in the US
2000: 100 foreign companies listed in the US for $55 billion
2005: 34 foreign companies listed in the US for $5 billion
Costs: loss of $50 billion in funding raising equivalent to loss of $2.8 billion in underwriting fees and yearly loss of $3.3 billion in trading revenue
CCMR (2006, 33)

Sources: MKC (2007): McKinsey & Co., *Sustaining New York's and the US' global financial services leadership* (New York: McKinsey & Co., 2007); CCMR (2006): Committee on Capital Markets Regulation, Interim report of the Committee on Capital Markets Regulation, Nov 30, 2006, http://www.capmktsreg.org

per year in the past ten years and generates a significant portion of employment, 6 million individuals. There are multiple contributions to capital formation in the form of financing of opportunities, monitoring, and so on. The securities industry contributes 17 percent of the US financial services industry. McKinsey & Co. (MKC) measures a broad aggregate, the financial stock, comprising equities, bonds, loans and deposits.[39] The value of the US financial stock in 2005 was an extremely high $51 trillion, still much larger than the values in the euro Area of $38 trillion and $20 trillion in Japan. However, the growth rate of the US financial stock in the past ten years has been 6.5 percent on average, lower than the high 8.4 percent of the UK, which is the true center challenging US competitiveness.

There is high concentration of the US financial industry in NYS and in particular in NYC. The state and the city are extremely important in terms of size in the US and also in terms of cosmopolitan visibility, being the host of the UN. The financial industry of NYS and NYC is very dynamic, growing at 6.6 percent per year in the past ten years. It makes significant contributions to employment, taxes and income.

The IPOs constitute a dynamic and visible part of the equities segment. The data assembled by the Committee on Capital Markets Regulation (CCMR) and MKC show an exodus of the issue of IPOs from the US, in particular NYC, to other stock exchanges. The US global share has declined from 37 percent in 2000 to 10 percent in 2005. This

decline is continuing. Moreover, the share of the US in mega IPOs, with value over $1 billion, collapsed from 57 percent of the global issue in 2001 to 16 percent in 2006.

Six of the largest ten financial institutions in the world are located in NYC. US investment banks continue to dominate the business worldwide. However, the location of the business has been shifting away from the US to markets overseas. US financial institutions continue to dominate technology and talent in financial markets but a significant part of the business has migrated to other financial centers.

One of the most dramatic facts is the continuing decline in foreign listing in the US. In 2000, 100 foreign companies listed in the US with total issue value of $55 billion. In 2005, 34 foreign companies listed in the US with issue value of $5 billion. The effect of this decline in listing is a significant decrease in underwriting fees and yearly trading revenue. Companies have continued to obtain capital in the US but through the private route of Rule 144A that does not require public listing. Rule 144A provides a safe harbor from registration and disclosure requirements. Private financing in public takeovers increased from 13 percent in 1995 to 26.3 percent in 2005. There is a broad movement of going private. Foreign issues of equity in 2005 amounted to $83 billion or 90 percent of the total compared with 50 percent in 1995. The exit from venture capital is now mostly through private equity. Small cap companies are now aggressively raising capital in the LSE's AIM.

The most lucrative part of the derivatives market is in OTC deals. The growth rate in 2004–6 is 27 percent per year. London dominates the market compared with the US that is losing ground. The FX OTC derivatives market is dominated by London deals. There is only remaining strength in the US in commodities.

Causes of the loss of competitiveness

There is a view that the companies that list in AIM are not attracted to cross-listing in the NY exchanges (NYE).[40] The cross-listing peaked at the LSE and the NYEs at the turn of the century and declined in both markets. It is difficult to explain this simultaneous decline in terms of enhanced regulation such as in SOX. The econometric research provides evidence that firms continue to make their cross-listing decisions after SOX on the basis of the same reasons as before. Various econometric techniques were used to uncover a listing premium for cross-listing in the US but no such premium for listing in London. The listing premium in the US is robust, exists every year and is permanent in event time. There is no evidence that the premium declined after 2001. The proponents

of this view conclude that there is an observable governance benefit for foreign companies to cross-list in the US that is not present in cross-listing in London or outside the US. The research does not provide evidence of a weakening of this governance benefit over time.

The premium of listing in the US is the difference between the value of the company in the market and its book value or accounting value of assets between cross-listed and non-cross-listed stocks.[41] The CCMR shows that this premium declined by almost one half for a large sample of cross-listed companies from multiple countries.[42] The premium for listing on both US and foreign markets was 51 percentage points in 1997–01, declining to 31 percentage points in 2002–5.[43] The decline of the premium was sharper for companies in countries with better corporate governance, such as Japan, Hong Kong, Canada and the UK. Investors perceive little extra benefit after 2002 from listing in the US. There was little decline in the premium for countries with weaker governance. The decline of the premium for countries with good governance could be the result of excessive regulation under SOX.[44] The stability of the premium for countries with weak governance suggests additional benefits from listing in the US.[45] Another measurement is the calculation of the control premium, consisting of the ratio of the market-to-book value of assets in transactions of controlled companies. The control premium is inversely related to the quality of governance in a country because it measures the ability of the company's controlling group to expropriate assets from minority shareholders. The CCMR provides evidence that the decline in the listing premium is lower for countries with larger control premium.[46]

Proposals

The strength of the US in the twentieth century was the result of its dominance of the financial services industry, according to NYC Mayor Bloomberg and US Senator Schumer.[47] Continuing long-term economic success will depend on the ability to meet the challenge of NYC as the world's financial capital. Bloomberg and Schumer argue that the threat to the US is accentuated by the complex rules of regulation in contrast with understandable principles behind regulation in competing countries. The situation is aggravated by heavy costs imposed by SOX and the insistence that foreign companies comply with complex US Generally Agreed Accounting and Auditing Principles. There is room for the US to implement reforms while protecting investors and consumers.

The proposals of the CCMR, MKC and the US Chamber of Commerce (USCC) are summarized in Table 10.4. Significant part of the proposals

Table 10.4 Proposals for enhancing US competitiveness in financial markets

SOX Section 404
- Redefinition of material weakness CCMR (2006, 19)
- Enhanced guidance of SEC and PCAOB CCMR (2006, 19–20)
- Reconsideration of small companies CCMR (2006, 20–1)
- Do not duplicate Section 404 to foreign companies with equivalent home regulation CCMR (2006, 21)
- Obtain more data on costs and benefits CCMR (2006, 21)
- Clear guidance for implementation MKC (2007, 97–100)
- Make SOX part of the Securities Exchange Act of 1934 USCC (2007)

Securities Litigation
- Resolution of uncertainties in Rule 10b-5 Liability CCMR (2006, 12)
- Prohibition of double recoveries CCMR (2006, 12–3)
- Prohibition of pay to play practices CCMR (2006, 13)
- Indictment of entire firms only in extraordinary cases CCMR (2006, 13)
- Modify criteria to indict firms on factor four of the Thompson Memorandum CCMR (2006, 13–4)
- Reform with immediate impact MKC (2007, 100–4)

Uniform Regulation
- Cost/benefit analysis for the SEC and SROs CCMR (2006, 8)
- Principles-based rules for SEC and SROs CCMR (2006, 8)
- Regulation of securities firms by SEC similar to prudential bank regulation CCMR (2006, 50)
- Cessation of ad hoc rule-making by states and federal/state coordination CCM (2006, 50)
- Shared regulatory vision and principles MKC (2007, 106–6)
- Reform/modernize federal regulatory approach to financial markets USCC (2007)

Supply of Skilled Workers
- Less restrictive entry of foreign professionals MKC (2007, 107–9)

Gatekeepers: Auditors and Outside Directors
- Congressional consideration of protecting auditing firms from catastrophic loss CCMR (2006, 14)
- Clarify Section 10A Liability CCMR (2006, 14)
- Modify SEC Rule 176 and SEC Indemnification Policy of outside directors CCMR (2006, 14)
- Domestic and international avoidance of catastrophic litigation USCC (2007)
- Allow auditing firms to raise capital from private shareholders other than partners USCC (2007)

IFRS (International Financial Reporting Standards) and GAAP (Generally Agreed Accounting Principles)
- Permit IFRS without reconciliation MKC (2007, 109–11)
- Promote international convergence of auditing and accounting standards MKC (2007, 109–11)

Continued

Table 10.4 Continued

Shareholder Rights
Allow shareholders of corporations with classified boards to vote on poison pills CCMR (2006, 17)
Alternative procedures for solving disputes with companies CCMR (2006, 17–18)
Basel II
Maintain US banking competitiveness MKC (111–13)

Sources: CCMR and MKC the same as in Table 10.3; USCC (2007): US Chamber of Commerce, *Commission on the regulation of US capital markets in the 21st century: report and recommendations* (Washington, DC: National Chamber Foundation, 2007).

is concentrated on SOX Section 404. This is the area where many are doubtful that the benefits compensate the costs of compliance. Material weakness requires precise definition. Small companies and foreign companies must be considered more carefully. Guidance for implementation is still lacking. There are not sufficient data on costs and benefits.

The second block of proposals focuses on the legal system of securities litigation. The CCMR is proposing the resolution of uncertainties in Rule 10b-5 liability, which is the common rule for most litigation. MKC is proposing reforms that have immediate impact. High-profile litigation in the US is creating a feeling of fear and threat in US and foreign firms. This environment is not conducive to efficient investment decisions.

Summary

The financial crises of the 1990s motivated the G7 to promote the international convergence of standards and codes. The belief behind this effort was that lack of transparency and disclosure, especially in the Asian crisis of 1997–8, adversely affected prevention of the crises and accentuated their effects. These standards and codes are voluntary. However, the surveillance under Article IV of the IMF has created a possible element of enforcement of compliance.

The SEC and the FSA implement different approaches to regulation of securities markets. SOX, complex regulation, unpredictable litigation and the rapid growth of foreign securities markets are undermining the competitiveness of the US as the center of world finance. The maintenance of competitiveness requires that the US streamline its system of regulation, move toward principles instead of rules, curb frivolous litigation and strengthen its auditing firms.

11
The Global Recession Risk

Introduction

The world economy is threatened with recession by the debt/dollar crisis. The dollar problem originates in the fact that the US has been absorbing two-thirds of world savings to finance its deficit in current account. The dollar has to devalue, cheapening exports with which to reduce the trade deficit. The debt problem was caused by the lowering by the Fed of the fed funds rate to 1 percent in 2003–4, which encouraged excessive investment in residential construction. The US economy has to reallocate its resources to producing goods for exporting. The CAD as percent of GDP began in 2007 its first decline since 1997. Several sections consider the US external deficit, the trigger of the debt crisis, the need of repairing the international financial system and the ominous threat of regulatory, trade and exchange wars.

US external deficit

The data to illustrate the concern with the CA of the US are shown in Table 11.1. The first block of numbers shows account balances that compose the CA: the sum of the balances in goods and services, income and unilateral transfers. There are small rounding discrepancies.

The US has been running a trade deficit for many years and a CAD since 1997. However, there was acceleration of the trade deficit in 1999 and 2000, when it reached $379 billion, or 3.9 percent of GDP. The behavior of the CA mirrors that of its main component, the balance of trade in goods and services. The CAD jumped from $302 billion in 1999 to $417 billion in 2000, or 4.2 percent of GDP, and then to $640 billion in 2004, or 5.4 percent of GDP. The CAD for

Table 11.1 US, current account, NIIP, fiscal balance, debt and nominal GDP ($B)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Goods and services	–166	–265	–379	–365	–424	–497	–612	–714	–758
Income	4	14	21	32	27	45	56	48	36
Unilateral transfers	–53	–50	–58	–52	–63	–71	–84	–88	–89
Current account	–215	–302	–417	–385	–457	–522	–640	–755	–811
Nominal GDP	8747	9268	9817	10128	10469	10960	11712	12456	13246
CAD/GDP %	–2.5	–3.3	–4.2	–3.8	–4.4	–4.8	–5.4	–6.1	–6.1
NIIP	–895	–766	–1381	–1919	–2088	–2140	–2294	–2238	–2539
NIIP as % of GDP	–10.3	–8.3	–14.1	–18.9	–19.9	–19.5	–19.6	–17.9	–19.2
Exports of goods and services and income	1194	1259	1421	1296	1256	1338	1559	1788	2096
NIIP as % of exports	–75	–61	–97	–148	–166	–160	–147	–125	–121
Fiscal balance, FB	69	126	236	128	–158	–378	–413	–318	–248
FB as % of GDP	0.8	1.4	2.4	1.3	–1.5	–3.4	–3.5	–2.6	–1.9
Internal debt, ID	3721	3632	3410	3320	3540	3913	4296	4592	4829
ID as % of GDP	44	41	36	33	33	35	37	37	36

Note: NIIP is net international investment position with FDI at market value. Fiscal Balance is revenues less outlays. Internal debt is debt held by the public.

Sources: GDP, http://www.bea.gov/national/xls/gdplev.xls
Current account and exports: http://www.bea.gov/international/xls/table1.xls
NIIP: http://www.bea.gov/international/xls/intinv06_t2.xls
Fiscal balance and debt held by the public: http://www.cbo.gov/budget/historical.pdf

2005 is $755 billion or 6.1 percent of GDP and $811 billion for 2006 or 6.1 percent of GDP.

The net international investment position (NIIP) of the United States followed the deterioration of the trade balance and CA. There was again a large jump from 1999 to 2000, reaching $1381 billion, or 14.1 percent

of GDP, and then $2140 billion, or 19.5 percent of GDP, in 2003. In 2004, the NIIP reached $2294 billion or 19.6 percent of GDP, $2238 billion in 2005 or 17.9 percent of GDP and $2539 billion in 2006 or 19.2 percent of GDP.

There is a classic characterization of policies to adjust the balance of payments.[1] Expenditure-switching policies consist of depreciation of the currency that makes imports relatively more expensive than domestic goods and exports relatively cheaper in foreign markets. Relatively more expensive imports reduce the quantity of imported goods demanded and relatively less expensive exports increase the quantity of exported goods demanded. The expenditure-switching policies could improve the trade account through changes in relative prices. Expenditure-reduction policies would reduce aggregate demand, lowering as well the demand for imported goods. The reduction in demand could also improve the trade account. The role of expenditure-switching policies is also considered within the standard balance of payments model.[2]

Discussion of the effects of depreciation has focused on the rate of exchange pass-through, which is the rate at which depreciation of the currency impacts on the actual prices of import and export transactions. There is much weaker pass-through of depreciation to import prices than to export prices in the case of the US.[3] Thus, depreciation could have significantly lower effects on US imports than exports. There is a significant gap between the value of exports of goods and services of the US. Imports increased to $1628 billion in 2007 and imports to $2336. Exports would have had to increase by 43.5 percent to eliminate the deficit of 2007. The policy obstacle is the significantly lower responsiveness of imports to dollar depreciation.

The pass-through measurements consist of the OECD average of an impact of 0.64 percent on imports resulting from 1 percent depreciation.[4] The pass-through to import prices after one year in the US is only 0.42 percent per 1 percent depreciation. There are three factors that insulate import prices in the US from the effects of depreciation of the dollar. Most of the imports of the US are invoiced in dollars. These prices are set periodically. Thus, an increase in the domestic currency value of the dollar need not result in a higher price in dollars in the US. In addition, the US has a larger and far more diversified economy than most countries. Exporters to the US try to maintain market shares in the competitive US market. It is likely that these exporters absorb depreciation of the dollar in the form of lowering profits but without changing their dollar prices. A third factor is the domestic component of US imports in the form of distribution, shipment, storage and retailing

costs after the good arrives in the US frontier.[5] The domestic component of the goods may absorb some of the depreciation of the dollar, leaving the price relatively unchanged.

This analysis leads to the conclusion that import prices may not be significantly affected by depreciation of the dollar but export prices, which are almost fully invoiced in dollars, immediately carry lower domestic currency prices into foreign markets.[6] The expenditure-switching policy of depreciation will be processed largely through an increase in exports with mild effects on import reduction. There is a major hurdle because the elimination of the deficit would require an increase of exports by 40–50 percent without any change in imports. Even the reduction of the deficit by one half, as proposed in discussion by the IMF, may be significantly difficult.

In the 12 months ending in March 2008, the FRBO's weighted average index of the dollar relative to major currencies declined by 11.9 percent.[7] There has likely been an improvement in the competitiveness of the US relative to its trading partners. Another factor could be a shift in profitability of selling abroad because of weaker internal demand in the US. The current world crisis is significantly about the US CAD. There would not have been such a devaluation in spite of the credit crisis had there not been a large and persistent CAD. Table 11.2 shows the first reversal of the trend since 1997 of deterioration of the CAD of the US as percent of GDP. Exports increased by 12.6 percent in 2007 while imports increased by only 6.5 percent in spite of a doubling of oil prices and other major increases of other commodity prices. The deficit of the balance of trade of goods and services in 2007 declined by $50 billion, or 6.5 percent. The CAD declined in 2007 by $73 billion or 9 percent and as percent of GDP from 6.1 percent in 2006 to 5.3 percent in 2007. The net exports of the US contributed about one percentage point of GDP, partly compensating for the impact of the crisis in real estate.

Table 11.2 Trade and current accounts of the US 2006–7 ($B)

	2006	2007	% Change
Exports of goods and services	144.6	162.8	12.6
Imports of goods and services	220.4	233.7	6.0
Balance of trade of goods and services	–758	–708	–6.5
Current account	–811	–738	–9.0
GDP	13,194	13,841	
Current account as percent of GDP	–6.1	–5.3	

Sources: Bureau of Economic Analysis, http://www.bea.gov/international/index.htm#bop http://www.bea.gov/national/nipaweb/TableView.asp#Mid

The credit crisis trigger

Contemporary central banking basically consists of the use of interest rates to control inflation. There are three lags in using a policy instrument to attain an objective: between need of action and recognition, recognition of need and taking of action and the effects of the action.[8]

The first lag reflects the insufficient knowledge about economic conditions and the poor record of economic forecasts. There is significant lag between the time when the action is needed and the recognition that action is required. The central banks did not realize that there was a growing credit crisis until August 2007 when it exploded nearly out of control, requiring drastic measures. The uncertainty about information, the necessary work in committees of monetary policy and the unreliability of forecasts causes another lag between the time when need is recognized and action is taken. Finally, available evidence suggests that it can take up to a year for the reduction of interest rates to affect economic variables.

There were various government failures in the credit/dollar crisis after 2007. The major failure was the perception in central banks and international organizations of a threat of deflation.[9] This fear originated in the devastating effects of deflation during the Great Depression and in Japan.[10] Prices decline during deflation but the nominal dollar value of debt remains the same. It becomes extremely painful for debtors to repay borrowers. The experience of Japan showed vividly that a major country can suffer deflation and recession during an entire decade.

The Fed decided to take insurance against the threat of deflation to the US and lowered the fed funds rate to 1 percent, showing the willingness to lower it to zero if it were needed. Chart 11.1 shows the fed funds rates fixed by the Fed since 1990. The success of these policy impulses suffered from the three lags of monetary policy in addition to the distortions caused by the precarious knowledge about the functioning of the economy and its relation to the fed funds rate.

The 1 percent fed funds rate and the willingness to lower rates to 0 percent because of errors in price indexes created the impression that interest rates and inflation would be low forever, encouraging borrowing in excess of income and capacity to repay, for prime and subprime borrowers alike. The US central bank misled borrowers that their wealth in real estate had experienced a significant permanent increase, also misleading lenders that there was no risk because collateral in the form of houses would always cover the values of the loans. Families purchased houses and lenders provided financing

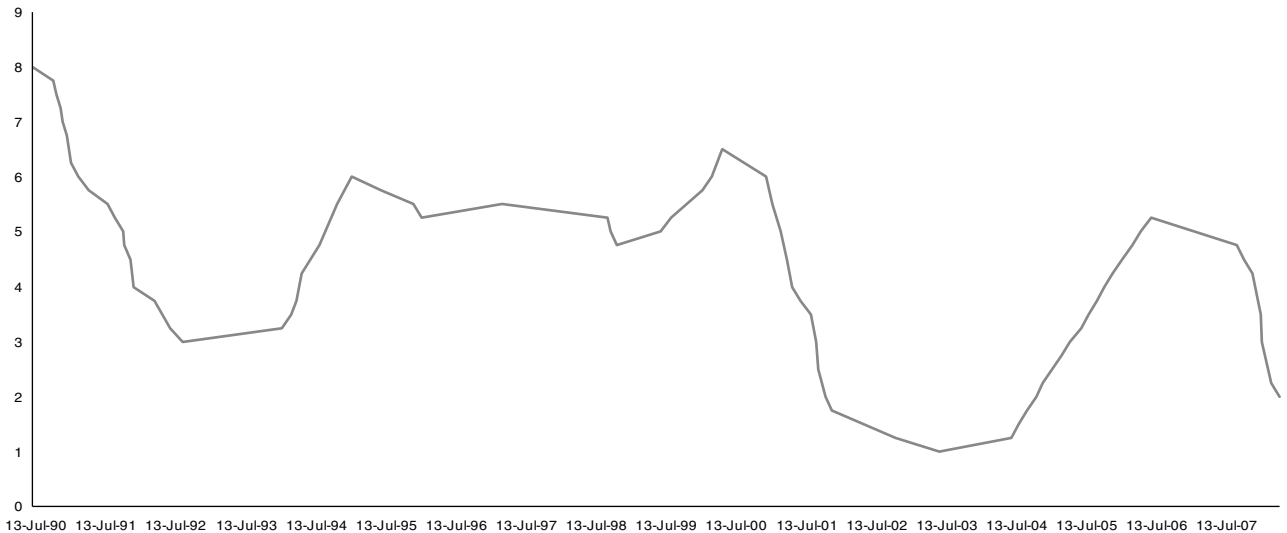


Chart 11.1 Fed funds rates 1990–08

under the illusion that even if the adjustable rates increased monthly payments by 50–100 percent after two–three years, the borrowers could exit by selling the houses at a profit. There was failure in Congressional oversight of Fed policy. It is difficult to accept that lenders and borrowers knowingly destroyed their lives in the value of 10 percent of GDP merely on their carelessness and not that of the central bank in creating the impression of low interest rates and resulting increasing personal wealth forever.

The theory of the financial accelerator analyzes the existence of a premium of external financing by business and households.[11] Internally generated resources of business and households, such as cash deposits, savings, income and profits, are cheaper relative to external resources obtained by borrowing.

The recent contribution on the association of the financial accelerator and the credit channel analyzes how the erosion of home values adversely affects borrowing and spending by households, especially because of two important implications.[12] The first is that households with low equity in their homes experience much sharper reduction of their potential spending after a decline in home values. The second is that households exposed to mortgage contracts with variable rates suffer an immediate impact on their cash flows from rising interest rates. There are some adjustable rate mortgages in the US and also in the UK.

A complementary analysis is the possible transmission of credit contractions through the bank-lending channel. Financial conditions of banks may deteriorate if their earnings and assets are affected by shocks to their borrowers. Even nonbank lenders may also experience increases in their cost of borrowing if there are adverse effects to their financial conditions, such as impacts on their net worth, leverage and liquidity.[13] The contraction of credit by banks and nonbanks would adversely affect consumption, production and investment.

The low interest rate for several years induced the creation of excessive debt by US households. Even prime debtors with sound credit histories are experiencing significant difficulties. New house sales in the US declined by 36.6 percent in the 12 months ending in March 2008. The stock of unsold new houses reached 468,000, equivalent to sales of 11 months.[14] Creditors began a fire sale of foreclosed houses to recover just any cash. The Standard & Poor's Case-Shiller index of house prices showed cumulative decline of house prices by 12.7 percent in the 12 months ending in February 2008.[15] Eight of the 20 cities in the index showed declines in excess of 10 percent and six cities suffered declines of around 20 percent.

The deterioration in the balance sheets of households caused adverse effects in those of financial institutions. There was need to replenish capital in many banks because of the write downs of the value of financial assets. Perhaps the most critical problem was the credit fear of counterparties in financial transactions. Financial companies became uncertain about their own balance sheet because of the difficulty of MTM complex products. There were similar fears about counterparties. Credit dried.

Multiple efforts by central banks to reignite the credit system were not successful. Conventional open market operations could not assure that credit would return to segments experiencing perceived difficulty. Financing by the Fed of mortgage-backed securities of Fannie Mae and Freddie Mac could not reignite overall credit. A major investment bank, Bear Stearns, was acquired by J P Morgan Chase with the guarantee of $29 billion of doubtful securities by the Fed just before the opening of the markets in Asia on Sunday March 16, 2008. The Fed moved again the fed funds rate close to zero, reducing the potential for interest rate policy.

Repairing the international financial system

Regulation of international finance and the resolution of crises developed during the postwar period by reaction to the crises that occurred instead of by an established theory based on empirical verification. The limitations of economics dictated this approach. The regime established in the past three decades consists of two types of institutional arrangements, the IFA and central banks. The current institutional arrangements have been nearly dismantled by the financial crisis originating in the collapse of the US real estate sector. The breakdown of the regulation and crisis arrangements of the world financial system occurred because the central banks created the crisis; the regulation of risk-based capital requirements is inadequate to deal with the crisis; and the central banks did not respond timely and effectively to the development of the crisis. The process of finding and implementing new, more solid arrangements may spread over several years in the future.

IFA: emerging market crises and soft law

The first arrangement originated in the reaction to emerging market crises by the finance ministers and heads of central banks of the G7 after the Mexican crisis in 1994 in the process known as IFA.[16] There were three mechanisms in this system.

First, the Rey Report of the G10 in response to the Mexican crisis of 1994–5 sanctioned the lending in arrears in the process of catalytic financing by the IMF as the form of *crisis resolution*. Arrears mean that countries are late in their payments. Catalytic financing is the process by which countries receive new credit from private lenders because the IMF backs country programs with funding. Balance of payments crises spread to domestic financial sectors, causing sharp contractions of credit and output. The second mechanism consists of *crisis prevention* by means of the FSAP, a process of the IMF-World Bank designed to use Article IV Surveillance of the financial sectors of members of the IMF. The countries and the IMF engage in consultations to strengthen their financial systems. Third, the Asian crisis of 1997–8 exposed the lack of transparency of financial systems as well as the lack of standards and codes similar to those prevailing in the G7. For example, one weakness was the lack of information on the actual balance sheets of banks. Economic research suggests that transparency is required for adequate private and regulatory monitoring of financial systems. The G7 instructed the IMF-World Bank to develop *standards and codes* of best practice and to evaluate them through the Reports on Observance of Standard and Codes.

The Basel II capital requirements constitute the most accomplished work on international codes and standards. The credit-risk models of Pillar I have failed in measuring default and in pricing complex products. Supervisors have not been as effective as envisioned in Pillar II. Transparency as promoted by Pillar III has not been adequate. Banks hid complex CDOs in off-balance sheet SIVs that eventually had to be incorporated in the balance sheets, causing tens of billions of dollars of losses. In fact, one of the major problems is the uncertainty about the actual strength of the balance sheet and liquidity of financial companies. The BIS and its forums should lead a comprehensive analysis of financial markets similar to the wide and deep consultations of Basel II, involving regulators, academics and market participants. This process is already beginning.[17]

G7 central banks

The second more informal mechanism is the primary role of individual central banks, especially the FRBO, the ECB, BOE and BOJ, in the management of crises in countries in the G7. Cooperation among central banks would be informally used as required to prevent crises from spreading regionally.

The approach to central banking is particularly influenced by the experience of the BOE. The UK found its framework of financial system

regulation after a troubled period in 1970–92. The average yearly growth rate of the UK declined from 2.8 percent in 1950–69 to 2.0 percent in 1970–92 while the average yearly rate of inflation rose from 3.9 percent in 1950–69 to 9.6 percent in 1970–92.[18] However, there was similar experience in the US, Japan, Germany and France of lower growth and higher inflation, known as "stagflation." The UK maintained an average yearly rate of growth of 2.8 percent in 1998–05 and of 2.5 percent in inflation. This was performance comparable with 3.0 percent growth in the US and inflation of 2.5 percent and better performance than 0.8 percent growth with inflation of –0.3 percent in Japan, 1.3 percent growth with inflation of 1.4 percent in Germany and growth of 2.2 percent in France with inflation of 1.5 percent.

Cooperation among the central banks of the G7 has been excellent. However, the credit/dollar crisis after 2007 defies the knowledge and experience on theory and policy. It appears that central banks are not implementing policies but learning how to deal with this new phenomenon.

Monetary policy at the Fed under a former chairman combined two types of analyses.[19] The environment of monetary policy is characterized by uncertainty, defined as lack of knowledge of the probability distribution, and risk, defined as events in a known probability distribution. The Fed has used a risk management approach to identify the sources of risk and uncertainty, quantifying them whenever possible and analyzing the costs of these risks. In addition, the Fed has accumulated knowledge over the years on the influence of a small set of variables on policy decisions and developed models to analyze their impact statistically. At the end, there is still a tough choice among many alternatives and a significant degree of imprecision.

Central banks, such as the BOE, follow a technical process of analysis and inflation targets. Both approaches have been seriously challenged by the financial crisis of 2007. There are hopes for improving the technical approach but the omniscient central banker, designing policy on a view of what may happen in six months, may be part of history.

Regulatory, trade and exchange wars

The actual loss of economic activity and employment after 2007 will be known with precision only when the National Bureau of Economic Research makes its judgment, if any, on the dates of beginning and ending of recession. There has been significant concern about the adequacy of regulation. This concern extends beyond the national level,

encompassing the world. There are likely to be profound changes in financial regulation and in the institutions and policy of the international financial system. There is risk of regulatory, trade and exchange wars, depending on the occurrence and depth of a global economic contraction. International relations in general could be compromised by economic struggle among countries and regions.

According to a distinguished macroeconomist, the Great Depression motivated the creation of macroeconomics and still influences theory and policy.[20] The Great Depression of the 1930s was a unique phenomenon in terms of economic contraction worldwide. Its impact was particularly strong in the US. The decline in real or price adjusted GDP in 1930–3 accumulated to 25.7 percent. The decline in GDP in current dollars or without adjusting for prices in 1930–3 accumulated to 44 percent. It is possible that there was recovery in employment and dynamism in the US economy only after the beginning of the effort to win World War II. The job losses in three US recessions are shown in Table 11.3. The risk is what happens to financial markets and economic expectations if the Department of Labor reports job losses in the first Friday of a future month of 200–300,000.

The synthesis of research on the depression is based on the importance of domestic monetary policies and the instability of the international monetary system.[21] The initial research proposed an autonomous role for tightening monetary policy in the US that induced or accentuated an already ongoing milder contraction.[22] Comparative research finds that there were similar policy mistakes in Germany and of a different form in France.[23] The international monetary system of fixed exchange rates facilitated the transmission of the depression among countries in the form of rising interest rates to prevent depreciation of the currency. The tightening of monetary policy accentuated banking crises in many countries but perhaps not as much as in the US.

The countries that maintained the gold standard contracted the money supply to arrest an outflow of gold, appreciating the exchange rate. This was the policy of major central banks in defending the relative strength of their currencies. Exchange appreciation made exports more expensive to foreigners, reducing internal economic activity. For example, Brazil abandoned the gold standard almost immediately because of the collapse of the prices of its major export, coffee, depreciating the exchange rate and imposing exchange controls. The large trade balance resulting from exchange rate depreciation combined with fiscal stimulus in the form of expenditures because of a drought and an internal revolution in São Paulo in 1932 in recovering the Brazilian economy.[24]

Table 11.3 Job losses in three US recessions thousand

Year	Losses	Year	Losses	Year	Losses
1990		2001		2007	
7	–42	1	–16	1	126
8	–208	2	61	2	25
9	–82	3	–30	3	177
10	–161	4	–281	4	46
11	–144	5	–44	5	162
12	–60	6	–128	6	107
1991		7	–125	7	57
1	–119	8	–160	8	74
2	–306	9	–244	9	81
3	–160	10	–325	10	140
4	–211	11	–292	11	60
5	–128	12	–178	12	41
6	+87	2002		2008	
7	–47	1	–132	1	–76
8	+15	2	–147	2	–76
9	+35	3	–24	3	–80
10	12	4	–85		
11	–58	5	–7		
12	23	6	–45		
		7	–97		
		8	–16		
		9	–55		
		10	126		
		11	8		
		12	–156		

Source: http://data.bls.gov/PDQ/servlet/SurveyOutputServlet

Stabilizing monetary policy required lowering interest rates, resulting in depreciation of the exchange rate. Abandoning the gold standard permitted liberal monetary policy that restored stability to banking and finance.[25] The banking crises and monetary policy errors were more important in the case of the US while the breakdown of the gold standard was more important in other countries.

An important change in economics during the Great Depression was the introduction of the concept of involuntary unemployment and the creation of the field of macroeconomics.[26] Involuntary unemployment is a continuing situation in which resources, such as labor, cannot find employment at prevailing wages. There were changes in attitudes about policies. The classical theory of international trade breaks down if the assumption of full employment of resources is replaced by involuntary

unemployment. Full employment can be attained by national policies. The government can promote domestic consumption by increasing domestic investment or use an excess of exports over imports, or trade surplus, in attaining its objective. Devaluation can be used to promote domestic employment. Using trade and devaluation to promote domestic employment restricts it in the rest of the world.[27]

The use of trade and exchange policy to promote employment at home at the expense of foreign employment was coined as "beggar-my-neighbor remedies for unemployment."[28] A distinguished economist also recognized as the ideal social scientist analyzed protection during the Great Depression, concluding that trade has positive long-term effects but protection may have positive net effects in the short term, facilitating macroeconomic adjustment.[29]

An important event during the Great Depression was the imposition of the Smoot-Hawley tariff on imports by the US Congress on June 18, 1930. Economic principles and the analysis of economists did not play a role in the discussion of the Smoot-Hawley tariff. An economist that accompanied the debates concluded that even if economics had been considered, the decision depended on the national opinion in the US in 1929–30.[30] The prevailing view was that if each group received what it desired, all individuals would benefit, promoting national welfare. There were no concerns on national policy. Congress accepted this view on the tariff, leading to approval of the legislation.

There was a decline of US imports by 41.2 percent from the second quarter of 1930 to the third quarter of 1932.[31] However, real US GNP declined by 29.8 percent in the same period, likely accounting for a major part of the decline in imports. Americans reduced their purchases of all goods, imported or not, when their income collapsed as in no other recorded period of history. Ad valorem, or percentage, tariff rates increased from 21.08 percent in the Act of 1913, to 34.61 percent in the Act of 1932 and finally to 42.48 percent in the Act of 1930, the Smoot-Hawley tariff.[32] Many of the tariff duties were specified on a dollar value, being subject to the curse of deflation. The fixed nominal value represents a higher percentage of the declining price. Suppose that the price of an imported good is $10 and the nominal tariff is $1. After a decline of the price to $8, the $1 duty is equivalent to 12.5 percent of the price. That is, deflation increases the ad valorem or percentage tax rate, in the example by 2.5 percentage points.

A sophisticated attempt to measure the impact of the Smoot-Hawley tariff results in the following conclusions.[33] There was an increase of US import prices of 5–6 percent resulting from the actual increase of

imports duties by 20 percent caused by the Smoot-Hawley tariff. The combined effect of the increase of the tariff directly or through the deflation effect reduced imports by 12–20 percent. Approximately 22 percent of the 40 percent reduction in the volume of US imports is explained by the combination of the higher tariff and the deflation effect. Imports accounted for only 4 percent of GNP during the Great Depression. Thus, the impact of the combined tariff and deflation effect could not explain the brutal contraction of income.

The British Parliament passed the Abnormal Importation Act in November 1931 and the Import Duties Act in February 1932. Other countries implemented retaliatory measures against trade as a reaction to the Smoot-Hawley tariff.[34] The macro tariffs, or tariff duties divided by imports, nearly doubled in that period.[35] The US was the largest creditor in the world during the Great Depression. The interruption of credit by the US to the rest of the world forced the reduction of imports by debtor countries that could not continue borrowing.

In 1929–32, the volume of exports and imports of industrialized countries declined by approximately 30 percent.[36] It is difficult in economics to separate the effects of various variables because they are not observed in isolation. The available measurement shows that world trade declined 13 percent because of the contraction of income, 8 percent because of increases in tariffs, 7 percent because of physical barriers to trade and 5 percent because of the increase of tariffs by deflation. There was an additional feedback effect of up to 2 percent in the form of declines in income caused by the tariff that in turn caused decreasing trade. Thus, the increase in tariffs may have accounted for almost 10 percent of the reduction of trade, close to the 13 percent caused by the contraction of income.

Regulation is typically an overreaction to economic events rushed through Congressional approval. There are three identifiable factors of the repeal of the Glass-Steagall Act.[37] Academic research demonstrates that the combination of banking and securities underwriting in the same corporate group did not cause the banking problems of the Great Depression.[38] The limited securities activities allowed to banks in the 1990s did not result in banking problems. Finally, new technology allows the rapid use of information from one company to benefit another; there was an increase in the profitability of selling insurance and securities products to households and business. The Gramm-Leach-Bliley Act of November 12, 1999, reformed the restrictions imposed by the Glass Steagall Act of 1933 and the Bank Holding Company Act of

1956.[39] However, American banks still lack the full flexibility of their competitors in other advanced countries.

There are significant grounds for concern on the basis of this experience. International economic cooperation and the international financial framework can collapse during extreme events. It is unlikely that there will be a repetition of the disaster of the Great Depression. However, a milder contraction can trigger regulatory, trade and exchange wars. Legislation is rushed through Congress, resulting in political solutions to economic problems. It is easier to pass harmful legislation than to repeal it. The Glass-Steagall Act lasted 67 years before its repeal. The loss of banking and FX by the US originated in temporary ceilings on interest rates and costly, unnecessary reserve requirements. That loss has not been reversed.

Summary

There is an extremely difficult balancing act in emerging from the credit/dollar crisis. The rules and regulation of the US have been partly abandoned in practice but still without proven success. The change in regulation should not be rushed but rather considered in comprehensive debate and passed after the crisis ends. Otherwise harmful regulation could perpetuate for many decades. The effort to reconsider the policies and institutions of the international financial system should engage the cooperation of many countries and sectors to gain support for implementation.

Conclusion

There are two main approaches in economics to state intervention. The differences in these views are illustrated below with the credit/dollar crisis after 2007.

The *public interest* view claims that market failures in attaining the first-best allocation of perfect competition predict the entry of the government into regulation. The government moves the economy toward a Pareto optimum. There is regulation in about every economic activity in the world. Financial markets are among the most regulated, in particular in the US, where the credit/dollar crisis began. Thus, the application of the public interest view requires the recognition that existing regulation was inadequate. Regulatory changes would be needed to prevent the repetition of the crisis.

The public interest view provides an interpretation of the origin of the credit/dollar crisis. Lending standards of mortgages were relaxed in the rush of increasing sales of mortgages. Borrowers with weak credit histories were offered products with teaser rates. For example, the initial monthly payments of $400,000 mortgages were reduced for the first two years to those corresponding to $250,000. In two years, interest rates and principal payments were adjusted to reflect the actual dollar commitment of the debtor, increasing sharply monthly payments above capacity to pay them, resulting in a wave of foreclosures. The mortgages were sold by individuals and entities that earned commissions on sales but did not participate in future default risk. Thus, there was not due diligence on the income and credit histories of the debtors to verify their creditworthiness and ability to pay relative to income. This was the case of both subprime debtors with weak credit histories and alt-A ones with reasonable credit scores but no verification of actual income. There was also fraud by debtors misrepresenting their income and assets.

Financial institutions, such as commercial, mortgage and investment banks, repackaged the mortgages in securities. There was not due diligence of verifying the quality of the underlying mortgages in the rush to increase sales and earn higher commissions. Mortgages were also combined in highly leveraged CDOs. Banks hid the CDOs in SIVs off the balance sheets. There are no adequate methods to value these structured products. Bank balance sheets did not reflect their actual financial weakness, misleading investors, depositors and supervisors.

The crisis magnified through the entire financial production chain. There were lax standards in the origination, securitization and distribution of mortgage products. The initial weakness of mortgages and their securitization eroded the confidence in banks. Similar problems developed in all forms of asset-backed securities. The interbank market paralyzed because of an unprecedented rise in the perception of counterparty risk. Banks did not trust their own balance sheets and would not lend to other banks to avoid absorbing their bad loans.

There are numerous proposals within the public interest view of preventing the next crisis perhaps because of the failure of solving the credit/dollar crisis. These proposals all lead to tightening regulation and supervision. Government agencies would ensure that lenders apply strict standards in originating and securitizing mortgages. Regulatory agencies would be reformed and strengthened. Supervisors would actively police transparency of bank balance sheets, inspecting the prudence of risk practices. The SEC and state authorities began to investigate violations with the objective of high-profile prosecutions.

The *private interest view* would argue that the credit/dollar crisis originated in government failure. The purpose of central banks and financial regulators and supervisors is preventing the market failure of financial crises with resulting output contraction and unemployment. However, the central banks created the credit/dollar crisis and are failing in its resolution. The lowering of the fed funds rate to 1 percent in 2003–4 and the expressed willingness of lowering it to zero eroded the risk discipline of banks and borrowers. The lowest interest rates in five decades created the impression that house prices would increase forever. Borrowers did not perceive risk in the known future increase in monthly payments because the worst that could happen would be to live in a better residence for two years and then sell it for a capital gain after repaying the mortgage. Lenders also believed that the downside would be early repayment of the mortgage or sale at market value in foreclosure. Supervision and regulation encouraged the expansion phase of the business cycle with unprecedented debt. The flood of

money at low interest rates encouraged borrowing and lending without prudence, eroding the calculations of risks and returns by creditors and debtors.

There is eventually an unavoidable solution of the credit/dollar crisis. There is no relief in subsidizing a debtor to keep a house that will never be worth the principal in the mortgage, after allowing for taxes, improvements, amortization and broker fees. It is also unfair to transfer the subsidy to taxpayers that exercised caution in their financial decisions. Unprecedented moral hazard would jeopardize housing and general finance. Numerous plans to avoid MTM financial assets, such as the super SIV and the deep rediscount window of any security by central banks, merely perpetuate the credit/dollar crisis with higher eventual costs of output and employment. The recovery of the monitoring and intermediation function of finance requires MTM of all depreciated financial assets. Such a cleansing of balance sheets will reduce counterparty risk to normal levels. Delays and expediencies may merely magnify the crisis.

Past experience is revealing. A current interpretation emphasizes the flexibility of exchange rates in the more rapid recoveries of some economies in the 1930s. The devaluation of the dollar is a necessary adjustment in the current situation. The Glass-Steagall Act was based on erroneous analysis and distortion of experience but survived seven decades, undermining finance in the US. Subsequent errors in regulation moved permanently banking and FX from NYC to London. SOX and frivolous litigation are transferring the remainder of the financial industry away from NYC.

International economic cooperation breaks during hard times. There should be a forward approach to regulation, trade and capital flows instead of the rush of regulatory shocks based on inadequate interpretations of the credit/dollar crisis that may create a different crisis and other problems of efficiency in the future. The emphasis should be in solving the current problems before embarking in regulatory, trade and devaluation wars. According to the NIE, both markets and government can fail. Pragmatic policy should balance regulation with the need to maintain economic incentives and property rights for future growth.

Notes

Introduction, Scope and Content

1. Joseph A. Schumpeter, *Capitalism, socialism and democracy* (New York: Harper & Row, 1942).
2. Adam Smith, *The Wealth of nations* (Chicago: University of Chicago reprinted in 1976 from 1776 original), 477.
3. Paul Krugman and Robin Wells, *Economics* (New York: Worth, 2006); Ibid., *Microeconomics* (New York: Worth, 2004); Robert C. Feenstra and Alan M. Taylor, *International economics* (New York: Worth, 2008); N. Gregory Mankiw, *Macroeconomics* (New York: Worth, 2006); Stephen Valdez, *An introduction to global financial markets* (Basingstoke and New York: Palgrave, 2006).

1 The World Economy, Prosperity and Conflicts

1. Simon Kuznets, Modern economic growth: findings and reflections, Stockholm, Sweden, Lecture to the memory of Alfred Nobel, Dec 11, 1971, http://nobelprize.org/nobel_prizes/economics/laureates/1971/kuznets-lecture.html
2. Ibid.
3. Douglass C. North and Barry R. Weingast, Constitutions and commitments: the evolution of institutional governing public choice in seventeenth-century England, *Journal of Economic History* 49 (4): 803–32. See William R. Summerhill III, *Inglorious revolution: political institutions, sovereign debt and financial underdevelopment in Imperial Brazil* (New Haven: Yale University Press, forthcoming) for important qualifications.
4. Rondo E. Cameron, *Banking in the early stages of industrialization* (Oxford: Oxford University Press, 1967).
5. Kevin H. O'Rourke and Jeffrey G. Williamson, *Globalization and history: the evolution of a nineteenth-century Atlantic Economy* (Cambridge: Cambridge University Press, 2001).
6. Joan Robinson, Beggar-my-neighbor remedies for unemployment. In Robinson, *Essays in the theory of employment* (London: Macmillan, 1937).
7. Harold James, *The end of globalization: lessons from the Great Depression* (Cambridge, MA: Harvard University Press, 2002).
8. Michael D. Bordo, Globalization in historical perspective. *Business Economics* 37 (1): 20–9; Bordo, Alan M. Taylor and Jeffrey G. Williamson, eds. *Globalization in historical perspective* (Chicago: University of Chicago Press, 2005).
9. Bordo, Globalization in historical perspective.
10. Anthony Giddens, *Runaway world: how globalization is reshaping our lives*, Rev. ed. (London: Routledge, 2002).

11. Martin Wolf, *Why globalization works* (New Haven: Yale University Press, 2005), 14.
12. Jagdish N. Bhagwati, In defense of globalization: it *has* a human face (Rome, The 2005 Angelo Costa Lecture).
13. Ibid., 7.
14. Joseph E. Stiglitz, *Globalization and its discontents* (New York: Norton, 2002), 4.
15. Ibid., 5.
16. Larry Summers, The global middle cries out for reassurance. *Financial Times*, Oct 29, 2006; Summers, A Strategy to promote healthy globalization, *Financial Times*, May 4, 2008; Summers, America needs to make a new case for trade, *Financial Times*, Apr 27, 2008.
17. Ibid.
18. David Wessel, The case for taxing globalization's big winners. *Wall Street Journal*, Jun 14, 2007.
19. Kenneth F. Scheve and Matthew J. Slaughter, A new deal for globalization. *Foreign Affairs* (Jul/Aug 2007).
20. Jason Furman, Lawrence H. Summers and Jason Bordoff, Achieving progressive tax reform in an increasingly globalized economy (Washington, DC, Hamilton Project, Brookings Institution, 2007).
21. Joseph Schumpter, *Capitalism, socialism and democracy* (New York: Harper & Bros. 1942).
22. Martin Wolf, Unfettered finance is fast reshaping the global economy. *Financial Times*, Jun 18, 2007.
23. Ibid.
24. Frederic S. Mishkin, *The next globalization: how disadvantaged nations can harness their financial systems to get rich* (Princeton: Princeton University Press, 2006).
25. Nancy Birdsall, Asymmetries of globalization. *Brookings Institution Review* 21 (2), 2003; Ibid., *The world is not flat: inequality and injustice in our global economy* (Helsinski: UNU, 2005).

2 International Official Institutions

1. Yolanda Ortiz de Arri, Group of Eight, *Financial Times*, Jun 7, 2004.
2. Carlos M Peláez and Carlos A Peláez, *International financial architecture: G7, IMF, BIS, debtors and creditors* (Basingstoke and New York: Palgrave Macmillan, 2005), 63–100.
3. The phrase was coined by US Treasury Secretary Robert E. Rubin, Strengthening the architecture of the international financial system (Washington, DC, Brookings Institution, Apr 14, 1998).
4. Anne O. Krueger, Promoting international financial stability: the IMF at 60 (Washington, DC, IMF, 2004).
5. See http://www.imf.org/external/np/exr/facts/glance.htm
6. See http://www.imf.org/external/np/sec/memdir/members.htm
7. See http://www.imf.org/external/np/sec/memdir/members.htm
8. See Joseph E. Stiglitz, *Globalization and its discontents* (New York: Norton, 2002); Ngaire Woods, *The globalizers: the IMF, the World Bank and their borrowers* (Ithaca: Cornell, 2006).

9. See http://www.worldbank.org/
10. See www.bis.org
11. See http://www.iadb.org/
12. See http://www.adb.org/
13. See http://www.eib.org/
14. *Understanding the WTO, 3rd Edition* (Geneva: WTO, Feb 2007).
15. For criticism of the WTO governance, see Stiglitz, *Globalization and its discontents*. The defense of free trade within multilateral agreements is by Jagdish Bhagwati, *In defense of globalization: with a new afterword* (New York: Oxford University, 2007).
16. Walter Bagehot, *Lombard Street 14th ed*. (London: Kegan, 1873 reprinted in 1917). A classic modern work is by Douglas W. Diamond and Philip H. Dybig, Bank runs, deposit insurance and liquidity. *Journal of Political Economy* 91 (3, 1983): 401–19.
17. Milton Friedman, A monetary and fiscal framework for economic stability. *American Economic Review* 83 (3, Jun 1948), 255; Friedman, The effects of full-employment policy on economic stability: a formal analysis. In Friedman, *Essays on positive economics* (Chicago: University of Chicago, 1953).
18. Ben S. Bernanke, The credit channel of monetary policy in the twenty-first century (Atlanta, FRBA, Jun 15, 2007).
19. Peláez and Peláez, *The global recession risk* (Basingstoke and New York: Palgrave Macmillan, 2007), 218–29.
20. Joseph E. Stiglitz and Bruce Greenwald, *Towards a new paradigm in monetary economics* (Cambridge: Cambridge University, 2003); Claudio Borio, Craig Furfine and Lawrence F. Katz, Procyclicality of the financial system and financial stability (Geneva, BIS, 2000).
21. *The Federal Reserve System: purposes & functions 9th ed*. (Washington, DC: Board of Governors, 2005).
22. Hanspeter K. Scheller, *History, role and functions 2nd rev. ed*. (Frankfurt am Main: ECB, 2006).
23. Ibid., 80.
24. Institute of Monetary and Economic Studies, *Functions and operations of the Bank of Japan* (Tokyo: IMES/BOJ, 2004).
25. Ibid., 126.
26. *Basic facts about the United Nations updated ed*. (New York: UN, 2004).
27. *United Nations Millennium Declaration* (New York: UN 8th plenary meeting, 2000).

3 Banks and Capital Markets

1. Advanced references in vast literature are Douglas W. Diamond and Philip H. Dybvig, Banking theory, deposit insurance and bank regulation. *Journal of Business* 59 (1, Jan 1986): 55–68; Diamond and Dybvig, Bank runs, deposit insurance and liquidity. *Journal of Political Economy* 91 (3, Jun 1983): 401–49; Diamond and Raghuram G. Rajan, A theory of bank capital. *Journal of Finance* 55 (6, Dec 2000): 2431–65; Diamond and Rajan, Liquidity risk, liquidity creation and financial fragility: a theory of banking. *Journal of Political Economy* 109 (2, Apr 2001): 287–327; Diamond, Liquidity, banks and markets. *Journal of Political Economy* 105 (5, Oct 1997): 928–56.

2. Diamond and Dybvig, Banking theory, deposit insurance and bank regulation.
3. See the essays by Diamond and Dybvig in footnote 1.
4. George J. Benston, Universal banking. *Journal of Economic Perspectives* 8 (3, Summer 1994): 121–43; Wonsik Sul and Joon Seok Oh, Are German-type universal banks superior in performance to other types of universal banks. *Journal of Financial Management & Analysis* 12 (2, Jul–Dec 1999): 18–30.
5. James R. Barth, Dan Brumbaugh, Jr. and James A. Wilcox, The repeal of Glass-Steagall and the advent of broad banking. *Journal of Economic Perspectives* 14 (2, 2000): 191–204.
6. Randall S. Kroszner and Raghuram G. Rajan, Evidence from commercial bank securities activities before the Glass-Steagall Act. *Journal of Monetary Economics* 39 (Aug 1997): 475–516.
7. Joseph A. Schumpeter, *Capitalism, socialism and democracy* (New York: Harper, 1942).
8. Michael C. Jensen, The modern industrial revolution, exit and the failure of internal control systems. *Journal of Finance* 48 (3, Jul 1993): 831–80. See Jensen and William H. Meckling, Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3 (4, 1976): 305–60; Jensen, Takeovers: their causes and consequences. *Journal of Economic Perspectives* 2 (1, Winter 1988): 21–48; Jensen, Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review* 76 (2, May 1986): 323–9; Eugene F. Fama and Jensen, Agency problems and residual claims. *Journal of Law and Economics* 26 (2, Jun 1983): 327–49; Fama and Jensen, Separation of ownership and control. *Journal of Law and Economics* 26 (2, Jun 1983): 301–25.
9. Jensen, The modern, 850.
10. Ibid.
11. Adolf Berle and Gardiner Means, *The modern corporation and private property* (New York: Macmillan, 1932).
12. Edward B. Rock, Saints and sinners: how does Delaware corporate law work? *UCLA Law Review* 44 (1997): 1009–107.
13. Rock, ibid., 1011, does not find that the checks on managers are very powerful with the exception of competitive markets in cases where they do exist.
14. Ibid., 1013.
15. Ibid., 1014.
16. Ibid., 1015.
17. Ibid.
18. William E. Knepper and Dan A. Bailey, *Liability of corporate officers and directors, seventh edition* (New York: LexisNexis, 2002), 14, 12.
19. Ibid., 14:06.
20. John Gieve, Hedge funds and financial stability. *Bank of England Quarterly Bulletin* 46 (4, 2006): 447–51.
21. Ibid., 448.
22. Tomas Garbaravicius and Frank Dierick, *Hedge funds and their implications for financial stability* (Frankfurt am Main: European Central Bank OPS No. 34, Aug 2005).
23. President's Working Group on Financial Management, *Hedge funds, leverage and the lessons of Long Term Capital Management* (Washington, DC: Treasury, 1999).

24. Martin Wolf, Barbarians at the gate: the balance of pros and cons. *Financial Times*, Feb 27, 2007.
25. Ibid.
26. Ibid.
27. Ibid.
28. http://www.thecarlylegroup.com/eng/company/index.html
29. http://www.blackstone.com/private_equity/index.html; http://online.wsj.com/article/SB117974471829909375.html?mod=sphere_ts
30. http://www.kkr.com/who/who.htm
31. http://online.wsj.com/mdc/public/page/2_3022-bondbnchmrk.html?mod=topnav_2_3024
32. http://online.wsj.com/quotes/industry_comparison.html?mod=2_0464&symbol=FRE&news-symbol=FRE

4 Risk Management and World Trade, Investment and Finance

1. John C. Hull, *Options, futures and other derivatives 7th ed.* (New York: Prentice Hall, 2008) is an advanced textbook. An excellent introduction is Stephen Valdez, *An introduction to global financial markets* (Basingstoke and New York: Palgrave Macmillan, 2006).
2. Allan J. Laubsch and Andre Ulmer, Risk management: a practical guide, 1999, www.riskmetrics.com
3. Jorge Mina and Jerry Yi Xiao, *Return to RiskMetrics™: the evolution of a standard* (New York: RiskMetrics Group, Apr 2001); Glyn A. Holton, *Value-at-risk: theory and practice* (New York: Academic Press, 2003); Philippe Jorion, *Value at risk 3rd ed.* (New York: McGraw Hill, 2006); Gilles Zumbach, A gentle introduction to the RM 2006 methodology (Geneva, Risk Metrics Group, Jan 2007); Zumbach, The Risk Metrics 2006 methodology (Geneva, Risk Metrics Group, Mar 2007).
4. http://files.shareholder.com/downloads/ONE/264354181x0x158179/5dc4999b-ea98–48bc-a3fe-527a75b91589/4Q07%20Supplement%20FINAL.pdf
5. Darrell Duffie and Kenneth J. Singleton, *Credit risk: pricing, measurement and management* (Princeton: Princeton University Press, 2003); BIS workshop on "The pricing of credit risk" (Basel: BIS, Sep 9–10, 2004).
6. Basel Committee on Banking Supervision, The Joint Forum, *Credit risk transfer* (Basel: BIS, Mar 2005).
7. Ibid.
8. Mina and Xiao, Return, 39–45; Committee on the Global Financial System, Stress testing by large financial institutions: current practices and aggregation issues (Basel, BIS, Apr 2000); Winfrid Blaschke et al. Stress testing of financial systems: an overview of issues, methodologies and FSAP experiences (Washington DC, IMF, Jun 2001).
9. Committee on the Global Financial System, Stress testing at major financial institutions: survey results and practices (Basel, BIS, Jan 2005); Ibid., A survey of stress tests and current practice at major financial institutions (Basel, BIS, Apr 2001).

10. Basu et al., Financial sector projections and stress testing in financial programming: a new approach (Washington, DC, IMF, Jan 2006); Hoggarth et al., Macro stress tests of UK banks (Basel, BIS, 2004); Marco Sorge, Stress-testing financial systems: an overview of current methodologies (Basel, BIS, Dec 2004).
11. Peláez and Peláez, *The global recession risk* (Basingstoke, UK and New York: Palgrave Macmillan, 2007).
12. World Trade Organization, *International trade statistics 2006* (Geneva: WTO, 2006).
13. Ibid., 108.
14. Ibid., 109.
15. BIS, Triennial central bank survey: foreign exchange and derivatives market activity in 2007 (Basel, BIS, Dec 2007).
16. http://online.wsj.com/mdc/public/page/mdc_commodities.html
17. http://online.wsj.com/mdc/public/page/2_3024-futopt_oil.html?mod=mdc_cmd_pglnk
18. Ibid.
19. Ibid.
20. UNCTAD, *World investment report 2006* (New York: UN, 2006).
21. Ibid., 10.
22. BIS, Semiannual OTC derivatives statistics at end-December 2006 (Basel, BIS, May 2007).
23. Paul J. Davies, Bank profits from asset-backed securities. *Financial Times*, Jun 3, 2007.
24. Ibid.

5 The Theory of the State

1. Adam Smith, *The wealth of nations* (Chicago: University of Chicago, 1976 reprinted from 1776), 477.
2. Kenneth Arrow, An extension of the basic theorems of classical welfare economics. In *Proceedings of the Second Berkeley Symposium on Mathematical Statistics and Probability* (Berkeley: University of California Press, 1951); Gerard Debreu, The coefficient of resource allocation. *Econometrica* 19 (3, 1951): 273–92.
3. Richard G. Lipsey and K. Lancaster, The general theory of second best. *Review of Economic Studies* 24 (1956): 11–32.
4. Arthur C. Pigou, *The economics of welfare 4th ed.* (London: Macmillan & Co., 1932).
5. Paul A. Samuelson, The pure theory of public expenditures. *Review of Economics and Statistics* 36 (4, 1954): 387–9; Samuelson, Diagrammatic exposition of a theory of public expenditure. *Review of Economics and Statistics* 37 (4, 1955): 350–6; Samuelson, Aspects of public expenditures theory. *Review of Economics and Statistics* 40 (4, 1958): 332–8.
6. George A. Akerlof, The market for 'lemons': quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 84 (3, 1970): 488–500; Michael A. Spence, Job market signaling. *Quarterly Journal of Economics* 87 (3, 1973): 434–59; Joseph E. Stiglitz, Information and the change in the paradigm in economics. *American Economic Review* 92 (3, 2002): 460–501.

7. George A. Akerlof, Writing 'The market for lemons': a personal and interpretive essay (Berkeley, University of California, 2003).
8. Stiglitz, Information, 469.
9. Ibid.
10. Harold Demsetz, Information and efficiency, another viewpoint. *Journal of Law and Economics* 12 (1969): 1–21.
11. Clifford Winston, *Government failure versus market failure* (Washington, DC: Brookings, 2006), 73–4.
12. Ronald H. Coase, The problem of social cost. *Journal of Law and Economics* 3 (1, 1960): 1–40.
13. Ibid.
14. Ibid.
15. Ibid.
16. John J. Wallis and Douglass C. North, Measuring the transactions sector in the American economy. In Stanley L. Engerman and Robert E. Gallman, eds. *Long-term factors in American economic growth* (Chicago: University of Chicago Press, 1986).
17. Oliver E. Williamson, The new institutional economics: taking stock, looking ahead. *Journal of Economic Literature* 38 (3, 2000): 595–613.
18. Ibid., 596–8.
19. Coase, The problem.
20. Ibid; Demsetz, Information.
21. For a comparison of the new world see Stephen H. Haber, Political institutions and financial development: evidence from new world economies (Cambridge, MA, NBER, Jul 11, 2007).
22. Ronald H. Coase, The nature of the firm. *Economica* 4 (16, Nov 1937): 386–405.
23. Oliver E. Williamson, The institutions of governance. *American Economic Review* 88 (2, 1998): 75–9.
24. Sam Peltzman, Regulation and the natural process of opulence (Washington, DC, AEI-Brookings, 2004).
25. George J. Stigler, The theory of economic regulation. *The Bell Journal of Economics and Management Science* 2 (1, 1973): 3–21. The term of economic theory of regulation was introduced by Richard Posner, Theories of economic regulation. *Bell Journal of Economics and Management Science* 5 (2, 1974): 335–58.
26. Stigler, The theory, 4–5.
27. Ibid., 4–6.
28. Sam Peltzman, The economic theory of regulation after a decade of deregulation. *Brookings Papers on Economic Activity* (1989), 6–7.
29. For extensions see Gary S. Becker, A theory of competition among pressure groups for political influence. *Quarterly Journal of Economics* 98 (3, 1983): 371–400.
30. Anne O. Krueger, The political economy of the rent-seeking society. *American Economic Review* 64 (1974): 291–303; Gordon Tullock, The welfare costs of tariffs, monopolies and theft. *Western Economic Journal* 5 (1967): 224–43.
31. Mark J. Roe, Rents and their consequences (New York, Columbia Law School, Apr 10, 2001), 3.

32. Andrei Shleifer, Understanding regulation. *European Financial Management* 11 (4, 2005): 439–51.
33. Ibid., 442.
34. Ibid., 442–3.
35. For a critique of capital requirements in Basel II, see James R. Barth, Gerard Caprio, Jr. and Ross Levine, *Rethinking bank regulation* (Cambridge: Cambridge University Press, 2006). With a worldwide sample, they conclude that the evidence supports more the private interest view than the public interest view.
36. Arnold C. Harberger, Three postulates for applied welfare economics: an interpretive essay. *Journal of Economic Literature* 9 (3, 1971): 785–97.
37. Harberger and Glenn P. Jenkins, Introduction. In *Cost-benefit analysis* (Cheltenham, UK: Edward Elgar, 2002).
38. Harberger, Three postulates, 795.

6 International Trade of Goods and Services

1. Adam Smith, *The wealth of nations*.
2. David Ricardo, *On the principles of political economy and taxation* (London: John Murray, 1817). In Piero Srafa, ed. *The works and correspondence of David Ricardo, Vol. I* (Cambridge: Cambridge University Press, 1951); Robert Torrens, *The economists refuted* (London: S.A. and H. Oddy, 1808); Torrens, *An essay on the external corn trade* (London: J. Hatchard, 1817). See the excellent essay by John S. Chipman, A survey of the theory of international trade: part 1, the classical theory. *Econometrica* 33 (3, 1965): 480–2.
3. Jagdish N. Bhagwati, Free trade: why AFL-CIO, the Sierra Club and Congressman Gephardt should like it. *American Economist* 43 (2, 1999): 5.
4. Eli Hecksher, The effects of foreign trade on the distribution of income (1919) reprinted in Howard S. Ellis and Lloyd A. Metzler, eds. *Readings in the theory of international trade* (Philadelphia: Blackiston, 1949); Bertil Ohlin, *Interregional and international trade* (Cambridge, MA: Harvard University Press, 1933); Paul A. Samuelson, International trade and the equalization of factor prices. *Economic Journal* 58 (1948): 163–84; Samuelson, International factor price equalization once again. *Economic Journal* 59 (1949): 181–97; Samuelson, A comment on factor price equalization. *Review of Economic Studies* 19 (1951): 121–2; Samuelson, Prices of factors and goods in general equilibrium. *Review of Economic Studies* 21 (1953): 1–20.
5. Paul A. Samuelson, The gains from international trade. *Canadian Journal of Economics* 5 (1939): 195–205; Jagdish N. Bhagwati, The gains from trade once again. *Oxford Economic Papers* 20 (2, 1968): 137–48.
6. Christian Broda et al., Optimal tariffs: the evidence (Cambridge, MA, NBER WP 12033, Feb 2006).
7. Harry G. Johnson, Optimum tariffs and retaliation. *Review of Economic Studies* 21 (2, 1953): 142–53.
8. Bhagwati and V. K. Ramaswami, Domestic distortions, tariffs and the theory of optimum subsidy. *Journal of Political Economy* 71 (1963): 44–50; Bhagwati, Ramaswami and T. N. Srinivasan, Domestic distortions, tariffs and the theory of optimum subsidy: some further results. *Journal of Political Economy*

77 (6, 1969): 1005–10; Bhagwati, The generalized theory of distortions and welfare. In Bhagwati et al., *Trade, balance of payments and growth* (Amsterdam: North Holland, 1971); Bhagwati, *Free trade today* (Princeton: Princeton University Press, 2001); Arvind Panagariya, Bhagwati and Ramaswami: why it *is* a classic. *The World Economy* 29 (11, 2006): 1153–70.

9. Robert E. Baldwin, Openness and growth: what's the empirical relationship (Cambridge, MA: NBER, 2003).
10. Francisco Rodriguez and Dani Rodrik, Trade policy and economic growth: a skeptic's guide to the cross-national evidence. In Ben S. Bernanke and Kenneth S. Rogoff, eds. *Macroeconomics annual 2000* (Cambridge, MA: MIT Press, 2001).
11. Robert E. Baldwin, The political economy of trade policy. *Journal of Economic Perspectives* 3 (4, 1989): 119–35.
12. Mancur Olson, *The logic of collective action* (Cambridge, MA: Harvard University Press, 1965).
13. Baldwin, The political.
14. Ibid.
15. Robert E. Baldwin and Christopher S. Magee, Is trade policy for sale? Congressional voting on recent trade bills. *Public Choice* 105 (2000): 79–101.
16. Ibid., 82.
17. Ibid., 99.
18. Ibid.
19. Gene M. Grossman and Elhanan Helpman, Protection for sale. *American Economic Review* 84 (4, 1994): 833–50.
20. Ernest F. Hollings, Protectionism happens to be Congress' job. *Washington Post*, Mar 21, 2004.
21. USITC, What the USITC is and isn't. http://www.usitc.gov
22. N. Gregory Mankiw and Phillip L. Swagel, Antidumping: the third rail of policy. *Foreign Affairs* 84 (4, 2005).
23. Ibid.
24. Wolfgang F. Stolper and Paul A. Samuelson, Protection and real wages. *Review of Economic Studies* 9 (1941): 59–73. See also the references in footnote 4.
25. Jeffrey D. Sachs and Howard J. Shatz, Trade and jobs in the US manufacturing. *Brookings Papers on Economic Activity* 1 (1994): 1–84.
26. Kristin Forbes, US manufacturing: challenges and recommendations. *Business Economics* 39 (3, 2004): 30–7.
27. Ibid.
28. Ibid.
29. Ben S. Bernanke, Trade and jobs (Durham, NC, Duke University, 2004).
30. Lori G. Kletzer, Job displacement. *Journal of Economic Perspectives* 12 (1, 1998): 115–36; Kletzer, *Job loss from imports: measuring the costs* (Washington, DC: PIIE, 2001).
31. Kletzer, *Job loss*.
32. Ibid.
33. Jagdish N. Bhagwati, Technology, not globalization, drives wages down. *Financial Times*, Jan 3, 2007.
34. Ibid.
35. Robert C. Feenstra, Globalization and the impact on labor (Vienna: Institute for International Economic Studies, 2007).

36. Andrew B. Bernard and J. Bradford Jensen, Exporters, jobs and wages in US manufacturing: 1976–1987. *Brookings Papers on Economic Activity* (1995): 67–119.
37. Ibid.
38. N. Gregory Mankiw and Phillip Swagel, The politics and economics of offshoring outsourcing (Cambridge, MA: Harvard University, Mar 2006).
39. Ibid., 25.
40. Alan S. Blinder, Offshoring: the next industrial revolution? *Foreign Affairs* 85 (2, 2006).
41. Gene M. Grossman and Esteban Rossi-Hanberg, Trading tasks in a simple theory of offshoring (Princeton: Princeton University, 2006); Ibid., The rise of offshoring: it's not wine for cloth anymore (Princeton, Princeton University, 2006).

7 Trade Agreements

1. Arvind Panagariya, Preferential trade liberalization: the traditional theory and new developments. *Journal of Economic Literature* 38 (2, 2000): 288.
2. Anne O. Krueger, Are preferential trade agreements trade-liberalizing or protectionist? *Journal of Economic Perspectives* 13 (4, 1999): 112.
3. Ibid., 112.
4. Ibid.
5. Jacob Viner, *The customs union issue* (New York: Carnegie Endowment for International Peace, 1950).
6. Panagariya, Trade liberalization.
7. Ibid; Kruger, Are preferential, 116.
8. Jagdish N. Bhagwati, US trade policy: the infatuation with free trade areas. In Bhagwati and Kruger, eds. *The dangerous drift to preferential trade agreements* (Washington, DC: AEI, 1995); Bhagwati, Testimony (Washington, DC, US House of Representatives, Subcommittee on Domestic and International Monetary Policy, Apr 1, 2003).
9. Bhagwati, Testimony.
10. Richard E. Baldwin, Multilateral regionalism: spaghetti bowls as building blocks on the path to global free trade (Geneva, Oct 2, 2006), 4, using data in R. Findlay and K. O'Rourke, *Power and plenty: trade, war and the world economy in the new millennium* (Princeton: Princeton University Press, 2007).
11. Ibid., 5.
12. Peláez and Pelaez, *The global recession risk* (Basingstoke and New York: Palgrave Macmillan, 2007), 135–44.
13. European Economic Community, Treaty establishing the European Economic Community, http://europa.eu
14. Ibid.
15. European Union, Consolidated versions of the treaty on European Union and of the treaty establishing the European Community (Brussels, Official Journal of the European Union, Dec 29, 2006).
16. USTR, 2006 special 301 report. http://www.ustr.gov
17. APEC, About APEC, http://www.apecsec.org
18. ASEAN, About ASEAN, http://www.aseansec.org

19. Ibid.
20. Ibid.
21. Peláez and Peláez, *International financial architecture* (Basingstoke and New York: Palgrave Macmillan, 2005), 28–42.
22. Barry Eichengreen, What macroeconomic measures are needed for free trade to flourish in the Western Hemisphere? *Latin American Politics and Society* 46 (2, 2004): 1–2.
23. OPEC, About us, http://www.opec.org

8 Poverty, the Environment and Climate Change

1. L. Alan Winters, Neil McCulloch and Andrew McKay, Trade liberalization and poverty: the evidence so far. *Journal of Economic Literature* 42 (1, 2004): 72–115.
2. Ibid., 106.
3. Ibid.
4. Gary S. Becker, Human capital and poverty alleviation (Washington, DC, World Bank, Dec 16, 1994).
5. Rondo E. Cameron, *France and the economic development of Europe* (Princeton: Princeton University Press, 1961).
6. Ibid.
7. Jagdish N. Bhagwati and T. N. Srinivassan, Trade and poverty in the poor countries. *American Economic Review* 92 (2, 2002): 182.
8. Ibid.
9. Shaohua Chen and Martin Ravallion, How have the world's poorest faced since the early 1980's. *World Bank Research Observer* (Fall, 2004): 1–41.
10. Ibid., 9.
11. Sanjay Reddy and Thomas W. Pogge, How not to count the poor (New York: Columbia University, Oct 29, 2005), 7.
12. David Dollar and Aart Kraay, Trade, growth and poverty. *Finance and Development* 38 (3, 2001).
13. Ibid.
14. Kevin Watkins, Making globalization work for the poor. *Finance and Development* 39 (1, 2002).
15. Xavier Sala-i-Martin, Why are the critics so convinced that globalization is bad for the poor? A comment (New York, Columbia University, Oct 19, 2004).
16. Ibid.
17. Joseph E. Stiglitz, Global public goods and global finance. In Jean-Philippe Touffut, ed. *Advancing public goods* (London: Edward Elgar, 2006).
18. Todd Sandler and Daniel G. Arce, A conceptual framework for understanding global and transnational public goods for health. *Fiscal Studies* 23 (2, 2002): 198.
19. Todd Sandler, Regional public goods and international organizations. *Review of International Organizations* 1 (1, 2006): 5–25.
20. Ibid.
21. Maureen L. Cropper and Wallace E. Oates, Environmental economics: a survey. *Journal of Economic Literature* 30 (2, 1992): 675–740.
22. Ibid., 680.

23. Ibid., 675–6.
24. Brian R. Copeland and M. Scott Taylor, Trade, growth and the environment. *Journal of Economic Literature* 42 (1, 2004): 66–7.
25. Ibid., 34–5.
26. Deepak Lal, The greens vs. India. *The Globalist*, Jul 8, 2005.
27. Ibid.
28. William Nordhaus, The Stern review on the economics of climate change (New Haven, Yale University, Nov 17, 2006).
29. HM Treasury, Stern review on the economics of climate change, 2006, http://www.hm-treasury.gov.uk
30. Ibid., 5.
31. Ibid., 6–7.
32. Ibid., iv–viii.
33. Ibid., xiii.
34. IPCC, Human influence on the climate system, www.ipcc.ch
35. IPCC, Climate change 2007: climate change, impact, adaptation and vulnerability, Feb 5, 2007, www.ipcc.ch 5.
36. IPCC, Climate change 2007, May 4, 2007, www.ipcc.ch 26.
37. Martin Wolf, In spite of skeptics, it is worth reducing climate risk. *Financial Times*, Feb 6, 2007.
38. Ibid.
39. Ibid.
40. Nordhaus, The Stern review.
41. Ibid.
42. Ibid.

9 Financial Globalization

1. Ross Levine, Financial development and economic growth: views and agenda. *Journal of Economic Literature* 35 (2, 1997): 701.
2. Ibid., 701–2.
3. Ibid.
4. Ibid., 689.
5. Ibid.; Zsolt Becsi and Ping Wang, Financial development and growth. *Economics Review—Federal Reserve Bank of Atlant*a 82 (4, 1997): 46–62.
6. Douglas Diamond, Corporate capital structure: the control roles of bank and public debt with taxes and costly bankruptcy. *Economic Quarterly Federal Reserve Bank of Richmond* 80 (2, 1994): 11–37; Diamond, Financial intermediation as delegated monitoring: a simple example. *Economic Quarterly Federal Reserve Bank of Richmond* 82 (3, 1996): 51–66.
7. Diamond, Financial Intermediation, 65.
8. Joseph A. Schumpeter, *The theory of economic development* (Cambridge, MA: Harvard University Press, 1934, originally published in 1911). For an application to early cases of industrialized countries, see Rondo E. Cameron, *Banking in the early stages of industrialization* (Oxford: Oxford University Press, 1967). See Robert G. King and Ross Levine, Finance and growth: Schumpeter might be right. *Quarterly Journal of Economics* 106 (3, Aug 1993): 717–37.
9. Raghuram G. Rajan and Luigi Zingales, Financial dependence and growth. *American Economic Review* 88 (3, 1998): 559–86.

10. Cameron, *Banking*.
11. Ibid., 2; Rajan and Zingales, Financial dependence, 561.
12. Ronald I. McKinnon, *Money and capital in economic development* (Washington, DC: Brookings, 1974); Edward S. Shaw, *Financial deepening in economic development* (Oxford: Oxford University Press, 1973).
13. Andrei Shleifer and Robert W. Vishny, *The grabbing hand: government pathologies and their cures* (Cambridge, MA: Harvard University Press, new edition, 2002).
14. Joseph E. Stiglitz, The role of the state in financial markets. In Proceedings of the *World Bank Annual Conference on Development Economics 1993* (Washington, DC: World Bank, 1994).
15. Joseph E. Stiglitz and Bruce Greenwald, *Towards a new paradigm in monetary economics* (Cambridge: Cambridge University Press, 2003), 59.
16. Stiglitz, The role of the state.
17. Ibid.
18. Joseph E. Stiglitz and Marilou Uy, Financial markets, public policy and the East Asian miracle. *World Bank Research Observer* 11 (2, 1996): 249–76.
19. Alberto Giovannini and Martha de Melo, Government revenue from financial repression. *American Economic Review* 83 (4, 1993): 953–63.
20. Sergio L. Schmukler, Financial globalization: gain and pain for developing countries. *Economic Review Federal Reserve Bank of Atlanta* 89 (2, 2004): 39.
21. Ibid., 44–6.
22. Committee on the Global Financial System, Foreign direct investment in the financial sector of emerging market economies (Basel, BIS, Mar 2004).
23. Christine Cumming, Review of recent trends and issues in financial sector globalization. In Financial Globalization. Fifth BIS Annual Research Conference, June 19–20, 2006 (Basel, BIS, Monetary and Economic Department, Dec 2006), 14.
24. Ibid.
25. Ibid.
26. BCBS, Home-host information sharing for effective implementation of Basel II (Basel, BCBS, Jun 2, 2006).
27. Committee on the Global Financial System, Foreign direct investment.
28. Ibid., 4, 7.
29. Peláez and Peláez, *The global recession risk* (Basingstoke and New York: Palgrave Macmillan, 2007).
30. Jagdish N. Bhagwati, The capital myth: the differences between trade in widgets and dollars. *Foreign Affairs* 77 (3, 1998); Bhagwati, Free trade: why the AFL-CIO, the Sierra Club and Congressman Gephardt should like it. *American Economist* 43 (2, 1999): 3–12.
31. Charles P. Kindleberger and Robert Z. Aliber, *Manias, panics and crashes 5th ed.* (Basingstoke and New York: Palgrave Macmillan, 2005).
32. Bhagwati, The capital myth.
33. Dani Rodrik, Who needs capital-account convertibility? *Essays in International Finance No. 207* (Princeton: Princeton University, 1998).
34. Maurice Obstfeld, The global capital market: benefactor or menace. *Journal of Economic Perspectives* 12 (4, 1998): 10.
35. Ibid.
36. Ibid.

37. Jeffrey Frankel, Mundell-Fleming lecture: contractionary currency crashes in developing countries. I*MF Staff Papers* 52 (2, 2005): 149–52.
38. IMF Independent Evaluation Office, The IMF's approach to capital account liberalization (Washington, DC, IMF, 2005) 57.
39. Ibid.
40. Ibid., 58.
41. Ibid., 57.
42. Frederic S. Mishkin, Global financial instability: framework, events, issues. *Journal of Economic Perspectives* 13 (4, 1999): 3.
43. Graciela L. Kaminsky and Carmen M. Reinhart, The twin crises: the causes of banking and balance of payments problems. *American Economic Review* 89 (3, 1999): 473–500.
44. Ibid., 474.
45. Mishkin, Global financial, 6–8.

10 International Economic Law

1. Peláez and Peláez, *International financial architecture* (Basingstoke and New York: Palgrave Macmillan, 2005), 63–100.
2. Richard L. Williamson, Hard law, soft law and non-law in multilateral arms controls: some compliance hypotheses. *Chicago Journal of International Law* 4 (1, 2003): 63.
3. Dinah Shelton, Normative hierarchy in international law. *American Journal of International Law* 100 (2, 2006): 319.
4. Hartmut Hillgenberg, A fresh look at soft law. *European Journal of International Law* 10 (3, 1999): 515.
5. Daniel E. Ho, Compliance and international soft law: why do countries implement the Basel accord? *Journal of International Economic Law* 5 (3, 2002): 647–88.
6. Ibid.
7. Carlos A. Peláez, The implementation of Basel II bank capital requirements in Brazil (Philadelphia, University of Pennsylvania Law School, Jan 2007).
8. BIS, Working paper on risk sensitive approaches for equity exposures in the banking book (Basel, BIS, Aug 2001).
9. BCBS, Consultative document, the new Basel capital accord, issued for comment (Basel, BIS, Jan 2001).
10. BCBS, Overview of the new Basel capital accord (Basel, BIS, Jan 2001).
11. BCBS, *Basel II: international convergence of capital measurements and capital standards: a revised framework* (Basel: BCBS Publications No. 107, BIS, Jun 2004).
12. SEC, The investor's advocate: how the SEC protects investors, maintains market integrity and facilitates capital formation, 2006, http://www.sec.gov/about/whatwedo.shtml
13. Ibid.
14. Ibid.
15. Ibid.
16. Margaret Cole, The UK FSA: nobody does it better? *Fordham Journal of Corporate and Financial Law* 12 (2, 2007), 266.
17. Ibid., 269.

18. FSA, About the FSA, 2007, http://www.fsa.gov.uk/Pages/About/index.shtml
19. Ibid.
20. Ibid.
21. Cole, The UK FSA, 270.
22. Ibid.
23. Ibid., 270–1.
24. Ibid., 271.
25. US 107th Congress. Public Law 107–204. Sarbanes-Oxley Act of 2002.
26. SEC, Sarbanes-Oxley rulemaking and reports, 2007, http://www.sec.gov
27. William J. Carney, The costs of being public after Sarbanes-Oxley: the irony of 'going private.' *Emory Law Journal* 55 (1, 2006): 141.
28. Ibid., 142.
29. Ibid., 148.
30. Ibid., 151.
31. Ibid.
32. Ibid., 52–3.
33. Roberta Romano, The Sarbanes-Oxley act and the making of quack corporate governance. *Yale Law Journal* 114 (7, 2005): 1529.
34. Michael C. Jensen and Kevin J. Murphy, Performance pay and top management incentives. *Journal of Political Economy* 98 (2, Apr 1990): 225–64.
35. Romano, The Sarbanes-Oxley Act, 1529–33.
36. Roberta Romano, Is regulatory competition a problem or irrelevant for corporate governance? *Oxford Review of Economic Policy* 21 (2, 2005): 214.
37. Ibid., 214.
38. R. Glenn Hubbard and John L. Thornton, Is the US losing ground? Oct 30, 2006, http://www.capmktsreg.org
39. McKinsey & Co., *Sustaining New York's and the US' global financial services leadership* (New York: McKinsey & Co, 2007), 32.
40. Craig Doidge, G. Andrew Karolyi and René M. Stulz, Has New York become less competitive in global markets? (Columbia, OH, Dice Center WP 2007–9, Apr 2007).
41. Gregg Ip, Is a US listing worth the effort? *Wall Street Journal* (Nov 28, 2006); CCMR, Interim report, 47.
42. CCMR, Interim report, 47.
43. Ip, Is a US listing.
44. CCMR, Interim report, 47.
45. Ip, Is a US listing.
46. CCMR, Interim report, 47–8.
47. Michael Bloomberg and Charles E. Schumer, Preface to McKinsey & Co., Sustaining.

11 The Global Recession Risk

1. Harry G. Johnson, Towards a general theory of the balance of payments. In Johnson, *International trade and economic growth* (Cambridge, MA: Harvard University Press, 1958).
2. Maurice Obstfeld, International macroeconomics: beyond the Mundell-Fleming model. *IMF Staff Papers Special Issue* 47 (2001): 1–39.

3. Linda Goldberg and Eleanor Wiske Dillon, Why a dollar depreciation may not close the US trade deficit. *Current Issues in Economics and Finance FRBNY* 13 (5, 2007): 1–7.
4. Ibid.
5. Ibid.
6. Ibid.
7. http://www.federalreserve.gov/releases/H10/Summary/
8. Milton Friedman, A monetary and fiscal framework for economic stability. *American Economic Review* 83 (3, Jun 1948): 255.
9. Peláez and Peláez, *International financial architecture* (Basingstoke and New York: Palgrave Macmillan, 2005): 18–28; Peláez and Peláez, *The global recession risk* (Basingstoke and New York: Palgrave Macmillan, 2007), Chapter 3, Japan after deflation.
10. Ben S. Bernanke, Non-monetary effects of the financial crisis in propagation of the Great Depression. *American Economic Review* 73 (3, Jun 1983): 257–76; Bernanke, Deflation—making sure 'it' doesn't happen here (Washington, DC, National Economists Club, Nov 21, 2002).
11. Ben S. Bernanke and Mark Gertler, Inside the black box: the credit channel of monetary policy. *Journal of Economic Perspectives* 9 (4, 1995): 27–48; Ben S. Bernanke and Mark Gertler, Monetary policy and asset price volatility (Jackson Hole, Wyoming, FRB Kansas City, Aug 26–8, 1999); Ben S. Bernanke, Mark Gertler and Simon Gilchrist, The financial accelerator in a quantitative business cycle framework. In J. Taylor and M. Woodford, eds. *Handbook of macroeconomics* (Amsterdam: North Holland, 2000).
12. Ben S. Bernanke, The credit channel of monetary policy in the twenty-first century (Atlanta, FRBA, Jun 15, 2007).
13. Ibid.
14. http://www.census.gov/const/newressales.pdf
15. http://www2.standardandpoors.com/spf/pdf/index/CSHomePrice_Release_032544.pdf
16. Peláez and Peláez, *International financial architecture*.
17. FSF, Report of the Financial Stability Forum on enhancing market and institutional resilience (Basel, BIS, Apr 7, 2008); US Treasury, Blueprint for a modernized financial regulatory structure (Washington, DC, Treasury, Mar 2008).
18. BOE, The Monetary Policy Committee of the Bank of England: ten years on. *Quarterly Bulletin* 2007 Q1: 24–38.
19. Alan Greenspan, Risk and uncertainty in monetary policy (San Diego: American Economic Association, Jan 3, 2004).
20. Ben S. Bernanke, The macroeconomics of the Great Depression: a comparative approach. *Journal of Money, Credit and Banking* 27 (1, Feb 1995): 1.
21. Barry Eichengreen, Still fettered after all these years (Cambridge, MA, NBER WP 9276, Oct 2002); Eichengreen, *Golden Fetters: the gold standard and the Great Depression, 1919–1939* (Oxford: Oxford University Press, New Ed, 1996).
22. Milton Friedman and Anna Jacobson Schwartz, *A monetary history of the United States 1867–1960* (Princeton: Princeton University Press, 1963).
23. Eichengreen, Still fettered.

24. Carlos Manuel Peláez, The state, the Great Depression and the industrialization of Brazil (New York, Columbia University, PhD dissertation, 1968); Peláez, *História da industrialização brasileira* (Rio de Janeiro: APEC, 1972).
25. Eichengreen, Still fettered.
26. John Maynard Keynes, *The general theory of employment, interest and money* (London: Macmillan, 1936).
27. Joan Robinson, The pure theory of international trade. *The Review of Economic Studies* 14 (2, 1946–1947): 112.
28. Robinson, Beggar-my-neighbor remedies for unemployment. In Robinson, *Essays in the theory of employment* (London: Macmillan, 1937).
29. Joseph A. Schumpeter, The influence of protective tariffs on the industrial development of the United States. *Proceedings of the American Academy of Political Science* 19 (1, May 1940): 5.
30. Frank Whitson Fetter, Congressional tariff theory. *American Economic Review* 23 (3, Sep 1933): 427.
31. Douglas A. Irwin, The Smoot-Hawley Tariff: a quantitative assessment. *Review of Economics and Statistics* 80 (2, May 1998): 326–34.
32. Ibid., 327.
33. Ibid.
34. Joseph M. Jones, Jr., *Tariff retaliation: repercussions of the Hawley-Smoot Bill* (Philadelphia: University of Pennsylvania Press, 1934).
35. Jakob B. Madsen, Trade barriers and the collapse of World Trade during the Great Depression. *Southern Economic Journal* 67 (4, Apr 2001): 848–68.
36. Ibid.
37. James R. Barth, Dan Brumbaugh, Jr. and James A. Wilcox, The repeal of Glass-Steagall and the advent of broad banking. *Journal of Economic Perspectives* 14 (2, 2000): 191–204.
38. Randall S. Kroszner and Raghuram G. Rajan, Is the Glass-Steagall Act justified? A study of the US experience with universal banking before 1933. *American Economic Review* 84 (4, 1994): 810–32; Kroszner and Rajan, Evidence from commercial bank securities activities before the Glass-Steagall Act. *Journal of Monetary Economics* 39 (Aug 1997): 475–516.
39. Barth et al., The repeal.

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