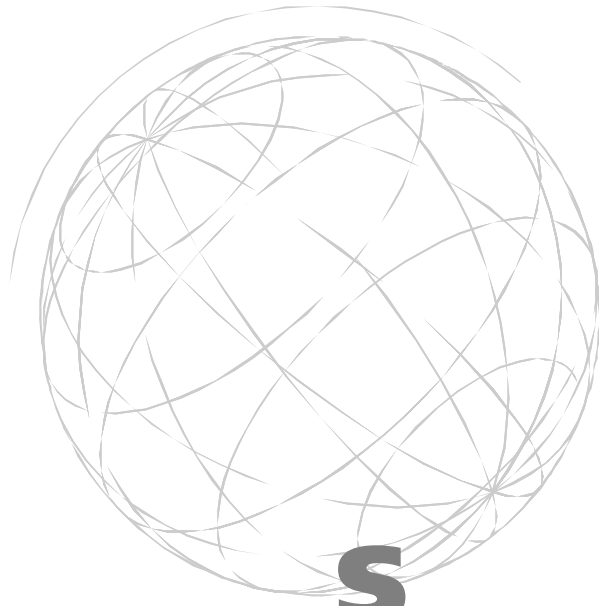




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**TRADE, FINANCE
AND FINANCIAL
CRISES**

K. Michael Finger and
Ludger Schuknecht

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I. Introduction and Summary

A well-developed and stable financial sector and an open international trading system are two key components of prosperous economies. Finance and trade are linked in a number of ways that are not always obvious. What the World Trade Organization has to do with finance is probably even less obvious. This study aims to show that trade cannot flourish without a stable financial system and financial stability is under threat without a well functioning trading system.

This study starts by explaining the basic links between trade and the financial sector, and then discusses how financial crises are interrelated with trade. It is shown how weak financial systems and financial instability hurt the flow of goods and services and why protectionism undermines financial stability. We go beyond a “theoretical” discussion of these links and review empirical evidence of the ways in which trade and finance interact. Finally, we examine the role of the WTO framework of multilateral trade rules in underpinning a sound international economic order.

The rest of the study is divided into four sections. Section II starts out by briefly reviewing why trade openness and financial sector development are good for growth. The main purpose of this section, however, is to explain the ways in which trade depends on a well functioning financial sector. First, credits help to bridge the time between an order and payment for the order so that trade can take place even if none of the parties is liquid enough to finance the transaction. Second, the financial sector helps cover a number of risks for traders, such as commercial risk, transportation risk, exchange risk, and political risk. Numerous trade-specific financial instruments have been developed and governments sometimes help to cover particularly large or unpredictable risks in trade through export credit agencies. Given the importance of exchange risk and the significant turmoil in exchange markets during the past two years, an appendix to Section II briefly reviews the principles of exchange rate formation, and discusses the advantages and disadvantages of various exchange regimes and exchange allocation mechanisms.

Financial crises are among the most important causes for disruptions in international trade. In such crises, trade-related financing may become very expensive or even unavailable, and economic disruptions depress demand for traded goods and services. Section III examines the nature of financial crises and what causes them. Particular emphasis is placed on understand-

ing the role of banks—the key players in countries’ financial systems. We continue with a discussion of the economic and trade effects of such crises. It is argued that trade is part of the solution to crisis rather than one of its causes. Trade is typically a very important element in maintaining and regaining financial stability, and open trade policies in the countries affected by crisis as well as in their export markets are key elements in the recovery from crisis. Finally, an appendix to this section provides a brief summary of strategies for crisis prevention and resolution outside the trade area.

Section IV presents case studies on past financial crises. We look at (i) the causes of crisis; (ii) empirical evidence on the economic, social and trade implications of these events; and (iii) the potential and in some cases actual role of trade policies in spreading and worsening financial crises. We have focussed on the Great Depression, a number of crises between the late 1970s and mid-1990s, and finally, the recent Asian Crisis. Most factors contributing to financial crisis have occurred repeatedly over the past 70 years, with the exception of trade protection, which only played a major role during the Great Depression. It is argued that the absence of major protectionist backlashes in post-World War II crises is one of the main reasons why these crises did not become global. Evidence for a number of countries also suggests that trade and open trade policies have played a major role in economic recovery following financial crises.

Finally, Section V analyzes the role of the multilateral trading system with regard to the trade and finance nexus. We find that WTO rules constrain adverse public interventions in trade financing in important ways, including with regard to provisions on restrictions on payments and transfers and on financial services trade, multiple exchange rate practices and exchange rationing, and export subsidies. Second, the multilateral trading system contributes to financial stability by promoting non-discriminatory trade liberalization, rule-based and predictable trade policies, and orderly trade conflict resolution. Furthermore, well-conceived liberalization of financial services trade can contribute to financial stability, and thereby indirectly benefit international trade.

In short, this study demonstrates that the WTO framework and the international financial system are interdependent elements of one global economic order, where trade cannot flourish without financial development and stability, and financial stability is unlikely to prevail without trade.

II. The Links Between Trade and Finance

This section explains the links between international trade and the financial sector. It argues that modern trade depends on credit and other key financial services to finance trade-related expenditure and cover against trade-related risks. The first part (Part A) describes the role of financial systems in promoting trade and growth. Part B discusses specific trade-related financial instruments, and Part C considers the role of export credit agencies, including the role of governments in this area. In light of the importance of foreign exchange policies for trade, the Appendix to this section briefly discusses the functioning of foreign exchange markets, and the pros and cons of various exchange regimes and exchange allocation mechanisms.

A. The importance of finance for trade and growth

Liberal trade and financial policies coupled with technological advance made international trade and financial sector development important engines of post-World War II growth

Both international trade and the financial sector are important engines of growth in today's economies. The growing importance of these two sectors is highlighted by their expanding share in output over the last decades. The ratio of international trade of goods and services to global GDP has risen from about 8 per cent at the founding of the GATT in 1947 to about one quarter of global GDP at present. Growth of financial transactions has been similarly spectacular in recent decades. In the United States, the financial sector (including banks, securities, insurance and real estate) expanded from 10.9 per cent of output in 1950 to 19.4 per cent in 1997. In other industrial and developing countries, financial services (excluding real estate) typically account for between 4 and 13 per cent of GDP. Growth of international financial transactions has been even more rapid, with many types of such transactions growing three to ten-fold over the 1990s alone (see Kono et. al., 1997 for more detail).

The growth of international trade since World War II was much faster than the expansion of world output (WTO, 1998). This is largely due to significant declines in trade barriers and transaction costs. Tariff and non-tariff barriers to trade were reduced in the context of seven GATT negotiation rounds and as part of regional integration efforts, most importantly in Western Europe. Falling transportation and communication costs also stimulated trade expansion. Similarly, the rapid growth of the financial sector is linked to a favourable policy environment and technological advances. Increasingly liberal financial policies both at the domestic and the international level, coupled with rapid progress in telecommunications and information technology and the development of new financial instruments, allowed an enormous expansion of financial services and capital flows within and across borders.

Without going into much detail, it is worthwhile reviewing briefly how international trade and the financial sector contribute to economic welfare and growth. Regarding international trade, specialization according to comparative advantage across countries can result in significant efficiency gains. Second, specialization allows benefits from economics of scale. Third, international trade increases the choice of goods and services available. In addition to these so-called static gains from international exchange, trade also enhances competition and stimulates international skill and technology transfer which, in turn, can have positive dynamic (long-run) effects on welfare and growth. Empirical studies show significant differences in the growth performance between open and closed economies. Sachs and Warner (1995), for example, find that annual growth in open economies exceeds that of more closed countries by 2-2.5 per cent, and other studies point in the same direction (for a survey, see WTO, 1998b).

Until only a few decades ago, our understanding of the role of the financial sector was quite limited. Today, we know that there are significant gains from specialization in the financial area as well as in trade. The ability of the financial sector to deal with asymmetric information between creditors and borrowers, where the creditor does not know the "quality" of the borrower (see Box II.1)¹, is a key reason for its existence. Borrowers with a low likelihood of repayment (bad risks) try to hide their poor quality and are willing to pay higher interest rates than borrowers who are a good risk. This leads to so-called adverse selection, where credit applications tend to come disproportionately from "bad risks". Once a credit has been made, the chances are that the borrower does something which reduces the probability of repayment. This is called "moral hazard".

Furthermore, a bank is specialized in providing credits and, thereby, also in checking credit worthiness of borrowers before and monitoring performance after the credit is accorded. As specialists they can do this at lower costs than individual lenders/savers. The bank is also able to spread the risk of default over a larger number of transactions, and can require various forms of collateral and restrictive covenants. A range of other financial instruments also reduce transaction and information costs, and improve the allocation of resources across space and time (for more detail, see Levine, 1997). As a result, financial intermediaries in an efficient financial system can pay savers a better risk adjusted interest rate, and borrowers find it easier and cheaper to obtain credit tailored to their needs.

Empirical studies support the claim that liberal and internationally open financial markets enhance economic welfare and growth through more efficient intermediation between savers and investors. Levine (1997) finds that the direct growth effect of a well-developed financial system is probably at least 1 per

¹ In industrial countries, bank loans are still the predominant form of external financing for companies. The share of bank loans ranged from more than 50 per cent to nearly 70 per cent in the five major industrial countries (according to Mishkin (1998b), p.197). Stock issues and corporate bonds play only a secondary role.

Box II.1: Asymmetric information, adverse selection and moral hazard in financial markets

In financial markets, one party often does not know enough about the other party to make accurate decisions. This inequality is called asymmetric information. For example, a borrower who takes out a loan usually has better information than the lender about the potential returns and risk associated with the investment projects for which the funds are earmarked. Lack of information creates problems in the financial system on two fronts: before the transaction is entered into and after.

Adverse selection is the problem created by asymmetric information before the transaction takes place. Adverse selection in financial markets occurs when the potential borrowers who are the most likely to produce an undesirable (adverse) outcome - the bad credit risks - are the ones who most actively seek out a loan and are thus most likely to be selected. Because adverse selection makes it more likely that loans might be made to bad credit risks, lenders may decide not to make any loans even though there are good credit risks in the marketplace.

Suppose that you have two entrepreneurs to whom you might make a loan. One is a prudent, competent person who borrows only when an investment is likely to pay off. The other, by contrast, is a gambler. The gambler sees more investment opportunities he would like to bet money on and is, therefore, more likely to ask for a loan. Suppose, though, that you don't know the entrepreneurs well. Because of the possibility of adverse selection you might decide not to lend to either of them even though the prudent one would be a good credit risk.

Moral hazard is the problem created by asymmetric information after the transaction occurs. Moral hazard in financial markets is the risk (hazard) that the borrower might engage in activities that are undesirable ("immoral") from the lender's point of view because they make it less likely that the loan will be paid back. Because moral hazard lowers the probability that the loan will be repaid, lenders may decide that they would rather not make a loan. The term was originally coined by the insurance industry for the phenomenon where people, for example, become less careful with their home once they have theft or fire insurance.

The asymmetric information problem is probably larger in the developing countries than in more developed economies for two reasons: information is more difficult to obtain and instruments which are designed to protect the involved parties may not be readily available. Stock markets, corporate bond markets and credit ratings are less developed, thereby rendering the acquisition of information and the prevention of adverse selection more difficult. The provision of financial services is often severely limited by a less developed legal system, which makes contract enforcement costly and time-consuming. This limits, for example, the use of collateral to reduce moral hazard.

Source: Mishkin, 1998b.

cent of GDP. Francois and Schuknecht (1999) argue that the competition-enhancing effect of international openness stimulates economic growth by a similar amount. To summarize, those countries with underdeveloped and closed financial systems and those with economies closed to international trade typically forego significant economic growth.

International trade can flourish when essential trade-related financial services are available

While an open trading and a liberal financial systems generate considerable economic benefits, they are not independent of each other. International trade benefits strongly from a well-developed and functioning financial environment and vice versa. We will see that international trade requires important services from financial institutions, and if these are not available, the transaction costs of trade are likely to grow strongly. In other words, finance is a "lubricant" for international trade. At the same time, trade creates demand for and promotes the development of financial services and institutions.

International trading activities are basically part of the investment process. An entrepreneur, for example, invests in products aimed for export markets in the hope of making a profit. The financial sector assists in four main ways in supporting international trade. First, the financial sector helps bridge the period between the need of funds for production, transportation etc. and the payment for such products by the importer. In other

words, the financial sector provides working capital. Banks have a most prominent role in this context, making loans to investors/traders. For this purpose they have to collect deposits. Banks are not only the bridge between savers and investors, but also broker the diverging time preferences of depositors (who often want to invest short-term) and borrowers (who often need medium- or long-term capital).

Second, the financial sector provides services which help the exporter to receive payment in the least costly and risky manner. Financial institutions secure a "smooth" money flow, which can range from simple intra-bank transfers of money between two accounts to more sophisticated financial services such as leasing or foreign exchange-related services.

Third, financial institutions provide valuable information to investors/traders. They inform their clients about present and future money and capital market conditions. They broker business contacts, do market research and check credit worthiness of customers (and their banks).

Fourth, the financial sector provides insurance against certain risks involved in the trading process. Insurance instruments involve freight and export credit insurance but also forward contracts (to insure against exchange rate changes). Certain other provisions can insure against non-compliance by the seller and risks arising from government policy changes. Without these financial instruments, international trade would be much imped-

Box II.2: Trade and finance in the Middle Ages as a precursor of modern international trade and finance

Many of today's trade and finance links can be traced back to innovations which took place in Western Europe between the XIV and XVI centuries. At that time, Italian cities emerged as the economically most advanced towns in Europe and as the dominant centres for both long-distance trade and finance. Genoa and Venice in particular—helped by their position as seapowers—established themselves as the leading trade and finance centres.

The extraordinary expansion of long-distance trade during that period was supported not only by a fall in the cost of sea transport, but also by the development of legal instruments, improved business organisation and new financial techniques. The precursor of today's international trade laws can be found in the *lex mercatoria*, *jus mercatorum* and the Law Merchant. Sea transport was made subject to regulations such as the *Rôle d'Oleron* and *Consolado del Mar*. These laws and regulations could be enforced in various courts, such as the merchant tribunals in the major trading centres. Early forms of maritime insurance were also developed.

Double-entry book-keeping emerged as a major innovation in accounting in Pisa in 1336. Letters of procura, and the first joint-stock and limited companies appeared in Florence in 1408. The introduction of paper money (e.g. checks, bills of exchange), account books and bank clearance reduced the cost of financial transactions which previously necessitated the risky transportation of gold and silver coins. These developments also encouraged an expansion of credit despite the fact that lending against interest remained officially sanctioned. Other cities in Italy and Central and Western Europe followed.

At that time, trade and finance were perhaps linked even more strongly than today. All the major trading houses also acted as banks, collecting deposits which they remunerated with a fixed interest and providing services for international payments and substantial credit facilities for long distance sea transport and trade. The progress in financial techniques also contributed to the commercial revolution which consisted in a shift from the adventurous travelling merchant to so-called sedentary merchants. The latter traded through a network of agents, shippers, or own employees stationed in foreign trade centres.

Source: Bernard (1971).

ed, and we will provide a more detailed discussion below. Historically, the development of international trade and finance has gone hand in hand.

The link between trade and finance, however, is not only unidirectional in that a well-developed financial system enhances trade. Trading opportunities also create demand for financial services and, thereby, promote the development of financial systems. The history of financial innovations shows that the management of the extraordinary risks involved in long distance trade had often been at the origin of new financial instruments (see Box II.2). Joint stock companies allowed the spread of risk of large trading endeavours (e.g., putting together a fleet of ships) over many capital suppliers. Payments by drafts avoided the risky transport of coins for the settlement of contracts. Historically, therefore, the world's leading trade centres have also been the world's most important financial centres. From the Italian cities in the renaissance (Venice, Genoa and Florence), to London, New York, Hong Kong, China and Singapore today—the most sophisticated financial markets in any epoch have also been leading trading places for goods and services. If trade prospers, the financial sector benefits and vice versa. Although this interdependence should be kept in mind, in the following we will focus mainly on the role of the financial sector in promoting trade.

B. Trade-related financial instruments

We briefly argued above that finance is an important “lubricant” of international trade. Credits help traders bridge the time from which they start spending money on an export activity (for example, when they have secured an export order) until the moment of payment. Furthermore, financial institutions help

secure payments and money flows across borders, they provide information about foreign countries and trading partners and their “riskiness”, and they insure against trade-related risks. It should be kept in mind that, in principle, financial institutions perform the same functions for purely domestic activities. However, international trade is also different from domestic transactions in important ways, and some instruments have been developed to deal explicitly with the resulting challenges. In the following, we will elaborate a bit more on the financial sector's role in securing credit for international trade and insuring against related risks.

The importance of trade credits

A key ingredient of trade-related financing is credit

The dynamic growth of world trade in recent decades was facilitated by a rapid expansion in trade finance. In particular, trade credits help trading partners to bridge the time between an export order and payment for the goods and services produced. If payment is made at or even after delivery of the product, the exporter is responsible for organizing the necessary working capital and trade financing. In some cases, payment for certain imports is stretched over several years, and the period to finance is accordingly long. If payment is made at the time of order, the importer has to secure the availability of capital. Who is best able and willing to finance a trade transaction depends on many factors, including the type of product, the trading relationship, and the comparative advantage in securing financing. A very liquid exporter in a long-term trading relationship of standardized products may not ask for payment until after delivery whereas an exporter from a country with very tight credit conditions in a

Chart II.1: Protection against the various risks in international trade

A. Risk category					
Economic (commercial) risks related to the trading partner	Exchange rate risk	Transportation risk	Political risks		
			Foreign policy	Domestic policy	Economic policy
Description of risks (examples)					
Importer is not willing or unable to pay	Floating exchange rates: variations in exchange rates	Damage or	War	Revolt	Prohibition to transfer foreign exchange
Importer does not accept merchandise	Fixed exchange rates: risk or devaluation	loss of goods	Embargo	Civil War	
Exporter does not deliver on time or products agreed			Restrictions		Currency declared non convertible

B. Options for protection and insurance provider			
Private insurance or public export credit agencies	Bank provide hedging facilities; public exchange risk insurance	Private Insurance	Export credit agencies or private insurance
Letter of credit			
Bank guarantees			

Source: Adapted from Jung (1998)

one-off trade transaction of a highly specialized product may want the importer to pay upon order.

About 90 per cent of world trade is conducted on a cash basis or with short-term credits of up to 180 days (Stephens, 1998a). Trade in raw materials and consumer goods, which are often repeated transactions between the same traders, and also growing international trade within multinationals, is largely conducted in this manner. Medium and long-term financing is more common in the areas of long-lasting capital goods and development projects.²

Large and drawn-out export transactions, in particular, often require the exporter to seek a credit facility. The volume of the transaction and the length of the credit period, as well as the degree of various risks (e.g., about the economic and political environment in the importer's country) may significantly raise the costs of financing or create difficulties in obtaining funding at all.

Managing the risks of international trade transactions

The availability and costs of trade credits is strongly affected by four types of risks: economic or commercial risk, exchange risk, transportation risk and political risk (Chart II.1). These risks

of international trade are either much smaller or do not exist at all in domestic trade. The type of financial instrument chosen to deal with them depends on three factors:

- the perception of the type and size of the risk involved in the transaction;
- the distribution of risk and risk reduction efforts between exporters, importers and their banks;
- the costs of risk reduction.

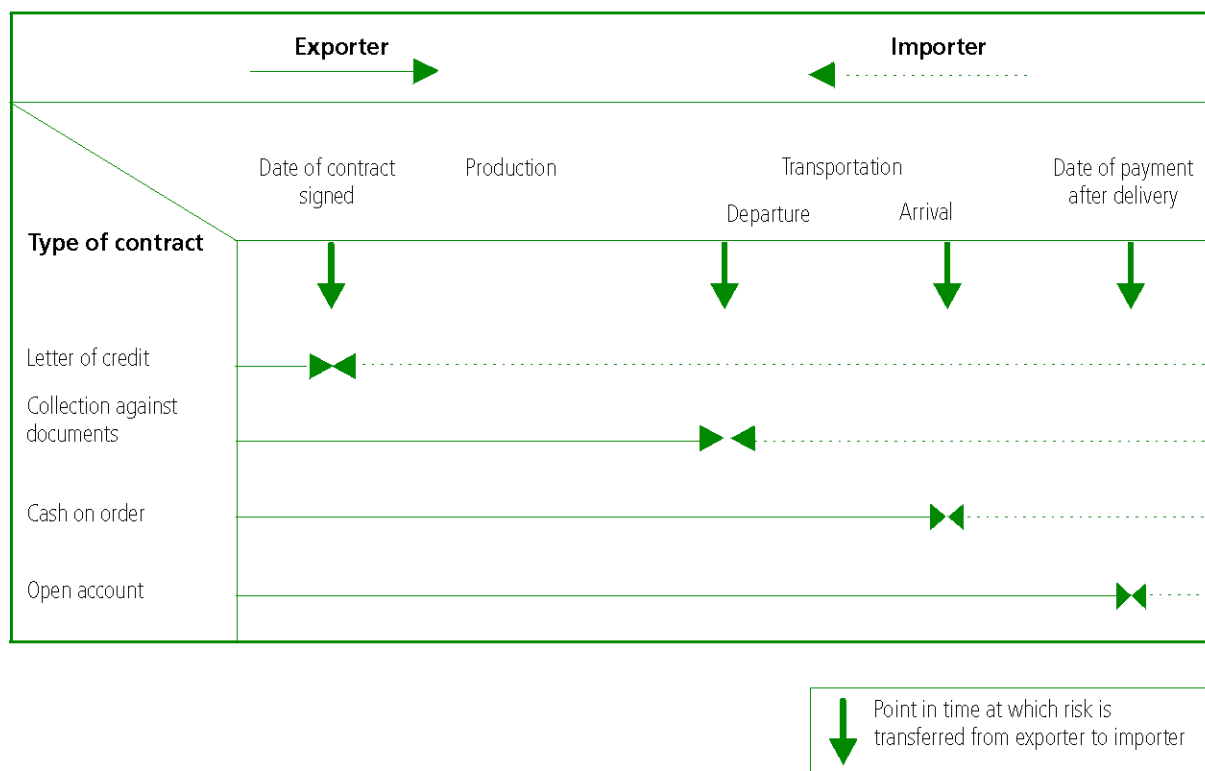
More generally, one can probably safely say that the more well-developed and efficient a financial system, the more likely traders are to find the type of financial arrangement which covers their credit and insurance (risk reduction) needs at low cost.

The reduction of economic or commercial risk can be an important challenge in international trade

Economic or commercial risk: Both in domestic and international trade, there is so-called economic or commercial risk. For the exporter, this risk basically involves the danger that the importer does not accept the merchandise or does not pay for it after accepting it. The importer risks that the exporter does not deliver the products at the agreed quality and time. In both

² In 1996, more than one third of US merchandise exports and more than 40 per cent of US imports was conducted on an intra-firm basis by multinationals. Nevertheless, the low share of medium and long-term financing (about 10 per cent for all countries, but significantly more for many developing countries) is somewhat surprising given the growing share of capital goods such as machinery and equipment in international trade. The sharp rise in FDI over the last decade - with its large content of capital goods imports - would also suggest a rise of the share of capital goods in world trade and consequently more demand for long-term trade credits.

Chart II.2: The shift of economic (commercial) risk from exporter to importer by type of contract



Source: Adapted from Jung (1998)

cases, the capital invested in the project—be it out of companies' own funds or through a credit facility—is at risk.

Commercial risk is linked to the problem of asymmetric information, which can be significantly larger in the international context. Information about the situation of foreign companies (e.g., importers, foreign banks, economic conditions and foreign law) will be more limited or less familiar to the exporter and his bank than in respect of domestic clients. Large banks, therefore, often maintain correspondent banks or branch offices abroad which provide the needed information about foreign clients, the legal system and other potential pitfalls.

It is frequently pointed out that shortcomings in the legal system increase commercial risk if property rights, contract law, arbitration procedures and bankruptcy laws, and the courts are inadequate. In such a legal environment, international trade is hampered by traders being unable to enforce their claims, so that the costs of reducing such risks rise or even become prohibitive. A poor legal environment, just like a poor financial sector, can then be a strong impediment to international trade.

A key consideration in mitigating commercial risk is the choice of trade financing instrument. If an exporter takes on a credit to finance his trade-related activities, he can seek a guarantee or an insurance against commercial risk from a commercial or public agency (see next part for more detail). Furthermore, a number of instruments have been developed which mainly differ in the time when the commercial risk is transferred from the exporter to the importer (see Chart II.2).

Traders can choose from among a range of instruments depending on the extent of commercial risk and the preferred time of transferring this risk from exporter to importer.

There are four main instruments of trade financing, which transfer the commercial risk from the exporter to the importer at different stages of the trade transaction, i.e., open account, collection (of payment) against documents, letter of credit, and cash upon order. The first three are most frequently used (for more detail, see ITC, 1997).

If the importer wants to assume the commercial risk as late as possible, he will want to make payment after delivery of the product. When this is done it is typically on an open account basis, where the buyer pays the seller through a money transfer after receipt of documents. Trade on an open-account basis will be chosen for intra-affiliate trade, or exports of a relatively small transaction value to companies with whom the exporter maintains an important longer-term business relationship. In this case, the size of transactions, the repeat nature of business and the special links between buyer and seller result in little risk. The administrative costs for an open account-based arrangement are minimal. If the exporter has liquidity needs before he is paid, he can ask for a credit or a credit line from his bank.

If the exporter wants to remain in possession of the merchandise as long as he or his agent has not received payment (cash, draft or any other means of payment), he should aim at **collection of payment against documents**. This practice is recommendable when the exporter and importer know

each other and the commercial risk is only moderate. The exporter usually instructs the shipper to hand out the merchandise at the customs warehouse in the foreign harbour only against proof of payment. With this method, the exporter shifts the commercial risk to the importer with the transfer of merchandise and the related documents.³

For trade transactions, which are perceived as quite risky with respect to the credit worthiness of the importer, an earlier transfer of the commercial risk is advisable. The exporter has various options to assure payment for his goods. In general, he will ask the importer to provide him with a **letter of credit** from his bank.⁴ A letter of credit assures the exporter that if he himself fulfils a certain set of conditions he will be paid by the importer's bank. It is the importer's bank which is now taking the default risk of the importing company. If the exporter has doubts about the credit standing of the importer's bank, he might ask his own bank to confirm the letter of credit. This enables the exporter to obtain payment for his goods even if the importer's bank defaults. Another way to minimize risk for an exporter and his bank is a public guarantee on the importer's bank which has opened a letter of credit.

Letters of credit can have important advantages for both parties at relatively low costs: for the exporter, first, the risk of payment is eliminated if the bank is of undoubted standing. Second, the political risk (see below) is often reduced as the foreign bank may know well existing or imminent payment restrictions and other political risks. Third, the exporter knows all the conditions (detailed features) he has to fulfil to obtain full and timely payment. He also saves time and money as the bank is checking the credit worthiness of the importer for him. The financing of his working capital is facilitated as he can show that payment is assured. For the importer, the compliance of the exporter to the conditions attached in the letter of credit assures that goods are actually shipped at a certain time and are certified by an on-board-bill of lading. Furthermore, the bank takes responsibility for ensuring that goods are in conformity with the stipulated conditions. Banks have specialists which are better able to examine the documents than an importer less familiar with international trade documents. The importer might also gain liquidity if the exporter would have otherwise insisted on an advance cash payment.

For a very risky transaction (or when the exporter is highly risk averse), **cash on order** may be the advisable form of trade financing. This leaves most of the risk of the transaction

and the financing requirement with the importer. From this we can conclude that a financial system which is able to provide these key financial instruments promotes international trade by facilitating the reduction of commercial risk.

Well-functioning financial systems can provide coverage against the three other main risks of international trade: exchange rate risk, transportation risk, and political risk

Exchange rate risk: both exporter and importer run the risk that between order and delivery economic circumstances may change in such a manner that the profitability of the trade deal is undermined for at least one of the parties. Exchange rate risk can produce such a change in economic circumstances, as large exchange rate changes can significantly increase or reduce the benefits from a trade transaction. An importer, for example, who orders goods for one million US dollars may benefit much less (or not at all) from the trade transaction if his home currency suddenly depreciates by 20 per cent and he has to pay 20 per cent more for the imports in terms of his own currency.

The exchange risk is affected to a large extent by the exchange rate regime. In countries with fixed exchange rates, this risk depends on the probability that the parity cannot be maintained and a depreciation or appreciation occurs. Flexible exchange rates can create considerable risk if exchange rates are very volatile.⁵ A number of instruments have been developed to hedge against exchange risk, and traders who have access to these instruments can reduce this risk at fairly low cost. In the case of a large contract, an exporter might ask his bank to sell his expected foreign exchange in the forward market. As transactions in forward markets typically start with amounts above 1 million US dollars, smaller exporters generally have to turn to the currency future markets where they can buy "put options" which are options to sell foreign exchange for a specific rate at a certain point of time in the future. The costs of such a hedging operation are a fee/premium (about 0.3 per cent depending on amount and currency) plus the price of the option (which depends on the current exchange rate, the future exchange rate specified in the option, the length of the period during which an option can be executed, relative interest rates, and the past volatility of the exchange rate). If the foreign currency has depreciated beyond the rate specified by the options, the exporter will execute his options and obtain the agreed equivalent in domestic currency. Otherwise, exporters do not exercise their options, but convert their foreign exchange in the "spot" market at the prevailing higher rate. For longer term transactions, the exporter

³ Typically, the exporter hands over to his bank the invoice, a draft drawn on the importer and the transportation documents he received from his forwarding agent. The exporter's bank sends this documentation to its agent or the foreign collecting bank in the importer's country. The agent/foreign collecting bank will inform the importer that he can have the documents necessary to release the goods in the harbour or airport on the condition that he instructs the bank to pay or by accepting the draft drawn on him. Once the agent/foreign collecting bank has received the payment instruction, it transfers the money to the exporter's bank which in turn credits the exporter's account.

⁴ The letter of credit is a letter written and signed by a bank, addressed to an exporter (seller) in which the bank promises that it will pay him a certain amount on the condition that the exporter (seller) conforms exactly to what is stipulated in the letter. In general, the bank will pay if the exporter can provide a number of documents which are proof that he has fulfilled his part of the sales contract. These documents can be a bill of lading, insurance papers, invoices etc. In other words, the commitment of the importer to pay is substituted by a quasi-guarantee by the bank to pay the exporter. If the letter of credit calls for sight payment then the exporter is paid immediately on presenting the sight draft to the opening bank. But even if he receives a time draft, the exporter will find it easy to discount the draft and obtain cash.

⁵ In the XIX century this risk was absent among the major trading nations as exchange rates were fixed through the gold standard. In the 1950s and 60s, the fixed but adjustable exchange rate system of Bretton Woods limited the exchange rate risk to certain adjustment periods. However, the inconvertibility of foreign exchange (up to 1958 for the £, DM and FF) exposed the traders to risks due to changes in foreign exchange regulations.

might be able to engage in currency swaps. This is particularly interesting (and inexpensive) if the exporter expects regular foreign exchange receipts which can be swapped against domestic currency.

In some cases, the invoicing currency for trade contracts is given, as for example for oil, and traders may or may not hedge against the exchange risk involved. In other cases, the currency in which trade contracts are made can be indicative of trading partners' ability and preference to hedge against exchange risk. Allen, Carse and Fujio (1987) have shown that British exporters preferred invoicing in British pounds in the early to mid-1980s. This minimized their exchange risk, and in return they frequently accepted more flexible conditions of payment. Japanese exporters, by contrast, showed much flexibility in the invoicing currency but insisted on firm dates of payment which allowed them to hedge the exchange risk. As a result, over 85 per cent of both countries' exports were not exposed to exchange risk.

About half of world trade was conducted in US dollars in 1992. The German Mark (16 per cent), and the Japanese Yen, Pound Sterling and French Franc (5 per cent each) were the other main invoicing currencies for world trade in that year (Hartmann, 1996). The share of trade invoicing in particular currencies may change with the establishment of the Euro. Inconvertible currencies are rarely used for trade contracts. Often, countries with such currencies also have underdeveloped financial systems with limited or no hedging possibilities. Traders from those countries are therefore at an important disadvantage to traders from countries with convertible currencies and well-developed currency markets.

Transportation risk: Traders can incur losses if the merchandise gets damaged or destroyed during the voyage from the seller to the buyer. This danger is greater in international trade where distances and travel time are often longer, ships can sink, and merchandise can get stuck in customs. Goods can spoil through heat, cold and water or they may not arrive because they are stolen or misdirected on the way. Freight insurance can prevent losses, and insurance agencies cover freight-related losses for a fraction of 1 per cent of the freight value and transportation costs, depending on the risk and destination.

Political risk: Finally, political risk can become a source of loss for the trading parties. This risk is much more limited or almost non-existent for domestic transactions. At the international level, however, wars and embargoes can prevent merchandise from reaching the buyer, or the buyer may not be able to pay in such circumstances. Similarly, revolts or civil wars may prevent the completion of a trade transaction. Political risk also refers to economic policy changes which prohibit the transfer of foreign exchange and thereby prevent an importer from paying for his purchases. Political risk is typically covered through an export credit agency, as discussed below.

C. Export credit agencies and the role of government in trade financing

In the previous part, we showed that bank credits and a number of financial instruments are important "facilitators" of international trade. However, we also pointed out that the com-

mercial and political risk of international trade transactions is often much larger than for domestic transactions, because companies lack information about their foreign trading partners, the legal framework may not be well-developed and war, crisis and the sudden implementation of payment restrictions can undermine the proper completion of trade transactions.

The aggravated asymmetric information problem in international trade (especially in countries with less developed financial systems), and the inability/unwillingness of commercial banks to take on certain economic and political risks (especially for large, long term trade contracts) is often seen as an economic justification for government involvement in trade financing. Government support typically comes in through so-called export credit agencies (ECAs). The latter can generally (i) provide various forms of trade financing, (ii) generate and provide information, (iii) serve as a forum for government and industry lobbying towards contract fulfilment by foreign governments and traders, and (iv) pool risks. However, private providers and development banks are increasingly entering this market as well.

Most industrialized and developing countries have some form of ECAs which help promote exports. They provide trade-related financing through three main instruments: (i) credits for trade transactions which would be difficult (or much more costly) to finance through purely commercial lending; (ii) guarantees for the repayment of credits which, in turn, help exporters receive more favourable terms from their banks; and (iii) insurance for exporters against commercial and political risk. The fees are moderate. The US Eximbank, for example, charges about 0.5 per cent for loans, and 0.125 per cent for guarantees, and 1/16th of 1 per cent flat for their credit guarantee facility.

The composition of portfolios and institutional structures of ECAs, however, differ markedly across countries. Some countries maintain ECAs as government departments, but more and more of them are run as government or commercial enterprises which administer an account for the government. Governments can support trade through the provision of credits at below-market interest rates, better terms of repayment and below-cost guarantees and insurances. Increasingly, ECA operations must be cost-covering (including normal losses), but governments provide a guarantee for operations on the government's account. Coverage can extend to 100 per cent of the export credit value but many programmes cover slightly less, with 10 or 15 per cent of the loss to be born by the exporter or his bank (Box II.3).

In recent years, pressure for ECAs to improve their services has been strong as private agencies and multilateral development banks have gained an increasing share of the international trade financing business. New financing instruments have been developed, international risk assessment has improved, and cooperation on financing especially large projects has developed. The World Bank, for example, frequently supports projects which are co-financed by ECAs. This cooperation is seen as worthwhile because ECAs reduce the financial burden for the World Bank while the latter provides information to which ECAs would otherwise not have access.

"National" ECAs have formed international associations with the objective of exchanging expertise and technical infor-

Box II.3: Export credit agencies in developing and industrialized countries

The Lesotho National Development Corporation

The Government of Lesotho, with the help of the United Nations Development Programme and International Trade Centre, has created a comprehensive export financing scheme. The Lesotho National Development Corporation (LNDC) provides exporters with credit guarantees by reimbursing the lending institution a certain percentage of the loss in case an exporter defaults. However, the liability of LNDC is limited to 5 percent of the loss amount, while the remaining 95 percent is assumed by the Export Development Fund (operated by the Central Bank's Export Finance Division). This credit guarantee scheme is mainly intended for exporters of "Lesotho made" goods and export-related projects whose activity increases local production.

Exporters may also obtain credit through pre-shipment and post-shipment credits. The pre-shipment credit scheme is designed for manufacturers whose output is directed to external markets. They can receive advances up to a certain maximum either in the form of loans or in some cases overdrafts for up to 180 days. The post-shipment credit scheme is designed as a financial bridge between the shipment of goods and receipt of payment from the foreign buyer.

Hermes Kreditversicherung in Germany

Hermes Kreditversicherungs-AG, a private company, is the oldest German credit insurer and among the biggest of its kind in Europe. Among other services, it offers insurance and export credit guarantees to exporters and commercial banks on its own account and on behalf of the Federal Government. All German exporters, public and private, are eligible for coverage. It is further available to foreign exporters located in countries where Hermes has branches.

Hermes covers both commercial and political risks, and provides 2 types of export guarantees: "Exportgarantie", where the foreign partner is a private-sector enterprise and "Exportbürgschaft", where the foreign partner is in the public sector. It provides credit guarantees for trade credit provided by commercial banks and pre- and post-shipment coverage to exporters directly.

The aim of export guarantees on behalf of the German government is to promote German exports. However, coverage can also be provided for goods and services with a foreign content of up to 10 percent of total, with higher percentages accepted for certain countries (mainly EU). Ten to 15 per cent of the risk remains with the exporters. Hermes insures/guarantees about 5 percent of German exports, but it is much more important for exports to developing countries as about 20 percent of German exports to this country group are covered.

Source: ITC, 1997.

mation (for example, regarding risk assessment) and representing their interests at the supra-national level (EU, OECD, UN) (ITC, 1997). The main associations include the Panamerican Surety Association (130 members worldwide), ALASECE, the Arab Credit Insurers Conference, the Berne Union (44 members), the International Credit Insurance Association (43 members), and the Dakar Union (18 members) (Box II.4).

Like in any commercial activity with government involvement, there is a danger that the original objectives of government involvement are compromised. Stephens (1998b) provides a list of what ECAs should and should not do. He argues that ECAs should have an important role in covering political risk so that problems from disruptions in currency transfers, war, default of public sector buyers etc. are minimized. The importance of commercial risk should also not be underemphasized. Such risks rise especially during times of recession. Regarding both these risks, ECAs are likely to have good access to information. Information but also expertise and training through ECAs can help traders strike profitable export deals. Through their size and commercial weight, ECAs might also be better "lobbying" associations towards reducing political and commercial risks than individual companies.

Through their international networks, their ability to pool risk, and government guarantees, ECAs are also often able to

provide export financing in otherwise very risky situations, such as selling to customers in high-risk and financial crisis countries. We will show later how the Asian financial crisis has reduced the availability of commercial financing, thereby sometimes leaving ECAs as the only remaining source for trade-related financing. In such circumstances, governments may be asked to step in to help provide trade-related credits and maintain credit lines through partial or full guarantees.⁶

Much emphasis is placed on difficulties by industrial country exporters in developing countries and the helpful role of ECAs in this regard. It should be stressed, however, that well-functioning ECAs are probably even more important for developing country exporters. The latter (and their banks) are often relatively small and, therefore, less able to generate their own information on commercial and political risk abroad. They are also often likely to obtain less favourable financing terms because of mistrust by importers from other countries. This implies that developing country traders have to pay earlier for imports (possible even cash on order) but they receive payment later (possibly only after delivery), and hence their trade financing needs are greater than for similar exporters from industrialized countries. Industrialized country ECAs can help in this process if they guarantee exports to developing countries, thereby reducing the financing needs for importers there.

⁶ Such crises can put considerable stress on ECAs. They will find it more difficult to assess risks in the changed circumstances, they may suffer from a growing share of "bad business" while demand of their services grows.

Box II.4: International coordination among credit insurance agencies

The Berne Union

The Berne Union is an international association of export credit insurers. Established in 1934, it currently has 44 members, with 43 coming from 35 countries and one international organization—the Multilateral Investment Guarantee Agency (MIGA) of the World Bank Group. Fifteen of its members are from non-OECD countries. Its purpose is to promote international acceptance of sound principles of export credit insurance, to provide a forum for exchange of information, experience and expertise, and to speak on behalf of its members. The status of the export credit agencies varies, as some are government departments while others are private companies.

The Union members insure and finance about US\$400 billion worth of exports and approximately \$10 billion in foreign investments annually. Of this, 70 percent relates to cash transactions or short-term credit. 75 percent of the total cover exports to OECD countries. The remaining \$100 billion is provided for exports to non-OECD countries. The major activities of most members include: (i) underwriting the repayment risks on individual buyers and their banks, as well as coverage of political risks, (ii) providing medium- and long-term credit (either through guarantees or direct lending) and (iii) supporting outward investments in various forms in other countries.

There are certain requirements for membership to the Union. Applicants need to have been operational for at least 3 years, provide both political and commercial risk cover (on short, medium and long-term basis), and report a minimum level of insured business of approximately CHF 500 million or a minimum of CHF 5 million in premium income. The Berne Union also assists with the establishment of new export credit insurance facilities and provides technical assistance, advice and information to new or small export credit agencies not yet eligible to join the Union.

International Credit Insurance Association (ICIA)

Established in 1928, the ICIA is a similar association to the Berne Union. In 1995 it had 43 members from 28 countries. The ICIA provides a forum for exchange of information, experience and expertise, facilitates the development of mutual relationships among its members, and studies questions related to credit and guarantee insurance. Membership is reserved for insurance companies operating in direct credit or guarantee insurance. Most members cover short- and medium-term commercial risks and some members cover political and transfer risks as well. In 1995, ICIA members insured a total of about US\$1 trillion in trade credits.

Dakar Union (Association of Export Credit Insurers and Export Promotion Organizations)

The Union, with 18 current members, was established in 1984 in Dakar, Senegal by credit insurance organisations from the ACP (African, Caribbean and Pacific) and Mediterranean countries. Its purpose is to promote co-operation among organisations concerned with export credit insurance and financing in ACP and neighbouring countries and to promote exchange of information on debtors and debt collection. In 1989, it opened up membership to European export credit insurers to promote cooperation between the ACP countries and the EU.

Source: ITC, 1997.

On the list of things ECAs should not do, Stephens includes the pursuit of government objectives which could better be achieved through other policy instruments. ECAs should not support the financing of exports which will most likely not be paid. Given that the government ultimately has to pay for bad debt with ECAs, this can undermine the government's fiscal position. ECAs should not subsidize medium- to long-term credits which tends to be more costly and distortionary than short term credit (assuming, e.g., the same interest rate subsidy). The OECD export credit arrangement has introduced some important constraints for OECD members in this regard (see Box II.5). ECAs also should not subsidize working capital as this should be the role of commercial banks. ECAs should not become an instrument which substitutes for direct aid, and they should not prop up inefficient

domestic industries, thereby becoming de facto guarantors for the survival of unfit exporters. The role of the multilateral trading system in constraining governments tempted to support (and distort) certain economic and trading activities through the financial system is discussed in detail in the last section.

In summary, this section has discussed the key elements of a well-functioning financial environment which provides trade-related financing needs and minimizes or helps traders to cope with the involved risks. An ITC study (ITC, 1997) on the practicalities of financing exports provides more details on many of these issues, and provides a check-list for governments to examine the functioning of the trade-finance nexus in developing and transition countries (see Box II.6).

Box II.5: The OECD Export Credit Arrangement

About 20 years ago, OECD members agreed to seek constraints on government support for certain export activities. This followed the experience of the early 1970s, when industrialised countries increasingly tried to help their exporters to get orders through government support. The resulting OECD arrangement contains rules for officially supported export credits (including guarantees, insurances, and financing arrangements to defer payment) to promote competition on the basis of economic efficiency rather than official support. For export credits with a maturity above two years (excluding military and agriculture), OECD members are now committed to charge minimum interest rates and premiums on the basis of established benchmarks, and to require a certain down-payment. The Arrangement also stipulates maximum repayment terms and imposes restrictions on the provision of tied aid.

Source: OECD (1998)

Box II.6: Principles of "good" trade-financing-related policies

An International Trade Centre (ITC) study provides a brief check-list for countries to see whether their financial environment is conducive to international trade. First, governments should ensure that their trading enterprises are sound and credit-worthy, with adequate management capacity, accounting standards and financial infrastructure. Second, governments need to establish an effective legal system which enforces contracts. Third, the banking system needs to be sound and well-managed so as to provide effective trade-related credit, insurance and foreign exchange services. Fourth, credit insurance and guarantees through export credit agencies need to be well-run and capitalised. Fifth, governments should establish a good record in terms of political risk in the areas of payments, customs procedures, taxes and currency arrangements.

Source: ITC, 1997.

Appendix to Section II: Trade and exchange policy

This Appendix briefly discusses the pros and cons of various exchange regimes and exchange allocation mechanisms.⁷ In the previous sections, we discussed the importance of foreign exchange risk for international trade. Such risk can arise from the devaluation or appreciation of a fixed exchange rate or the volatility of a floating regime. The price of foreign exchange, and the regime through which its price is determined are, therefore, key policy variables for traders. Furthermore, exchange policies can have important indirect effects on trade, if such policies cause or contribute to financial crisis. However, the formation of exchange rates and the choice of exchange regime are very complex and difficult issues and the following discussion may help clarify some of the trade-offs involved in the choice between various regimes.

The impact of exchange policy on trade is not limited to the price of foreign exchange. If there are foreign exchange restrictions, and foreign exchange is allocated in a manner which penalizes or prevents certain types of trade through multiple exchange rates or rationing mechanisms, trade patterns will also be affected. Sudden shifts in policy here would fall under political risk. An efficient, transparent and flexible exchange allocation mechanism can be equally if not more important for traders than getting the exchange rate “right” (Collier, 1998).

Exchange rate formation and exchange rate volatility

If exchange rates are not fixed, they are formed in foreign exchange markets. The current (or spot) exchange rate is determined by so-called spot transactions. Contracts for the purchase and sale of foreign exchange dated in the future determines the forward exchange rate. Most trade in foreign exchange is not in bank notes but in bank deposits. The exchange rate, like any other price, is determined by supply and demand. More demand for a currency results in appreciation; less demand causes a fall in its value or depreciation.

In the long run, exchange rate movements tend to equilibrate prices for the same tradable products across countries

Economic theory distinguishes between factors determining the exchange rate in the long and short run. If exchange rates can move freely, the law of one price and the concept of purchasing power parity have a strong influence on exchange rates in the long run. This means that identical goods and services should cost the same in similar markets. If this is not the case, goods and services flow from the “cheap” to the “expensive” country, until prices are equilibrated either through adjustment of the price level, or the exchange rate, or both.

There are number of factors which can result in different price levels across countries so that purchasing power parity

does not always prevail even in the long run. The main reason is different prices for non-traded products such as land. If the price of non-tradables rises in one country, overall price levels start to differ even though the law of one price may still hold for tradables. However, as the price of non-tradables (e.g., rent for buildings) affects the price of tradables (e.g., through retail markups), some difference in the price of tradables across countries can persist as well. Other reasons for persistent price differences across countries can be different tax rates (including tariffs and quotas), or regulation (e.g., different safety standards).

Changes in the long run exchange rate can be induced by any measure which affects the demand and supply of currencies, for example by raising a tariff. The latter reduces demand for imports, and thereby demand for foreign currency to buy such imports. This, in turn, induces a devaluation of the foreign currency, and an appreciation of the domestic currency. It is noteworthy that the latter, even if it takes some time to come about, will erode part if not all of the competitiveness gains from protection. In other words, an import tax is also an export tax.⁸

Another important factor influencing long term exchange rates is inflation. If domestic prices rise more than foreign prices, domestic products become less competitive. More demand for imports follows which results in more demand for foreign currency and a depreciation of the domestic currency. This process continues typically until exchange rate changes have balanced out inflation differentials.

In the short run, interest rate differentials and expectations tend to determine exchange rates, and overshooting is possible

In the short term, however, capital market related factors are more likely to determine exchange rates, and these factors are also responsible for much exchange rate volatility. We mentioned that foreign exchange trading largely involves bank deposits. Since this is a form of capital, the expected return is a key in determining its price. Just as the law of one price suggests an equalization of prices for identical goods across borders, bank deposits will have similar returns, regardless of the currency they are denominated in, if they can move freely across borders. Economists, therefore, use a so-called asset market approach to explain short term movements in exchange rates. In essence, exchange rates in the short term are determined by asset movements which aim to equalize risk-adjusted returns across countries.

The asset market approach can explain why capital market-related factors coupled with shifts in expectations about certain market variables can cause short term exchange rates to overshoot, i.e. they change more than needed for re-equilibrating exchange markets in the long term. Variables which influence expectations about exchange rates include domestic and foreign

⁷ For a detailed textbook discussion of related issues, see Mishkin (1998), and for a more advanced analysis, see Visser and Smits (1997). A policy-oriented discussion is provided by Eichengreen et. al. (1998) and Baliño and Enoch (1997).

⁸ A tariff, therefore, helps import-competing producers but hurts exporters. The latter effect is sometimes neglected.

inflation, money supply and price levels, but also tariffs and import quotas.

The asset market approach is a useful tool for explaining short term exchange rate fluctuations and overshooting

The asset market approach basically argues as follows: international assets must yield approximately the same return. An example may help to illustrate the interaction of interest rates and exchange rates to achieve this objective. Assume that initially both the United States and Euroland have the same real interest rate of 3 per cent and their exchange rates are in equilibrium. Suddenly, the United States engages in expansionary monetary policies by lowering interest rates to 2 per cent. As a result, assume that inflation in the US is expected to be 1 per cent higher than in Euroland for one year.

In the long term, we know that the dollar would have to depreciate by 1 per cent towards the Euro to maintain the law of one price. In the short term, however, capital flows determine the exchange rate, and the exchange rate will overshoot. After the interest rate reduction in this example, investors buy Euro deposits which pay a higher interest rate. As a result, the dollar depreciates. But it depreciates by 2 per cent instead of 1 per cent because investors will continue to buy Euro assets until they expect an appreciation of the dollar by 1 per cent. Only then is the expected return to US assets (2 per cent plus 1 per cent appreciation) equal to the return of Euro assets (3 per cent). In other words, the initial depreciation by 2 per cent (overshooting) and a subsequent appreciation by 1 per cent add up to long term depreciation of 1 per cent which re-equilibrates exchange markets.

Empirical evidence supports the relevance of the asset market approach. It has been useful, for example, in explaining part of the strong dollar appreciation in the early 1980s, when high real US interest rates drove up the demand for the dollar. The dollar appreciated (and overshot the equilibrium) until the real interest cum expected depreciation equalized expected returns across countries.

The asset market approach, however, cannot explain all exchange rate overshooting/volatility in all situations. Market imperfections resulting from information problems may exacerbate volatility, especially in underdeveloped financial markets. In those markets, investors may be unable or unwilling to buy and sell assets denominated in certain currencies especially in times of crisis, or demand very high risk premiums. Overshooting may then exceed even the amount justified by interest rate differentials.

The choice of exchange regime

There is a multitude of choices regarding exchange rate policy, from fully flexible via intermediate to fully fixed rates, but all of them involve important trade-offs

Given the importance of the exchange rate for trade and other policy objectives, countries face a difficult decision as to

their exchange rate policy. They can choose regimes of fully fixed or freely floating rates, and there are many regimes with varying degrees of flexibility (see Appendix Table II.1 for a selection of options). There are also two versions of "monetary union" that countries can try to introduce: several countries can adopt a single currency in a Monetary Union of "equals", as recently undertaken by eleven of the 15 EU members. Alternatively a (typically smaller) country can adopt another (bigger) country's currency. This was an avenue considered by Argentina regarding the US dollar in the context of the late 1998 financial turmoil.

Exchange rates can be fully fixed as under currency boards or exchange rate pegs but they may still be allowed to fluctuate by a certain percentage around a target level. The bands (also sometimes called buffer) are "hard" constraints when the central bank has to intervene to prevent breaking the limits. Bands can also be "soft" when the central bank may intervene or not. The latter regime is best characterized as a flexible regime with target zones. The United States has probably one of the most freely floating exchange regimes, as interventions are very rare. Hong Kong, China and Argentina, by contrast, have versions of currency boards which are the most fixed exchange regimes short of monetary union.

Before choosing an exchange regime, a country should evaluate its policy objectives. A fixed exchange regime, for example, can help achieve a predictable environment for traders. It can also promote price stability by disciplining monetary policy. However, pursuing these objectives implies that the country cannot pursue certain other policy objectives. Devaluation to boost competitiveness, for example, has to be foregone because it leads to higher import prices which, in turn, push up inflation. The following discussion looks at some of the pros and cons of fixed exchange rate regimes in more detail. It should be noted that many of the disadvantages of fixed rates are the advantages of flexible rates and vice versa, but the following discussion does not always mention this explicitly.

Fixed rates make international prices more predictable, and can contribute to macroeconomic stabilization but they mean losing policy autonomy and require sufficient international reserves

One of the most important advantages of a fixed exchange regime lies, as mentioned, in making the returns from international trade more predictable.⁹ The benefits from this are greatest between countries with significant trade links. Furthermore, countries with undeveloped financial markets and lack of hedging possibilities would also be able to reduce the exchange rate risk for their exporters and importers. Finally, fixed exchange rates can contribute to macroeconomic stabilization in countries with a history of high inflation. Argentina, for example, successfully introduced a currency board to raise the credibility of announced reforms and break inflationary expectations.

This argument only holds when the chosen exchange rate is approximately "right". This is more easily said than done, given that nobody knows the "right" exchange rate. The question does not arise with flexible rates, but many observers argue that

⁹ While exchange rates seem to have become more volatile in recent years, traders' means to deal with volatility through, e.g., hedging, have improved as well.

exchange rates in flexible regimes are virtually unpredictable, at least in the short run, which, in turn, increases the exchange rate risk for traders.

Fixed rates require considerable monetary and fiscal policy discipline. When lax monetary policies result in inflation which is higher than in the country to which the exchange rate is pegged, this can undermine competitiveness of domestic producers with adverse consequences for the economy. Excessive fiscal deficits combined with fixed exchange rates can result in very high real interest rates, low growth and unsustainable current account deficits. Growing debt and/or shifting investor confidence could then force a devaluation.

If exchange rates are fixed between “equal” countries (where no country can set policies completely independently), some policy coordination is necessary to achieve similar inflation rates and prevent excessive fiscal deficits. In fact, the members of the European Monetary Union are currently experiencing this pressure for increased policy coordination.

Fixed exchange rates also require sufficient international reserves. The latter are needed if, for whatever reasons, foreign exchange shortfalls need to be financed. A shortage of reserves could otherwise force the country to abandon its currency peg. Such a situation is more likely to arise if high inflation results in overvaluation, current account deficits, and expectations of devaluation. In light of growing international capital mobility and financial integration, the most important indicator of the adequacy of reserves is shifting from the traditional import coverage (i.e. reserves in months of imports) to coverage of external financial liabilities, and especially short term foreign liabilities by the central bank (Eichengreen et. al., 1998). The latter type of liability contributed significantly to the abandonment of the Thai baht’s peg to the US dollar which “officially” started the Asian crisis in July 1997.

Monetary management and adjustment to external shocks becomes more difficult with fixed exchange rates, and overvaluation can raise protectionist pressures

Fixed regimes make monetary policy management difficult when capital inflows or higher inflation elsewhere puts upward pressure on the exchange rate. The central bank may then be required to buy foreign exchange. This, in turn, increases domestic money supply and inflation if it is not sterilized (neutralized). But sterilization policies may not work very well, as such policies drive up interest rates which in turn may attract even more capital inflows. Small countries may find it particularly difficult to absorb large and erratic capital inflows.

Fixed exchange rates can hamper adjustment to internal and external shocks. Primary commodity exporters, for example, often experience a correlation between terms of trade changes, and domestic activity. If prices and wages are not sufficiently flexible and the exchange rate is fixed, strong imbalances can arise when prices and wages do not adjust downward after a terms of trade decline. If commodity prices fall and activity declines, inflexible wages result in unemployment and corporate sector difficulties, as witnessed for instance after the second oil crisis in many oil importing countries. But inflexible prices and wages can also

result in imbalances in industrialized countries with fixed exchange rates (or monetary union), as they give rise to inflation differentials and declines in competitiveness.

Fixed exchange rates can also result in growing protectionist pressures if the currency becomes overvalued over time. Many countries with fixed exchange regimes resorted to protection in order to maintain the competitiveness of producers in their domestic markets (e.g., the West African CFA countries in the 1980s and early 1990s).

The disorderly abandonment of an unsustainable exchange rate peg can be very costly

We mentioned that fixed exchange rates can help countries with undeveloped financial markets and limited hedging opportunities to reduce uncertainty. But financial market development is important for increasing exchange rate stability in countries with either fixed or flexible exchange regimes. Fixed exchange rate countries, in particular, can experience large exchange rate fluctuations when an exchange rate peg has to be abandoned in an unordered manner, and the lack of confidence and market depth lead to collapses of the exchange rate. The Indonesian experience of late 1997/early 1998 probably falls into this category. Financial sector development mitigates the drawbacks of flexible regimes, e.g., by allowing hedging operations through the emergence of new instruments. The development of broader and deeper markets is also likely to increase stability.

From this it follows that fixed exchange rates can have important advantages for traders through more predictable exchange rates. But the costs still often outweigh the benefits, if a fixed rate provokes macroeconomic imbalances and protection, and especially if countries are forced to abandon the fixed rate at some stage. A fixed peg may induce importers to forgo precautionary hedging of their exchange risk, and an unexpected devaluation may then lead to large losses (as witnessed in Asia in 1997). Abandoning an exchange rate peg can also undermine the long term credibility of governments. When governments tie their credibility to the peg and make this a matter of national pride, a devaluation often precipitates the downfall of governments (Visser and Smits, 1997). Based on these arguments, recent studies have emphasized the importance of moving early enough to sufficient flexibility in countries where the pre-requisites for stable pegs are not met (see Eichengreen et. al., 1998).

Finally, it should be noted that any sort of monetary union can magnify the costs and benefits of fixed exchange rates. The costs of dissolving the union are probably even higher than the costs of abandoning a fixed peg, but the very fact of these high costs may induce countries to secure the maintenance of an appropriate policy environment.

Multiple exchange rates and exchange allocation

Multiple exchange rates and foreign exchange rationing distort trade and invite rent seeking and corruption

Countries sometimes try to maintain fixed exchange regimes by providing foreign exchange for certain imports at a preferential rate while applying a less favourable rate to others (or not

allocating any foreign exchange for certain imports). Export earnings may have to be fully or partly surrendered at an often unfavourable (below market) rate set by government. Such split exchange regimes which are typically coupled with some rationing mechanism can be introduced with the best of intentions, and in theory, they can help to promote worthwhile public policy objectives through implicit taxes or subsidies. In practice, however, such regimes have typically produced very poor results (Visser and Smits, 1997).

First, multiple exchange rates distort trade. Those transactions which face a favourable rate are likely to grow while others will shrink. In theory, such exchange regimes could serve the promotion of worthwhile policy objectives (although other policy instruments may be more suitable). In practice, multiple exchange rates invite rent-seeking and corruption as the decision on which trade receives favourable treatment is made by government officials who may be susceptible to lobbying and bribes.

A government is also unlikely to be the most suitable agent to allocate foreign currency efficiently, as this requires enormous knowledge about what trade should be encouraged or discouraged. Collier (1998) emphasizes the importance of market-based

and private sector-led foreign exchange allocation for developing countries, so that trade transactions are not undermined by government intervention in foreign exchange allocation. Collier examines, in particular, the merits of moving from very controlled regimes with high surrender requirements to more liberal regimes with foreign exchange auctions, bureaux de changes and interbank markets for foreign exchange, with a view to maximizing the efficiency, transparency and flexibility of exchange allocation.

In summary, trade considerations should be one (but only one) of the determinants of foreign exchange policies. If the policy prerequisites are met and trade integration is large, countries can benefit considerably from fixed exchange regimes. Fixed rates for short-term stabilization purposes have also proven useful. However, in many countries the benefits from more flexible regimes outweigh the costs, and greater flexibility may be considered before the markets force an unorderly exit and an excessive devaluation on a country with an ill-conceived and unsustainable peg (see also Collier and Gunning, 1994; Visser and Smits, 1997; and Eichengreen et. al., 1998). Efficient exchange allocation mechanisms are also very important for a functioning trading system, and they should move towards a private sector-led and market-based allocation of foreign exchange.

Appendix Table I.1: Major exchange regimes and their characteristics

Exchange regime	Characteristics	Examples (October 1998)
Fixed exchange rates		
Currency board	Strongest link to other currency, money supply adjusts automatically with international reserves.	Argentina, Hong Kong, China,
Exchange rate peg	Central bank intervenes to maintain peg; some policy discretion possible, depending on the permitted degree of fluctuation.	CFA zone in Africa, Malaysia
Intermediate		
Crawling peg	Central bank intervenes to maintain peg; peg is adjusted following certain rules/criteria; "hard" fluctuation bands are likely to apply.	Brazil
Managed float	Occasional central bank intervention, often "soft" bands/buffers.	Many developing countries
Free float	Normally no foreign exchange market interventions.	United States, United Kingdom

III. Financial Crises and Trade

Since the outbreak of the Asian crisis in July 1997, financial crises have been on the top of the political and academic agenda. A climax of the turmoil was probably reached in the third quarter of 1998, with the collapse of the Russian rouble, the near-collapse of a major hedge-fund, and a steep drop in major stock markets. Repercussions on global growth and trade started being felt as the crisis spread to seemingly unrelated countries. At the same time, a vivid debate about the role of domestic policies, trade, capital flows and the international financial architecture emerged.

This section will show that financial crisis can be an important disturbance for international trade through two channels: financial crises often result in credit shortages and in the breakdown of financial relations, which makes trade-related financing more costly if not unavailable. Second, financial crises undermine economic growth, and thereby indirectly trade, and in a large-scale crisis these repercussions can be felt even at the global level. In light of these links between trade and financial stability, we examine in this section what financial crises are and what causes them. We continue with a discussion of the economic and trade effects of such crises.

We then go on to argue that trade is part of the solution to financial crises rather than part of the cause. Trade is typically a very important element in maintaining and regaining financial stability, and liberal trade policies in the crisis countries as well as in their export markets are key to recovery. Finally, an Appendix to this Section provides a brief summary of strategies for crisis prevention and resolution outside the trade area.

A. Why worry about financial crises?

Financial sector problems typically start with growing non-performing loans

We have seen above that the most important players for investment and trade-related financing in financial markets are banks which provide trade-related loans, letters of credit, etc.. At the same time, banks are also the financial market players which are the most vulnerable to crisis, and our discussion will start with a brief explanation of this vulnerability. Take the very simplified example of a "Sample Bank" whose balance sheet is shown below (Figure III.1). Assume the bank has taken deposits of 90. These are recorded on the liability side of the balance sheet because the bank owes this money to its depositors. The bank also has capital of 10 which is a liability to its shareholders. Finally, the bank has lent 100 to its clients. Loans are report-

ed on the asset side of the balance sheet as this money is owed to the bank, and the bank can, in principle, sell the loans if it needs the money. The so-called capital-asset ratio for this bank is 10 per cent ($10/100=0.1$ or 10 per cent). If all borrowers make their interest and amortization payments regularly (and abstracting from risk-weighting and other complications), this could be considered a healthy bank because the capital-asset ratio of 10 per cent exceeds the now widely accepted minimum of 8 per cent (see BIS, 1997).¹⁰

Now assume a borrower cannot repay a loan, and the bank loses 5. This can be a private borrower, but it can also be a state enterprise, etc. If the bank writes off this amount, loans decline to 95, and the capital falls to 5. This balance sheet is much less healthy: capital of 5 on loans of 95 results in a capital-asset ratio of only 5.3 per cent. To reach the minimum of 8 per cent, the bank either has to raise new capital or it has to reduce lending so that the remaining capital is adequate relative to the bank's loans. If the bank is unable to raise new capital, it has to reduce lending from 95 to 62.5 (as $5/62.5=8$ per cent). It can do this through using loan repayments to pay back depositors or through calling in loans which are due. If the losses are too great (and depending on the laws and regulations of a country) a bank may have to close down.

This example already shows the importance of sufficient capital as a contingency for problems. But even with a capital-asset ratio of 15 or 20, banks are still highly "leveraged". This means that their capital is only a small fraction of the loans they give out. The example above is also very close to the real world: it often only takes the loss of 10 per cent of all loans to wipe out a bank's capital. This makes banks much more leveraged than companies, whose capital cushion is typically much larger.

An important question to ask here is why banks lend money to "bad" borrowers in the first place. The main reason is asymmetric information between the bank and the borrower over the borrower's credit-worthiness (see Box II.1 of the previous section for more detail). As a result, banks charge everybody higher interest rates to cover for the bad credits. This, in turn, drives the "good" risks into alternative forms of financing (bond, equity, self-financing). It can lead to the seemingly paradoxical situation where rising interest rates result in less lending because only the bad risks are willing to pay such interest rates, and the banks, knowing this, are unwilling to lend at all (Stiglitz and Weiss, 1980).

¹⁰ For simplicity, we assume that this is the legally binding and economically reasonable minimum. If there is no regulation on capital adequacy, banks could in principle operate with less capital. However, we will see below that "under-capitalisation" usually makes things worse when problems emerge, and insufficient coverage for non-performing loans threatens the solvency of banks.

It is also noteworthy, that simple capital-asset ratios without differentiating and weighting the risks of various activities are not considered adequate in modern financial markets, and more sophisticated standards and more emphasis on risk management are frequently recommended (see, e.g., Goodhart, Hartmann, Llewellyn, Rojas Suarez and Weisbrod, 1998 for a more detailed discussion). We will come back to a more detailed discussion of regulation below.

Figure III.1: Sample bank-balance sheet

(a) Sample Bank ("healthy")		(b) Sample Bank (after bankruptcy of client)		(c) Sample Bank (with reduced loan portfolio)	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
100 (loans)	10 (capital) 90 (deposits)	95 (loans)	5 (capital) 90 (deposits)	62.5 (loans)	5 (capital) 57.5 (deposits)
Capital asset ratio: 10%		Capital-asset ratio: 5.3%		Capital-asset ratio: 8%	

Non-performing loans can also arise through the activities of other financial institutions to which banks have lent money. Hedge funds have become prominent in this regard. Hedge funds are investment funds which are in many ways similar to other types of investment funds. But their fate is intertwined with banks as they sometimes borrow 10 or more times their capital, so that a fund with US\$1 billion in capital in fact operates with US\$ 10 billion. This leverage (here by the factor 10) can result in very high losses. If the hedge fund fails, losses in excess of the fund's capital have to be absorbed by the banks which have lent them the money.¹¹ In September 1998, for example, banks had to inject several billion dollars into Long Term Capital Management to prevent the failure of the fund to which they had lent large amounts of money.

Institutions trading securities (bonds, shares) on their own account often use borrowed money to leverage their activities. Assume a trader buys shares for 100 with borrowed capital of 80. If the share price falls below 80, the bank may ask the trader for cash as the value of the shares (the collateral) does not cover the loan any more.¹² The trader may then be forced to sell assets. Resulting losses can be considerable, depending on the volatility of the market and the type of security purchased (losses on derivatives can be particularly high). When the losses exceed the trader's own capital reserves, or other financing the trader can raise, banks may have to cover for the residual losses. This, in turn, translates into non-performing loans/losses in the banks' balance sheets.

But there are also other reasons than non-performing loans that can cause bank losses, thereby weakening bank balance sheets. Mistakes in business operations (such as below-cost charges), deficient risk assessment and management, and fraud are probably the most important factors internal to a bank. Government-imposed interest rate ceilings and employment decisions can also weaken banks by preventing cost-recovery or raising their operating costs.

Widespread banking weakness can result in crisis and cause bank panics

If non-performing loans and other losses cause the failure of a bank, losses to depositors are often cushioned through the acquisition of the insolvent bank through a healthy bank, through implicit insurance between banks, or through official deposit insurance schemes. But if several banks get into trouble this can undermine the whole financial system. Banks may be unwilling or unable to take over their weak competitors. Insurance schemes may break down from the sheer size of the losses.

Furthermore, the weakness or failure of a growing number of banks undermines confidence in the financial system as a whole. Unable to distinguish between sound and weak banks (asymmetric information again), clients may fear that a few bank's problems may just be the tip of the iceberg and may perceive their deposits everywhere as unsafe. This may cause a so-called run on banks or a "panic" as depositors try to withdraw their money regardless of the health of the bank. This is a type of "herding" behaviour at the domestic level. For depositors who do not know which bank is weak and which one is strong it is perfectly rational to withdraw their money everywhere. This is presumably what happened in Russia after the rouble peg to the dollar was abandoned in August 1998. In a panic, even a healthy bank may not be able to pay back depositors because it does not have enough cash and it cannot call in loans quickly enough (as deposits are often more short term than lending). This can broaden the crisis from a number of weak institutions to the entire financial system.

The threshold where the functioning of and confidence in the financial system is threatened by the number of troubled banks and the size of their losses is not equal for all countries. However, Caprio and Klingebiel (1996a and b) argue that this point of "financial crisis" is roughly reached when the net-worth of the banking system is eliminated.¹³

¹¹ Hedge funds as limited partnerships are not regulated and do not disclose their positions. This has surrounded them with an aura of secrecy and uncertainty.

¹² A similar situation can arise in derivatives trading where price fluctuations can result in "margin calls" to cover potential losses.

¹³ Given non-performing loans, this point may already be reached when the average capital-asset ratio for the banking system falls below 5 per cent. While banks are the most important players in financial systems, "serious misfunctions of the securities markets would have the potential to destabilise the entire financial system" as well, given the growing importance and concentration, the nature of risk taken by intermediaries, and the interdependence with banks and payment systems (see OECD, 1993 and Goodhart, Hartmann, Llewellyn, Rojas-Suarez and Weisbrod, 1998).

Financial crisis can have international repercussions through trade and—more importantly—financial interdependence

Financial crises are often intertwined with balance-of-payment crises but they are not identical. A country with a completely closed economy and financial system can experience financial crisis but the absence of foreign exchange transactions excludes a balance-of-payment crisis. Today, both types of crisis often go hand in hand. This is partly because a financial crisis induces domestic and foreign investors to take their money out of the country. If the country does not have enough foreign reserves to cover these outflows and other obligations like debt service payments, a balance of payment crisis can arise. The withdrawal of foreign funds can put additional pressure on company and bank balance sheets as they cannot roll over old loans or receive new financing. This can exacerbate an existing crisis or it can push a weak financial system over the threshold of crisis. However, most observers agree, that capital flows alone do not cause financial crisis (Goldstein and Turner, 1996; IMF, WEO 1998; World Bank, 1998).

Furthermore, financial crises can spread across countries because of growing financial interdependence. When investors with internationally diversified portfolios take financial problems in one country as an indication that there must be problems in seemingly similar countries as well, they can create so-called contagion. The underlying cause is often the same as for domestic bank runs and capital flight: asymmetric information. Investors do not know which financial systems are healthy and indiscriminately lose confidence in countries which are perceived as similar, and withdraw their funds from all these countries. This happened in many emerging markets after the onset of the Asian crisis.

Growing financial interdependence can also contribute to contagion through another channel. Losses in one market, for example, can force investors to withdraw funds from another market for prudential reasons. If, for example, an investor lost money in Russia and his risk exposure became too high compared to his capital base, withdrawing money from another risky market (such as Brazil at that time) would most likely be the best strategy to abide by prudential norms at home. Ironically, this type of prudent behaviour re-enforced contagion across emerging markets. As a consequence, interest rates for attracting capital to these countries were at times over 10 percentage points higher than for comparable financial instruments in industrial countries.

Financial difficulties faced by companies can also have international repercussions through the trading system. Firms which fail may “export” some of their losses abroad, for example, when unpaid import bills or loans cause foreigners to lose money. This, in turn, undermines the balance sheets of companies and banks with strong exposure to such markets.

The economic and social costs of financial crisis can be very high

Experience has shown that the economic and social costs of prolonged and deep crisis can be enormous, and rapid measures towards crisis resolution can limit such costs. This is why govern-

ment intervention is often necessary to prevent protracted instability, as has been experienced, for example, by Japan in the 1990s. Government intervention, however, can be very costly, raising fiscal deficits and public debt in the process. Larger fiscal deficits and public debt, in turn, must be financed out of tax payers’ pockets.

There are two main types of costs associated with financial crisis. First, there are the costs incurred by governments to recapitalize banks, to take over bad loans and to refund depositors. These costs are often very high, and the reason for this can be illustrated quite easily. Most countries report outstanding credit volumes of 50 to 100 per cent of GDP. A financial crisis with, say, 20 per cent fully unrecoverable loans then results in losses of 10–20 per cent of GDP. Assume half of this is absorbed by the banking system itself, then the other half, or losses of 5–10 per cent of GDP have to be paid for by government. If only a small share of the banking system fails or if the economy rebounds quickly and only a small share of loans is unrecoverable, the costs can be smaller. If virtually the whole banking system is affected and other policy errors are committed, the costs can be much larger. The financial crises of Argentina and Chile in the early 1980s saw costs above 40 per cent of GDP.

Second, there are economic and social costs in the form of lost output, less trade and higher unemployment and poverty. This type of cost is hard to measure, but we will see later that the costs can be very significant. The Great Depression, for example, saw output fall by one quarter in many countries. Some of the Asian crisis countries experienced a decline in output by 5 to 15 per cent in 1998.

In summary, there is little doubt today that financial crises have become one of the most-feared economic problems. Non-performing loans and financial sector losses are at the root of financial weakness. Asymmetric information plays a key role in the emergence of difficulties, and in their spreading to seemingly unrelated banks and countries (through panics and contagion). In the following, we will discuss the causes of non-performing loans and financial crisis in more detail.

B. The causes of financial crisis

We argued before that financial crises mostly have their roots in non-performing loans. Given numerous financial crises in all regions, why are such loans so difficult to contain? First we will look at the domestic roots of crisis before turning to the international linkages. In most countries, however, not just one but a broad array of factors has contributed to financial crisis. Given the complexity of the issues and interdependencies, we can only outline some broad features here.

Domestic causes of crisis

Inadequate macroeconomic policies can weaken the financial system, for example, through creating boom-bust cycles

There are three main domestic reasons for financial crises: macroeconomic policy errors, inadequate financial regulation and supervision, and inappropriate government financial market interventions (see Kono, Low, Luanga, Mattoo, Oshikawa and

Schuknecht, 1997). Poor macroeconomic management puts pressure on financial systems, for example, through creating boom-bust cycles. If a government introduces expansionary monetary policies by lowering interest rates, this permits easy financing of investment projects and consumer credit. The economy picks up, and as long as spare capacities are better utilized such policies can even be non-inflationary. Continued monetary expansion is likely to lead to economic overheating as domestic demand begins exceeding supply. Increases in asset prices such as stocks or real estate follow.

Economic overheating also triggers inflationary pressures more broadly. The government then has to raise interest rates to “cool off” the economy. Often, the correction comes too late and asset prices have already appreciated so much that their prices are mainly justified by anticipated further increases and not by rents or profits. If investors find themselves with debt from buying these assets which is not justified by the returns, and higher interest rates raise the financing costs of debt, they will try to sell their assets. If many of them do this, the asset bubble bursts, and prices tumble. In Argentina, for example, apartment prices increased by 50 per cent and stock prices tripled in real terms between 1977 and 1981 before the bubble burst and all gains were lost within a year (Baliño, 1991). Highly indebted investors may find themselves with negative equity, i.e., the sales price would not cover their debt. In that situation, many investors may have literally lost everything and default on their loans. This results in the non-performing loans which undermine corporate and bank balance sheets, discussed above.

Furthermore, the banks' capital often includes shares and real estate. If asset prices fall strongly, banks may have to write down the value of these assets in their books, which reduces the value of their capital, and limits their ability to extend new loans.¹⁴ If many banks are affected by the adverse effects of a bursting asset bubble, a financial crisis may emerge. This chain of events has been reported in many places from the Great Depression in the early 1930s, Latin America in the early 1980s, the Nordic countries in the early 1990s to East Asia most recently.¹⁵

Crisis macro management has to balance the threats of deflation and hyperinflation

If monetary policies (and possibly prudential standards) are relaxed and the central bank extends credits to troubled banks and companies this can trigger hyperinflation. Several Latin American and transition economies experienced this in recent decades. On the other hand, an excessively tight monetary stance may worsen the situation for banks if the resulting high real interest rates drive more companies into default on their loans.¹⁶ If tight monetary policies are followed by deflation, real interest rates rise as nominal interest cannot fall below zero.

Furthermore, the real value of companies' debt grows, thereby undermining corporate and (indirectly) bank balance sheets. The Great Depression is the most well-known example of this type of crisis management error (Friedman and Schwartz, 1963).

Overvalued exchange rates followed by devaluation can initially undermine financial stability

Fixed and overvalued exchange rates can contribute to boom-bust cycles and financial crisis through their implications on the balance-of-payments and on relative prices. This is a very complex issue. If the exchange rate is fixed to a currency with relative price stability like the US\$ or the Euro, and if expansionary monetary policies start causing inflation, the exchange rate appreciates in real terms. This raises, in particular, the price of goods and services which are not tradable (such as real estate) as compared to goods which are tradable (such as cars) because increases in the price of the latter products are kept under some control by competition from world markets. In other words, the choice of the exchange regime can worsen imbalances in relative prices and exacerbate asset price bubbles.

Expansionary policies also cause aggregate demand to outstrip domestic supply, the counterpart of which is a growing current account deficit. In the balance of payments this shows up as imports growing more quickly than exports. Strong demand draws in imports while the real currency appreciation makes exporters less competitive. The growing current account deficit has to be financed either through falling reserves or capital inflows. If then, for example, a real estate bubble bursts and much real estate-related debt becomes non-performing, investors may not be able to pay their loans to both domestic and foreign banks. Confidence declines, new financing becomes unavailable, and capital flight sets in. This, coupled with inadequate reserves, may then force the country to abandon its fixed exchange rate.

The potential repercussions from such a devaluation can be very grave in countries where many debt contracts are short term and in foreign currency. A devaluation increases the real (domestic currency) value of foreign currency-denominated debt significantly (Mishkin, 1998a). This may be bearable for companies with hard currency export earnings. But companies with local currency revenue to finance foreign currency debt are much harder hit. Corporate bankruptcies follow, with the above-mentioned consequences for non-performing loans and bank balance sheets. In the Asian crisis countries, for example, much debt was denominated in foreign currency, and traders did not hedge their obligations in the belief the exchange rate would remain stable. When a large amount of short term loans became due and foreign financing dried up, several currencies experienced very steep falls, thereby exacerbating problems of companies

¹⁴ Even without a bursting asset price bubble, rising interest rates alone can depress the book value of bank capital if the latter contains interest rate sensitive assets such as bonds, shares or real estate.

¹⁵ Expansionary fiscal policies and excessive fiscal deficits can also burden the financial system, for example, by re-enforcing boom bust cycles and by putting upward pressure on interest rates (see Kono et. al., 1997).

¹⁶ On the other hand, high real interest rates can prevent the currency from depreciating, thereby reducing companies' foreign debt service obligations in local currency terms.

indebted abroad. Although a devaluation can cause significant problems initially, we will see later that it can also be an important element of recovery from a crisis, as it improves the competitiveness of the domestic exporting and import-competing sectors instantaneously.

Poor banking regulation and supervision are another key cause of banking crises

When banks are under-capitalized they are less able to weather major shocks. Inadequate licensing and management requirements result in poorly managed and, almost by definition, weak banks. If bankruptcy policies are not in place, and banks can continue operating even when they are in trouble, managers have an incentive to be more careless in extending risky loans (to recover their losses). Poor risk management has also been singled out as a main problem area in many countries (Kono et al., 1997; IMF, ICM, 1998).

Lack of transparency is almost always criticized in the context of financial crisis. If, for example, a country's accounting rules do not require the timely and appropriate disclosure of non-performing loans, this can delay a timely response to emerging difficulties and exacerbate boom-bust cycles. Recall our example from above, starting with a healthy bank balance sheet. Assume that a borrower stops making interest and amortization payments on his loans. If the bank has to report and write off these loans, a regulator will require the bank to take corrective action before new lending can resume. This indirectly also puts a break on the lending boom, and thereby on asset price inflation. If there is no such reporting/provisioning requirement for non-performing loans, the bank can continue lending, thereby further fuelling the lending and asset boom. Prudential regulation promoting transparency can hence help contain the emerging asset bubble and the danger of financial crisis. It is now widely held that lack of transparency, allowing non-performing loans to be hidden and delay adjustment in the financial sector facilitated complacency, prevented early warning, and contributed significantly to the depth of the Asian crisis.

Excessive exposure to one single borrower and lending to related parties is also often seen as leading to financial difficulties. If a bank makes a significant share of its loans to just one borrower, a default by the latter would most likely cause the bank to fail as well. Lending to bank employees and managers or companies which have a stake in the bank has often led to imprudent decisions and later difficulties. Negligence by regulators and supervisors in these areas has frequently been reported in past incidences of financial crisis.

Finally, good regulation is not enough. Supervisors are often unwilling (because of poor incentives) or unable (because of inadequate means and skills) to perform their tasks satisfactorily. If supervisors do not discover underreporting of non-perform-

ing loans, management errors, fraud etc. and do not demand corrective action, financial stability will suffer.¹⁷

Inappropriate financial sector interventions, including "cronyism", financial repression and protectionism contribute to financial difficulties

Various other types of government intervention can undermine the health of the financial sector. Governments in many countries have burdened the financial system with costs which should normally be borne by the budget. An example of such policies is directing credits to priority firms and individuals at below market interest rates. This includes so-called political lending to friends and relatives of the ruling establishment. A related type of intervention aims at reducing government debt servicing costs. The most popular means is financial repression when financial institutions are forced to hold government debt at below market interest rates. Tanzi (1995) reports that some countries have reduced interest expenditure by several per cent of GDP via financial repression in the past.

Such interventions distort credit allocations and thereby reduce the growth potential of an economy. They can also undermine financial stability. The costs of subsidized credits or subsequent non-performing loans have to be met by earnings from other activities. If financial institutions are unsuccessful in making a compensatory profit elsewhere, or if they are not allowed to do so, their balance-sheets are weakened. Depending on the magnitude and severity of interventions, the latter can exacerbate or even trigger financial crises (Kono et. al., 1997).

It should also be noted that financial sector interventions are often accompanied by restrictions against foreign financial service providers. This isolates the financial system and may, thereby, generate the rents to pay for the above-named government interventions. But it also shields the financial sector from healthy competition and innovation which, in turn, distorts investment and financial flows (Francois and Schuknecht, 1999).¹⁸ Kono and Schuknecht (1998) find that restrictive regimes in financial services trade may have resulted in more distorted capital flows and less financial stability.

International influences on financial stability

Terms of trade shocks and international interest rate hikes can undermine financial stability in a similar manner as boom-bust cycles

Two types of external shocks have contributed to financial crisis in the past: declines in the terms of trade and world interest rate increases. When countries experience a negative terms of trade shock, governments and corporate borrowers experience a fall in revenue which may make them unable to pay for their financial obligations at home and abroad. Debt-servicing

¹⁷ Goodhart, Hartmann, Llewellyn, Rojas-Suarez and Weisbrod, 1998 suggest that regulation and supervision should create the right incentive structure for stability-enhancing practice in the banking sector. Shortcomings of the kind discussed above fail to create such incentives. These authors also note that regulation needs to be complemented by internal controls (e.g. of risk) and market discipline (e.g., through rating agencies)

¹⁸ Claessens, Demircuc-Kunt and Huizinga (1998) report that foreign presence enhances the efficiency of the financial sector. Kim and Wei (1999) find that the volatility of capital flows was increased less by resident than by non-resident investors.

problems, non-performing loans and financial crisis are likely to follow. Undiversified exporters of commodities with much price variability are most likely to suffer financial crisis because much of the economy-wide loans are linked with the commodity sector. Examples include the post-boom financial crisis in Africa or Latin America in the early 1980s.¹⁹

After the second oil crisis, which triggered stagflation (high inflation and low growth) in the West and a debt moratorium in Mexico in 1981, interest rates rose steeply. Most developing countries had contracted large amounts of debt at low or even negative real interest rates in the late 1970s. When interest rates shot up, so did the debt burden of many countries. The subsequent “debt crisis” triggered often not only external payment difficulties but also domestic debt crisis. Eichengreen and Rose (1997) find interest rate increases in industrial countries to be one of the main explanatory factors for financial crises in developing countries.

Lack of transparency promotes “herding” behaviour by international investors and contagion; implicit debt guarantees can result in “moral hazard”

The volatility of international capital flows can also contribute to financial crisis, especially in an untransparent economic and policy environment. First, strong capital inflows can undermine countries’ macromanagement. Capital inflows raise the money supply but anti-inflationary interest rate increases may then attract even more foreign money. Foreign money which finances asset acquisition and excess demand can also exacerbate an asset bubble. And poorly informed foreign investors are likely to continue “flocking” into a “fashionable” market when the lack of profitability of investment opportunities and financial difficulties are “disguised”. When the bubble bursts, investors lose confidence and display “herding behaviour” again—this time in the other direction. Exaggerated inflows turn into excessive outflows which exacerbate the contraction of asset prices and, thereby, the pressure on financial systems. Poorly informed investors are also more likely to invest only for the short-term. This distorts the structure of capital flows and makes countries more vulnerable to changing investor sentiment (Kono and Schuknecht, 1998).

Herding behaviour and international contagion, we mentioned, largely go back to asymmetric information (see Wolf, 1999 for a survey). Growing international financial interdependence and the lack of transparency in many developing country financial markets contributes to spreading financial crisis. When Thailand slipped into crisis, investors began to look at other Asian nations more carefully. It has been widely argued that a lack of transparency had helped to hide problems there as well. Confidence collapsed and capital flows reversed. The five Asian crisis countries experienced average outflows of almost 4 per

cent of GDP in 1997, after average inflows of a similar magnitude the year before. Banking systems which had already been weak before could not absorb the additional pressure. In late 1998, non-performing loans in the Asian crisis countries were estimated at 20–30 per cent of all loans (IMF, WEO, October 1998).²⁰

A number of observers argue that the Asian financial crisis was triggered (or at least worsened) by moral hazard, as imprudent investors relied too much on implicit guarantees by governments. The argument is that investors bring more money into countries where they feel that their deposits are implicitly guaranteed than into those where they would have to bear part of the costs of financial difficulties. Although few people doubt the need of international emergency financing in principle, some observers argue that the “generous” bailout of Mexico by the international community in 1995 and the perception that international emergency funds are readily available at non-penalizing terms worsened the moral hazard problem in Asia as it made government debt guarantees more credible.

Protectionist responses during financial crisis are likely to raise rather than reduce pressure on financial systems

Finally, financial crisis can spread through protectionist trade policies. At first, protection seems to be a ready means to raise the profitability of domestic producers which can then indirectly help strengthen the financial system. However, the adverse repercussions of protection are probably much more serious than the benefits. Protection raises the price of imports. If these are inputs for domestic producers competing in world markets, their competitiveness and financial position suffers.²¹ Furthermore, protection can hurt foreign producers if they lose export business for which they have incurred fixed costs or if they can only sell such products elsewhere at a loss. This undermines the financial health of foreign producers and, indirectly, financial stability abroad. Finally, protectionist retaliation is likely and this, in turn, will hurt domestic exporters. The net effects of trade protection on the financial sector at home and abroad are, therefore, likely to be negative.

C. The economic, social and trade implications of financial crisis

This part looks in more detail at the economic, social and trade implications of financial crisis which can be very grave indeed. First, the impact of crisis on macroeconomic variables, such as growth, money and the availability of credit, fiscal deficits, and the current account balance is analyzed. A discussion of the social consequences, especially regarding unemployment and poverty follows. Finally, we turn to the trade implications of financial crisis.

¹⁹See Collier and Gunning (1999)

²⁰Bacchetta and Van Wincoop (1998) argue that initial volatility in emerging financial markets can also be the result of incomplete information about investment opportunities and international investors undergoing a learning process about evaluating such investments.

²¹In Appendix I to this section, we show that protection can lead to an appreciation of the domestic currency as it reduces demand for foreign exchange. This hurts exporters as well.

Table III.1: Growth projections since the beginning of the Asian crisis

	IMF World Economic Outlook				
	May 1997	October 1997	May 1998	October 1998	May 1999
World economic growth (in per cent)					
1998	4.4	4.3	3.1	2.0	2.5
1999	...	>4	3.7	2.5	2.3

Economic and social implications of financial crises.

A financial crisis can create a credit crunch which, in turn, depresses economic activity

A financial crisis often has severe economic repercussions. If banks experience significant non-performing loans, they may come under pressure to improve their balance sheets. We have seen above that one way to do so is to reduce the loan portfolio by calling in old loans while not extending new ones. The resulting "credit crunch" is magnified in a full-fledged financial crisis when the lack of confidence and uncertainty makes banks even more reluctant to extend new loans to customers whom they cannot easily identify as "good" risks. Even healthy companies may find it difficult to obtain new credit when the banks which know about their good standing are in difficulties or out of business, and other banks do not know their creditworthiness. Uncertainty about future exchange rates (and thereby the profitability of activities) and the value of assets (which could serve as collateral) can worsen the "credit crunch". As a result, firms will find it difficult to get new financing for investment projects, and sometimes even capital for their production and trading activities. The corporate sector may be unable to repay called-in loans, and in extreme circumstances contracts may not be honoured due to lack of capital. All these factors depress economic activity. They may even lead to a vicious cycle of declining activity triggering more non-performing loans and bankruptcies which, in turn, again depress output.

Mexico in the post-1994 crisis period and the Asian countries after mid-1997 experienced a significant credit crunch (IMF, WEO, October 1998). Private sector credit typically expanded at a rate of 10–30 per cent in the pre-crisis year (which is also indicative of the asset price boom stimulated by loose credit policies before the crisis). As the financial crisis unfolded private sector credit started falling. In Mexico and Thailand the crunch was most pronounced, and private credit fell by 20–40 per cent in real terms. The other Asian crisis countries reported declines of up to 20 per cent in the first half of 1998.

Financial crises can have repercussions on growth abroad

Financial crisis can also depress economic activity abroad. If banks have to cover for unpaid debt, they may have to scale

back their lending activities not only in the crisis country but also abroad. Similarly, a company experiencing losses from unpaid trade bills or diminished export opportunities, may want to cut investment. These spillovers and growing import competition from crisis countries are likely to depress economic activity in non-crisis countries as well. Repercussions are likely to be strongest in countries with close trade links and a large financial exposure to crisis countries. The Asian crisis provides a prominent example of global repercussions from financial crises. World growth projections have been repeatedly revised downward between May 1997 (pre-crisis period) and fall 1998 (Table III.1).

In May and still in October 1997, IMF growth forecasts were exuberant, looking at world growth of over 4 per cent for 1998 and 1999. By May 1998, growth for 1998 had been revised downward to about 3 per cent and by fall 1998 to only 2 per cent, before being revised slightly upward again in spring 1999. Growth prospects for 1999 had been reduced to 2.5 per cent by fall 1998. These projections include the direct effect of the financial crisis on economic activity in South-East Asia and also the indirect effect on other countries.²² Japan experienced the strongest revisions, as its economy and banking system were more exposed to South East Asia than the ones of other industrialized countries. Japan's 1998 growth projection was revised from almost 3 per cent in May 1997 to –2.5 per cent in October 1998. Other industrialized and developing countries, however, also found their growth forecasts reduced, especially after the financial crisis spread to Russia and threatened to affect Latin America.

Financial crisis can undermine monetary and fiscal stability

The impact of financial crisis on other macroeconomic variables are also worth discussing. We mentioned above that monetary management is very difficult during financial crisis. If a country attempts to "solve" a crisis through extending central bank credit, such monetary expansion can lead to hyperinflation. Amongst the Asian countries, Indonesia probably came closest to this scenario as lack of reforms and central bank credit growth fuelled inflation in late 1997 and early 1998. On the other hand, financial crisis coupled with overly contractionary monetary policies can result in deflation with equally adverse consequences for economic activity. Tight monetary policies coupled with falling international commodity prices, deflation and accelerating

²² Most of Japan's problems, however, are home-grown, and the Asian crisis cannot fully account for the situation in Japan.

Table III.2: Trade developments in a country with financial crisis

Issues	Exports volume	Import volume
Credit crunch, confidence loss	Down	Down
Decline in domestic demand	Possibly up	Down
Financial and economic contagion	Down	--
Policy choices:		
Devaluation	Up	Down
International financial support	Possibly up	Up

bank failure in the late 1920s and early 1930s is now seen as key in explaining the Great Depression of the early 1930s. The fear of deflation, therefore, induced industrialized country central banks to reduce interest rates in late 1998.

Financial crises put pressure on government finances mainly through three channels. First, they raise public expenditure on social obligations such as unemployment benefits and social assistance. At the same time, revenue, especially from corporate profits, tends to fall. Thirdly, fiscal deficits and public debt rise when governments have to bail out the financial system with public money. In fact, weakening public sector accounts and loss of confidence in holding domestic currency debt can almost force the government to print money and, in a vicious cycle, cause hyperinflation and further economic deterioration.

The end of the boom and falling external financing often require painful adjustment of the current account and aggregate demand

Financial crises also often require a painful adjustment of the current account, especially if the crisis was preceded by an economic boom, high external deficits and growing debt. An economic boom characterized by excess domestic demand and high current account deficits at some point has to be followed by a period of tighter demand and more balanced external accounts. But during a financial crisis, capital outflows may demand a large improvement in the current account, and this can only be achieved through a strong contraction of domestic demand. If the crisis is severe, the credit crunch and the confidence loss cause domestic demand to shrink as producers stop or scale down investment projects and run down stocks, and consumers cancel or delay purchases. If the magnitude of this "automatic" adjustment in demand does not suffice to achieve the necessary adjustment in the external accounts, government fiscal policies may have to be contractionary to prevent external payment difficulties. But if the contraction of domestic demand "over-shoots", there may be room for countervailing fiscal expansion.

With falling domestic demand and the onset of recession (or even depression), government social policies become very important. Despite the growing social needs, however, an excessively loose fiscal stance in times of crisis can be counterproductive. Fiscal expansion could offset the necessary adjustment of the current account and put pressure on the exchange rate by raising public consumption and deficits. Growing deficits might also absorb a large share of the available (and scarce) liquidity, thereby crowding out private investors and driving up interest rates.

In a severe crisis, international financial support can be of crucial importance to contain the decline in economic activity (by reducing the necessary adjustment in the current account) and to support crisis resolution. International support can help prevent default on international debt payments, and thereby prevent worse repercussions on the domestic and international economy. Foreign direct investment (FDI) can help re-capitalize banks and the corporate sector.

Despite international support, the required external adjustment can still be enormous: some Asian countries experienced a turn-around in the current account by over 10 per cent of GDP between 1997 and 1998—and this is closely linked to the reversal in capital flows and the strong decline in economic growth in these countries.

Unemployment and poverty constitute the social costs of crisis

Financial crisis can cause considerable social hardship. As economic activity slows down, and banks and companies close or work at less than full capacity, people are laid off and real wages fall. The unemployed and those at the lower end of the wage scale who have to feed large families are most likely to suffer and are possibly even pushed below the poverty line. Social assistance programs become over-stretched, health and nutrition levels fall and the poorest may not be able to pay school-related expenditure for their children anymore. Acknowledging these costs, governments in crisis countries and the international community emphasize social safety nets and human capital formation in their assistance programs.

Trade implications

Credit shortages are likely to reduce imports and may under certain circumstances, render trade financing more difficult

There are important trade implications for a country affected by financial crisis (Table III.2), and we touched upon some of them above. First, the credit crunch following financial crisis adversely affects imports. Credit-financed investment projects (which usually have a large component of imported capital goods) are scaled back. The Great Depression, for example, witnessed a decline in gross investment by almost 90 per cent (Kindleberger, 1973), and the Asian crisis resulted in a decline in gross investment by about one third in Thailand and the Republic of Korea in 1998. Consumer credit is also likely to suffer, and together with falling consumer confidence, is likely to affect especially imports of consumer durables such as cars and luxury items.

The credit crunch can also adversely affect export and import volumes through raising the costs of trade financing. In a financial crisis, credits to finance imports or to advance export payments, like any other form of financing, will face higher interest rates. Premiums for export guarantees are bound to rise, as agencies find it more difficult to assess the creditworthiness of trading partners in crisis countries.

In severe crises with significant short term private debt and exchange rate volatility, producers may find it difficult to finance their trading activities at all. First, domestic banks may not be solvent enough to finance imports which are needed to produce exportables. Similarly, working capital may be hard to come by, even if the export orders for which the capital is needed have already come in. Second, uncertainty about the solvency of domestic producers—which is likely to be greater the higher their short term foreign indebtedness—may also undermine their ability to obtain credit. Third, exchange rate volatility may make banks reluctant to extend foreign currency letters of credit. An Indonesian bank, for example, may not want to guarantee a payment in dollars, if it does not know whether tomorrow's exchange rate still permits the domestic producer to pay.

Despite these obstacles to obtaining credit, and reported difficulties of obtaining trade-related financing, such claims should be examined with caution (Stephens, 1998a). Exporters are most likely to receive credits during a financial crisis. First, if the exporter is indebted domestically or abroad, cutting off trade credit lines is not in the interest of financial institutions. This would further reduce his ability to repay his debt. An exporter earning hard currency may also receive preferential treatment by banks which want to pay back hard-currency obligations elsewhere. Second, exporters can find alternative means to finance their trading activities. The credit crunch can be circumvented through trade credit by foreign banks. Export proceeds can also be deposited in an escrow account out of which import bills are paid first, before the remaining funds are released to the

exporter. Furthermore, in some instances difficulties in getting credit may be justified if the producer is insolvent and continuation of his operations is not guaranteed.

Declining growth reduces trading opportunities while raising competitive pressure

The decline in domestic demand accompanied by rising unemployment and declining business and consumer confidence depresses import volumes. Domestic producers whose home-markets are eroded by crisis may increase their sales abroad to seek alternative business and to service their financial obligations. This is likely to increase exports. On the other hand, in third countries, the loss of export opportunities to crisis countries and potential repercussions from financial problems can undermine growth. This in turn reduces the opportunities for exporters from crisis countries to sell abroad (second-order effects).

Devaluation and international financial support can stimulate trade

If a country devalues relative to its main trading partners, domestic producers of traded goods and services become more competitive at home and abroad. As a consequence, export volumes are likely to increase, while import growth slows down or even becomes negative.²³ However, we have seen above that the “disorderly” abandonment of exchange rate pegs can result in extreme exchange rate volatility and “overshooting”, as experienced by some Asian countries, (Eichengreen and Masson, 1998), This can undermine trading activities as financing is withheld and corporate solvency is threatened. The costs of such financial turmoil may outweigh the benefits from a more competitive exchange rate in the short run, until financial markets have stabilized.

International financial support allows countries in crisis to sustain higher import levels. In as much as this takes pressure from the financial system, sustains economic activity and restores confidence, it can also be good for a country's export performance. Bulgaria, for example, experienced a virtual collapse in the financial and productive sector and a severe contraction in exports and imports in 1996 and early 1997, before an international support package arranged through the IMF stabilized the economy and revitalized trade.

The Asian crisis resulted in substantial revisions in global trade projections

At the global level, severe financial crises in important countries are not only likely to depress world output but also world trade. Table III.3 illustrates the adverse effect of financial crisis on global trade, as witnessed by the Asian crisis. Before the onset of the Asian crisis, the IMF WEO projected 1998 world export volume growth at 6.7 per cent. This was revised downward to 3.6 per cent in the October 1998 WEO and to a similar number in the 1998 WTO Annual Report, before being revised further to 3.1

²³ Another concern sometimes raised is that of competitive devaluations. If all countries devalue the relative position of countries does not change. We will see in the next section that despite some devaluations elsewhere, the Asian crisis countries did devalue in real terms relative to their trading partners and thereby improved their export opportunities.

Table III.3: Merchandise trade projections since the beginning of the Asian crisis
(Percentage changes)

		IMF World Economic Outlook				WTO
		May 1997	May 1998	October 1998	May 1999	Annual Report Sept. 1998
World						
Export volume	1998	6.7	6.2	3.6	3.1	4.0
	1999	...	6.0	4.2	3.7	...
Developing Asia*						
Export volume	1998	11.2	9.5	5.0	3.1	...
	1999	...	7.6	4.9	3.6	...
Import volume	1998	12.0	4.0	-4.2	-10.7	...
	1999	...	9.9	3.8	5.6	...

* Excluding Chinese Taipei; Hong Kong, China; Korea, Rep. of and Singapore.

per cent in spring 1999. Similarly, trade growth for 1999 has also been revised downward from 6.0 per cent (May 1998) to 3.7 per cent (May 1999). The change in projections for developing Asia is even more dramatic. In May 1997, the IMF WEO projected double-digit export and import growth for 1998. Subsequently export volume growth was revised downward to less than 4 per cent for both 1998 and 1999. Import volumes even contracted in 1998 before recovering to modest growth in 1999.²⁴

D. The role of trade in crisis prevention and resolution

A functioning trade financing system is important, but government intervention should be very careful to avoid unintended adverse consequences

Liberal trade policies and trade-related financial policies which help trade to flourish are key variables in preventing and solving financial crises. We mentioned above that breakdowns in trade-financing and trade protection can trigger and re-enforce a vicious circle of financial crisis and declining growth. Stephens (1998a) provides a detailed discussion of the role of trade financing and related government policies in preventing and coming out of crisis. It is noteworthy, that banks typically do not have an incentive to cut off (relatively low risk) trade credit lines during financial crisis as this would undermine borrowers' ability to pay their debt.²⁵ But creditors and borrowers have an

incentive to draw attention to trade financing problems strategically if they think that governments and international agencies might step in and provide more favourable financing. A careful assessment of the extent of the problem is therefore important before initiating such action.

Governments might want to allow at least partial retention of export earnings by exporters. This would permit exporters to use expected proceeds as collateral for import credits. We mentioned that exporters can also have such proceeds paid into escrow accounts from which import bills are paid before the remainder is released or surrendered to the central bank. In addition, private export credit agencies, government guarantees, or central bank schemes to secure trade financing and working capital can be useful complements in times of financial sector turmoil and disruptions in orderly trade financing. However, the incentive effects and financial liabilities arising from such schemes should be carefully assessed. As mentioned, the perception that public money is available can induce producers to "create" a problem. Government intervention through across-the-board guarantees can also produce considerable short term public liabilities. It can drive out private agencies, and prevent useful market differentiation between "good" and "bad" risks. Care should also be taken when guaranteeing import financing for projects which do not lead to exports, as this type of import subsidization might put further pressure on an already strained balance-of-payments situation.

²⁴ Note, however, that developing Asia includes Asian crisis and non-crisis countries.

²⁵ The incentive to maintain credit lines to keep debtors afloat may be undermined for two reasons. As discussed above, prudential reasons may require banks to divest from risky markets. Second, creditors who are afraid to be called upon for burden sharing at some stage may cut credit lines to minimise their exposure.

Trade growth can be an important vehicle to emerge from crisis, and well-conceived trade liberalization and exchange rate adjustment can contribute to this aim

During financial crisis, governments sometimes contemplate trade protection to provide relief to domestic producers. However, as outlined above, the effect on input prices, the distortions it creates, and the danger of retaliation do not make this an advisable option to deal with financial crisis. By contrast, trade liberalization has featured prominently in a number of countries to escape from financial crisis. The reason is that liberalization enhances economic efficiency and lowers input prices, and thereby helps the economy to escape from crisis through trade.

Trade liberalization is probably more feasible when combined with the correction of an overvalued exchange rate. This dual approach allows the efficiency gains to be reaped from freer trade for domestic and export-oriented industries while compensating import competing industries with the import-price-boosting effect of devaluation. Liberalization cum devaluation can then trigger a strong output response in the tradable goods sector which helps to re-ignite the economy and absorb unemployment. Devaluation alone could also boost the competitiveness of the export sector which, in turn, could help improve corporate balance sheets, repay debt, and speed up crisis resolution. We mentioned above that an "orderly" devaluation is key in minimizing adverse short-term repercussions of devaluation. High foreign debt can also reduce the beneficial effects of devaluation, as the increased debt burden in domestic currency terms may undermine the health of non-exporting producers.

The 1994 CFA franc devaluation in West Africa, which was also accompanied by trade liberalization measures, provided such an impetus to trade, and export volumes in most countries of the CFA zone increased strongly (Clément, Mueller, Cossé and LeDem, 1996). Mexico saw export volumes increase by over 50 per cent in the two years following the floating of the Peso at the end of 1994. Exports, thereby, contributed strongly to the economic rebound that occurred in Mexico in 1996. We will see in the next section that strong export growth also played a pivotal

role in other financial crisis episodes, and is likely to do so in the context of the Asian financial crisis as well.

Liberal financial services trade policies can lead to more efficient and developed financial sectors, and less destabilizing capital flows

The Asian crisis has shown that even countries with a seemingly favourable policy environment, including balanced fiscal accounts, export-oriented trade policies and relatively low import tariffs are not immune from financial crisis. As it turns out, policies have not always been as favourable as perceived, and inappropriate government interventions in the financial sector were particularly prominent. In several countries, domestic financial institutions suffered from directed and political lending. At the same time, certain protectionist policies in the financial services sector may have encouraged an over-emphasis on short-term lending in foreign financing (Kono and Schuknecht, 1998). In the Republic of Korea, for example, such policies probably favoured short-term over long-term capital inflows (World Bank, 1998). A bias towards short-term lending in external financing is now widely seen as having exacerbated the financial turmoil in Asia.

Kono and Schuknecht (1998) discuss the importance of financial services trade policy for financial stability. The commercial presence of foreign service providers and liberalization across the full spectrum of financial services is particularly beneficial to financial systems. First such liberalization instils competition and encourages the transfer of skills (although it can give rise to transitional adjustment problems in the financial sector). Second, market and infrastructure development, risk management and transparency are increased. Finally, a better information base for investors, and deeper and broader financial markets are likely to generate a more balanced maturity and instrument structure of foreign debt which is less conducive to financial crisis.²⁶ Thailand and the Republic of Korea started changing their policy course in 1997 and, in a widely welcomed move, opened their financial services sectors to further foreign participation. Financial services trade liberalization could probably become an important vehicle of crisis prevention in other countries as well. The last Section will deal in more detail with the role of the WTO in this context.

²⁶ The link between financial services trade and capital flows and the multilateral trading system will be discussed in more detail below. Ojeda, McCleery and De Paolis (1997) find that financial service liberalisation in India and China would stimulate economic growth by several per cent of GDP. Goldstein and Turner (1996), IMF ICM, 1998, and World Bank, 1998 stress the importance of foreign commercial presence for resilience to shocks, spreading risks, transferring skills and recapitalizing the banking system.

Appendix to Section III: Strategies for financial crisis prevention and resolution outside trade policy

Given the prominence of financial crisis in the public debate, and the frequent use of words such as “prudential regulation” and “international financial architecture”, this Appendix briefly discusses policy recommendations outside the trade area which are seen as key issues in solving if not preventing financial crisis, i.e. macroeconomic and regulatory policies, and issues related to the international financial architecture.

Proper macroeconomic policies are key for maintaining and regaining financial stability

In previous parts, we described the adverse consequences of inappropriate monetary and fiscal policies on the financial sector. Much attention has been paid to macroeconomic management to prevent and to solve financial crisis. Here we can only restate some basic principles.²⁷ Crisis prevention involves cautious monetary and fiscal policies to prevent economic overheating. Both can help avoid a boom-bust cycle. Fiscal and monetary transparency are also important conditions for improving macroeconomic management. The IMF has been developing codes of conduct in these areas.

In some countries, interest rate ceilings and financial repression weaken the financial system. Such policies should be replaced by indirect monetary policy instruments and market-based debt financing (coupled with fiscal consolidation if deficits are too high). This strengthens financial institutions and promotes financial market development. Political or directed lending should also be avoided as frequent losses from such loans weaken financial systems.

Overvalued exchange rates are not conducive to financial stability. However, an orderly exchange rate adjustment in the middle of a financial crisis is not always possible, especially if market participants did not hedge against a change in the peg, and financial market turmoil could result in strong exchange rate overshooting and volatility. This was the experience of several Asian crisis countries in late 1997 and early 1998. Although there is no one “right” exchange rate regime for all countries, Eichengreen and Masson (1998) and Mishkin (1998a) suggest that emerging market countries should seek more flexible exchange rate regimes in “good” times, so that there is enough flexibility for an “orderly” adjustment in times of crisis.

Strong prudential regulation and supervision in the financial sector is now widely held as a prerequisite to financial stability

Weak financial regulation and supervision in many countries and the globalization of financial activities has induced the development of the so-called Basel Core Principles for Effective Banking Supervision. These are guideposts for evaluating and

reforming a country’s regulatory and supervisory policies. They have now been accepted by many industrialized and developing country governments, and they are fully consistent with multilateral commitments, although they may not be sufficient to deal with all relevant challenges. Furthermore, the International Organization of Securities Commission (IOSCO) is working to establish universal principles for securities regulation, and the International Association of Insurance Supervisors (IAIS) released a set of “Principles, Standards, and Guidance Papers” for insurance supervisors dealing with internationally active insurance companies. We can only review a few core recommendations here, and more details are provided by BIS, IOSCO, IAIS and IMF reports, and Goodhart, Hartmann, Llewellyn, Rojas-Suarez and Weisbrod, (1998).

An adequate capital base is a safeguard against crisis; transparency, licensing, management and supervision of financial institutions may need to be improved

We noted before that the capital of the banking system is like a safety net to depositors. A bank with a large capital base is perceived to be more trustworthy and stable because depositors are more likely to get back their money even in hard times. A large capital base will also allow the bank to extend new loans when profitable investment projects are coming up.

The Basle standards specify a number of additional elements of effective banking regulation and supervision. Licensing, transfer of bank shares and ownership, corrective measures and liquidation procedures shall ensure that only competent and financially “healthy” banks offer financial services. Management has to be capable, and risk management needs to be up to scratch so that banks are not weakened from within.²⁸ Supervisors must carry out their tasks effectively with adequate means and training, and political influence on supervisors should not undermine their role.

Much attention, however, has focussed on increasing transparency. Accounting and auditing standards need to secure full transparency over the financial position of companies and financial institutions. Especially, uncertainty about non-performing loans can undermine confidence. The experience in Asia has shown that obfuscation first delays the response of investors. Once rumours of problems spread, domestic and foreign capital flight is likely to make things much worse than if transparency had allowed an earlier and more gradual response. The international harmonization of auditing and accounting standards is, therefore, an important step in both strengthening domestic financial systems and preventing international “herding” behaviour.

²⁷ See various IMF publications (World Economic Outlook, International Capital Markets), Goldstein and Turner (1996), World Bank (1997) and Demirgüç-Kunt and Detragiache (1997).

²⁸ It is noteworthy, however, that a tightening of prudential standards during financial crises can worsen the credit crunch as banks may have to cut back lending further to meet such tightened prudential standards.

Government intervention may be necessary to re-start the economy, but reforms should aim at preventing the recurrence of crisis

Should governments “help” financial institutions in the case of crisis? This is a difficult question to answer, and a case by case approach on how and to what extent governments should intervene is probably warranted. In the case of isolated bank failures, governments may be well advised to take a hands-off approach and let those institutions be liquidated or taken over. This also provides a ready warning for other institutions. In case of a “systemic” crisis, however, governments can hardly watch the banking system collapse. But governments should not just provide financial support. They should also secure that orderly procedures for the liquidation, restructuring or recapitalization are in place (Folkerts-Landau and Lindgren, 1998), and they should also create the regulatory and macroeconomic policy framework which prevents the recurrence of crisis in the future.

On the procedural level, laws and regulations for bankruptcy and corrective action are very important. Very weak banks often should not be allowed to continue operating as they are likely to take on excessive risk and, thereby, raise the costs of crisis unnecessarily. Conservatorship (control by the supervisory authority) or closure (if there are no chances for return to profitability) might be necessary in this case. Lender of last resort facilities can help protecting the payments system, avoid runs, and prevent illiquidity which could lead to insolvency. Speedy, collateralized short term lending at penalty rates could be made available to the financial system. A deposit insurance scheme can also provide a safety net for depositors but a number of pitfalls must be avoided (see IMF, 1998a and b for more detail).

When non-performing loans are very extensive and widespread, the banking system may need to be rehabilitated. The weakest institutions may be closed down while public funds could save distressed but viable banks. Governments can re-capitalise the latter directly. Nationalization through an independent public agency and a later resale to the private sector is another option (IMF, WEO 10/98). In any case, public intervention and funds should be employed in a way that minimizes moral hazard (IMF, ICM, p 73ff). There may be a need for a large amount of public funds as the latter must be sufficient to re-establish confidence. The bail-out package decided by the Japanese government in fall 1998, for example, foresees public funds of up to 60 trillion yen (12 per cent of GDP) to revitalize the financial system.

Herding behaviour and moral hazard may warrant better international transparency, early warning, private sector “burden sharing”, and international cooperation

We identified herding behaviour and moral hazard arising from implicit debt guarantees as the two ways by which international investors and capital flows can exacerbate financial crisis. After the onset of the Asian crisis, the debate on these problems intensified, and although there is no certainty as to the degree that this problem contributed to the depth of the crisis, a number of remedies have been implemented or are under discussion. First, we mentioned that a number of international standards

has been developed to improve the transparency and the regulation and supervision of financial markets. These include the Basle standards, securities and insurance regulation standards, the IMF fiscal and monetary standards, and the development of international accounting and corporate governance standards. Private sector efforts aim at improving and coordinating payment systems to reduce foreign exchange settlement risks over different time zones. These initiatives enhance the institutional infrastructure, the international comparability of companies’ and financial institutions’ health, and the soundness of macroeconomic and regulatory policies.

For the same transparency reasons, data dissemination standards have been developed, and the IMF now provides information about countries’ key economic and financial data. Revised data standards are being developed to adapt them to the new financial sector challenges. Revisions on the reporting of foreign debt, international reserves (including forward commitments by central banks), and exposure by international investors, including investment banks and hedge funds are under consideration. Economic and financial early warning indicators are also being developed. An international “financial stability forum” intends to strengthen international surveillance and supervision.

Orderly capital market and capital account liberalization are of key importance to maintaining financial stability, especially when the appropriate policy framework is not in place (Johnston, 1998; IMF, ICM, 1998). In some instances, capital controls may need to be retained (Dooley, 1995), although price-based measures are clearly preferable to quantitative restrictions (Schuknecht, 1999). Chilean type reserve requirements on short-term flows have received considerable attention in this context (see Laurens and Cardoso, 1998, for more details on this case).

International communication and cooperation between governments and supervisors needs to be strengthened to improve transparency and crisis management. The IMF has been asked to improve its surveillance process, and a new financing facility for crisis countries (charging a penalty rate in return for speedy disbursement) has been put in place. Finally, private sector “burden sharing” and better mechanisms for orderly crisis resolution (also sometimes called debtor-creditor regimes) are being discussed. Governments may need to exercise great care when (explicitly or implicitly) guaranteeing financial liabilities. On many of these issues, however, the discussion is still very much in flux.

Countries which tackle their policy problems rapidly can reduce the severity and duration of crisis

Finally, the effect of crisis on trade and growth depends on the speed and determination with which policy makers address the crisis. A country which speedily implements far-reaching reforms is more likely to come out of the crisis quickly with less protracted declines in trade and growth. Mexico, for example, experienced a steep decline in growth and imports in 1995 before a strong rebound only one year later. Japan, by contrast, had not been able to implement adequate reforms until 1998, several years after financial difficulties had started undermining economic growth.

IV. An Historical Perspective on Financial Crises and their Economic and Trade Implications

Given the economic and trade disturbances which can arise from financial crisis, and the frequency of crisis episodes in the past decades, this section provides a number of financial crisis case studies. We will look at (i) the reported causes of crises, (ii) empirical evidence on the economic, social and trade implications of crises and (iii) the potential and sometimes actual role of trade policies in spreading and worsening the crisis. Most factors contributing to financial crisis have been reported repeatedly over the past 70 years. However, one of the two main lessons countries seem to have learned from the Great Depression is not to respond to financial crisis with trade protection. The other lesson is the importance of better international political and financial cooperation. Despite the numerous crises that have occurred in recent decades, the avoidance of another global crisis like the Great Depression can probably be seen as an important success. It is likely that open markets and better international cooperation (promoted through GATT/WTO and Bretton Woods institutions) played an important role in this.

Kindleberger (1996) provides an historic overview of financial crises starting with the crisis in the "Holy Roman Empire" between 1618 and 1623, which related to the 30 year war in Europe. He recounts 35 episodes of financial crisis before the Great Depression. Mishkin (1991) reports eight bank panics between 1819 and 1907, only in the US financial crises, in conjunction with protection and a number of other policy errors, were also at the root of the Great Depression (Kindleberger, 1973; Cuccini and Kahn, 1996). At that time, financial turmoil severely affected 10 European countries, the United States, Argentina and Mexico, and precipitated the first truly global economic crisis (Bernanke and James, 1991).

After World War II, financial crises affected numerous countries at all levels of development, but they remained local or regional episodes. Caprio and Klingebiel (1996) report crises in 90 countries between the mid-1970s and mid-1990s. This includes the countries most severely affected by the debt crisis of the early 1980s. The financial turmoil in Asia and Russia after July 1997 has, hence, not been a new phenomenon. However, it has raised the spectre of global crisis for the first time since the early 1980s, and reawakened memories even of the 1930s. In the following, this section will focus on: (i) the Great Depression, (ii) a number of crises between the late 1970s and the mid-1990s, and (iii) the recent Asian crisis.

A. The Great Depression

Causes of the Great Depression

When reading economic history books about the Great Depression after following the recent literature on the Asian crisis, one has a strong feeling of *déjà vu*. The Great Depression was preceded by an economic and asset price boom in many industrialized and developing countries of the time. The US stock market index more than doubled between 1926 and 1929 and

world trade had risen by 32 per cent in volume terms between 1924 and 1929 (Kindleberger, 1973; Maddison, 1995). In 1929, the boom came to an end, and the US stock market started falling strongly with "Black Friday". Eichengreen and Portes (1987) emphasize the responsibility of the poor regulatory environment for the boom, and ultimately the crash. Anecdotal evidence reports highly leveraged stock purchases even by small investors. The bursting bubble caused many people to lose everything they owned and strongly disrupted investor confidence.

But many observers today argue that it was mainly the subsequent policy errors which turned a probable correction/recession into a global depression. First, the US Federal Reserve pursued restrictive monetary policies, leading to a strong decline in money supply after 1929. At the same time, confidence loss resulted in stronger money demand as people wanted to hold cash instead of putting their money into the bank. This resulted in strong deflation which, in turn, caused high real interest rates, even with nominal interest rates near zero. Consumer prices in the US, for example, fell by an average of 7 per cent per year between 1929 and 1933. Deflation also inflated the real value of debt, which undermined corporate balance sheets. In addition, the gold standard, introduced in most countries in the 1920s, functioned very poorly and did not facilitate international adjustments (Bernanke and James, 1991).

The 1920s also witnessed considerable international lending especially by the US. By 1929, Germany had contracted US\$ 5 billion of foreign debt, or 25 per cent of GDP, and half of this was short term (Eichengreen and Portes, 1991). This was a very high level of indebtedness by the standards of the 1920s and compared to the relatively low export earnings of the time. Germany also had to pay significant war reparations in addition to the debt service. US financing started to dry up in 1929 and loans were called in at home and abroad. German banks were hit particularly strongly, but banks elsewhere experienced difficulties as well. The period between fall 1930 and fall 1932 hardly saw a month without major bank failures in the US and Europe (Bernanke and James, 1991). One bank's failure became another bank's losses, compounding the problems within and across countries. Only a few countries, including Sweden, Japan and the Netherlands, which had strengthened their banking system and regulation in the 1920s, experienced much less severe financial sector problems (Bernanke and James, 1991).

Protectionism emanating from the US also contributed significantly to the emerging crisis (Crucini and Kahn, 1996; Kindleberger, 1973). The Smoot-Hawley tariff increase in the US was initiated after Hoover's 1928 election victory. Hoover had promised higher agricultural tariffs. However, the subsequent legislative process resulted in much broader tariff increases. Tariffs on dutiable imports increased from about 40 per cent in 1929 to a peak of 60 per cent in 1932. European countries retaliated and saw their tariffs approximately double over the same period.²⁹ In addition to tariff increases, France brought 65 per

²⁹ Tariff revenue over total import value increased from about 10 to 20 per cent in a number of European countries. The corresponding US figures rose from 13.5 per cent in 1929 to 19.6 per cent in 1932.

Table IV.1: Economic indicators of selected industrialized countries during the Great Depression

	United States	United Kingdom	France	Germany
Maximum Decline in GDP ²	-29%	-5%	-11%	-23% ¹
Maximum Deflation ³	-24%	-15%	-28%	-23%
Fiscal position (%of GDP), early 1930s ⁴	about -5%	...	about -5%	...

Source: Saint-Etienne, 1984

¹ Net national product.

² From 1929 to early 1930s.

³ Decline in CPI, 1929 to early 1930s.

⁴ United States and France posted small fiscal surplus in 1929.

cent of its imports under quantitative restrictions and Germany introduced import licensing procedures (Saint-Etienne, 1984). Even liberal Britain reduced the share of duty free imports from 85 per cent in 1930 to 30 per cent in April 1932 (Capie, 1983). Frustrations over tariff preferences also fuelled the “trade war” (Kindleberger, 1973).

Protectionism had a number of very serious consequences. Unit value prices of internationally traded goods fell by 55 per cent between 1929 and 1932, as protectionism destroyed trade opportunities and stimulated import-substitution. Falling commodity prices and lost trade undermined corporate balance sheets which, in turn, raised non-performing loans and further triggered bank failures. Kindleberger describes, for example, how falling hog and corn prices bankrupted farmers and banks in the Mid West of the US. The role of competitive devaluations in this process, however, is probably much smaller than often assumed (Bernanke and James, 1991).

Protectionism and uncertainty about future trade policy also undermined investment. Archibald and Feldmann (1998) report that 10 per cent of the US investment decline can be attributed to trade policies. Cricini and Kahn (1996) argue that 10 per cent of the US output fall can be directly attributed to protectionism. This figure looks more significant against the fact that the contribution of protection was equal to the impact of monetary policies, and corporate and bank failure in their regression analysis (all four factors explain about 40 per cent of total output decline).

Finally, it should be noted that international communication and coordination at that time was very deficient (Kindleberger, 1973). There were no established financial and institutional mechanisms to coordinate policies and to contain the crisis. A number of conferences to coordinate efforts of crisis management and resolution internationally all failed.

Economic, social and trade implications of the Great Depression

The Great Depression had, as the name tells us, very severe repercussions on economic activity and trade. Table IV.1 illustrates the deterioration in GDP, prices, and the governments’ fiscal position in selected countries between 1929 and 1933. In the US, real GDP declined by almost 30 per cent. Stock prices fell by 85 per cent and investment by almost 90 per cent. France and the United Kingdom fared better with output falls of “only” 5–11 per cent. Germany reports a fall in net national product by nearly one quarter. Industrial production in both the US and Germany almost halved over this period. Consumer prices declined between 15 and 28 per cent. This means that the real value of debt (held in nominal terms) increased dramatically, and real interest rates could only be strongly positive. Fiscal positions deteriorated from a small surplus in 1929 to deficits of about 5 per cent of GDP in the early 1930s in France and the United States.

The social costs of the Great Depression were also enormous. Unemployment reached 25 per cent in the US and in Germany. This is now widely seen as one of the factors facilitating Hitler’s rise in Germany.

Table IV.2 shows the strong decline in world trade value and volume between 1929 and 1933. World trade volume had increased rapidly by an annual average of 6 per cent between 1924 and 1929, but it fell by 30 per cent in the subsequent 3 years. Due to declining unit prices, the world export value fell by 60 per cent from US\$ 32.7 billion in 1929 to only US\$ 12.6 billion in 1932. Figure IV.1 shows the contracting spiral of world trade on a monthly basis between April 1929 and February 1933. In the mid-1930s, trade barriers were lowered and economies started to grow again. But before the onset of World War II, world trade volume was still below that experienced in 1929.

Table IV.2: World merchandise export value and volume, 1929-1937

Years	Export Value		Export Volume
	Billion US\$	Index (1924=100)	Index (1924=100)
1929	32.7	118	132
1930	26.2	95	123
1931	18.6	67	113
1932	12.6	45	96
1933	14.8	53	99
1934	18.6	68	103
1935	19.2	70	108
1936	20.7	75	113
1937	25.5	92	128

Source: Maddison, 1995.

Note: Calculations done on the basis of 56 industrialized and developing countries.

B. Financial crisis from the late 1970s to mid-1990s

Causes and costs of financial crisis, and an assessment of policy responses

Financial crises in the past 20 years have very similar causes

As mentioned above, the past 20 years have witnessed a large number of financial crises. In the following, we will examine 25 crisis episodes for which information on the causes, costs, policy responses and economic and trade implications is most readily available.³⁰ Table IV.3 provides an overview of the crisis periods and the causes and costs of crisis for the sample countries. The first crisis we analyze began in 1977 in Spain and the most recent episodes include the financial crisis in Mexico, Latvia, Brazil and Bulgaria in the mid-1990s. More details on a selection of countries are provided in Box IV.1.

When looking at the causes of crises, it is remarkable that every single one has featured macroeconomic policy errors and weak prudential regulation and supervision. Directed lending was at the root of crisis in one third of the episodes; two thirds reported other problems, including mismanagement, fraud, lending to bank managers, staff or companies with cross-share holdings, and problems related to state-owned banks in transition economies. Four countries experienced terms of trade shocks in excess of 10 per cent.³¹ Furthermore, a number of countries suffered from rising world interest rates, especially in the early 1980s. In all crisis episodes, non-performing loans became

unmanageable. As the crisis unfolded, a credit crunch set in; we mentioned above that private sector credit in Mexico, for example, fell by 40 per cent in 1995.

Repercussions on trade financing in these crisis episodes, however, have been limited (except for higher financing costs). The incidence of trade financing drying up was limited, probably because the share of short term corporate debt (which threatens solvency) was mostly small and exchange rate volatility was typically not so significant either. Therefore, most traders did not experience problems of trade financing even when credit more generally was hard to come by. This assessment is consistent with the mostly favourable development in countries' exports (see below) which would not have been possible with major problems in getting trade-related financing.

Table IV.3 reports the crisis resolution costs for 20 of the 25 episodes. Almost half of the crises cost more than 10 per cent of GDP, with the first Argentinean and the Chilean crises topping the "league". In absolute terms, Japan's ongoing financial turmoil may yet become the most "expensive" financial crisis ever.

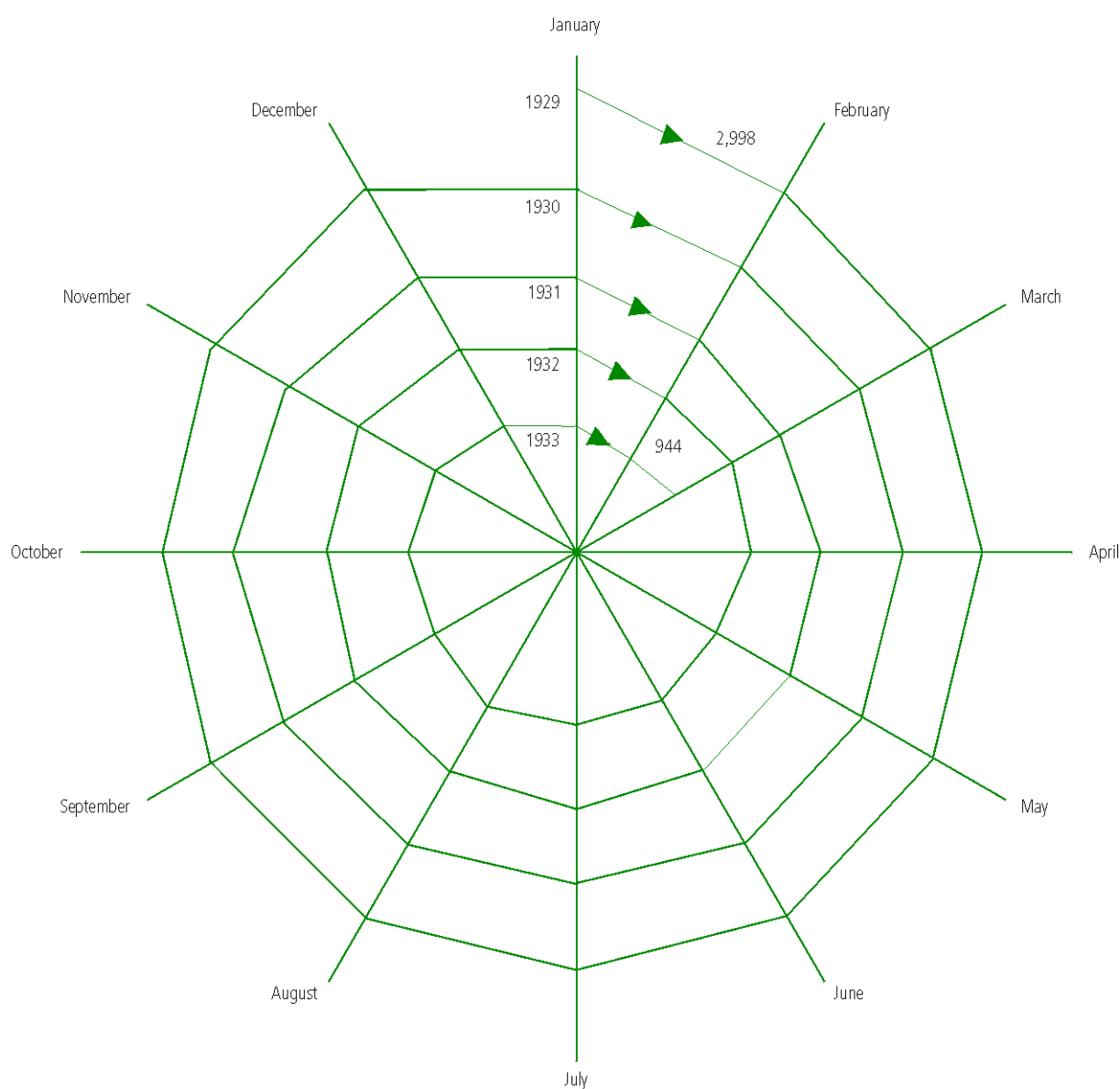
Most governments responded to financial crisis with macroeconomic and regulatory reform, and exchange rate adjustment

Table IV.4 surveys government responses to financial crisis. The columns under the heading "crisis resolution" report on how far governments tackled the policy problems preceding financial crisis. A "0" means that governments did not take corrective action whereas "0.5" and "1" reflect partial or satisfactory reforms. The "resolution score" reaches 100 per cent when the

³⁰ Data on causes and costs of financial crisis are from Caprio and Klingebiel (1996), selected country studies (see Box IV.1), and IMF publications and statistics.

³¹ Comparing the average terms of trade for the three years prior to the crisis with the average terms of trade for the first two crisis years.

Figure IV.1: The contracting spiral of world trade, January 1929 to March 1933¹



¹ Total imports of 75 countries. Monthly values in millions of old US gold dollars. Source: Kindleberger, 1973.

major domestic policy problems were addressed. From this table we can see that most countries addressed their financial sector weaknesses, reformed macroeconomic and regulatory policies and corrected other adverse policy interventions at least partially. Benin, Chile, Colombia, Finland, Latvia, Malaysia, Spain and Sweden receive the full mark of "100". However, it should be noted that these scores are highly subjective, and only represent a rough assessment of policy responses. Furthermore, a country may address its macroeconomic problems in the context of a crisis and yet deviate from the "path of virtue" again a couple of years later. Certain problems may not have played a prominent role in one crisis but became important in the next one. Finally, growing financial integration and innovation posed new policy

challenges. These may be reasons why, for example, Indonesia, Malaysia and Thailand received very high crisis resolution scores in the 1980s, and yet not even 10 years later these countries found themselves in a renewed and much more severe crisis.

The last three columns of Table IV.4 assess countries' exchange rate policies. Eleven of the sample countries had fixed exchange rates before the crisis and seven devalued, often drastically. Only the three West African CFA countries in the sample and Estonia did not change their currency peg. However, 11 out of 18 countries for which we have the relevant information experienced a lower real effective exchange rate.³² This means that most countries experienced an increase in the price of tradables

³² The real effective exchange rate measures exchange rate movements weighted by the trade share in bilateral trade with major partner countries. Everything else equal, a higher real effective exchange rate means an appreciation of the domestic currency and a less competitive export sector.

Table IV.3: Causes and costs of selected financial crisis, late 1970s to mid 1990s

Country	Crisis period	Causes of Crisis					Cost of crises resolution (% of GDP)
		Regulation and supervision	Macro economic	Directed lending	Other ¹	Terms of trade shock ²	
Argentina (1)	1980-82	+	+	...	...	+	55
Argentina (2)	1989-90	+	+	...	...	...	...
Benin	1988-90	+	+	+	...	...	17
Brazil	1994-95	+	+	+	...	...	5-10
Bulgaria	1995-97	+	+	...	+	...	14
Chile	1981-93	+	+	...	...	...	41
Colombia	1982-87	+	+	...	+	...	5
Côte d'Ivoire	1988-91	+	+	+	...	+	25
Estonia	1992-94	+	+	...	+	...	1
Finland	1991-93	+	+	...	+	...	8
Ghana	1982-89	+	+	...	+	+	6
Hungary	1991-95	+	+	...	+	...	10
Indonesia	1992-94	+	+	+	+	...	2
Kenya	1985-89	+	+	+	+	...	...
Latvia	1994-96	+	+	...	+	...	...
Malaysia	1985-88	+	+	...	+	+	5
Mexico	1995-96	+	+	...	+	...	12-15
Philippines	1981-87	+	+	+	+	...	3
Poland	1992-94	+	+	...	+	...	...
Senegal	1988-91	+	+	...	+	...	17
Spain	1977-85	+	+	+	+	...	17
Sweden	1991-93	+	+	...	...	...	6
Thailand	1983-87	+	+	...	+	...	...
Turkey	1982-85	+	+	+	...	...	3
Uruguay	1981-84	+	+	...	+	...	7

Source: Compiled from Caprio & Klingebiel, 1996a and b.

¹ Mismanagement, fraud; insider and connected lending state owned banks; etc.

² Decline in terms of trade by at least 10 per cent in crisis compared to pre-crisis period.

relative to non-tradables and exporting and import-competing industries became more competitive as the currency was devalued. This was described as an important element in crisis resolution in the previous section. It helped countries reduce unemployment, and "export" out of the crisis (although initially some countries experienced devaluation-related turmoil). It is noteworthy that most of the transition economies in our sample did not experience a more "competitive" exchange rate after crisis. Successful reforms in the macroeconomic and regulatory sphere in countries like Poland and Estonia probably reduced production and transaction costs in the private sector, thereby compensating for the higher real effective exchange rate.

In most cases, countries did not take recourse to trade protection; some of them even initiated significant liberalization during the financial crisis

Given the experience of the Great Depression, the trade policy response by countries in financial crisis seems particularly important. On balance and in contrast to the Great Depression, countries liberalized rather than tightened their trade regimes. This helped to limit financial contagion through "trade wars" (protection and counter-protection), as experienced in the early 1930s. However, information on trade reform is often not readily available and not easily comparable across countries. Therefore, we only looked at 13 of the 24 sample countries.³³

³³ For further information on the trade policy stance in the context of financial crisis, see WTO, 1994a (Kenya); WTO, 1994b (Turkey); IMF Recent Economic Developments 1998 for Mexico; Dornbush and Edwards, 1994 for Chile; Kapur, Hadjimichael, Hillbers, Schiff and Scymczak, 1991 (Ghana), Galy, Pastor, Pujol, 1993 (Spain), Schadler, Rozwadowski, Tiwari and Robinson, 1993 (Senegal), Ebrill, Chopra, Christofides, Mylonas, Otker and Schwartz, 1994 (Poland), Shome, 1995 (Columbia), Saalvalainen, Banerjee, Lutz, Krueger, Koen and Marrese, 1995 (Hungary), Lachmann, Bennett, Green, Hagemann and Ramaswami, 1995 (Sweden), and Goldsborough, Coorey, Dicks-Mireaux, Horvath, Kochhar, Mecagni, Offerdal and Zhou, 1996 (Thailand).

Box IV.1: Examples of financial crises

Chile: U-shaped recovery

Chile experienced severe financial turmoil from 1981 to 1983. It was probably one of the most costly financial crises ever recorded. The crisis followed a strong expansionary phase up to 1980. But poor financial regulation and supervision, strong credit growth and "reckless" lending, and an increasingly overvalued exchange rate coupled with declining export prices weakened the financial system. Connected lending resulting from interlocking ownership and management of banks and enterprises following the country's mid-1970s privatisation program also contributed to the difficulties. At the height of the crisis, in 1983, non-performing loans exceeded the capital of the banking system.

The government devalued the peso in May 1982 but at first growing obligations from dollar-denominated debt put further pressure on financial institutions. In 1983, domestic debt rescheduling was encouraged and in 1984, comprehensive bank re-capitalisation was initiated. Most importantly, financial regulation and supervision were strengthened considerably from 1983. Average tariffs, which had peaked at 26 percent in 1985 were subsequently lowered to 11 percent by 1991.

After strong economic contraction in 1982 and 1983, the economy recovered and economic growth averaged over 7 percent during the following years. Trade openness (the ratio of exports and imports over GDP) increased from a low of 40 percent in 1982 to over 60 percent in the late 1980s.

Mexico: Sharp crisis and rapid rebound

The Mexican crisis started in December 1994 when the government first devalued and then floated the peso. But the roots of the crisis had been laid much earlier, and there are many similarities to the earlier Chilean experience (Edwards, 1996). Strong monetary expansion especially before the 1994 elections precipitated private sector credit expansion from 10 percent of GDP in 1988 to 40 percent of GDP in 1994. Lax regulation and supervision of the financial system facilitated the lending boom. The peso, pegged to the dollar, became increasingly overvalued. Strong capital inflows helped to finance the boom, and maintain the exchange rate. When the Mexican government issued a growing amount of dollar-denominated debt (tesobonos), and U.S. interest rates started to rise, confidence in the ability to repay such debt began to decline, and the economic bubble burst. Financial difficulties were reinforced by the rising debt service costs for dollar-denominated debt after the devaluation.

Determined government action, rapid export expansion to the U.S. (thanks to open markets there) and considerable international financial support helped to stage a very rapid turnaround. A macroeconomic stabilisation program was introduced. Banks were recapitalised and privatised, although the Banking sector remained relatively weak. Export volume grew by over 40 percent over the following two years. Import volumes contracted by 13 percent in 1995 before rebounding by 23 percent in 1996. Economic growth which had declined by 6 percent in 1995 recovered, and reached 6 and 7 percent in the following two years.

Japan: Protracted crisis

Japan experienced a protracted financial crisis, following the boom of the late 1980s. Expansionary monetary policies and weak regulation and supervision set the stage for a boom-bust cycle which preceded the crisis. In particular, the foreclosure and bankruptcy proceedings and the accountancy rules provided only limited information about the "true" financial position of banks and companies. This allowed banks to accumulate considerable non-performing loans, and attempts to make up for latent losses through risky lending further boosted the bad loan portfolio.

Efforts to reform the regulatory and supervisory framework started in 1992, but implementation was slow and piecemeal. Only in fall 1998, did the government provide significant public funds to recapitalise the banking system. As a result, average economic growth between 1991 and 1997 lagged much behind other industrialised countries. Japan also suffered strongly from the Asian crisis as losses hit an already weak banking system. But many observers agree that the costs of the crisis and the repercussions from the Asian turmoil could have been kept much smaller if the crisis had been tackled earlier.

Transition economies: Shock therapy, gradualism or no therapy

Most transition economies have experienced financial crisis since the end of communist rule. And most crises share common features, including macro-management errors, weak or absent legal frameworks, weak court systems, poor regulation and supervision, insufficient capital, incapable management, and lack of accounting standards. Public ownership and government intervention often induced banks to lend to bankrupt companies, thereby burdening banks with growing non-performing loans. The collapse of traditional export markets after the end of the CMEA also undermined corporate and financial health. Non-performing loans in the Czech Republic, Hungary and Poland reached 15-60 percent of all loans in 1992.

Central Eastern European transition economies have made considerable progress in banking sector reform since 1992. The Czech Republic quickly privatised part of its banking system, and it has kept the macroeconomic costs at bay. However, privatisation remained incomplete while weak portfolios, poor supervision, cross-ownership risks and limited use of bankruptcy and liquidation have made Czech reforms only partly successful. Hungary has created a favourable institutional environment for banks and accelerated privatisation in 1995. However, re-capitalisation costs were high, undermining fiscal stability. Poland has successfully re-

capitalised and privatised its state-owned banks but specialised banks remain weak. Improved solvency, management, governance and supervision of banks, and cooperation with West European commercial bank has given rise to a relatively efficient and strong banking system.

The successful resolution of financial crisis has been highly correlated with the recent economic performance of transition economies. Economic recovery in recent years has also been helped by open markets between each other and with the European Union. By contrast, a number of former Soviet Union countries have made much less progress with financial sector reform. Low efficiency and high costs of intermediation continue to undermine economic growth in those countries.

Sources: Velasco (1991) and Dornbush and Edwards (1994) for Chile; Edwards (1996), Mishkin (1998c), Salvatore (1998), Gonzales-Hermosillo and Pazarbasioglu (1997) and Blaine (1998) for Mexico; Cargill, Hutchison and Ito (1998) and Mishkin (1998c) for Japan; and Borish and Montes-Negret (1998) for transition economies.

Five countries kept their level of protection basically unchanged. These include Poland, Sweden, Bulgaria, Kenya and Mexico. Mexico slightly raised average tariffs, but new anti-dumping claims declined significantly in 1995/96. We mentioned that Chile raised protection somewhat during the crisis, but embarked on significant liberalization afterwards.

Seven countries introduced a more liberal trade regime during the crisis. Ghana lowered tariffs and reduced import licensing requirements in the mid to late 1980s. Hungary significantly liberalized its trade policies during the first half of the 1990s. Turkey started a phase of major trade liberalization during their financial crisis of the early 1980s. Similarly, Columbia reduced applied tariffs but some of this liberalization was reversed through a tariff surcharge. Thailand, Senegal and Spain all reduced average tariff levels during crisis.

The economic, social and trade implications of financial crises from the late 1970s to mid-1990s

Financial crisis often caused a significant deterioration in growth, the fiscal balance and price stability; macroeconomic variables typically improved when the crisis was being resolved

The development of economic, social and trade indicators for the 25 financial crisis episodes is consistent with the discussion in the previous section. Chart IV.1 provides unweighted arithmetic averages for the behaviour of key economic indicators before, during, and after financial crisis for the 25 episodes. All crisis episodes are aligned so that the first crisis year is set as C1. C-1 to C-3, hence, reflect the average indicator for the three pre-crisis years, C1 to C3 reflect the average indicator for the first three crisis years, and PC1 to PC3 refer to the average indicator for the first three post-crisis years.

The chart suggests that average economic growth declined by almost 4 per cent between the pre-crisis period C-3 and the second crisis period C2, when the fall in growth typically bottomed out. In the following periods, growth recovered strongly (by almost 6 per cent). Growth averaged over 5 per cent in the first two post-crisis years.³⁴

Fiscal deficits of about 2 per cent of GDP in the pre-crisis years peaked during the second crisis year at near 6 per cent. The deterioration in the fiscal stance by 4 per cent, however, took on average four years to reverse. Only in the third post-crisis period (PC3) did fiscal deficits approach pre-crisis levels again. The figures for inflation are somewhat distorted by some high- or hyperinflation countries which drive up the average for all countries. Nevertheless, the chart shows the rise in average inflation before and during crisis, before stabilization policies brought down inflation again. Unlike during the great depression, no country experienced deflation over the late 1970s to mid-1990s period.

Finally, real effective exchange rate trends reflect the exchange rate policies described above. On average, countries experienced an appreciation of their currencies until the first year of crisis, before devaluation and depreciation set in. The improvement (decline) in the real effective exchange rate in the following crisis and post-crisis periods averaged almost 20 per cent.

Fast response to crisis, including exchange rate adjustment and open trade policies were correlated with a stronger post-crisis rebound in growth

Chart IV.2 reports macroeconomic experiences by selected country groups. Here the data are aligned such that the first crisis year corresponds to "0", further crisis and post-crisis periods follow, taking the value of "1" to "5", and pre-crisis periods are represented by periods "-1" to "-5".³⁵ Chart IV.2a presents regional averages of real GDP growth before, during and after financial crisis. It is noteworthy that the Latin American and the industrialized countries experienced the strongest decline in growth and the strongest recovery amongst the four regions represented. Asian countries' growth rates declined only marginally during their first period of financial crisis in the 1980s.

The next two Charts IV.2b and IV.2c look at the speed of crisis resolution and exchange rate policy. "Fast responders" (with a crisis lasting three or less years) experience a stronger initial recession. More importantly, the Chart shows that countries which responded swiftly experienced a strong subsequent recovery with growth exceeding 5 per cent on average—much above

³⁴ For Benin, for example, C-1 to C-3 correspond to pre-crisis periods 1985 to 1987, the crisis years 1988 to 1990 are reflected by C1 to C3, and PC1 to PC3 contain data for the post-crisis periods 1991 to 1993.

³⁵ Example: Argentina experienced its first crisis from 1980-82. 1976 to 1979 data, hence, correspond to periods -1 to -4, and 1980 to 1985 data is represented by periods 0 to 5.

Table IV.4: Crisis resolution and exchange rate policies in the context of financial crises, late 1970s to mid 1990s

Country	Crisis Resolution				Exchange Rate Policies		
	Regulatory reform	Macro-economic reform	Directed lending and other	Resolution score (in %) ¹	Fixed rate before crises	Devaluation if fixed rate during crisis	Improved real effective exchange rate ²
Argentina (1)	0.5	0	na	25	no	...	yes
Argentina (2)	1	0.5	na	75	no	...	yes
Benin	1	1	1	100	yes	no	...
Brazil	1	1	0.5	83	no	...	...
Bulgaria	1	1	0.5	83	no	...	no
Chile	1	1	1	100	yes	yes	yes
Colombia	1	1	1	100	no	...	yes
Côte d'Ivoire	1	1	0.5	83	yes	no	no
Estonia	1	1	0.5	83	yes	no	no
Finland	1	1	1	100	no	...	yes
Ghana	1	0.5	1	83	yes	yes	...
Hungary	0.5	0	0	17	no	...	no
Indonesia	1	1	0.5	83	no	...	no
Kenya	0.5	0.5	0.5	50	yes	yes	...
Latvia	1	1	1	100	no	...	no
Malaysia	1	1	1	100	yes	yes	yes
Mexico	0.5	1	0.5	67	yes	yes	yes
Philippines	0.5	0.5	1	67	no	...	yes
Poland	1	0.5	1	83	no	...	no
Senegal	1	0.5	0.5	67	yes	no	...
Spain	1	1	na	100	no	...	yes
Sweden	1	1	na	100	yes	yes	yes
Thailand	1	1	0.5	83	yes	yes	...
Turkey	0.5	0	0.5	33	no	...	...
Uruguay	1	0.5	0.5	67	no	...	yes

Source: Compiled from Caprio & Klingebiel, 1996a and b; IMF, International Financial Statistics.

1 As compared to possible score, determined by the sum of previous three columns. Example, Brazil has achieved 2.5 out of a possible score of 3, or 83 per cent.

2 During and after crisis compared to pre-crisis period.

the rate for countries which dealt with financial sector problems more slowly. Exchange rate policy also seems to be an important determinant of the recovery. Countries with a depreciation in the real effective exchange rate experience similar pre-crisis growth as countries without such a boost for competitiveness. During the crisis, the dip in growth is more pronounced but the post-crisis recovery is much stronger for countries with a real effective exchange rate depreciation.

We do not have a good measure for the level of trade protection over an extended period of time for most sample countries. Furthermore, we cannot compare the performance of protectionist with liberal countries as none of the countries for which we have information adopted strongly protectionist poli-

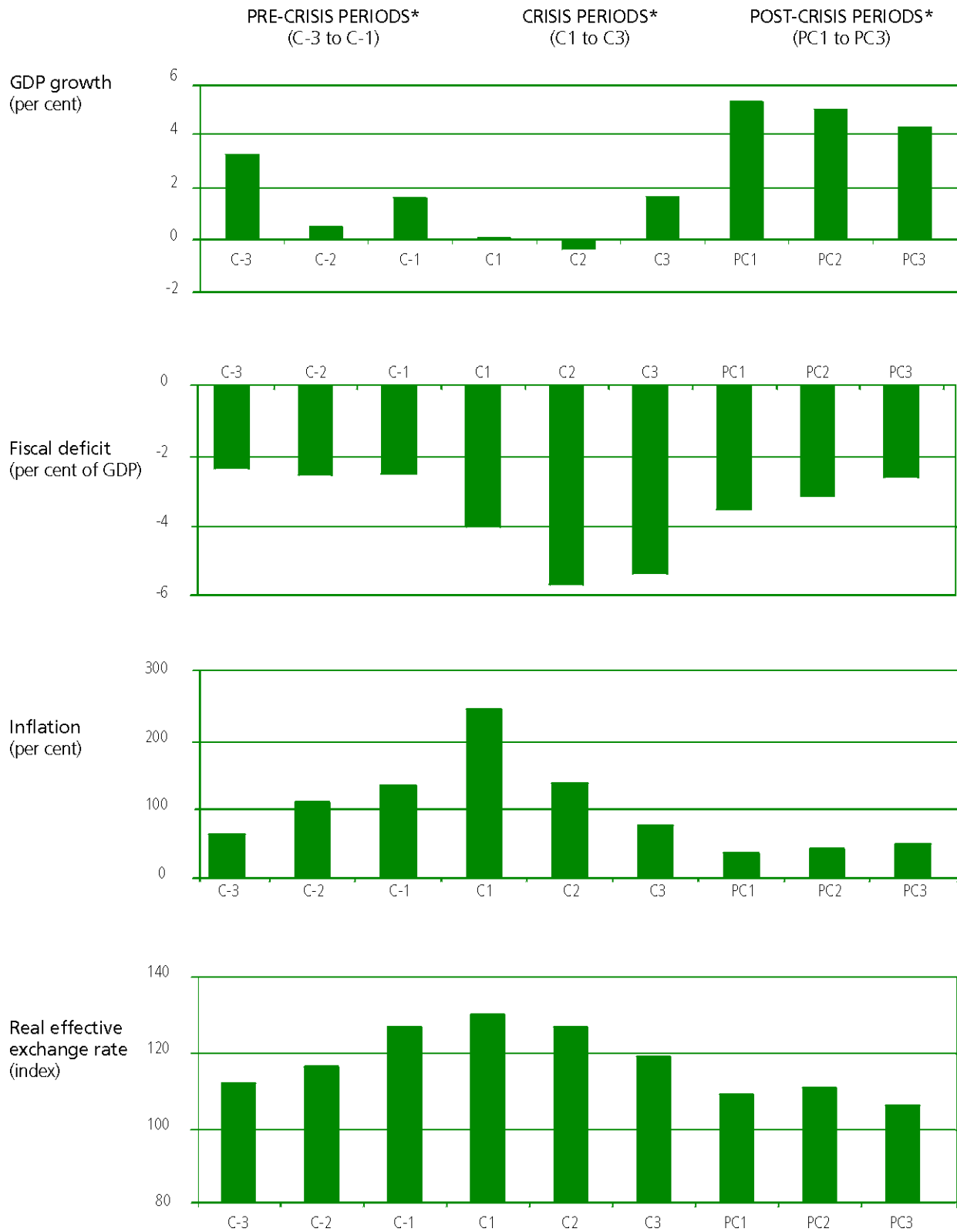
cies. However, the change in trade openness between the first crisis year and a few years after the crisis is likely to reflect, in part, the country's trade policy stance.³⁶ Chart IV.2d suggests that countries which experienced a strong increase in trade openness after the crisis also report much stronger post-crisis growth than countries whose trade share grew less strongly. This suggests that strong trade growth contributed to economic recovery (and probably vice versa).

Financial crises often cause considerable unemployment

The social costs of financial crises were also often high. Although data are relatively scarce, we were able to find ILO unemployment data for nine of the sample countries for a suffi-

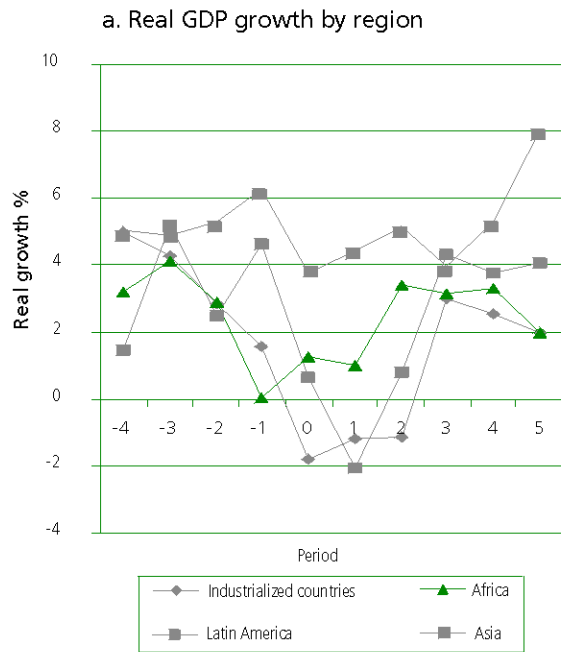
³⁶ The openness indicator not only reflects trade policies. A decline in the openness indicator before a crisis is also indicative of the relative expansion of the tradable versus the non-tradable goods sector. A post-crisis rise in trade openness reflects the re-allocation of resources due to demand and exchange rate policies.

Chart IV.1: Financial crisis and economic developments, 25 crisis countries, late 1970s to mid 1990s

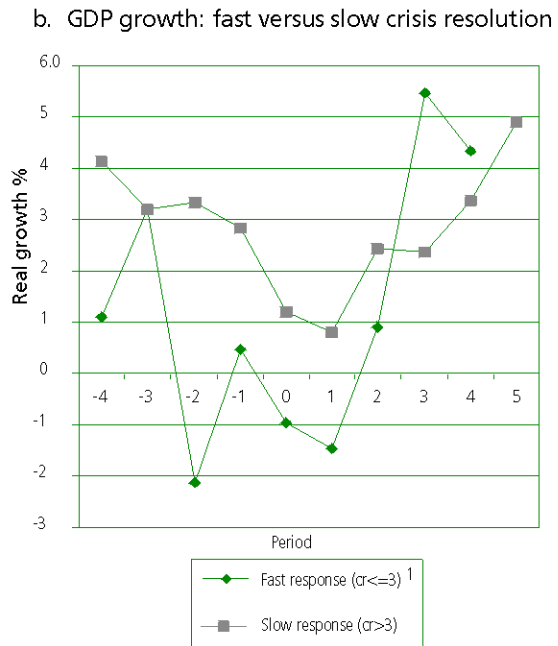


Sources: World Bank, World Development Indicators, 1998; IMF, World Economic Outlook, 1998 and 1999; OECD, Outlook December 1998; CEPAL, January 1999.
 *Pre-crisis periods are three years preceding crisis; crisis periods include first three crisis years; post-crisis periods refer to first three post-crisis years.

Chart IV.2: Economic implications of financial crisis, selected country groups, late 1970s to mid 1990s

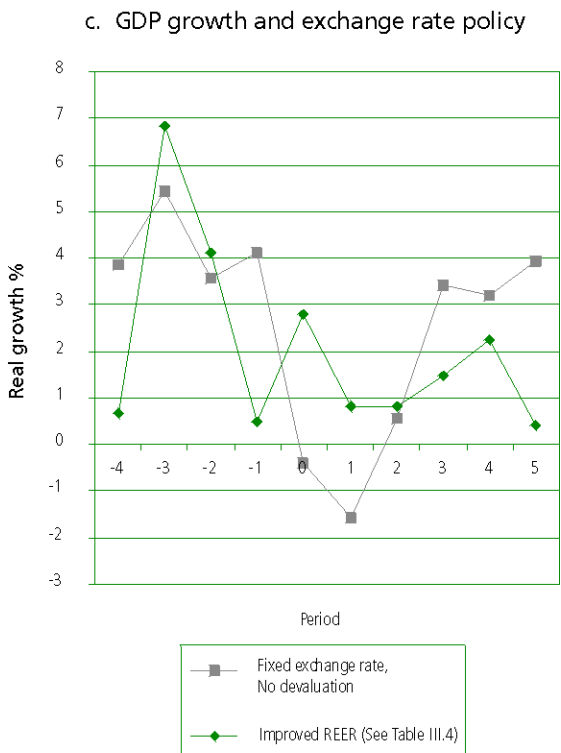


Note: -1 to -4=pre-crisis period; 1 to 5=crisis period and post-crisis periods (for median country, post-crisis starts in period 3).

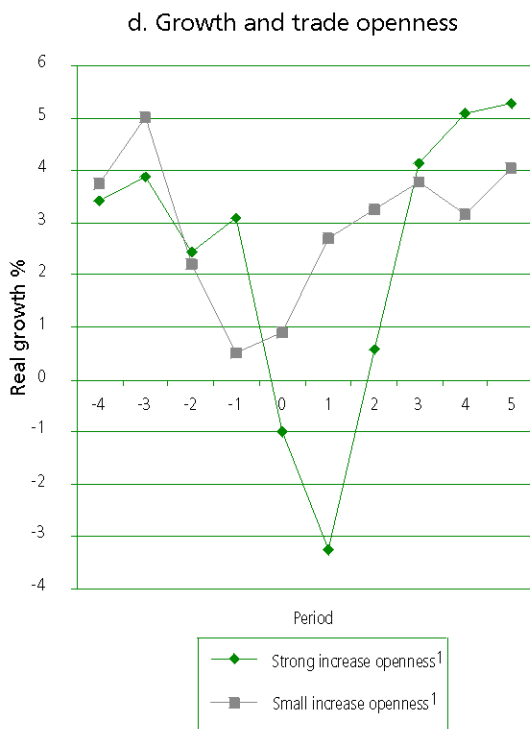


Note: -1 to -4=pre-crisis periods; 0=first year of crisis; 1 to 4=subsequent crisis and post-crisis periods (for median country, post-crisis starts in period 3);

¹ $cr \leq 3$ means crisis less than/equal to 3 years (includes 13 countries); $cr > 3$ means more than 3 years of crisis (includes 13 years of crisis); see Table III.3 for more detail.



Note: -1 to -4=pre-crisis periods; 0=first year of crisis; 1 to 5: subsequent crisis and post-crisis periods (for median country, post-crisis starts in period 3)

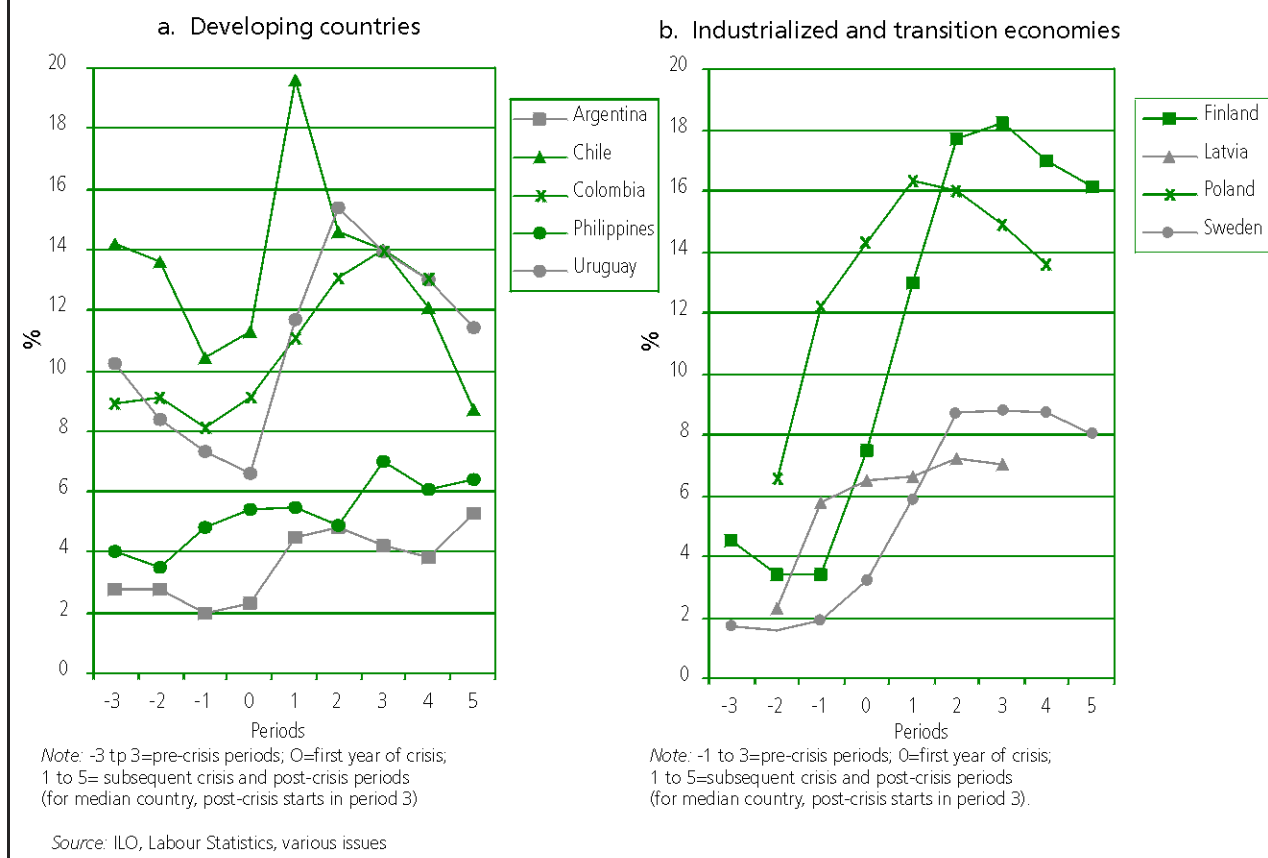


Note: -1 to -5=pre-crisis periods; 0=first year of crisis; 1 to 6=subsequent crisis and post-crisis periods (for median country, post-crisis starts in period 3).

¹ increase in ratio of exports over GDP between crisis minimum and post-crisis (3 years) maximum greater or smaller than average of 32%.

Source: World Bank, World Development Indicators, 1998; IMF, World Economic Outlook, 1998 and 1999.

Chart IV.3: Financial crisis and unemployment, selected countries, late 1970s to mid 1990s



ciently long time period. Most of the nine countries display a “lying S”-shaped pattern of unemployment rates (Chart IV.3). Unemployment tends to fall until the last pre-crisis or even the first crisis period before it increases strongly during the crisis. In the post-crisis phase, unemployment falls again. In the case of Chile, unemployment rapidly fell back to below pre-crisis levels but in all other countries unemployment fell much more slowly than it had increased. Furthermore, unemployment remained higher than the levels reported before the crisis. In the case of industrial countries, these figures are consistent with an upward-ratcheting of unemployment levels over the past 25 years. In some countries, however, the low pre-crisis levels of unemployment may also reflect below-equilibrium unemployment due to the pre-crisis economic boom.

Trade developments were strongly affected by policy responses; in most cases, export volumes grew rapidly while import growth temporarily contracted

The case studies suggest that trade was an important part of moderating and solving financial crisis. Chart IV.4a illustrates that trade openness (measured as the ratio of exports and imports over GDP) dipped during the crisis before rising strongly thereafter. Table IV.5 provides more detail on different country groups. Post-crisis trade-openness rose strongly by at least 15 per cent between period 1 and 4 in Asia, industrialized countries

and Latin America, after having stagnated before the crisis. In Africa, the openness index falls before the crisis and rises only slowly thereafter. This is because of the three CFA countries dominating the data for the African sample countries.

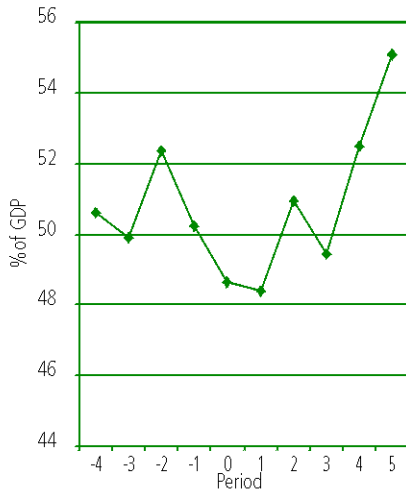
Chart IV.4b suggests that real trade growth strongly depends on exchange rate policies. Countries which devalued their currency experienced a strong increase in trade. The openness index increased from a low of 50 per cent in period 1 (second crisis year) to almost 75 per cent in period 5. Countries with an exchange rate peg and without devaluation experienced a strong decline in the importance of trade before the crisis and a stagnation afterwards. Chart IV.4c compares countries which successfully emerged from crisis and those countries (7 in total) which experienced either continued low growth or post-crisis macroeconomic destabilization. Here again, success and trade-openness are strongly correlated.

Charts IV.4d to f provide more detail on the development of trade volumes and values. Chart IV.4d shows that export volumes expanded strongly in a number of sample countries, thereby contributing to financial and economic recovery.³⁷ This development was most pronounced in Thailand. Import values and volumes grew considerably less fast or even declined in the beginning of numerous financial crises. By the third crisis year, however, imports started to recover strongly.

³⁷ Trade volume data, however, is very scarce and often re-calculated. Long time series were only available for a few countries.

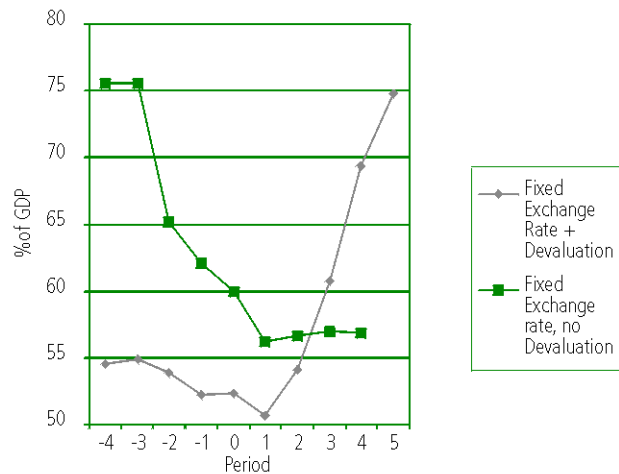
Chart IV.4: Financial crisis and trade developments, late 1970s to mid 1990s

a. Trade openness - all countries



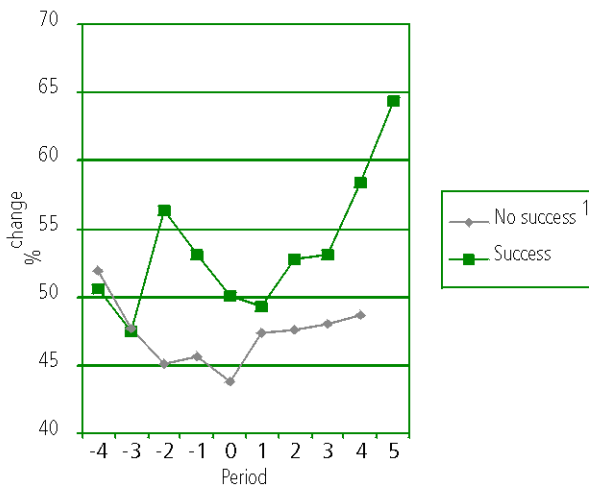
Note: -1 to -3=pre-crisis periods;0=first year of crisis; 1 to 5=subsequent crisis and post crisis periods (for median country, post-crisis starts in period 3).

b. Trade openness and exchange rate policy



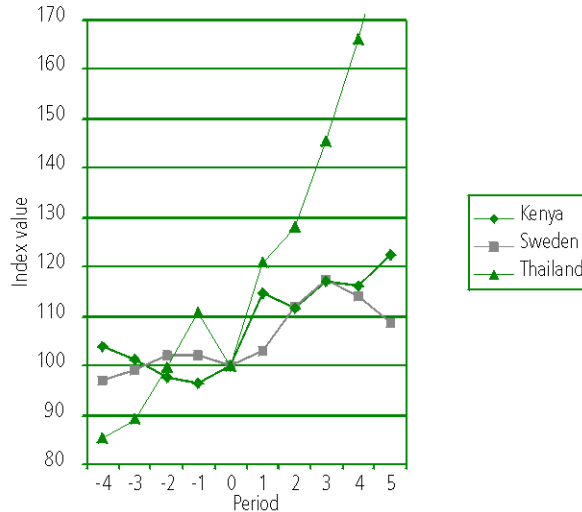
Note: -1 to -3=pre-crisis periods;0=first year of crisis; 1 to 5=subsequent crisis and post-crisis periods (for median country, post-crisis starts in period 3).

c. Trade openness and successful crisis resolution



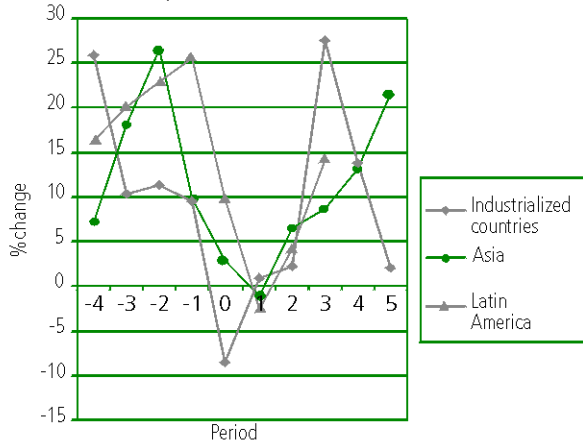
Note: -1 to -4=pre-crisis periods;0=first year of crisis; 1 to 5=subsequent crisis and post-crisis periods (for median country, post crisis starts in period 3).

d. Export volume change, country sample, t0=100



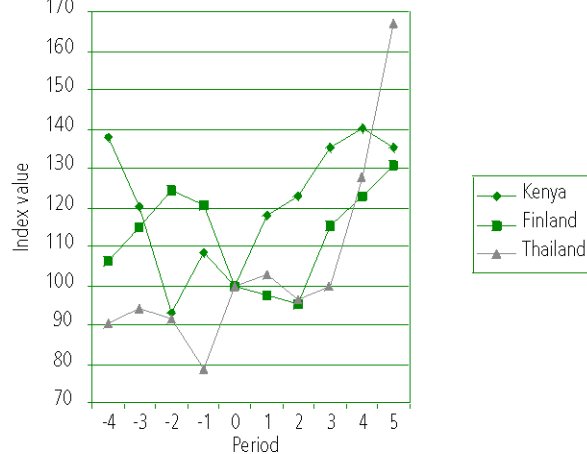
Note: -1 to -4=pre-crisis periods;0=first year of crisis; 1 to 5=subsequent crisis and

e. Change in import value by region (in per cent)



Note: -1 to -3=pre-crisis periods;0=first year of crisis; 1 to 3=subsequent crisis and post-crisis periods (for median country, post-crisis starts in period 3).

f. Import volume change, country sample, t0=100



Note: -1 to -4=pre-crisis periods;0=first year of crisis; 1 to 5=subsequent crisis and post-crisis periods.

Table IV.5: Trade openness¹ and financial crisis, by region, 1970s to mid-1990s

	Pre-crisis periods ²				Crisis and post-crisis periods				
	-4	-3	-2	-1	0	1	2	3	4
Industrialized countries	48.0	48.9	48.0	46.3	43.5	45.3	50.7	55.9	60.5
Transition countries	75.9	71.5	92.7	85.3	76.5	82.7	82.8	n.a.	n.a.
Africa	60.9	60.5	52.7	50.0	47.6	46.3	47.2	48.6	52.1
Asia	52.9	53.2	55.4	55.6	56.7	56.1	59.6	62.0	64.8
Latin America	28.2	28.0	28.7	28.1	29.9	26.0	29.3	30.7	31.9

¹ (Exports + Imports)/ GDP.

² Each period equals 1 year.

Source: World Bank, World Development Indicators, 1998.

C. The Asian Crisis

Causes and policy responses

The Asian crisis “officially” started in July 1997, when Thailand floated its currency, the baht. In the following months, a number of other East Asian countries (excluding China and Hong Kong, China) floated their currencies as well. The crisis spread from Thailand to Malaysia, the Philippines, the republic of Korea, and Indonesia (Asia 5), and deepened considerably in the fall of 1997 when Indonesia’s and the Republic of Korea’s financial difficulties became more and more serious. In August 1998, the peg of the rouble to the US\$ collapsed, and Russia slipped into crisis. According to the IMF WEO (10/98), severe banking sector problems continued in Asia 5 into fall 1998, and non-performing loans at that time were estimated at 20 to 30 per cent of total loans. A number of Asian countries started introducing significant reforms in the financial sector and elsewhere in response to the crisis. First signs of improvements began emerging towards the end of 1998.

Domestic macroeconomic and regulatory problems are amongst the key causes of crisis

The factors contributing to financial crisis in Asia seem quite well-known by now—although the debate on the division of responsibility between the different elements is likely to continue for some time (IMF, WEO, December 1997 and October 1998; World Bank, 1998). Most observers stress domestic policy errors as the prime cause of a “classic” bubble economy which precipitated the financial crisis. In most countries of the region, however, the financial sector was relatively under-developed and weak to begin with. Governments attempted to promote domestic industrial and service producers through directed lending to priority sectors, interest ceilings and state-run financial institutions. To facilitate the implicit subsidization of various producers through the financial sector it had to restrict international competition. In addition, financial sector interventions were influenced for political and personal reasons.

A bubble economy emerged in the mid–1990s, when strong private credit extension coupled with weak prudential regulation and supervision, provoked “risky” lending and declining investment productivity. In fact, current account deficits (an indicator of domestic excess demand) became quite large and, over the years, accumulated to considerable external debt in some countries. First doubts about sustainability appeared in 1996 (see e.g., Salvadore, 1998). Initially, untransparent accounting and corporate governance structures made it possible to obscure growing financial and corporate sector problems. When the bubble ultimately burst and banks and enterprises got into difficulties, weak or absent bankruptcy laws and procedures made things worse.

“Herding behaviour” by international investors and moral hazard may have exacerbated the crisis

The Asian crisis, however, would not have achieved such prominence if it had not been for the role of international financial markets and investors. The boom of the early to mid–1990s had been increasingly financed with short-term bank lending from abroad, especially in Indonesia, the Republic of Korea and Thailand. Foreign financing undermined macroeconomic control, while probably also making rulers and regulators complacent about the state of their economy and their financial system. Foreign financing was also stimulated by the fact that domestic interest rates were often higher than abroad. As borrowers perceived the exchange rate to be “untouchable”, this seemed like a “guaranteed” way of reducing financing costs. Low interest rates in industrial countries and the excellent economic record of the Asian tigers enticed lenders from the advanced economies to provide funds to this region at relatively low risk premiums. The latter was also “artificially” lowered by foreign and domestic lenders’ belief that governments would bail them out in case of difficulties. This, it is frequently claimed, created a moral hazard problem. The latter might have been worsened by the perception that international financial institutions were providing financing too easily in case of crisis. As a result, the corporate sector in sev-

eral countries had considerable debt which made it highly vulnerable to swings in investor confidence (World Bank, 1998).

When (poorly informed) international investors ultimately recognized that they had invested in a bubble economy, and debt had reached a magnitude which undermined the credibility of the implicit government guarantees, domestic and foreign "capital flight" set in. Underdeveloped financial markets made things worse in Indonesia and the Republic of Korea, where foreign financing was heavily skewed towards short-term lending. When large amounts of foreign short-term liabilities became due, and markets became illiquid, staggering exchange rate depreciations and near-debt defaults in these two countries followed. This resulted in severe liquidity shortages, affecting virtually all financial transactions.

Reform programs, including trade liberalization, have raised hopes of crisis resolution in 1999/2000

In the context of IMF programs, the Republic of Korea, Thailand, the Philippines and Indonesia started introducing significant economic reform programs in 1997/98. Tight monetary policies successfully contained inflation, except in Indonesia. Much emphasis was on financial sector reform, including strengthened prudential regulation and supervision, and revitalization of the banking system. The World Bank (1998) estimates that re-capitalization of the banking system in Asia 5 may cost 20–30 per cent of GDP. A number of other reforms (with much emphasis on transparency) were under preparation as of end 1998 (IMF, WEO, October 1998). After some delay, social safety net spending was prioritized to reduce the social costs of the crisis.³⁸ Nevertheless, the credit crunch and high interest rates made many investment projects unprofitable and undermined consumer confidence, with severe repercussions on economic activity.

Unlike during previous financial crises, importers at times had significant difficulties in obtaining trade financing. This was due to high levels of indebtedness (threatening corporate solvency) and severe disruptions in the domestic banking system. The situation was particularly tense in Indonesia in early 1998. Lack of letters of credit or high foreign exchange deposit requirements and reluctance by export guarantee agencies to underwrite new, possibly risky business with crisis countries are some of the difficulties experienced. Often, substitution to cash-financing, barter deal and other trade financing instruments seem to have provided some relief. In some instances, caution with providing credit to some "risky" traders also may have been fully justified and "strategic" complaints and threats were prevalent. However, some well-conceived government-supported trade financing programs at the height of the crisis could have proven useful. Although far from being "perfect", the situation seems to have improved considerably during the course of 1998 (Stephens, 1998a).³⁹

Protectionist responses by the crisis countries were virtually absent. Liberalization more than outweighed the few, minor tariff increases in Thailand, the Philippines and Malaysia. Indonesia and the Republic of Korea introduced significant reductions in tariffs and quantitative restrictions. Financial markets were opened to foreign investors in Thailand, the republic of Korea and Indonesia to gain capital and expertise. Only Malaysia re-introduced capital controls and returned to a fixed exchange rate system in September 1998.⁴⁰

Improvements in the international financial architecture are being discussed, and to some extent, also realized

At the same time, a debate has started on the reform of the "international financial architecture" (for details, see IMF, ICM, 1998, G7 statements, and BIS publications). Especially, the issue of "burden sharing" by international lenders in the costs of crisis is controversial. Domestic and international investors in shares and corporate bonds incurred significant losses from the fall in asset prices. The population suffered from rising unemployment and falling wages. International lenders, on the other hand, are perceived to get away too lightly when funds provided by international financial institutions and governments are used to pay them back in full. Without "burden sharing" in the future, it has been argued, moral hazard might lead to further costly crises with international spillovers down the road. However, we mentioned above that burden sharing requirements can also have adverse effects. International lenders could be induced to cut credit lines more quickly in times of crisis to contain their exposure. Furthermore, the risk premium on emerging market debt would rise, and this would raise the debt servicing costs on a debt stock which was contracted under the assumption that interest rates would be lower.

The Asian crisis has also made it obvious that crisis management systems need to be improved. Mechanisms for orderly "debt workouts" are therefore being discussed, and a new crisis-oriented IMF financing facility was put in place. We mentioned above that opinions on the extent of international moral hazard differ, but measures to strengthen IMF surveillance are being prepared. International codes of conduct are being developed to establish benchmarks for stability-enhancing behaviour and better policy evaluation. An international "financial stability forum" has been set up which first met in April 1999.

The economic, social and trade implications of the Asian crisis

The Asian crisis has been a significant shock to the world, because of the region's exemplary role of successful development before the crisis. By contrast, the economic and social repercussions of the crisis in Indonesia have come close to the experience of the Great Depression, and in the other regional economies, they have been dramatic as well. The Asian crisis started receiv-

³⁸ For more detail on implemented and suggested reforms, see IMF, WEO, Oct. 1998, p. 43-44.

³⁹ Stephens suggests to consider, for example, partial (instead of moral hazard-creating full) guarantees from debtor governments, and interventions to prevent the collapse of exchange rates.

⁴⁰ In early 1999, Malaysia relaxed its capital controls and replaced some quantitative restrictions by price-based measures. It is too early to evaluate the Malaysian experience with re-introducing controls as compared to more liberal approach of the other crisis countries.

Table IV.6: Exchange rate movements, Asian crisis countries and developing country competitors, June 1997 to September 1998 (per cent)¹

	Bilateral exchange rate		Real effective exchange rate ²
	Versus US dollar	Versus Japanese Yen	
Indonesia	-77.7	-73.8	-56.3
Korea, Rep. of	-33.8	-22.2	-19.8
Malaysia	-39.8	-29.2	-27.2
Philippines	-38.3	-27.5	-26.0
Thailand	-36.7	-25.6	-19.1
Average	-45.3	-35.7	-29.7
Chile	-11.3	4.3	-0.2
India	-15.9	-1.1	-3.0
Mexico	-22.2	-8.5	-6.4
Singapore	-17.6	-3.1	-2.7
South Africa	-27.0	-14.1	-19.0
Chinese Taipei	-19.4	-5.2	-12.4
Average	-18.1	-4.6	-7.3
Argentina	0.0	17.7	3.9
China -	17.4	6.1	...
Hong Kong, China	0.0	17.5	16.1
Hungary	-13.8	1.3	2.8
Poland	-10.6	5.1	2.4
Turkey	-47.5	-38.3	21.2
Venezuela	-17.2	-2.6	26.8
Average	-22.3	...	11.7

Source: IMF, Direction of Trade Statistics (DOTS) and Information Notice System (INS) databases; WEFA, Inc; and IMF staff calculations.

¹ Change from June 1997 to September 1998; positive number means appreciation. September 1998 was calculated based on the average exchange rates up to and including September 21.

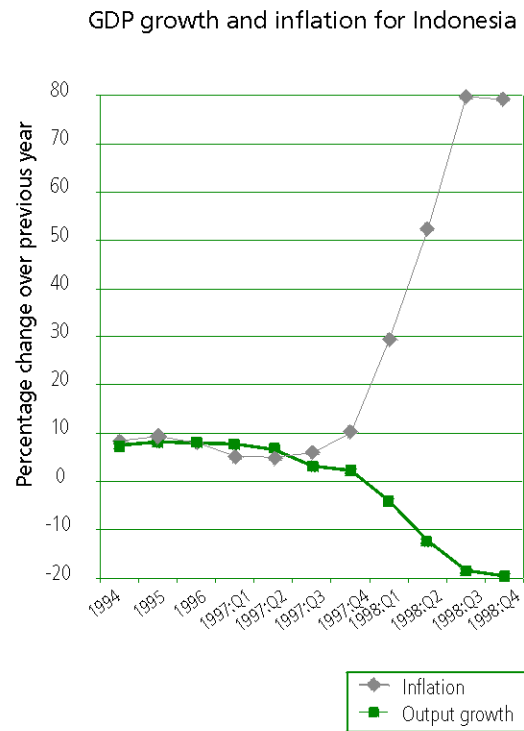
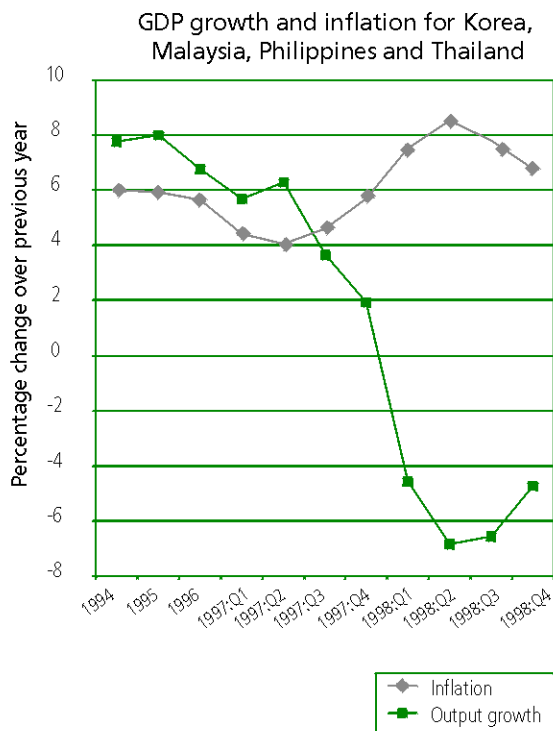
² DOTS weights: Partner country weights capture only bilateral trade, based on data for 1994-96.

ing attention with the devaluation of the Thai baht in July 1997, and drastic exchange rate depreciations followed in all five Asian crisis countries (Table IV.6). Nominal exchange rates fell by 37–78 per cent towards the US dollar, and by 22 to 74 per cent towards the Japanese yen between June 1997 and September 1998. This translated into real effective exchange rate depreciations of 19–56 per cent which significantly exceeded the degree of overvaluation experienced before the crisis (between 9/98 and spring 1999, some reversal of this “overshooting” has been reported). The competitiveness of exporters in Asia 5 improved as a result, but foreign debt-service obligations increased as well. This, in turn, undermined corporate solvency especially in sectors where foreign debt is not serviced by export earnings.

A strong output decline led to much higher unemployment and more poverty in South East Asia

Table IV.7 and Chart IV.5 illustrate the economic and social costs of the Asian crisis. Real economic growth in the Republic of Korea, Malaysia, the Philippines and Thailand declined from a regional average of 7–8 per cent before the crisis to negative 7 per cent by the second and third quarter of 1998 before improving slowly in the fourth quarter of 1998 (Chart IV.5.a). In Indonesia, output contracted even more sharply at an annualized rate of almost 20 per cent in the second half of 1998 (Chart IV.5.b). The output decline caused unemployment to rise to a projected 15 per cent in Indonesia and 7.5 and 6 per cent in the Republic of Korea and Thailand, respectively. Growth is likely to remain very limited in 1999, and unemployment is not likely to

Chart IV.5: Output and inflation in Asian crisis countries, 1994-1998
(Percentage change over previous year)



Source: WTO Secretariat.

fall significantly before 2000 (IMF, WEO, October 1998, p.61). Despite the considerable devaluations, inflation was successfully contained in the region, and remained at single digit levels in Malaysia, Thailand, the Republic of Korea and the Philippines. In Indonesia, the spectre of hyperinflation was probably eradicated by the end of 1998 as well, despite inflation reaching annualized rates of 80 per cent in the second half of that year.

Some estimates of the effect of financial crisis on poverty also exist, but uncertainty about data and the availability of safety nets do not allow very precise estimates. Before the crisis, the share of the population living below the poverty line was 11 to 16 per cent in the three countries for which data are available. Worst case estimates (which suggested that poverty would double) seem to prove exaggerated but higher unemployment has certainly caused much hardship especially in urban areas, as each wage earner often has a large family to feed (World Bank, 1999). Rural areas sometimes benefited from the devaluation's impact on exportable food crop prices and rural-urban terms of trade. Informal social safety nets were also more readily available in the country-side to cushion social hardship. If further economic decline and unemployment can be contained, the increase in poverty might be limited to 2-5 per cent of the population (IMF, WEO, October 1998).

Exports benefitted from strong devaluation while imports contracted in the poor economic climate

Chart IV.6 provides summary statistics on the trade repercussions of the Asian crisis up to the end of 1998. It illustrates the strong contraction in imports, which is far in excess of overall economic decline. Export value growth (in US\$) had slowed down in 1996 and 1997 compared to 1995, and in 1998, the dollar value of exports even declined. Both series on export and import values, however, mask a much more favourable volume trend. The trade statistics are shown in US dollar but a large share of trade is with countries whose currency has depreciated considerably towards the US dollar. Trade with Japan, for example, would have posted a strong decline in dollar terms between the middle of 1997 and the middle of 1998, even if it had stayed constant in Japanese yen. The strong fall in commodity prices also depressed the dollar value of trade, especially of imports (and in the case of Indonesia also of exports). Consequently, Chart IV.6b reports strong positive export volume growth, exceeding 15 per cent in 1997. Although the export volume growth of crisis countries slowed down in 1998, its role of expansion remained more than two times faster than that of world exports. The large increase in real net exports in 1998 will help countries to emerge from crisis, and reduce unemployment by picking up some of the slack elsewhere in the economy. But the export response would have probably been much stronger in 1998 if Japan had not been hit severely by recession as well and if intra-regional trade had not been so important.

Table IV.7: Economic and social implications of the Asian financial crisis

	Country	1996	1997	Forecast 1998
Real GDP (percent change)	Indonesia	8.0	4.6	-15.0
	Korea, Rep. of	7.1	5.5	-7.0
	Thailand	5.5	-0.4	-8.0
Unemployment (percent of labour force)	Indonesia	4.9	5.4	15.0
	Korea, Rep. of	2.0	2.7	7.5
	Thailand	2.0	4.0	6.0
Consumer price inflation (percent change)	Indonesia	7.9	6.6	60.0
	Korea, Rep. of	4.9	4.4	8.5
	Thailand	5.9	5.6	9.0
Poverty (Additional poor in percent of population)	Indonesia	...	...	4.8 - 11.2
	Korea	...	...	1.6 - 12.1
	Thailand	...	...	2.3 - 11.6

Source: IMF, World Economic Outlook, October 1998.

The direction and composition of trade adjusted to changes in the exchange rate and in the economic climate

We can also observe a change in the direction and composition of trade, although much of the likely effect is not yet captured by available data. Chart IV.7 illustrates that exports to the US and Western Europe as a share of total exports from the Republic of Korea, Malaysia and Thailand have increased considerably between 1996 and the first half of 1998. At the same time, the share of exports to Japan has fallen, probably both as a result of the falling yen and the recession in Japan. Exports to the other Asian crisis countries have also fallen, but again this is probably more the result of currency depreciation than of volume declines. On the import side, we observe falling import shares from Western Europe and Japan, as imports from these countries became more expensive. Imports from within the region on the other hand increased strongly as they became more competitive. Only the increase in the US import share comes somewhat as a surprise.⁴¹

There is also evidence that the composition of imports to the crisis countries is changing. Table IV.8 illustrates the overall fall in imports and the change in import structure in the Republic of Korea between 1996 and 1998. While overall imports fell by almost 40 per cent, the import value of consumer durables and investment goods such as iron and steel, transport equipment and other capital goods fell most strongly by 50–72 per cent (see also JETRO, 1998). A reversal of this trend may start in 1999, as economic recovery sets in and companies have to start investing and retooling again.

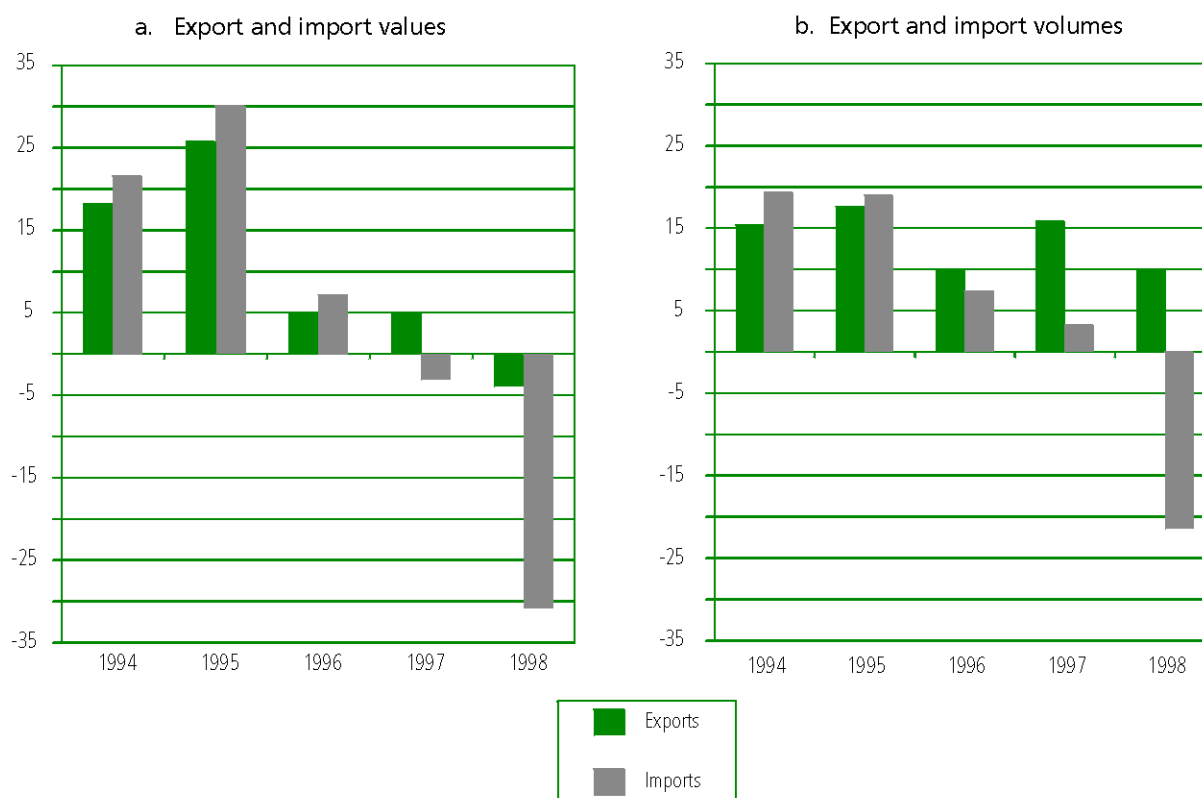
World output and trade have suffered from international repercussions of the crisis

The Asian crisis has also had considerable repercussions for world growth and trade. We mentioned above that world economic growth for 1998 has been revised downward by about 2 per cent between May 1997 and October 1998. The Asian crisis, the Russian crisis, the slow-down in Latin America, and adverse effects from the commodity price declines (which have at least partly been caused by falling demand in Asia) are the main reasons for this change in outlook. Zhang and Cline (1998) estimate that the adverse growth effect of the Asian crisis on the US and the EU has been relatively moderate, at about 0.6–0.7 per cent of GDP. Japan's negative growth in 1998 is partly due to Asian crisis spillovers as well.

The previous Table IV.6 on exchange rate developments in 1997/98 gives us some more indication on economic spillovers to other emerging markets. The table identifies two country groups in addition to the Asian crisis countries. The first group, comprising Chile, Mexico, etc. experienced a decline in their real effective exchange rate, but this decline was smaller than in Asia 5. This means that their exports have become less competitive relative to exports from Asia 5, but on balance, exchange rate developments have not been unfavourable. These countries are also likely to experience less adverse growth spillovers. The third country group, by contrast, comprises countries which experienced an appreciation in their real effective exchange rates. This was strongest for Hong Kong, China, Turkey and Venezuela over the 6/97 to 9/98 period. Part of their expected economic slow-down is probably due to exports suffering from real effective exchange rate appreciation.

⁴¹ This may have to do with pre-crisis trade contracts (which have to be full-filled even at a less favourable exchange rate) and a small import elasticity for imports from the US (J-curve). A small import elasticity implies that imports do not react strongly to exchange rate changes. This could be the case, for example, if imports such as machines or spare parts can not easily be switched to suppliers from other countries.

Chart IV.6: Trade developments in Asian crisis countries, 1994-1998



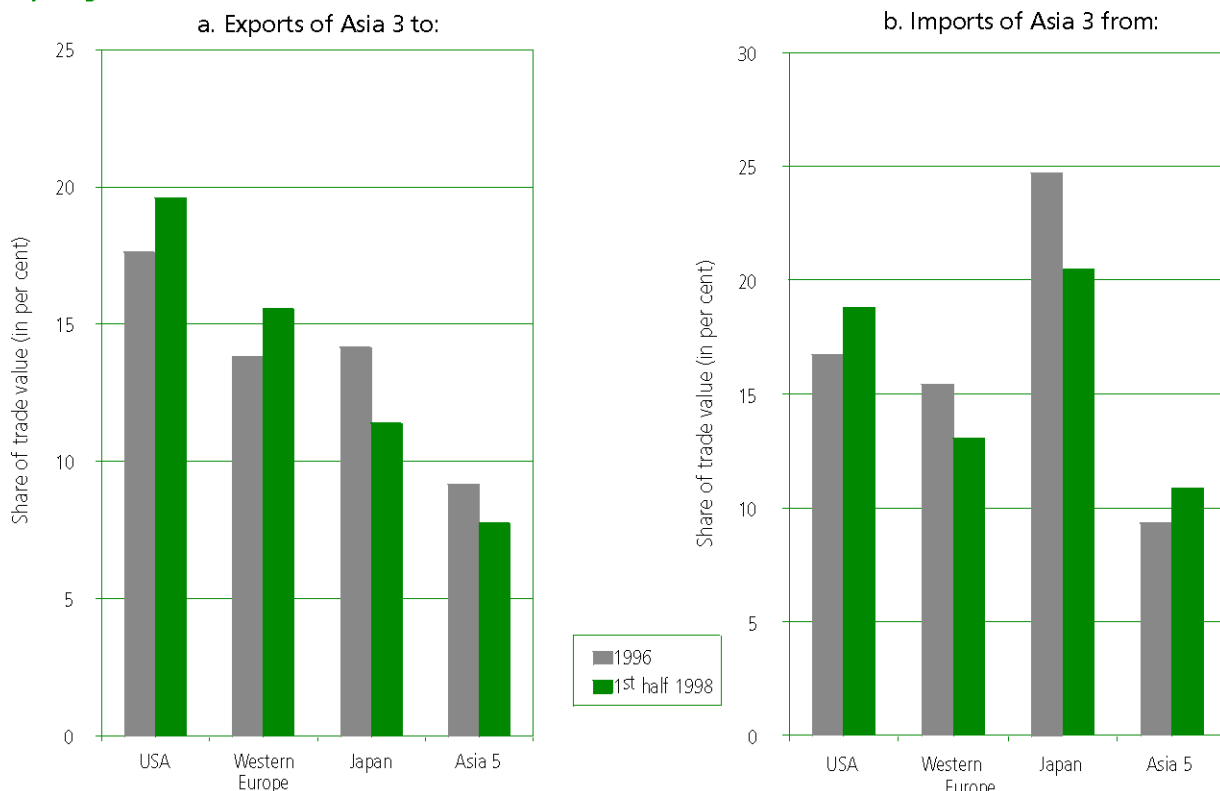
Source: WTO Secretariat.

Table IV.8: Merchandise import structure of the Republic of Korea, 1996 to 1998
(Million US dollars and percentage)

Product category	Value			Percentage change in import value, 1996-98	Percentage share		
	1996	1997	1998		1996	1997	1998
All merchandise	150339	144616	93282	-38.0	100.0	100.0	100.0
Food and consumer goods	16942	15603	9157	-46.0	11.3	10.8	9.8
Consumer durables	5616	5182	2800	-50.1	3.7	3.6	3.0
Fuels	24181	27212	18166	-24.9	16.1	18.8	19.5
Iron and steel	6762	5826	2978	-56.0	4.5	4.0	3.2
Capital goods	58896	52783	33822	-42.6	39.2	36.5	36.3
Electric and electronic machinery	21391	23966	18939	-11.5	14.2	16.6	20.3
Transport equipment	5416	2934	1491	-72.5	3.6	2.0	1.6
Other capital goods	32089	25883	13392	-58.3	21.3	17.9	14.4

Source: The Bank of Korea, Monthly Statistical Bulletin, April 1999.

Chart IV.7: Merchandise trade of the Republic of Korea, Malaysia and Thailand, by origin and destination, 1996 and 1998



Note: Asia 3 includes Korea, Malaysia and Thailand. Asia 5 includes Indonesia, the Republic of Korea, Malaysia, Philippines and Thailand.
Source: WTO Secretariat.

As economic growth slows down so does world trade. The WTO estimates that 1998 world trade growth only reached 4 per cent, after more than twice the growth rate in 1997 (see also Table II.3 in the previous section). The crisis, coupled with exchange rate re-alignments, also strongly affected some countries' current account balances. The combined improvement in the latter for the five Asian crisis countries is estimated at US\$ 100–150 billion for 1998 (Zhang and Cline, 1998).

We mentioned that Asian countries have liberalized rather than restricted trade flows. New protection by the countries which absorb most of Asia 5's exports has so far been limited. However, the trade policy environment may not stay as benign as it seems to have been in 1997 and 1998, unless protectionist forces in the major markets are kept at bay. Anti-dumping claims have been the most-used measure of contingency protection against South-East Asia in the past, and the five crisis countries have continued to be affected by them. Table IV.9 illustrates that between 12 and 20 per cent of world anti-dumping investiga-

tions were directed against Indonesia, the Republic of Korea, Malaysia, the Philippines and Thailand in the 1990s. This is 2–3 times their share of world trade. 1997 saw a 20 per cent increase in such claims over 1996, but in 1998 the number of claims seems to have stabilized. Nevertheless, this aggregate figure masks some intra-regional differences: while the number of cases against Thailand and Indonesia declined, the Republic of Korea reported a strong increase in investigations against its exporters. As a result, the Republic of Korea was the target of two thirds of the anti-dumping cases against Asia 5 in 1998. Some of these cases (e.g. steel) were highly-publicized, and have drawn the danger of protection into the lime-light.

All observers have warned that closing markets to exports from the crisis countries will backfire. It undermines countries' ability to repay debt and emerge from crisis. Prolonged crisis in Asia would almost certainly fuel further global economic and financial turmoil and, thereby, provoke less growth and more unemployment elsewhere as well.

Table IV.9: Anti-dumping investigations against exporters from Indonesia, the Republic of Korea, Malaysia, Philippines and Thailand (Asia 5), 1993-97

	1993	1994	1995	1996	1997	1998 ¹
European Union	6	11	14	4	8	4
United States	2	7	1	1	3	6
Asia and Oceania	13	6	9	17	17	10
Latin America	12	3	6	3	2	3
Other	4	4	2	4	5	10
Total	35	29	30	28	33	33
Percent of world total investigations	12.4	13.6	20.5	13.1	15.0	15.1
<i>Memorandum item:</i>						
Share of Asia (5) in world merchandise exports	5.8	6.1	6.3	6.4	6.5	6.4

Source: WTO Secretariat; Miranda, Torres, Ruiz, 1998.

¹ Preliminary numbers for the antidumping investigations on the basis of 6 industrial and 20 developing country users.

V. Trade, Finance and the Role of the WTO

The previous sections illustrated a number of important links between trade and the financial system. First, the availability of credit and a number of trade-related financial instruments is key to flourishing international trade. A well-developed financial system can provide such services which reduce the costs and risks of international trade. Second, well-developed and open financial systems in a stable macroeconomic and appropriate regulatory framework are also more resilient to economic and financial shocks, and therefore less likely to experience financial crisis. The latter can have severe economic and trade repercussions, as demonstrated by the case studies from the previous section. But the case studies have also shown that trade and growing exports are often a key element of crisis resolution. Needless to say, a well-functioning financial framework is not the only prerequisite for trade to flourish: international markets must also be open.

In light of these important interrelationships between trade and finance, this Section briefly analyzes the role of the multilateral trading system, first, in constraining trade distortions arising from public interventions in the financial system, and, second, in maintaining trade policies conducive to financial stability. The first part, therefore, looks at WTO disciplines on restrictions to international payments and transfers, financial services trade, multiple exchange rate practices and export subsidies. The second part discusses, first, the role of the rule-based multilateral trading system in promoting financial stability through predictable trade policies more generally, and, second, the role of financial services liberalization for financial stability in particular.

A. Trade distortions through the trade and finance nexus, and WTO disciplines

Trade distortions can be introduced through the financial system via various government policies and programs. In the following, we look at four types of policies which could result in such distortions: (i) restrictions on payments and transfers, (ii) restrictions on the international provision of financial services, (iii) multiple exchange rate policies, and (iv) export subsidies. As a general principle it is worthwhile keeping in mind that restrictive policies (both access restrictions and discriminatory measures) create WTO-relevant distortions when they modify conditions of competition. Such policies do not have to come in the form of a law, they can also be introduced through decrees and practices.

Restrictions on trade-related payments and transfers

Restrictions on trade and related payments and transfers are not permitted under GATT (in general) and GATS (where specific commitments have been made), except in the case of serious BOP problems

Trade liberalization could be undone if importers or exporters were not allowed to undertake the underlying payments and financial transfers (political risk, as discussed in Section II). Article XI:1 of the GATS acknowledges this threat by prohibiting the use of restrictions on international payments and transfers for current transactions relating to Members' specific commitments in services trade. However, it allows the use of exchange actions in conformity with the IMF's Articles of Agreement (GATS Article XI:2). In a similar vein, GATT Article XV:4 states that "contracting parties shall not, by exchange action, frustrate the intent of the provisions of this Agreement" regarding trade in goods while the IMF's jurisdiction over exchange controls on current transactions is acknowledged by GATT Article XV as well. Trade (not exchange) restrictions on goods are permitted under GATT Article XII or XVIII:B in case of serious balance-of-payments difficulties. Under similar circumstances, GATS Article XII allows a Member to "adopt or maintain restrictions on trade in services on which it has undertaken specific commitments, including on payments or transfers for transactions related to such commitments", as long as they are consistent with the Articles of Agreement of the IMF.

Restrictions on trade financing

The international provision of trade financing services is subject to WTO Members' specific commitments in financial services trade

Access to and the terms of trade-related financing are important variables which determine trade. Limited access and high costs of such services work like an implicit tax on trading activities. Opening markets to international financial services provision can reduce the costs of trade-related financing (Kono et. al., 1997).

The supply of financial services involved in trade financing falls under financial services as defined in the GATS Annex. International supply of financial services is subject to commitments under the GATS (including the results of the negotiations from December 1997), which came into force in March 1999. Members' specific commitments determine the minimal degree of international competition allowed for the provision of finan-

cial services, such as trade-financing loans, guarantees, financial leasing, forfeiting, and hedging operations. To the extent that countries have made commitments in these areas, foreign suppliers of such services have a right to market access and national treatment, and traders may benefit from open markets and lower costs. However, the absence of commitments does not mean that international financial services provision is not allowed; countries can always introduce more liberal policies than specified under the GATS schedules, and a number of countries have done so.

Exchange rate policies, multiple exchange rates and exchange allocation

Multiple exchange rates and exchange rationing are permitted if they are not discriminatory

Exchange rate and allocation policies were also identified as an important variable in the trade and finance nexus. Such policies are largely outside the ambit of the WTO framework, except where they are in violation of GATS Article XI and GATT Article XV as described above. Furthermore, if multiple exchange rates and exchange allocation mechanisms are applied in a discriminatory manner or result in a discriminatory treatment of imports from different countries, such practices would violate the most-favoured nation principle (GATT Article I and GATS Article II). This means, in other words, that unfavourable exchange rates which apply only to imports from a selection of WTO Member countries would arguably be in violation of these articles.

Discrimination could be interpreted as covering not only *de jure* discrimination, as described above, but also *de facto* discrimination. For example, if a country applies an unfavourable exchange rate to the imports of certain goods and services which are only sold by a certain country, one could argue that imports from these countries are discriminated against *de facto*.

Subsidies through the financial system

The Subsidies Agreement prohibits export subsidies in goods trade, and thereby provides strict disciplines for export credits, guarantees and other trade-finance services

The subsidization of goods through the financial system is subject to important disciplines in the WTO framework under the Agreement on Subsidies and Countervailing Measures (SCM Agreement). Under Article 1 of the SCM Agreement, a subsidy shall be deemed to exist where there is a financial contribution by a government or any public body within the territory of a Member which confers a benefit. Among the forms of financial contributions specified by Article 1 are "direct transfers of funds", including loans, and "potential direct transfers of funds", including loan guarantees. Further, a "public body within the territory of a Member" may include government owned or controlled financial institutions. Accordingly, the disciplines of the SCM Agreement apply to subsidies provided through the financial system.

The SCM Agreement prohibits two categories of subsidies, export subsidies and subsidies contingent on the use of domestic over imported goods (subject to special and differential treatment for developing country Members and Members in the process of transition to a market economy). With respect to export subsidies, Article 3.1(a) of the Agreement refers to an Illustrative List of Export Subsidies subject to the prohibition. That Illustrative List makes clear that certain financial practices give rise to prohibited export subsidies. Item (j) of the Illustrative List establishes that the provision by a government of export credit insurance or guarantee programmes constitutes a prohibited export subsidy where the premium rates charged are inadequate to cover the long-term operating costs and losses of the programmes. The first paragraph of item (k) stipulates that export credits are prohibited export subsidies where they are provided at below the granting government's cost of borrowing. The second paragraph of item (k) creates a "safe harbour" from the export subsidy prohibition for export credit practices that are in conformity with the interest rate provisions of the OECD Arrangement on Officially Supported Export Credits and Export Credit Guarantees.⁴²

Most other specific subsidies, including subsidies provided through the financial system, may be subject to dispute settlement challenge in the WTO if they cause adverse effects to the interests of another Member. In addition, a Member may impose countervailing measures on imports benefiting from prohibited or actionable subsidies. In the countervailing context, Article 14 of the SCM Agreement looks to commercial or market benchmarks to determine the amount of the benefit conferred to the recipient by a loan or loan guarantee.

Most developing countries have until the year 2003 to bring their export financing arrangements into WTO conformity

Finally, it should be noted that all developing country Members are exempted from the prohibition on export subsidies until the year 2003, subject to compliance with certain conditions. Least-developed countries are currently exempted from this prohibition without time-limit, whereas countries identified in Annex VIIb of the SCM Agreement are exempted until their GNP has reached US\$ 1,000 per annum. As of 2003, most developing countries have to have a system in place which is WTO-consistent. Many industrialized countries already apply WTO consistent systems which still provide scope for public involvement in export financing. It is therefore very important that developing countries start early with putting such a system in place to avoid later conflicts.

Specific disciplines are applicable to trade in agricultural products; disciplines on discriminatory subsidies in services are "built" into GATS Article XVII

The use of agricultural export subsidies under the WTO is governed by the provisions of Part V and Article 3.3 of the Agreement on Agriculture. Article 3.3 prohibits the use by all WTO Members of six major categories of export subsidies in excess of the product-specific quantity and budgetary-outlay

⁴² See OECD (1998a and b), and the collection of OECD members' export credit financing schemes.

reduction commitment levels (if any) that are specified in a Member's legal schedule. These export subsidies are listed in Article 9.1 of the Agreement. The use of these Article 9.1 export subsidies is prohibited for any agricultural product not specified in its WTO Schedule as being subject to a reduction commitment. There is a temporary and conditional exception for developing countries with respect to two of the Article 9.1 categories (transportation and marketing-cost-reduction subsidies).

Non-Article 9.1 export subsidies are subject to anti-circumvention rules under Article 10 of the Agreement. In other words, these "other" export subsidies can be used in conjunction with, but not in excess of, the scheduled reduction commitment levels. Article 10.2 calls for specific disciplines to be developed to govern the provision of export credits, guarantees or insurance programmes. Negotiations in this area have so far not been conclusive. In the meantime, subsidized agricultural export credits and related facilities can be used within the limits of the product-specific reduction commitments but are otherwise prohibited or are subject to the Article 10.1 anti-circumvention disciplines.

When assessing disciplines on export subsidies in **services trade**, a distinction between discriminatory and non-discriminatory subsidies is necessary. Article XVII (National Treatment) of the GATS applies to any measure that discriminates against foreign suppliers, including subsidies, if a country has scheduled commitments under the relevant sectors. Discriminatory subsidies which support the supply only of service providers of national origin would then violate Article XVII, unless the Member country has scheduled Article XVII limitations with respect to subsidies. Subsidies which discriminate between two foreign service suppliers would violate the MFN obligation under Article II unless countries have listed an exemption in the MFN exemption list. As mentioned above, the concept of discrimination in Articles II and XVII covers both de jure and de facto discrimination.

Non-discriminatory subsidies are so far not subject to disciplines. WTO members may grant subsidies to services providers through loans, guarantees or grants, as long as they do not discriminate, regardless of the policy objective behind the subsidy. A WTO working group is debating how far such subsidies distort trade and whether there is a need for disciplines in this area as well.

B. The multilateral trading system and financial stability

The implications of the main WTO principles for financial stability

The rule-based, non-discriminatory multilateral trading system promotes policy predictability and, thereby, helps to prevent and solve financial crises

After the experience of the Great Depression, when one of the grave policy errors was protection, the founders of the post

World War II economic order made the multilateral trading system one of its corner stones (WTO, 1998a). The key elements of the WTO-based multilateral trading system do not only promote world trade and prosperity, they also support financial stability.

The main contributions of the multilateral trading system for maintaining financial stability and solving financial crisis lie in securing predictable trade policies and increasingly open markets. The benefits of predictable trade policies for financial systems are indirect, as described above. They arise through preserving healthy corporate balance sheets and preventing non-performing loans in the banking system. The unexpected introduction of trade barriers can result in financial difficulties for exporters, especially when they are heavily dependent on selling in foreign markets. Financial difficulties would spread from companies to the banks which provided them with loans. If protection spreads to several important trading nations through retaliation, significant terms of trade effects are likely, as a protection-induced fall in demand depresses world prices. This further undermines exporters' (but possibly also domestic producers') financial position. The previous section illustrated the significant terms of trade and market-disrupting effects of protection during the Great Depression. By securing increasingly open markets, the multilateral trading system also helps those countries which want to emerge from financial crisis through expanding exports.

Five elements of the WTO system promote predictable trade policies and increasingly open markets. First, WTO Members have committed themselves not to raise trade barriers (tariffs on trade in goods and certain quantitative restrictions for trade in services) beyond a ceiling which is inscribed in member countries' GATT tariff schedules and GATS schedules of specific commitments. These upper limits on trade barriers increase the predictability of trade policies. New agreements in the areas of intellectual property, technical barriers to trade, etc. basically have the same objective of providing a more predictable trading environment.

Second, the principle of non-discrimination also enhances the predictability of trade policies. It protects especially the small nations with less "bargaining-power", and prevents frequently shifting coalitions and very high negotiation costs. The lack of this principle in negotiations between countries before World War II made trade policies less predictable and hard to liberalize (WTO, 1998a).

Third, the rule-based nature of the WTO framework enhances predictability, as it is costly to renege on WTO rules which have the status of international law. Contingency protection is permitted, for example, through the safeguards mechanism and anti-dumping provision in GATT. These provisions add an element of uncertainty, but as they are rule-based as well, they tie the re-introduction of trade measures to certain conditions.⁴³ Elaborate procedures with the right to hearings and defence in anti-dumping and safeguards do not make protection as easy to introduce as it used to be before the time of multilateralism.⁴⁴

⁴³ See GATT Article VI (anti-dumping) and XIX (safeguards). In services, negotiations for safeguards are ongoing.

⁴⁴ Considerable criticism of anti-dumping has been voiced (see e.g., Finger (1993); Miranda, Torres and Ruiz, (1998) provide worldwide data). The main criticism refers to a bias towards accommodating powerful special interests while failing to take due account of the costs arising from protection-induced price increases and inefficiencies.

Progressive liberalization raises income, and the dispute settlement mechanism prevents trade conflicts

Fourth, the obligation to progressive liberalization (as put in practice in seven negotiation rounds and embedded in Part 4 of the GATS) promotes financial stability. It encourages policy makers to seek benefits from more open international markets rather than from more protected domestic markets. The trade of concessions in the multilateral context sometimes allows governments to liberalize markets even against powerful protectionist interests. In other words, negotiations towards progressive liberalization help to raise income through trade and growth-oriented lobbying (WTO, 1998a). As markets are becoming more open, and companies discover new profit opportunities, this is likely to promote their financial strength as well.

Finally, conflict resolution in the multilateral trading system through the dispute settlement mechanism reduces the danger of trade conflicts resulting in protection and retaliation. Again, this raises policy predictability and financial stability.

From this we can conclude that maintaining the WTO-based multilateral trading system is key for promoting financial stability which, in turn, is essential for flourishing trade. More progress in liberalizing goods and services trade is possible in many areas. Many observers also call for careful monitoring and constraining of contingency protection so that policy predictability is not undermined by an “excessive” use of “safety valves”. Nevertheless, one can probably claim with a high degree of certainty that in the absence of the multilateral trading system, more trade protection would have prolonged many financial crises, raised the probability of debt default, and induced more severe global repercussions.

Financial services trade, financial stability and the role of the WTO

Trade-related financing benefits from well-developed and open financial systems

The sector which affects trade-related financing and financial stability most directly is financial services trade. The latter provides considerable benefits through promoting more efficient and well-developed financial systems. We mentioned that financial services trade encourages the transfer of skills and knowledge, puts downward pressure on costs, and promotes financial innovation. Better risk management systems, the broader use of more diverse financial instruments, risk diversification across borders, and new skills also promote the institutional development and transparency of markets and can help improve macroeconomic management. All these factors improve financial intermediation, which should also reduce the costs and improve the availability of trade-related financing.

Open and well-developed financial systems can reduce adverse effects of financial crisis but liberalization without the proper policy framework can exacerbate financial instability

It is also important to note that the disruptions arising from financial crisis for the economy and for trade are likely to be less severe in well-developed and internationally open financial systems (everything else being equal). In countries with such financial systems, exchange markets are likely to remain liquid even during crisis, which reduces the volatility of exchange rates. In well-developed and open markets, information on credit-worthiness of borrowers is typically better. This should help reduce herding resulting from asymmetric information, and financially “healthy” producers to obtain trade-related financing more easily. Open markets with a good information base also facilitate switching to foreign service providers if a credit crunch prevails at home. Export-credit or -guarantee agencies are more likely to keep crisis countries on their list of eligible countries, if the financial sector is well-developed and transparent.

However, earlier studies have also shown that there is sometimes a trade-off between increased efficiency and loss of financial stability arising from financial liberalization (Kono et. al., 1997; Demirguc-Kunt and Detragiache, 1998). The full benefits of liberalization (with minimal adverse effects on stability) can only be realized, if it is undertaken in the appropriate policy environment. This includes in particular macroeconomic stability and a proper regulatory framework. Liberalization in conjunction with international capital flows can otherwise exacerbate financial instability emanating from such policy deficiencies.⁴⁵

The GATS does not curtail countries’ scope for macroeconomic policy management, nor for prudential regulation and supervision. Certain constraints apply to other types of regulation

There are four policy areas which determine how far the full benefits of financial services trade liberalization are likely to be reaped. We mentioned the importance of macroeconomic management. This is outside the ambit of GATS, and countries are not constrained by the multilateral trading system in their pursuit of macroeconomic policies. GATS commitments also do not curtail the scope for prudential regulation and supervision, although the latter must not be used to avoid commitments and obligations under the agreement (Kono et. al., 1997). Paragraph 2(a) of the GATS Annex on Financial Services states that:

“Notwithstanding any other provisions of the Agreement, a Member shall not be prevented from taking measures for prudential reasons, including for the protection of investors, depositors, policy holders or persons to whom a fiduciary duty is owed by a financial service supplier, or to ensure the integrity and stability of the financial system.”

We have seen above that governments also apply other types of regulation. The GATS does not question the underlying policy objectives of this regulation. If the regulation is not discriminatory, and does not restrict the access of foreign suppliers to the market, then such regulation falls under the ambit of GATS Article VI. The latter seeks to ensure that regulation does

⁴⁵See also IMF, ICM (1998), Eichengreen et. al. (1998) and Johnston, Darbar and Echeverria (1997) for a more detailed discussion of these issues.

not constitute an “unnecessary barrier to trade” by requiring that regulation be based on transparent and objective criteria, that it is not more burdensome than necessary to ensure the quality of the service, and that licensing procedures do not constitute a restriction on the supply of the service.

The GATS promotes progressive liberalization in financial services. Liberalization of those types of financial services which promote institutional development and a “balanced” structure of capital flows is recommendable even for countries which can not immediately liberalize all types of financial services trade

Liberalization under GATS aims at the progressive removal of trade barriers in the financial services sphere. In light of the discussion above, countries with the proper policy framework in place have no reason to fear broad-based liberalization across instruments and modes, given the considerable benefits from such liberalization.⁴⁶ Countries with a less favourable policy environment, however, may want to undertake a more careful assessment. Recent research has shown that certain types of liberalization can be useful even in a weak policy environment, and can contribute to the strengthening of financial stability (Kono and Schuknecht, 1998).

Contrary to what is sometimes feared, financial services trade can enhance financial stability, through promoting institutional development of the financial sector, and a less distorted structure of capital flows. If countries do not think their regulatory and macroeconomic framework permit the full liberalization of all financial services across modes, they may still want to consider liberalizing the commercial presence of foreign service providers (mode 3 trade). Foreign service provision through commercial presence increases transparency and market development more than cross-border trade and is, therefore, more stability-enhancing. Mode 3 liberalization is also likely to change the structure of capital flows. The resulting development of bond markets and better information enhances the chances to contract a diverse range of debt instruments with a more balanced maturity structure. In other words, foreign debt would be less

likely to comprise mostly short-term loans which have exacerbated financial difficulties in many countries in the past.⁴⁷

Second, there are important arguments why countries should refrain from having a bias towards lending in their commitments, and instead envisage liberalization across a broad range of instruments. Such liberalization is desirable because it promotes the use of more differentiated financial instruments and the development of financial markets. This, in turn, also promotes a foreign financing structure which is less distorted across instruments and maturity structure.

Empirical evidence cited by Kono and Schuknecht (1998) shows that the structure and volatility of capital flows and the probability of financial crisis are significantly affected by countries’ financial services trade liberalization strategy. Countries with a restrictive regime against foreign commercial presence and a lending bias in their commitments are more likely to experience volatile capital flows and financial crisis than those with a more stability-enhancing regime. The Republic of Korea and Indonesia, for example, which experienced the worst financial turmoil amongst the five Asian crisis countries also had amongst the least stability-enhancing financial services trade regimes before 1998.

Finally, there are financial services which normally do not involve capital flows such as the provision of financial information. Such services can be liberalized across modes without much concern over financial stability.

Finding the “right” liberalization strategy in financial services is probably one of the most important trade policy challenges for many countries in the near future. The latter need to evaluate carefully what they can and should offer as liberalization commitments in the new multilateral services trade negotiations, beginning in the year 2000, and the preceding discussion may provide some helpful guideposts in this regard. However, it should be kept in mind that protection should only buy time to put the proper policy framework in place, and not permit policy complacency.

⁴⁶ In this regard, forward commitment to liberalisation can in principal be a useful constraint for necessary policy reform elsewhere.

⁴⁷ Furthermore, mode 3 commitments only require the liberalisation of “related” capital inflows whereas cross-border trade requires the liberalisation of all essential inflows and outflows.

VI. Conclusion

This study has explored the numerous and often complex links between trade and the financial sector. For international trade to flourish a functioning financial system is essential. The financial sector provides vital capital for trading activities and insures against trade-related risks. Financial crisis can inflict great economic and social damage, as shown by numerous crisis episodes since the Great Depression. They can hurt trade through raising the costs of essential financial services and reducing their availability, and more indirectly, through depressing aggregate demand.

The study examined the role of trade and trade policy in preventing and solving financial crises. We rejected claims that too much trade integration causes financial crisis and, therefore, warrants a protectionist response. On the contrary, financial instability can be exacerbated through trade protection. If countries resort to restrictive trade measures during financial crises in a misguided attempt to protect their domestic producers, this gives rise to inefficiencies at home, it undermines the financial position of exporters in other countries and may provoke retaliation. Today we know that the adverse effects of the Great Depression on output, employment and financial stability around the globe would have been much less severe if trade protection had not taken hold.

Open and predictable trade policies not only contribute to preventing (or at least containing) crises, they can also help countries to emerge from crises. We showed that numerous countries have strengthened their economic and financial position with the help of growing exports. Fortunately, the lesson from the Great Depression—that protection is not a suitable policy response to crisis—seems to have been learnt: in all subsequent crisis episodes we studied, open markets were maintained at home and abroad, and in some cases the crisis resolution strategy even featured significant trade liberalization.

More recently, the role of trade in financial services and the latter's links to international capital flows has attracted considerable attention. The key question here is how to liberalize financial services trade so as to reap the benefits from liberalization (which could benefit trade through lower costs and better availability of credit and insurance) while minimizing the costs of potential trade-induced instability. In this regard, we argued that countries should seek to liberalize trade in manner which promotes financial sector development, undistorted capital flows

and transparency in the financial system, while also enhancing competition and efficiency in the financial sector.

The GATT/WTO framework is a key element in the post-World War II economic order and has contributed to global financial stability through maintaining predictable, stable and increasingly open market access conditions. As WTO Members commit to upper bounds of protection, they are prevented from policy back-sliding which could increase protection and thereby exacerbate financial crises. Although we do not have a clear account of how far WTO commitments have directly prevented protectionist back-sliding during financial crises, the absence of such experiences in the past 50 years no doubt at least partly attributable to the constraints imposed by the multilateral framework. By a similar token, the WTO framework imposes important disciplines on trade distortions arising through the financial system. These disciplines relate in particular to export subsidies, restrictions on payments and transfers, and discriminatory exchange policies which could have the same adverse effect on the trading environment (and indirectly on financial stability) as "traditional" protectionist barriers such as tariffs.

Moreover, the WTO framework guarantees market access abroad for countries seeking to emerge from crises with the help of export expansion. Secure market access helps crisis countries to revive their economies, reduce unemployment and other social costs of crisis, and to pay back their debt. Negotiations leading to strengthened trade rules and more open markets also contribute to reducing the severity and likelihood of financial crises.

The WTO framework provides a vehicle for committing in a legally binding manner to financial services trade liberalization. Depending on the liberalization strategy pursued, the resulting boost in trade can promote both economic growth and financial stability. In this regard, more research on the "right" liberalization strategy would be desirable. Finally, the recent crisis episodes and the trade dimension of financial services and international capital flows have demonstrated again that the multilateral trading system cannot be seen in isolation from other domestic and international economic issues, such as prudential regulation, macroeconomic stability and the international financial architecture. The numerous links between trade and finance call for close cooperation between the WTO and the other international economic institutions.

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