ECONOMIC AND FINANCIAL GLOBALIZATION

What the Numbers Say

Foreword by Marcel A. Boisard

Paul H. Dembinski (Leading contributor)

Translation by Kevin Cook

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Typesetting
Cedrigrafic (Geneva) and Observatoire de la Finance
Cover design
Bertrand Kowalski
Translation from French
Kevin Cook

United Nations publication
Sales No. E.02.XV.1
ISBN 92-1-157085-9

Observatoire de la Finance

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UNITAR

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UNITED NATIONS

New York and Geneva, 2003

Foreword

In a world in which figures are increasingly seen as the most effective way of expressing and perceiving socioeconomic reality, it is important to recall the context in which they are compiled and to make quite clear their meaning and significance. The 'Observatoire de la Finance' has been working towards such clarification over the past few years. Together with UNITAR, the 'Observatoire de la Finance' is undertaking to bring together in a single publication the main statistical data on the global economy and global finance, placing them in something of a historical perspective, and discussing their conceptual significance and statistical accuracy.

The results of this work are compiled in a reference book which will certainly appeal to those who seek more than ready-made ideas, preferring to develop their own views on the process of economic and financial globalization, based on precise figures and concepts. National and international civil servants, decision-makers in the private sector, teachers, students and media staff will all find in this book the quantitative data they need to assess the importance of modern trends and phenomena.

Today's increasingly complex world places new challenges before public and private decision-makers regarding the joint stewardship of the future of our planet and its inhabitants. In this context, new international and cross-border means of sharing this common global or regional responsibility will have to emerge in the years to come. With this aim in mind, UNITAR has set up training programmes in an attempt to develop new skills in the countries where they are most needed. In line with these efforts, this book will prove a valuable source of information and an effective training tool, especially for those involved in capacity-building programmes on debt and financial and management, and international economic relations.

UNITAR is grateful to Professor Paul H. Dembinski, Director of the 'Observatoire de la Finance', and to his staff for producing this study. The ideas and conclusions expressed in the book are, of course, entirely those of the author and do not necessarily reflect the views of UNITAR or the United Nations.

Marcel A. Boisard

UN Assistant Secretary-General

Executive Director of UNITAR

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Introduction

"If we don't count something, it gets ignored. If we count it, it gets perverted."

David Boyle, 2001, p11

The rocky road to independence

The purpose of this book is to help readers develop a well-founded, independent view of the global economy and global finance. It is not a synthesis or a set of ready-made answers, nor is it simply one more noisy opinion which, while laying claim to scientific objectivity, is in fact voiced in defence of some political ideology. Such opinions are to be found on both the right and the left, among out-and-out believers in laissez-faire as well as fervent advocates of national or global regulation. This book is in no sense polemical, but is intended to help readers weigh up, in the light of the available statistics, the many conflicting arguments in what is now a worldwide debate on globalization.

In order to develop an independent, critical view of globalization, one must endeavour to rise above the heaving swell of information and conceptual data, so that the mind can fasten onto something solid. Information – and this is particularly true of economic and social statistics – is a fragile structure whose relevance will very much depend on the circumstances in which it has been compiled. Paradoxically, for all the precision and objectivity seemingly inherent in quantitative expressions of economic, financial or social realities, they are based on methodological and in some cases institutional choices which affect the accuracy, impartiality and solidity of the results. Now that quantification is often seen as the be-all and end-all, figures are often taken to mean more than they do, and incautious writers drag them beyond the limits of their relevance - like "factoids" in which seemingly rational arguments are used to trigger off in those who read them impulses of fascination or fear which are fundamentally irrational and emotive.

Any independent, well-founded view of globalization – one that does not let itself be misled by today's sophisticated "spin" techniques – requires both a conceptual and a quantitative frame of reference. This book provides a structure for this, based on two principles: a transnational outlook, and clarity of method.

As the term suggests, globalization is a planetary process - yet most statistics are domestic. Any proper frame of reference for globalization must move beyond the purely domestic viewpoint and see things at least in regional, if not global, terms. That is why this book avoids classifying or comparing individual countries, and focuses instead on global and regional trends. When individual countries are occasionally mentioned, it is by way of example, or because they are simply too important to be ignored. The raw materials for this global outlook are the figures provided by major international agencies. Rather than seek data at domestic level, the authors used those produced by the UN's Division of Economic and Social Affairs, the World Bank, the Organization for Economic Cooperation and Development (OECD), UN specialized agencies, and private sources.

The principle of clarity of method is harder to enunciate, for it concerns the very philosophy of measurement. The frame of reference proposed in this book is based on 25 key concepts which are each approached from two angles, one conceptual, the other statistical. This is because there is a considerable difference between a concept based on a corpus of theory and a statistical series that bears the same name. Each of the 25 concepts adopted has been subjected to the same three-stage process.

The first stage ("Concepts and definitions") involves getting the concepts clear – finding out what the concept means and, if necessary, listing its main accepted meanings.

The second stage ("Methods and problems of measurement") looks at how the concept has been operationalized so that the reality it refers to in abstract terms can be quantified. This stage brings to light any over-simplifications, errors in gathering data, inconsistencies between the methods used by the various sources and so on. The intention here is to give the alert reader a clear idea of the epistemological limitations of statistics and the caution with which they must be treated.

Finally, the third stage involves figures. The idea here is to look closely at the available statistical series and put them in something of a historical perspective so that changes over time become clear. This section ("Recent trends") does not claim to extract the full wealth of information in the accompanying tables and charts. All it does is point out a number of facts so that readers are encouraged to find their own way through the forest of data. Comments on recent trends refer to either long-term developments or more specific events, depending on the case.

To help readers draw their own conclusions freely, the data is presented in as raw a form as possible. The statistical series presented here have not been "dressed up", and only exceptionally have they undergone statistical transformations to smooth out the series or transpose them into real terms so that the "background noise" of inflation is eliminated. Moreover, this decision to focus on nominal values was determined by the need to set up a common reference framework for both the economy and the financial sector (in finance only nominal figures are used).

What we learned from the exercise

When the project was first launched it seemed relatively simple, and we expected to get it finished in a matter of months. In practice, things turned out very differently. Throughout the project we were confronted with unforeseen situations which taught us a great deal about things that lay beyond the confines of the project proper.

The first thing we noticed concerned the state of economic, financial and social statistics. Large-scale economic and social quantification is a recent phenomenon which did not really get going until the mid-1970s. Although we have a fairly uniform database for the thirty countries that are members of the OECD, statistics become scarce as soon as we move beyond this group of rich countries. We thus know a great deal about the creation and use of about three quarters of global product and the living conditions of the people that produce it – who represent just under a third of the world's population. In other words, there is nothing global about our statistics, either geographically or demographically. There are many reasons for why coverage is so unbalanced, but in any case it continues to bias most people's view of the globalized economy.

The second thing we noticed concerned the ownership of the figures. In this era of virtual technology, information is no longer a freely available good, but has become a commodity which is bought and sold at a price. The limitations of this view of information become apparent once access to knowledge about the global economy and how it works becomes commercialized. Most government agencies compile such figures to serve the public interest and the common good, but they also take advantage of their special position to sell access to the information, often at a high price.

What has driven the agencies in question to behave in this way is the reluctance of national governments to increase their budgets, forcing them to find their own sources of funding.

From the outset our project received strong support from the private company Thomson Financial, which gave us free access to its on-line statistical services, particularly Datastream. Public agencies such as the OECD, the IMF and the

World Bank, not to mention the IFC, were noticeably less accommodating. Even with deductions, the charges for access to information were in some cases several thousand US dollars a year.

This raises the fundamental issue of access to statistics that are in the public interest. A related issue is the increasingly specialized nature of the methodological debates on which the figures are based. Worldwide, it seems likely that only a few hundred statisticians possess the relevant knowledge in these crucial areas, and that only they are capable of using the figures they produce properly. These experts know the limitations, subtleties, strengths and weaknesses of figures. Most of them are officials in northern countries or in international organizations. This suggests that, as regards both access to statistical information and the skills needed in order to make proper use of it, a twofold gulf is opening up between (a) the governments of northern countries and those who can pay the asking price, and (b) the governments of southern countries, civil society and intellectuals, who lack the necessary resources or skills or both. As things now stand, the governments of rich countries are favoured on both counts, which enables them to remain one step ahead of civil society and the southern countries. This asymmetry of information, which is also an asymmetry of understanding, cannot fail to have major implications when global interests are at stake.

The fourth thing we noticed was the extent to which statistical measurements are rooted in social institutions. The statistics presented here claim to cover economic activity as a whole, yet the measuring instruments and key concepts used in thinking about the economy are reflections of social institutions in northern countries. Nor surprisingly, in countries that do not share this institutional tradition, statistics obtained on such a basis can only cover a part of economic and social reality – the part that fits into the western conceptual framework. Whether we are talking about businesses, employment or unemployment, money or the financial sector, it is clear that whole sections of socioeconomic life in the southern countries are not covered by these concepts or by measurements based on them. It should be emphasized that the economy – as defined and captured by mainstream economic thinking – performs a very different function in society as whole, depending on which country and which society we are looking at. We would therefore do well to realize that the way in which our statistics - and above all our concepts, and hence economic "science" as a whole – relate to reality varies from time to time and from place to place. In other words, in the interests of both honesty and relevance, it is vital to bear in mind that the frame of reference used here only covers part of the economy, and that there is no way of telling exactly what it does and does not include. Paradoxically, despite the seeming precision of our figures, we are groping in the dark. This conclusion raises the much more fundamental issue of how formalized, Western-style economic activity relates to society as a whole. Is the relationship a complementary one, a symbiotic one, or a parasitic one that will ultimately exhaust and kill off one of the partners?

The fifth thing we noticed concerns the way in which the figures relate to the country and, more generally, the government. The series presented in this book are of two kinds. Most relate to a given country, and are drawn up by and for that country's authorities. Firstly, such figures contribute to a balance of power, for they serve as a basis and a frame of reference for subsequent actions or decisions. The balance of power between those who produce the figures and those whose activities are measured is one of the essential aspects of socioeconomic information. International statistics are thus compiled when there is a great deal at stake or when there is a need to reach a well-founded decision. The second category of figures provided here is of private origin, particularly the financial figures that players require in order to make decisions. Here the link with a given country is a good deal less clear.

The project team

Many people have worked to make this project possible. First of all, our thanks are due to the members of the Board of the Observatoire de la Finance Foundation. Next, despite what were often epic clashes with the suppliers of the data, our thanks are due to the professionals responsible for producing them. They repeatedly provided additional information and drew our attention to important details in the methodological documents.

The director of the project enjoyed the unswerving support of Dr Alain Schoenenberger (lecturer at the Universities of Geneva and Neuchâtel and an expert on public finance) and Pietro Giorgio Gawronski (an economist on the staff of the Council of the Republic of Italy). Both of them followed the project through from start to finish and made useful contributions to the sections dealing with their respective fields of expertise.

The statistical side of the project was handled by Claudio Bologna (an econometrist and statistician on the staff of Eco'Diagnostic who was temporarily seconded to the Observatoire de la Finance). He organized and updated the database, and used it to generate the charts and tables that are such an essential feature of this book. He also wrote the article on development indicators.

Other contributions to the project were made by sociologist Prof. Jean-Michel Bonvin on demographic variables, and Christophe Perritaz (then working at the University of Fribourg) on telecommunications and transport. A number of trainees were working at the Observatoire de la Finance during the project, including Cyril Arnold (an economist who made an extremely valuable contribution to the statistical side of the project), Caroline Bauman and François-Xavier Belottini.

The text was finalized by Ms Corine Devanthéry, Ms Isabelle Dembinski and Ms Nati Garcia.

Paul H. Dembinski

Directeur de l'Observatoire de la Finance

Professeur à l'Université de Fribourg

I. The context of global economy

1.1 Population

CONCEPTS AND DEFINITIONS

As defined for statistical purposes, the total population of a country includes all its inhabitants regardless of nationality, with the exception of illegal immigrants, as well as refugees who have not settled permanently in their host country and are still counted as part of the population of their country of origin. Thus defined, the population is renewed by mechanisms that help to increase numbers (such as birth and immigration) or reduce them (such as death and emigration). Knowledge of the size of the population, its rate of growth and its distribution by age group is essential in order to assess a country's productive capacity and the resources that will be required to satisfy its citizens' needs. At a time when the population is aging, a key aspect is the rate of dependency, i.e. the proportion of dependent persons aged less than 15 or above the legal retirement age in relation to the working-age population.

The state of a given population is thus examined on the basis of its structural components - age, gender, urban or rural location, income level, employment status - and its movements, i.e. its dynamic dimension which is analysed by such factors as the migration balance, the birth rate, the death rate and the rate of natural growth. Forecasts of medium-term and long-term population changes can be made on the basis of individual calculations of these various ratios.

METHODS AND PROBLEMS OF MEASUREMENT

Population may appear to be a precise, unambiguous concept which lends itself easily to statistical analysis according to the principle "one person = one statistical individual". However, counting the population is an extremely complex matter. The quality of demographic figures depends on the reliability of the methods used and on the amount of funding made available to gather the data.

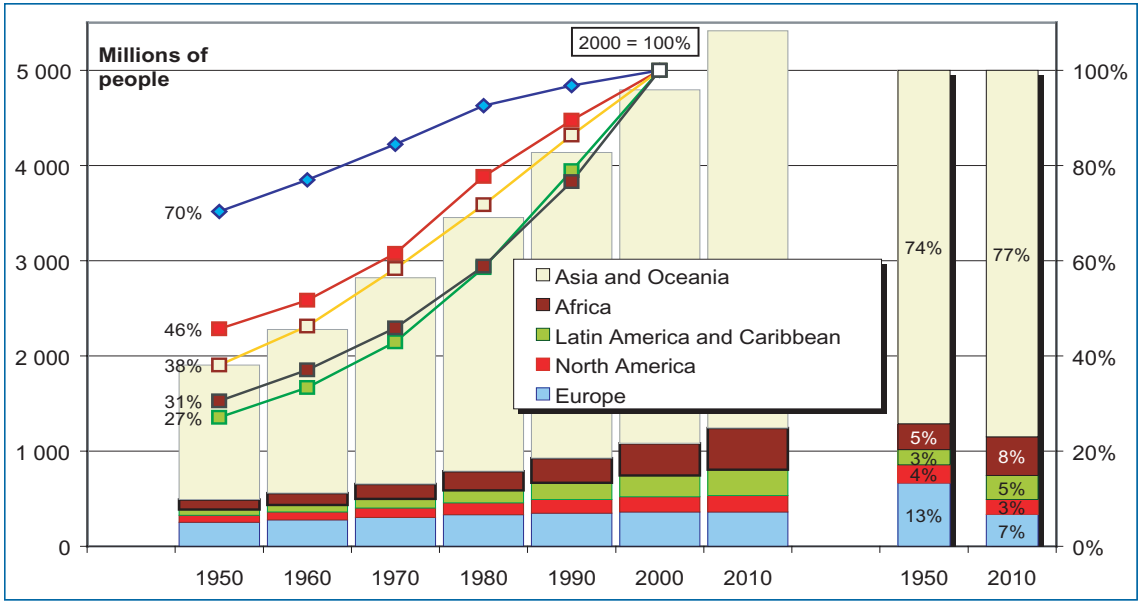
Four methods are used to count the population:

- censuses, which are intended to be as exhaustive as possible but by definition exclude all residents who do not have an official place to live, i.e. refugees who have not settled in the country permanently, illegal immigrants and people with no fixed abode (in developing countries the total number of people in all three categories can be quite considerable).
- official birth, marriage and death statistics
- population surveys
- population registers which record the number of people coming to live in, or leaving, a given area.

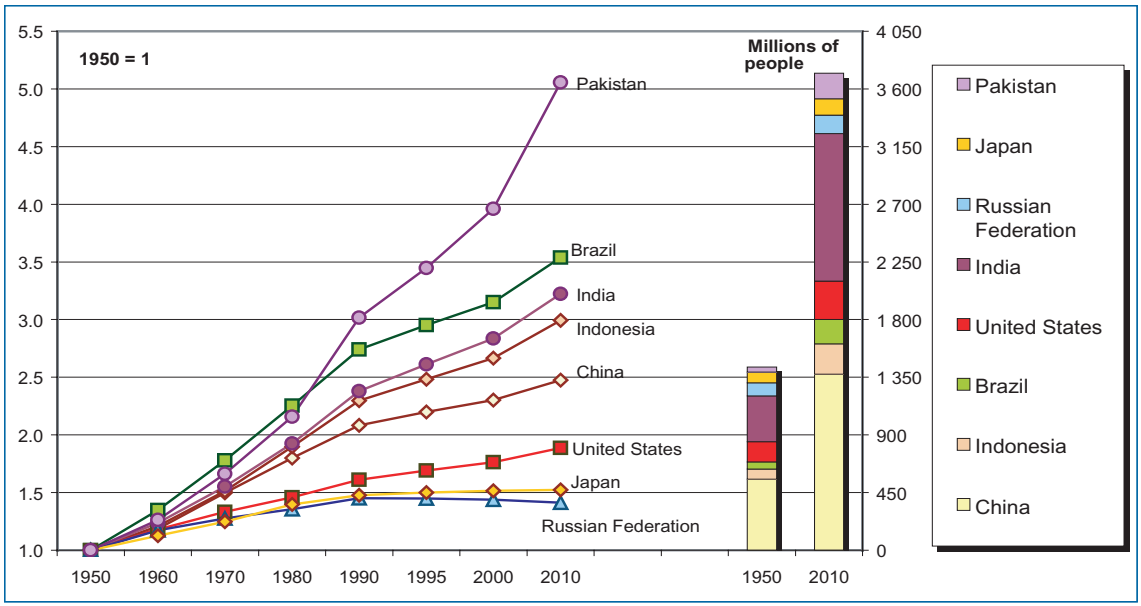
The most reliable method is the census. However, the quality of the data and the frequency with which they are gathered vary considerably from country to country. Most countries only hold a full census once every ten years; in the intervening period the population is estimated on the basis of demographic models. This inevitably leads to underestimates or overestimates, even in industrialized countries. However, such errors can be particularly serious in developing countries, where censuses are held less often and are of poorer quality. In some countries, particularly in urban areas, the population may be underestimated by as much as 20%.

World Bank data show that 16 out of 148 countries did not hold a census between 1988 and

1.1.A. World population by continent, in millions, in per cent and as an index: 1950-2010



1.1.B. Population of most populous countries, in millions and as an index: 1950-2010



Primary data: WorldBank, World Development Indicators; UNPD, World Population Prospects; ILO, Economically Active Population 1950-2010
Grouping of countries: Fig. A cf ILO

1998. In those countries, population estimates are based on birth and death rates and the migration balance, calculated from population samples which are often very small. However sophisticated, models based on such material are bound to be flawed.

The reliability of demographic data also depends on how well people trust the authorities. Some governments do not hesitate to use censuses as a means of keeping the population, particularly ethnic minorities, under control. The confidentiality on which an effective census depends is not always observed, since the bodies that gather the data are not independent. In such cases the results are less accurate than they might be and hence less suitable for international comparison.

In dynamic terms, demography is one of the areas in which forecasts are most reliable. Observed trends are lasting and forecasts are usually solid (except in times of sudden change, such as baby booms, baby crashes and war). This means that demographers can risk making predictions over several decades with only a small likelihood of error.

If they only cover people already born at the point when the forecast begins, demographic forecasts, which assume a stable death rate and extrapolate on the basis of the current migration balance, are usually reliable. It is thus possible to calculate with an acceptable degree of accuracy the extent to which the population will have aged within, say, fifty years. Such figures are extremely valuable when planning retirement systems, but need to be backed up by less reliable forecasts about the number of people that will be born during the period concerned. Here, extrapolations based on the present birth rate will be less trustworthy, for the future is full of uncertainties which may seriously affect people's confidence and hence the fertility rate.

Paradoxically, the difficulties are greater when attempting to count the population at a given moment in time. Despite these difficulties, forecasts that set out the various possible scenarios on the basis of refined demographic models are greatly prized by policymakers.

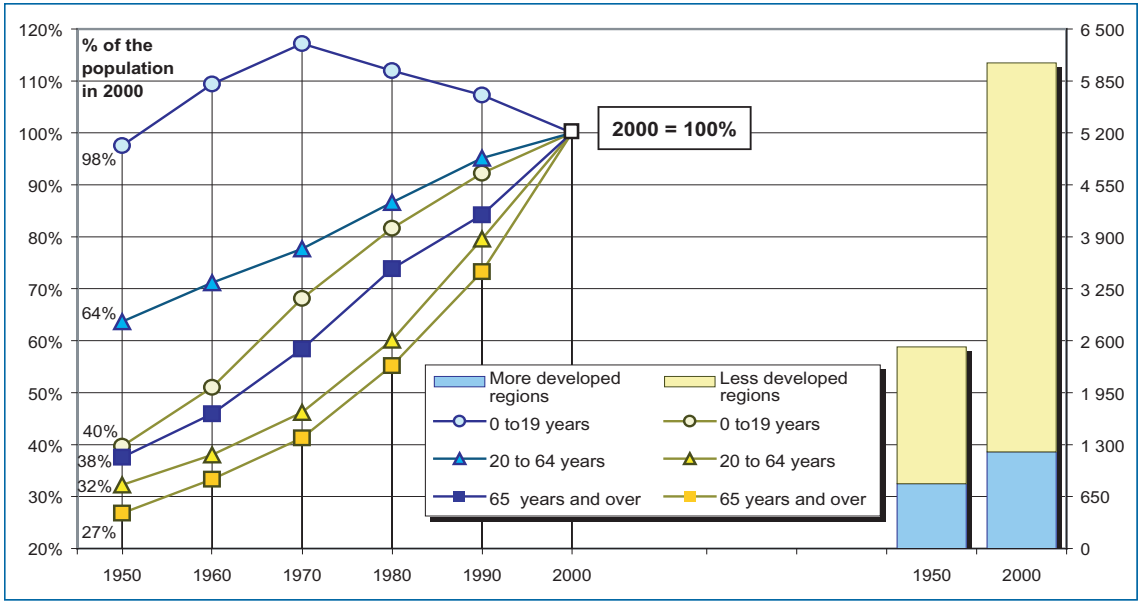
RECENT TRENDS

1. Population explosion in developing countries (Fig. A and B)

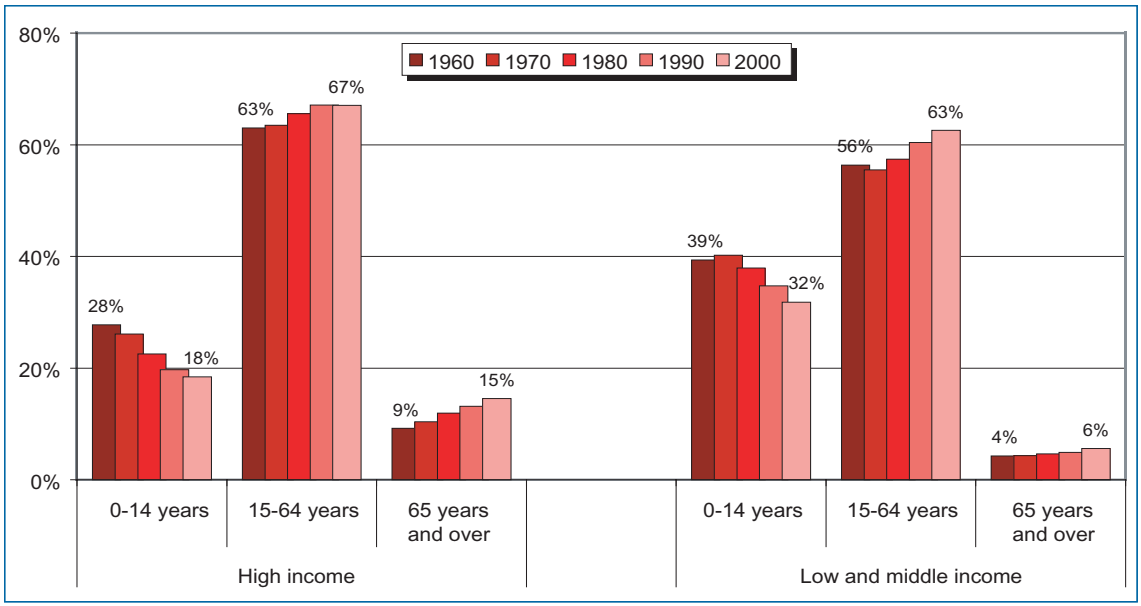
Population growth is much slower in industrialized countries than in developing ones. From 1950 to 2010, Europe and North America's share of the world population will have fallen from 17% to 10% despite a considerable absolute increase (from some 320 million in 1950 to over 500 million in 2010). In contrast, a population explosion began in Asia in 1950, and Africa and Latin America followed suit some decades later. These three continents, which contain the majority of the world's most disadvantaged countries, will together account for 90% of the world's population in 2010 (77% in Asia alone). The commonest explanation for these differing trends involves the notion of demographic transition, according to which each country shifts from a traditional high-equilibrium situation of high fertility and high mortality to a modern low-equilibrium one in which fertility and mortality are much lower. The transition from one situation to the other may take one or two centuries. This demographic disequilibrium between tne North and the South is particularly worrying because it is accompanied by a symmetrical disequilibrium in income, illustrated by wealth statistics which are in inverse proportion.

Similar variations can be observed at national level. In some countries population growth has reached extremely high levels, particularly Pakistan (whose population will have increased

1.1.C. Population by level of development, in millions, by age group and as an index: 1950-2000



1.1.D. Population by age group and by level of development, in per cent, 1950-2000



Primary data: WorldBank, World Development Indicators; UNPD, World Population Prospects; ILO, Economically Active Population 1950-2010
Grouping of countries: Fig. D cf WB; Fig. C cf ILO

fivefold between 1950 and 2010) or India (whose population will have more than tripled), whereas other countries will have seen their population decline (a disastrous example being Russia). This shows that demographic transition is not a uniform phenomenon to which all countries are invariably subject, but that the rate at which it occurs, and indeed its very occurrence, depend on numerous religious, political, economic and other factors. In countries at war or in regions striving to achieve independence, and in countries with strong fundamentalist religious movements, a high birth rate is interpreted as an instrument of power. In economically depressed countries, on the other hand, citizens' confidence wanes, and this is reflected in a noticeable decline in the birth rate.

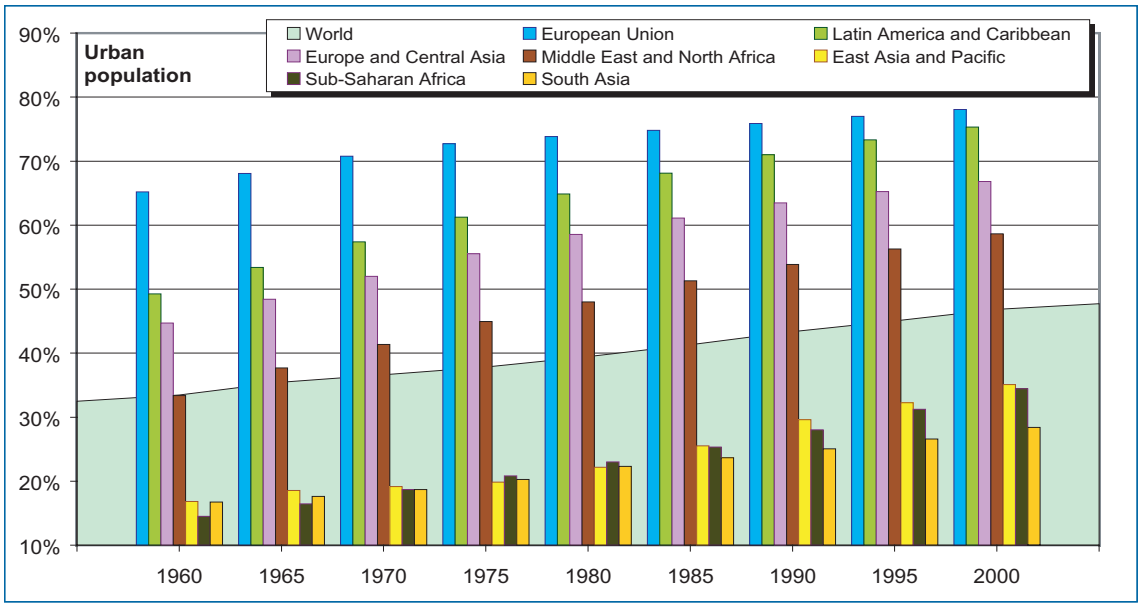
2. Aging of the population in developed countries (Fig. D)

Aging of the population is a phenomenon which chiefly affects developing countries. Contrary to what is commonly thought, it is due to a significant fall in the proportion of young people rather than an explosion in the number of old people. The curves indicating changes in the population over 65 are much the same in developed and developing countries, and the proportion of old people is actually increasing faster in developing countries. However, there is a very great difference in the 0-19 age group, in which the developed countries have suffered from a serious population deficit since 1970. Aging of the population in this part of the world is thus due to a marked reduction in the number of young people rather than a disproportionate increase in the number of old ones. Since 1970 developing countries have also seen a fall in the relative proportion of young people aged 0-14, but this reversal of trend is less pronounced than in rich countries.

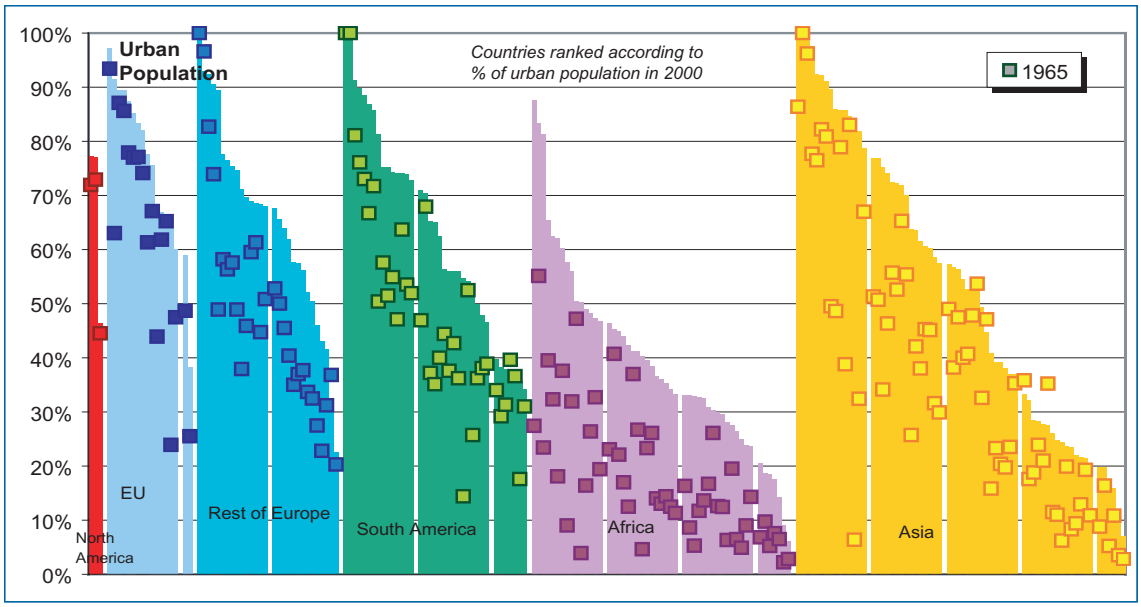
3. Increasingly urban population (Fig. E and F)

The rate of urbanization increased in all continents between 1950 and 2000. This growth has been particularly spectacular in Latin America and sub-Saharan Africa. It is reflected in the emergence of vast megalopolises, especially in developing countries (where inadequate census-taking has undoubtedly caused the phenomenon to be underestimated). Since the infrastructure in such countries is unable to cope with influxes of this size, people are reduced to abject poverty. Finally, conditions in the interior of continents show that Europe and America have become more uniformly urbanized than Africa and Asia, where large rural economies still exist (especially in southern Asia and sub-Saharan Africa).

1.1.E. Urban population, in per cent of total population, 1960-2000



1.1.F. Urban population growth, by continent and by country, in per cent, 1965 and 2000



Primary data: WorldBank, World Development Indicators; UNPD, World Population Prospects; ILO, Economically Active Population 1950-2010

Grouping of countries: Fig. E et F cf WB

1.2. Telecommunications

CONCEPTS AND DEFINITIONS

Telecommunications make globalization possible. From a conceptual point of view, telecommunications include the entire range of instruments that allow data to be transmitted intangibly from one point to another. The speed of transmission of information has always been a key factor not only in military supremacy, but also in efficient government. Thus, in the course of history, numerous methods have been devised to enable information to circulate more quickly than its physical carrier. Fire or smoke signals may be considered the most ancient form of telecommunications.

Until the mid-nineteenth century, information could circulate more rapidly than matter only over distances that did not exceed the range of human sight or hearing. Beyond that, it travelled at the same speed as its carrier (sheets of paper, messengers, pigeons). The breakthrough occurred about a century and a half ago, when variations in electric current began to be used to code information. The first steps towards the development of telecommunication technology in the modern sense of the term were taken in 1833, when Samuel Morse first used the telegraph to transmit coded information. This combined use of transmission technology and a coding system was the first link in a long chain of innovations and improvements which were to culminate in modern telecommunication technology.

With distance dead, telecommunications allow the creation of remote, real-time linkups, feedback loops and networks. The relative distance between the various components is no longer a problem. These real-time linkages are the key to the globalization process. Some of them are in the form of structured organizations, of which transnational corporations are the best known; others are more volatile, such as remote partnerships or joint ventures; still others are in the form of trade networks or over-the-counter (OTC) markets. All these arrangements depend on the technical ability to communicate and interact without regard for distance – thanks to telecommunications.

To obtain a clearer picture of the magnitude, density and geographical structure of the network in which information now circulates, one must look at (a) indicators that describe the telecommunication infrastructure and (b) indicators concerning traffic. It would also have been interesting to distinguish between the contents of communications (voice or data), but for technical reasons this is not possible.

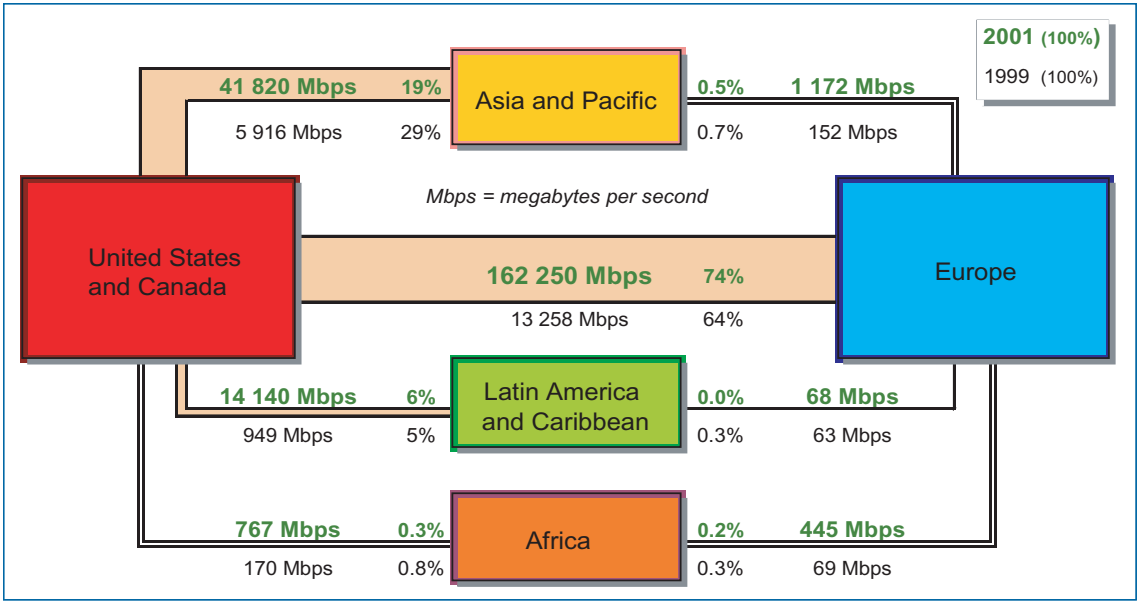
METHODS AND PROBLEMS OF MEASUREMENT

In the final decade of the twentieth century, profound changes took place in the global telecommunication sector. These changes can be summed up in three key phrases:

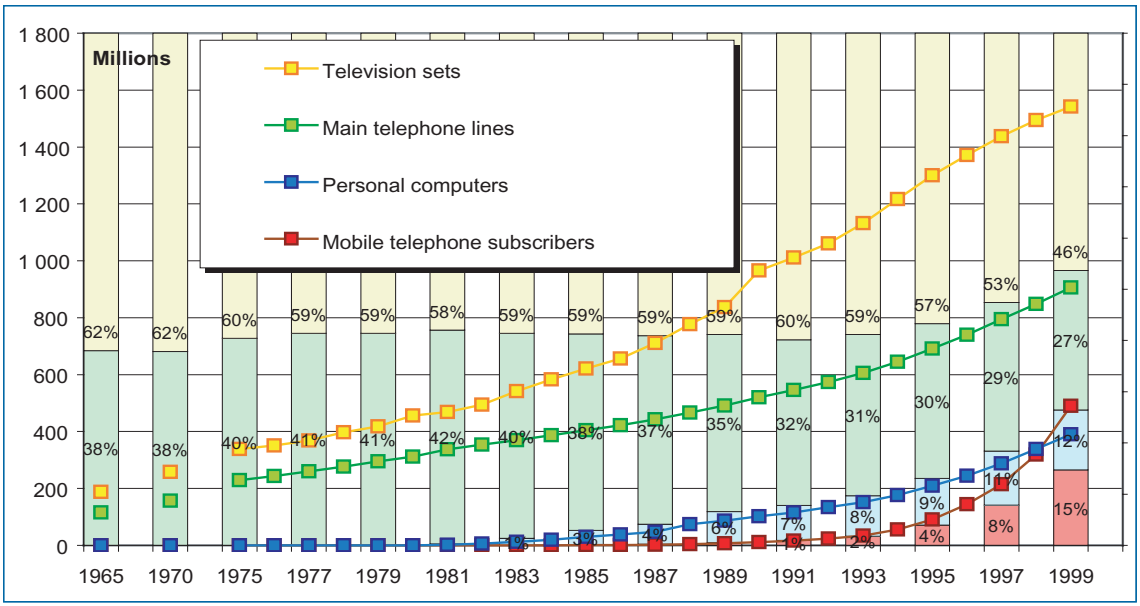
- a radical technological change due to the emergence of mobile telephony and the Internet;
- privatization and deregulation;
- internationalization of telecommunication companies.

These three changes have greatly complicated the gathering and consolidation of data, in comparison with the days when telecommunications around the globe were controlled by national monopolies.

1.2.A. Band width of international Internet circuits in megabytes per second, in 1999 and 2001



1.2.B. Access to telecommunication networks, in millions of units and in per cent, 1965-1999



Primary data: ITU, World Telecommunication Indicators Database; OCDE, Perspectives des communications de l'OCDE; World Bank, Global Economic Prospects and the Developing Countries; Telegeography, Packet Geography 2002. Grouping of countries: Fig. A cf Telegeography

For years the International Telecommunication Union (ITU) has gathered statistical information on the telecommunication sector and related services from the 189 states and 650 companies that are ITU members. Its work is limited to public telecommunications, and therefore excludes networks that are not automatically connected to public networks, broadcasting, and the manufacture of telecommunication equipment.

Despite attempts to standardize statistical information, it will be some time before the ITU's World Telecommunication Indicators Database can provide an exhaustive and readily comparable picture of global public telecommunications. Since the database is based on countries, it cannot provide regional or global aggregates or data on specific markets. These gaps are filled by private companies such as Telegeography Inc.

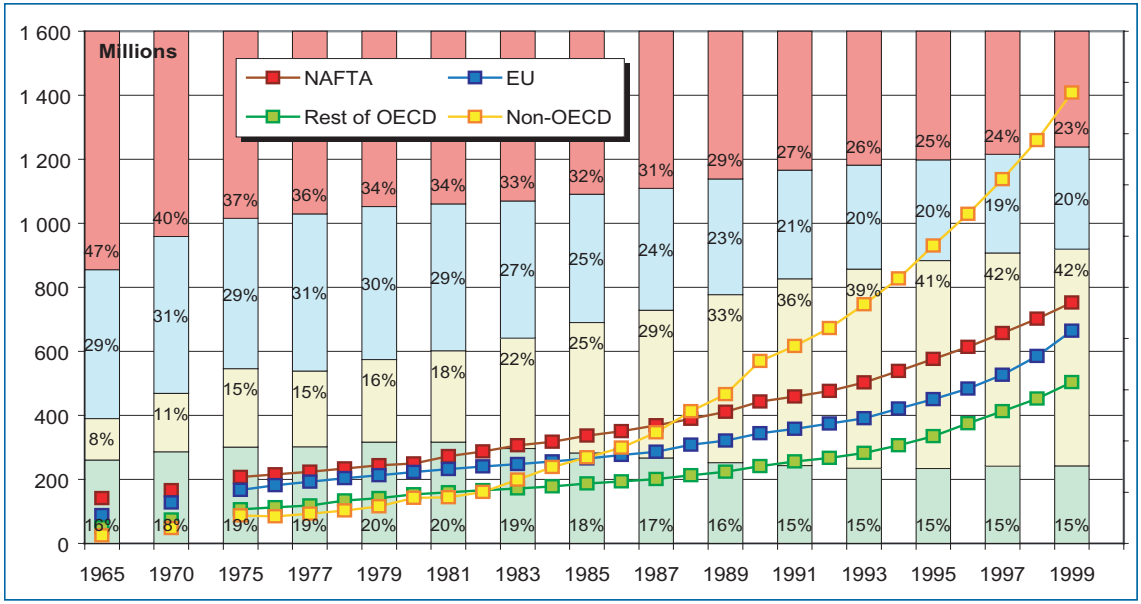
Drawing up global historical series is difficult, for two reasons. The first reason is the absence of a generally accepted unit of measurement: some countries measure traffic in minutes, others in numbers of calls, and others in pulses. Even if the most commonly used unit is the "connection minute", the number of countries supplying data varies over time and according to the type of traffic. In any case, a fourth unit - band width - could soon become the new measurement standard. The second reason is the strategic importance of information on levels of telecommunication traffic, which explains the reluctance of operators - particularly private ones, or those about to become so - to publish data on traffic at a time when competition in the sector is so fierce.

Experts distinguish between three levels of telecommunication traffic: international, national and local. As Swisscom in Switzerland has done in 2002, some countries or operators are tending to merge these categories for technical or economic reasons. The most detailed statistics concern international traffic, because - traditionally, but things are changing - it involves two operators and gives rise to cross-border financial settlements. In 1999 data on international traffic were available for 192 countries; the equivalent figures for national and local traffic were 128 and 100 respectively.

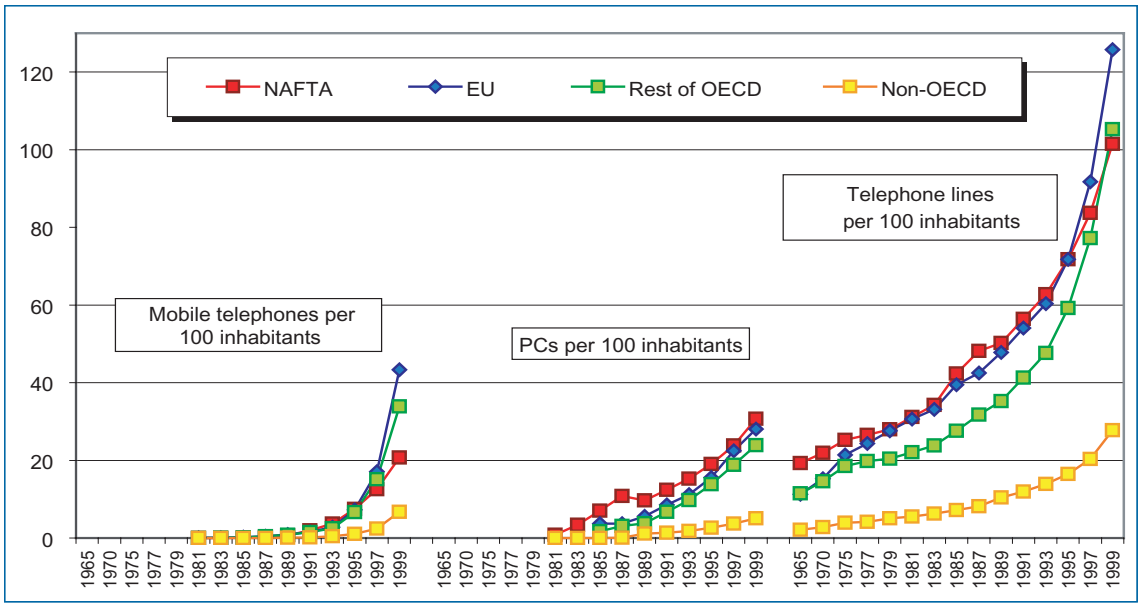
Another way of looking at telecommunication traffic is to analyse the turnover of companies in the sector. In that case one is no longer measuring traffic in the physical sense of the term, but monetary aggregates relating to all types of telecommunication services without distinction. This approach also takes account of pricing policies, which may vary from operator to operator; on the other hand, the point of reference shifts from the country of operation to the operator's nationality, disguising the geographical distribution of the services paid for. Drawing up global statistical series on turnover in the telecommunication sector also raises the question of which reference currency and methods of conversion to use; the ITU uses the US dollar and end-of-year rates of exchange for other currencies.

Data on the expansion of telecommunication networks are of better quality than data on traffic. They indicate the number of lines or connecting devices. However, the significance and accuracy of these data will depend on local habits of use and regulation. For example, the difference between the number of telephone lines and the number of subscribers is due to the number of public telephones. In some developing countries, the latter are far more important than in developed countries. Another example is television: some countries record the number of TV sets, whereas others simply record the number of households with TV licences. Such difficulties greatly complicate the international interpretation and comparison of these statistics.

1.2.C. Access to telecommunications by region (all types of system), in millions of units and in per cent, 1965-1999



1.2.D. Density of telecommunication systems by region, in units per 100 inhabitants, 1965-1999



Primary data: ITU, World Telecommunication Indicators Database; OCDE, Perspectives des communications de l'OCDE; World Bank, Global Economic Prospects and the Developing Countries; Telegeography, Packet Geography 2002

RECENT TRENDS

1. Internet capacity is growing explosively (Fig. A)

Since 2000, the total capacity of the international Internet network to transmit information (band width measured in megabytes per second) has exceeded that of the international telephone network. The development of the Internet at interregional level is further consolidating the key position of the United States, where 99% of interregional transmission capacity is located. For historical reasons - unlike in the telephony sector, where the costs of international cables are borne jointly by both parties - Internet circuits connected to the United States are entirely paid for by the foreign party. This asymmetry has had a major impact on the geographical distribution of telecommunication earnings, especially since band width - and probably interregional traffic - has tripled each year since 1999.

2. Mobile telephony all around the globe (Fig. B, C and D)

Until the early 1990s it was usual to analyse the expansion of a network in terms of the number of subscribers. Things changed fundamentally during the 1990s, particularly with the advent of mobile telephony. However, there are still major differences even on the terrestrial network. In the most highly developed countries the number of subscriptions is 127 per 100 inhabitants, whereas in the non-OECD countries it is 27 per 100.

3. The structure of traffic is hardly changing, but charge rates are (Fig. E)

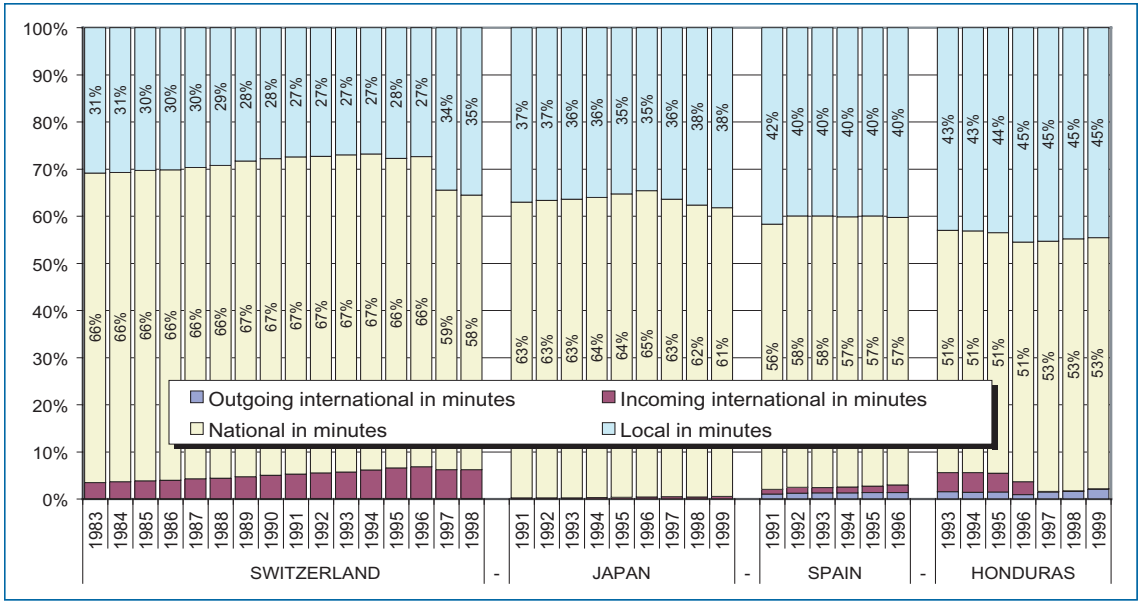
Telecommunication traffic has three main components: traffic within the same switching area (local traffic), traffic between national switching areas (national traffic) and international traffic, which has two statistical dimensions depending on the charging method: outgoing and incoming traffic. Full information on the subject is only available for a very limited number of countries, and the relative distribution of local, national and international traffic varies over time and from country to country. These differences are due to many factors, including social habits and the amount of contact with other countries, as well as technological and charging arrangements. In most countries Internet traffic is charged at local rates, since beyond that level it is handled by dedicated, non-telephone circuits. In countries for which full historical data are available, the share of local traffic is between 35% and 45% of total connection minutes, national traffic seldom accounts for more than 60%, and international traffic may range from negligible to 10%.

Traditionally, the cost of a telephone call depended on distance. However, at least in the OECD countries, there has in recent years been an increasing tendency to "postalize" telephone charge rates. Just as for postal services, the costs of telephone services are now much the same, regardless of distance. Local calls are thus tending to become more expensive in relative terms, while international calls are getting cheaper. There are two explanations for this. Deregulation is forcing operators to adapt their prices to actual costs, while the "last kilometre" remains the most expensive section of the link-up, and charges rates have been increased accordingly.

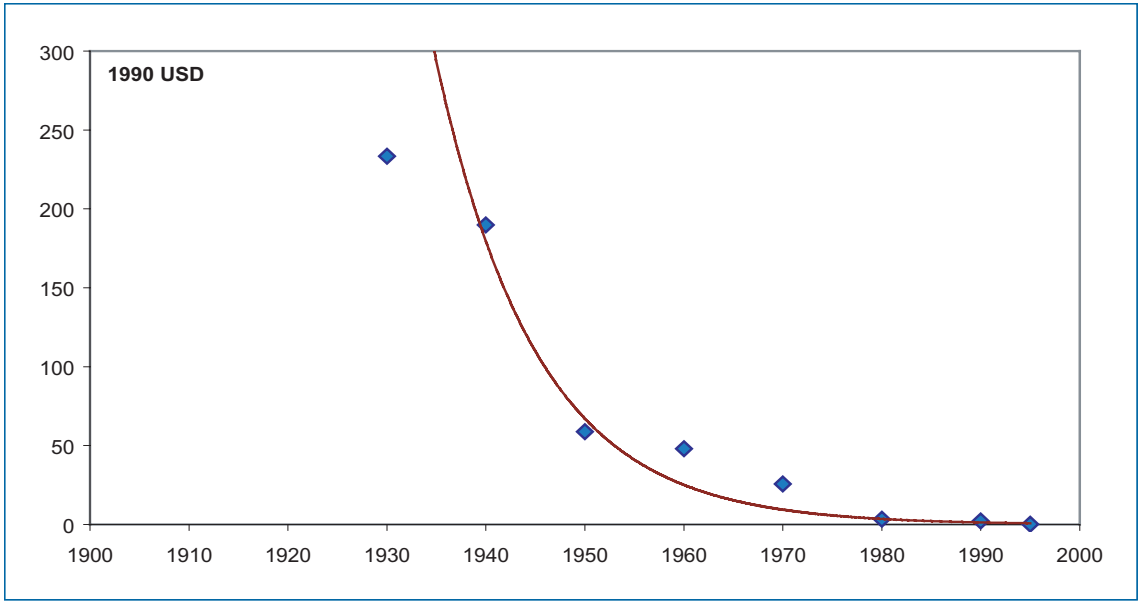
4. An increasing technology gap (Fig. G)

Capital expenditure, or investment in telecommunication infrastructure, has varied over the years between 0.5% and 1% of GDP, with a slight tendency to increase since the early 1990s. The same trend can be observed in most countries that provide the relevant data. However, if the same expenditure is analysed per capita, the contrasts become much more apparent. The non-NAFTA members of the OECD are at the top of the league table with some USD 140 of capital expenditure per head of population; next comes NAFTA with USD 86, followed by the rest of the world with about USD 10 per capita. Even if the gap between the OECD and the rest of the world is gradually closing in terms of share of GDP, it is still very

1.2.E. Distribution of telephone traffic by switching area, in per cent



1.2.F. Changes in the price of a three-minute transatlantic call, in constant USD, 1940-2000



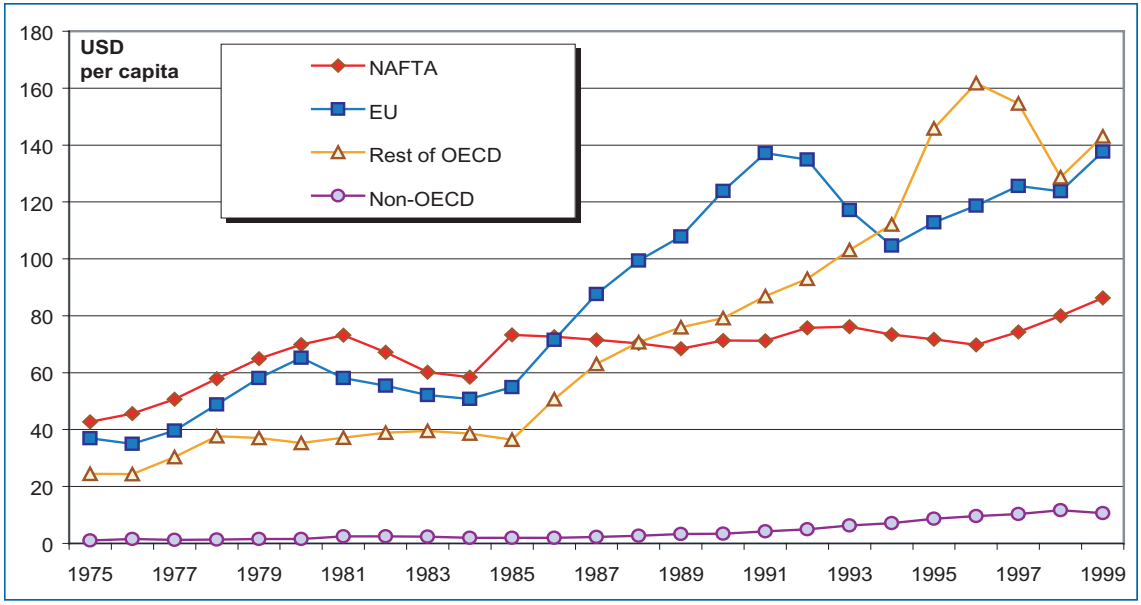
Primary data: ITU, World Telecommunication Indicators Database; OCDE, Perspectives des communications de l'OCDE; World Bank, Global Economic Prospects and the Developing Countries

large in absolute terms, i.e. in terms of total investment, which determines a country's capacity to benefit from technological progress.

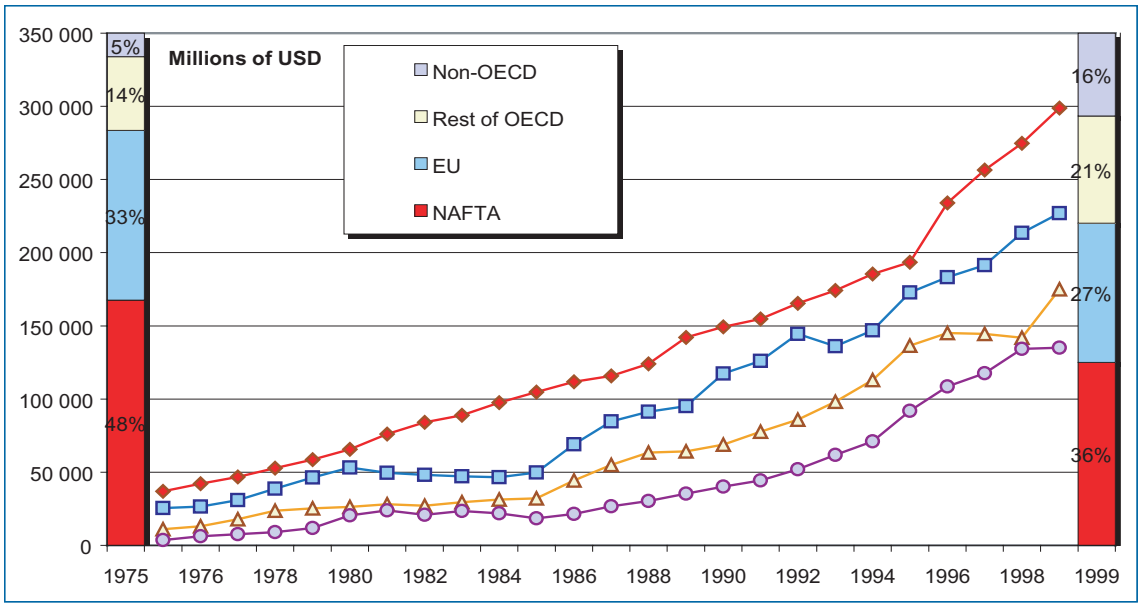
5. Higher telecommunication earnings in non-OECD countries (Fig. H)

Between 1975 and 1999, telecommunication operators saw their earnings increase in nominal terms by a factor of 10.8, while global GDP had multiplied by 3.7. This means that the telecommunication sector's share of the economy tripled. In 1975, 48% of earnings went to operators based in the United States, but this figure had fallen to 36% by 1999. Over the same period, the share of earnings received by operators based in European Union countries fell from 33% to 27% of the total. Non-OECD countries saw their share of earnings rise from 5% to 16%. However, operators based in OECD countries may be shareholders in operators based elsewhere and may therefore enjoy a share of non-OECD earnings.

1.2.G. Investment in telecommunication infrastructure, in USD per capita, 1975-1999



1.2.H. Turnover of telecommunication operators by region, in millions of USD and in per cent, 1975-1999



Primary data: ITU, World Telecommunication Indicators Database; OCDE, Perspectives des communications de l'OCDE; World Bank, Global Economic Prospects and the Developing Countries

1.3. Transport flows

CONCEPTS AND DEFINITIONS

Like mail traffic and telecommunications, transport of people and goods is a key aspect of globalization. It helps explain the development of the spatial organization of human activity, from urban growth to the internationalization of production within multinational corporations.

Transport can be analysed from three related angles:

- expansion of the network, measured in kilometres or the number of regular lines or connections, or investment in expansion;
- the available fleet, i.e. transport capacity;
- transport flows and volumes.

The first two approaches are very useful but highly specialized. From an economic point of view, transport flows are the most meaningful, and give a clearer picture of the amount of transport in the globalization process.

Transport of people and goods involves an extremely wide variety of carriers, ranging from automobiles (private cars, lorries, buses, etc.) to trains, ships, barges, pipelines and aircraft. To make things even more complicated, each of these carriers can be subdivided into domestic and international transport.

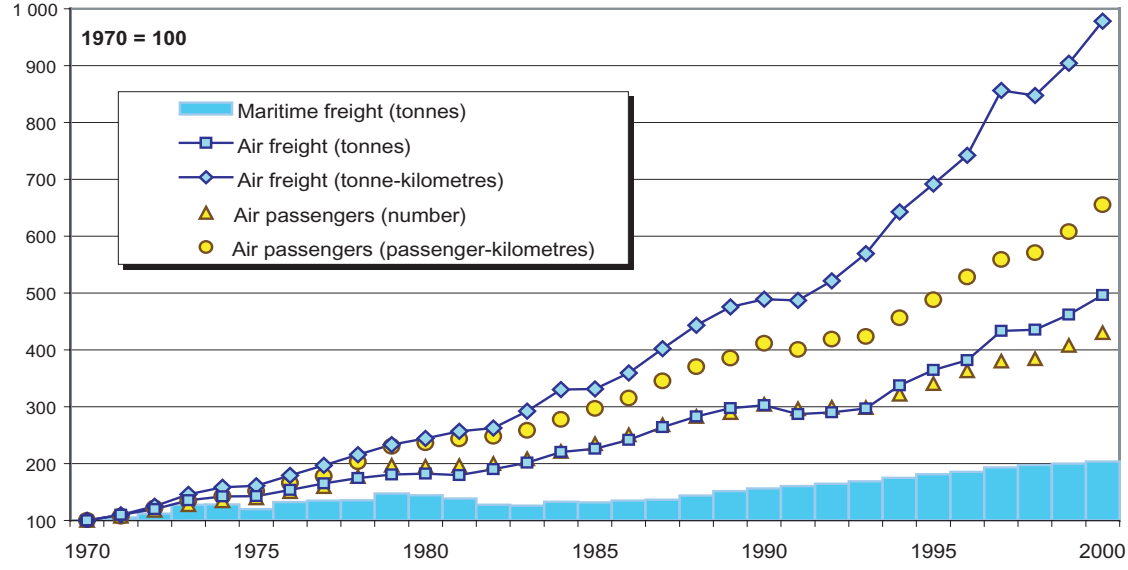
METHODS AND PROBLEMS OF MEASUREMENT

The units of measurement most commonly used to quantify traffic are passenger kilometres for transport of people and ton kilometres for transport of goods. These are not natural units, and in order to use them it is necessary to know not only the total number of passengers (or tonnes) but also the distance covered by each. This definition demonstrates how difficult it is to measure the various modes of transport, some of which (such as international air transport) are highly regulated, whereas others (such as private cars) are totally uncontrolled. As a result, transport data are determined with the help of surveys and estimates of average distances travelled, rather than by statistics in the strict sense of the term.

The less regulated a given mode of transport is, the more incomplete the data concerning it will be. To make matters worse, there is an almost total lack of statistics on domestic transport in most developing countries. This makes it impossible to speak of global transport statistics; all that one can do is discuss selected aspects, with varying degrees of accuracy:

- Air transport statistics are calculated by the International Civil Aviation Organization (ICAO) on the basis of information supplied by its 185 member countries. These data cover transport of both people and goods and distinguish between domestic and international traffic.
- The International Railway Union has only 45 members. It provides data about its member countries, but is unable to supply global information.
- The International Road Transport Union does not keep statistics of its own, but uses data compiled by other organizations such as the WTO or Eurostat instead.
- Statistics on maritime transport of goods are gathered by UNCTAD, which has published the Review of Maritime Transport since 1968.

1.3.A. Comparative trends in air and maritime transport, as an index, 1970-2000



1.3.B. Distribution of passengers transported, by type of carrier, in billions of passenger-kilometres, 1999

	EU	United States	Japan	China	Russian Federation
Car	3 676 (79%)	6 216 (86%)	723 (55%)	-	-
Bus and coach	402 (9%)	239 (3%)	90 (7%)	594	172
Rail	281 (6%)	23 (0%)	389 (30%)	370	81
Tram and underground railway	50 (1%)	22 (0%)	31 (2%)	5	72
Sea vessel	32 (1%)	1 (0%)	5 (0%)	12	1
Aircraft (domestic/inter-EU)	241 (5%)	767 (11%)	76 (6%)	80	56

Primary data: UNCTAD, Annual Review of Maritime Transport; European Commission, EU Energy and Transport in Figures; ICAO, Statistical Yearbook ; IRU, World Transport Statistics; UIC, Rail Traffic Statistics

- The European Conference of Transport Ministers is the only organization with the resources to cover the full range of carriers, but it does this only for one region - the European Union. In 2001 the EU published a highly interesting booklet entitled EU Energy and Transport in Figures 2001, which contains a number of international comparisons based on standardized definitions.

RECENT TRENDS

1. Predominance of maritime freight (Fig. A)

In the absence of readily comparable data on rail and road transport, only sea and air transport can be compared globally. In the space of thirty years the volume of air transport has increased fivefold, whereas the volume of transport by sea has scarcely doubled. Despite this differing trend, it should not be forgotten that maritime transport still accounts for 99.5% of the total volume transported by sea and air, with only 0.5% travelling by air. In 2000, 5.2 billion tonnes of goods were transported by sea.

The geographical distribution of maritime transport has changed profoundly over the last thirty years. In 1970, 64% of total tonnage was loaded in developing countries, but by 1999 this figure had fallen to 51%. The share of goods unloaded in developing countries rose from 17% in 1970 to 28% in 2000. There are several reasons for this development, including the relative stagnation of trade in raw materials and ores, changes in transport costs, and finally structural changes in the composition of global trade flows.

2. In Europe, road transport leads the field (Fig. C)

The only truly complete statistics on transport are those concerning the European Union. They show that the number of ton kilometres travelled in the EU doubled between 1970 and 1999, which more or less matches the trend (in tonnes) in global maritime transport. This long-term trend conceals major structural changes, especially the increasing predomination of road transport (45%), followed by inland waterways (40%), within the Union. In the space of thirty years both of these carriers have increased their share by twenty per centage points, and other carriers, particularly the railways, have seen their shares decline. The predomination of road transport is also reflected in the number of passenger kilometres travelled; over the last thirty years its share has risen slightly and is now almost 80% of the total.

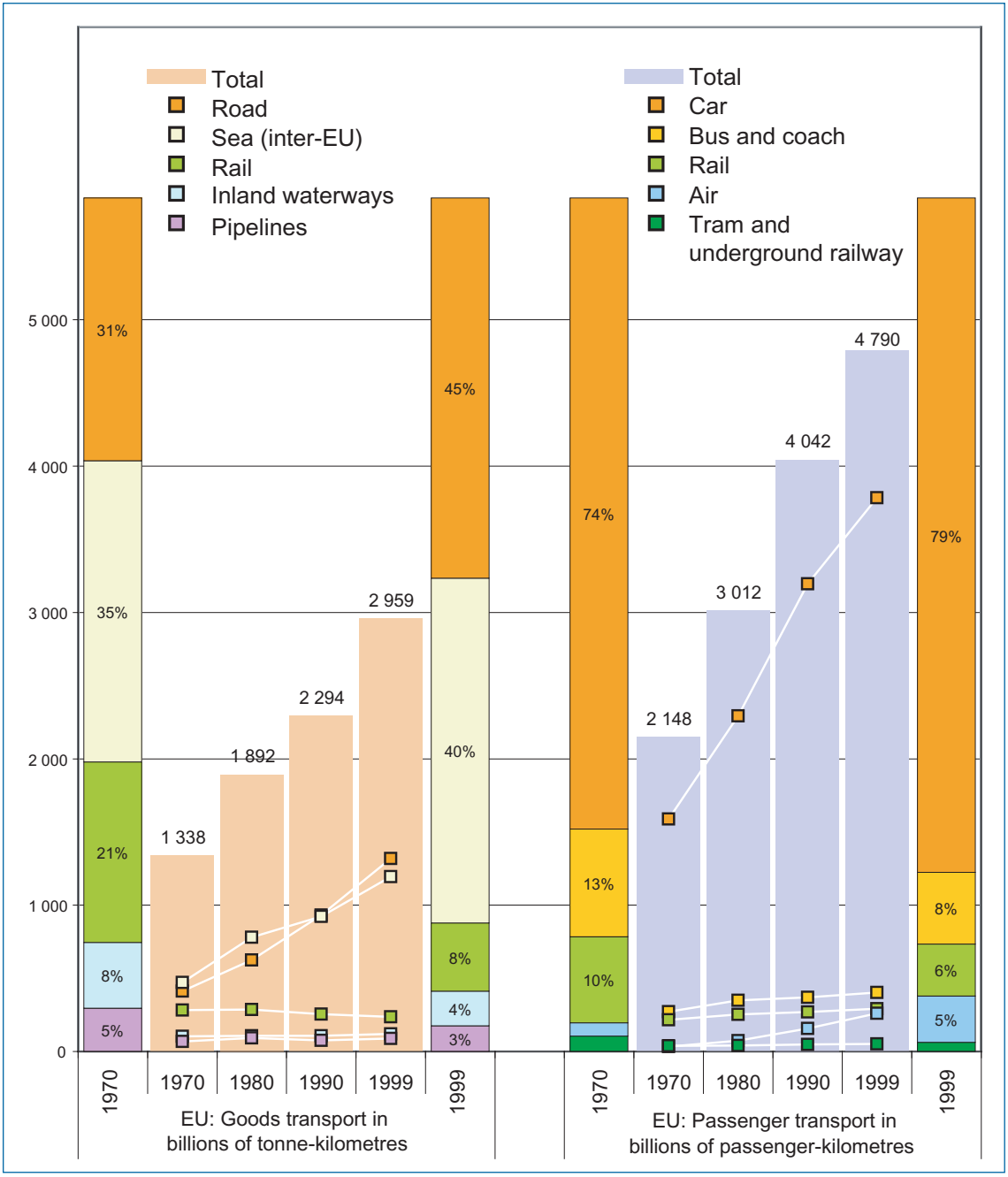
3. Widely differing levels of transport (Fig. B, D and E)

The amount of goods transported varies enormously from region to region. Thus there is a huge contrast between China (3,000 per capita ton kilometres) and the United States (19,600 per capita ton kilometres). The European Union and the Russian Federation are in between these extremes, with 7,600 and 14,000 per capita ton kilometres respectively. Factors such as level of development, land area and type of resources help to shed light on, if they do not actually explain, the various countries' demand for transport. For example, the large share of transport by oil pipeline in both the United States and Russia (17% and 33% of total ton kilometres respectively) is due to the remoteness of the oil fields (Alaska and Siberia) and their importance to their countries' economies.

4. The greenhouse effect and the Kyoto protocol

The continuing expansion of transport and the use of fossil fuels is having a tangible impact on the environment (particularly the ozone layer) and on the climate in general. The Earth Summit in Rio de Janeiro in 1992 recommended that

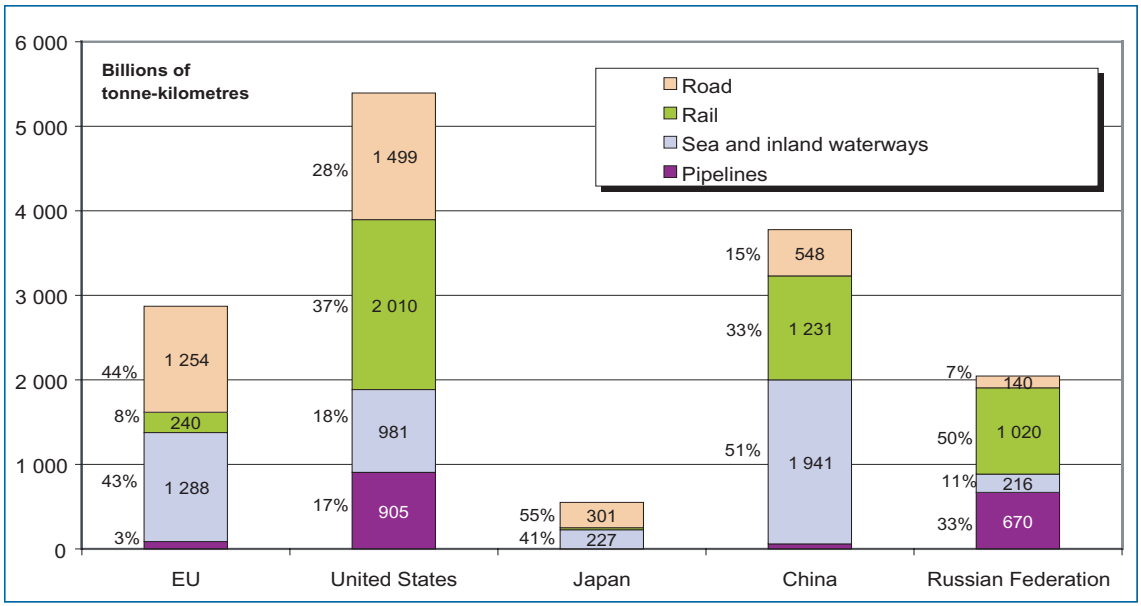
1.3.C. Distribution of flows of passengers and goods within the EU, by type of carrier, 1970-1999



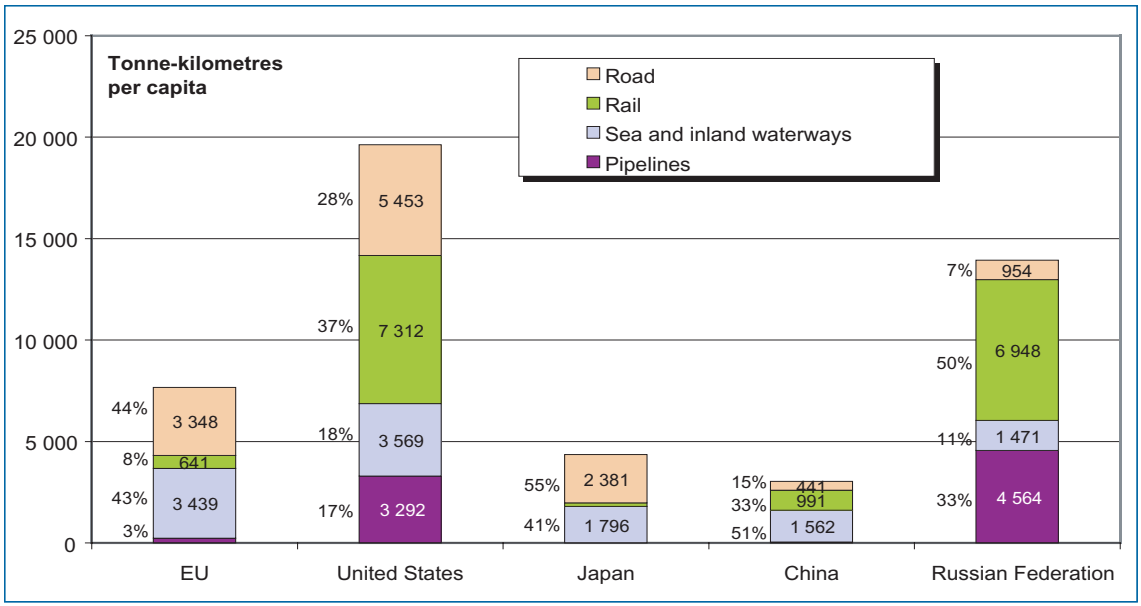
Primary data: UNCTAD, Annual Review of Maritime Transport; European Commission, EU Energy and Transport in Figures; ICAO, Statistical Yearbook ; IRU, World Transport Statistics; UIC, Rail Traffic Statistics.

emissions of greenhouse gases be measured. The Kyoto protocol, which entered into force in 2002 despite the refusal of the United States to ratify it, distributes objective quotas for reduction of emissions among the various regions of the world. However, there is still a long way to go before the targets set out in the protocol can be met.

1.3.D. Distribution of goods transported, by type of carrier, in billions of tonne-kilometres, 1999



1.3.E. Distribution of goods transported, by type of carrier, in tonne-kilometers per capita, 1999



Primary data: UNCTAD, Annual Review of Maritime Transport; European Commission, EU Energy and Transport in Figures; ICAO, Statistical Yearbook ; IRU, World Transport Statistics; UIC, Rail Traffic Statistics

1.4. Mail traffic

CONCEPTS AND DEFINITIONS

Mail services are responsible for delivering letters and parcels. Before the development of telecommunications, letters were the only way to send information over long distances. Traditionally, therefore, mail services have played an important part in eliminating distance - a phenomenon which has developed to an unprecedented degree in recent years thanks to telecommunications. The Universal Postal Union (UPU) was set up in 1874, six years after the International Telegraphic Union. Today the UPU has 189 member countries and is still the only source of information on global traffic in letters and parcels. Statistics on traffic density, the types of message delivered and the kinds of senders and recipients of letters and parcels provide a picture of how information circulates around the world and what kinds of relationship mail services enable the various players to establish.

METHODS AND PROBLEMS OF MEASUREMENT

The member countries of the UPU send it information on traffic, classified in one of two ways: either by speed of delivery, or according to whether or not the item sent is a letter or small parcel weighing less than 2 kg. The UPU merges this information into a single set of statistics, combining priority delivery with items under 2 kg and ordinary delivery with other items. This provides a fairly reliable picture, but above all a unified one, of global mail traffic, although there have been a number of gaps in the supply of data. For example, some countries failed to send in any figures in a given year (e.g. Switzerland and Canada in 1997) and some regions underwent profound political changes (such as the collapse of the USSR).

RECENT TRENDS

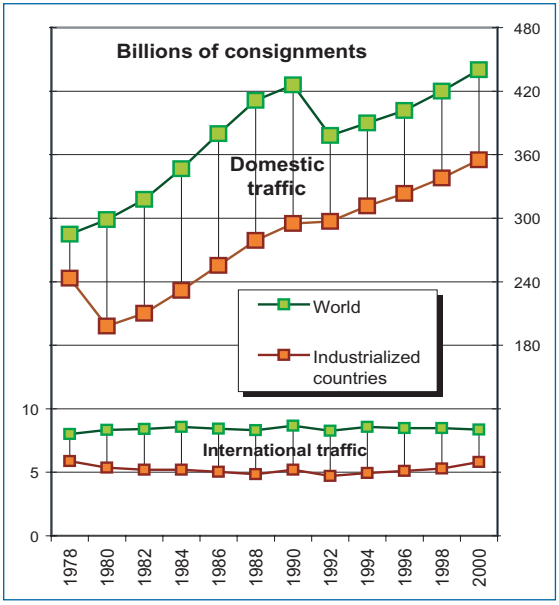
1. Mail traffic: a Northern phenomenon (Fig. A)

In the twenty years between 1980 and 2000, mail traffic underwent two profound changes. First, developing countries' share of world domestic traffic fell from 33% in 1980 to 19% in 2000. Second, the relative share of international traffic in total global mail traffic fell from 2.7% to 1.9%. In other words, the last twenty years have seen an expansion of domestic mail traffic in the developed countries. However, if differences between regions are disregarded, it can be seen that mail traffic has grown at the same rate as world population, since in the space of twenty years the number of consignments per inhabitant of the globe has remained almost unchanged (76 a year in 2000, as against 75 in 1980).

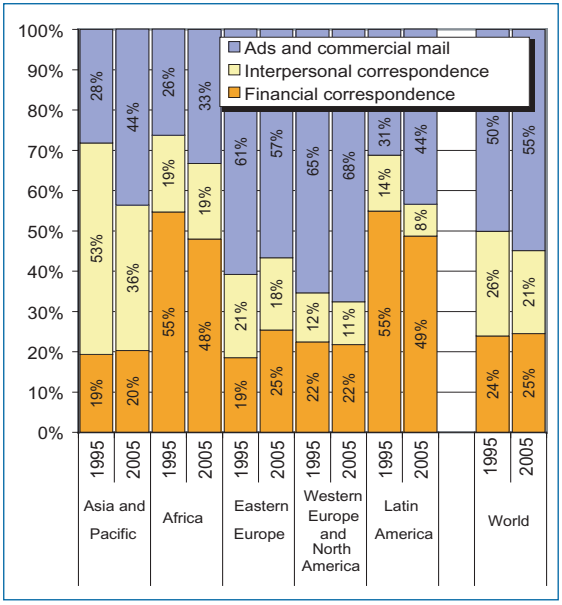
2. The postal network (Fig. C)

Postal statistics make it possible to determine the extent to which mail services have become available to people in various countries. In 2000, averaged across the globe, two thirds of the world's population were able to receive mail at home, which also means that they had a recognised address which could be reached by the postal network. However, this average figure must be treated with caution, for it conceals major disparities between countries (as reflected by a mean deviation of 36%). Top of the league is the

1.4.A. Number of mail consignments in the world and in industrialized countries, 1978-2000



1.4.B. Distribution of consignments by type of contents in 1995 and forecasts for 2005



1.4.C. Population having mail delivered at home, in per cent, in 1993, 1996 and 2000

	1993		1996		2000	
WORLD	**62%**	**(36%)**	**62%**	**(37%)**	**64%**	**(38%)**
OECD	**90%**	**(15%)**	**97%**	**(5%)**	**96%**	**(7%)**
NAFTA	84%	(10%)	82%	(15%)	93%	(5%)
EU	95%	(9%)	98%	(2%)	95%	(10%)
NON-OECD	**55%**	**(36%)**	**55%**	**(38%)**	**58%**	**(39%)**
Rest of Europe	96%	(5%)	96%	(5%)	96%	(6%)
Latin America and Caribbean	56%	(30%)	57%	(30%)	64%	(29%)
Africa	29%	(27%)	25%	(28%)	22%	(26%)
Asia and Pacific	55%	(36%)	60%	(35%)	64%	(37%)

In brackets: countries' mean deviation from the regional average.

Primary data: Universal Postal Union, Postal Statistics; Universal Postal Union, Annual Report. Grouping of countries: Fig. A et C cf UPU

European Union, where 95% of the population have mail delivered at home; at the bottom is Africa, where the equivalent figure is less than one person in four. Asia and Latin America are around the global average, although here again there are very significant deviations from this average figure.

3. The future of mail services (Fig. B)

In 1996 the UPU asked 94 national mail services to forecast the amount and type of mail traffic in 2005. Apart from information on the contents of consignments, this study revealed three main trends:

- The share of consignments from businesses to households seems likely to increase significantly, mainly at the expense of consignments between households (both domestically and internationally). Although this trend will be seen in every region, it will be particularly marked in Latin America, Asia and the Pacific.
- In 1995 international interpersonal communications accounted for 48% of global traffic, but it is forecast that this figure will fall to 39% by 2005, probably owing to the ease of communicating through the Internet. This reduction by almost ten percentage points is forecast for every region, and will be compensated for by an increase in business mail and advertisements. The same applies to domestic interpersonal communications, with advertisements increasing by 5 percentage points.
- Once the main medium of interpersonal communication, mail services are more and more clearly becoming a network for the dissemination of business communications and information, which are expected to account for 65% of mail traffic by 2005 (over 70% in the developed countries and Latin America), as against 58% in 1995.

II. Main players

2.1 The economically active population

CONCEPTS AND DEFINITIONS

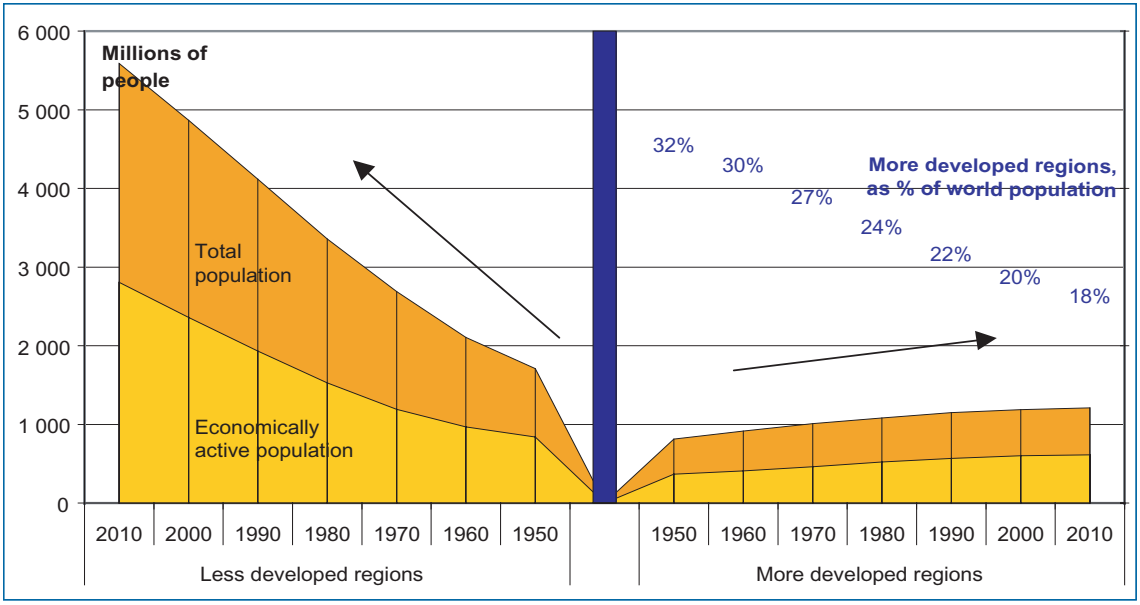
A country's population can be divided into three categories based on its relationship to the labour market: employed, unemployed and non-active. This classification largely depends on the institutional framework as determined by the country's labour laws and social policy. As regards employed people, there is a sharp distinction between industrialized countries (where labour legislation is highly developed) and developing ones (where it is much less so). For example, informal employment is the exception in industrialized countries and is treated as illegal, whereas in developing countries it is widespread. Such differing ideas about what employment actually is and what part labour legislation should play have major implications when it comes to counting the number of jobs. International comparisons of such institutionally dissimilar realities must therefore be carried out with the utmost caution.

Things are even worse when it comes to unemployment and inactivity. Rates of registration of job seekers by unemployment insurance agencies are influenced by factors such as how strict the conditions of eligibility are and how generous the benefits are. If applicants are required to have been registered for a long time, people who lose their jobs may not be able to get unemployment benefit. If benefit is only provided on condition that applicants accept active label market policies, or if unemployed people can be forced to accept a poorly paid or less skilled job, some will prefer not to apply rather than submit to what they see as humiliating conditions. If benefit is only provided for a limited period, people who reach the end of their entitlement will no longer be officially recorded as unemployed and will join the ranks of the non-active. Finally, people in informal employment are not officially recorded as employed, but as non-active. Southern Italy, with its vast underground economy and low rates of employment, illustrates the difficulties of counting jobs in countries where the informal sector is highly developed.

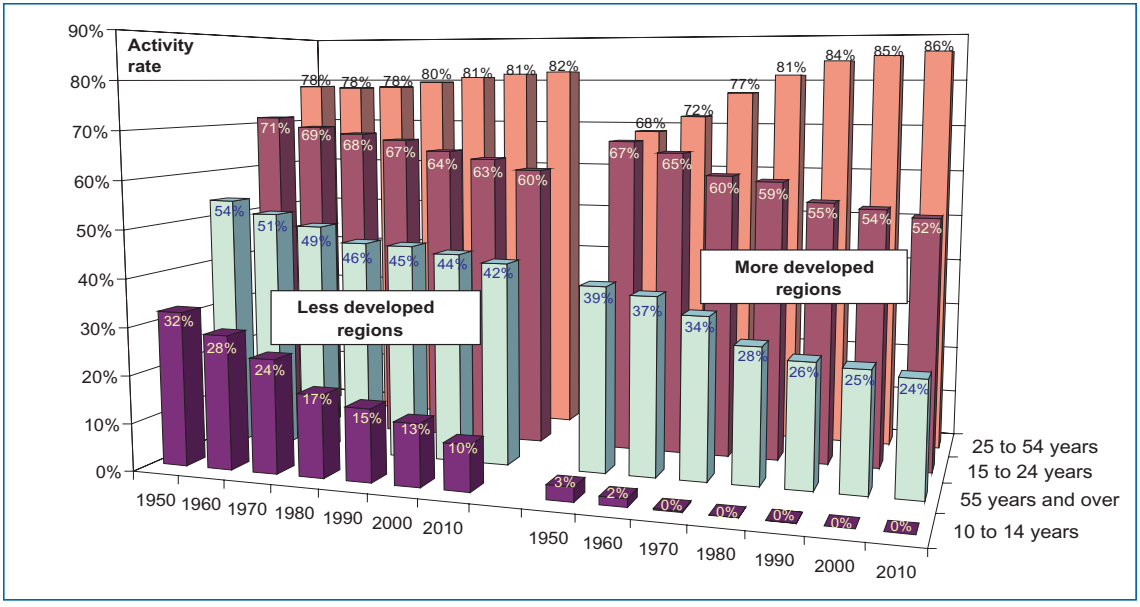
Labour market statistics depend on each country's specific institutional framework, and to a significant extent this explains the differences in data on employment, unemployment and inactivity. Accordingly, such data do not provide a true picture of reality, but merely a glimpse of it as created by labour market institutions and policies. Quite apart from problems of counting, differences in legislative and institutional frameworks create major difficulties when it comes to international comparisons of both labour stocks and labour flows.

Standardized definitions have been adopted in order to ensure that data can be compared internationally. In this connection, the classic definitions used in surveys of the economically active population are based on recommendations by the Thirteenth Conference of Labour Statisticians held by the International Labour Organization (ILO) in 1982. They apply to the working-age population, which conventionally includes everyone aged 15 and over. In this connection, employed people are defined as those who, during the week of the survey, have done at least one hour of paid work (or have a job from which they are temporarily absent). Unemployed people must meet the following three criteria during the week of the survey: they must be out of work; they must be prepared to find work within two weeks; and they must have actively sought work in the previous four weeks. Non-active people are people who do not have a job and are not seeking one. The labour force comprises employed and unemployed people. By excluding the non-active, it

2.1.A. Population and economically active population by level of development, in millions and in per cent 1950-2010



2.1.B. Economic activity rate by age group and by level of development, in per cent, 1950-2010



Primary data: ILO, Key Indicators of the Labour Market; ILO, Economically Active Population 1950-2010; World Bank, World Development Indicators
Grouping of countries: Fig. A et B cf ILO

makes it possible to obtain the clearest possible picture of the amount of labour available in the country concerned.

These various categories are used to calculate the following rates for the population concerned:

- the economic activity rate: the labour force (employed plus unemployed people) as a percentage of the working-age population;
- the employment rate: the percentage of people who actually have jobs;
- the unemployment rate: unemployed people as a percentage of the labour force (rather than the working-age population).

These data are then broken down by gender, level of skills, nationality, marital status, etc.

Economic activities carried out by employed people are classified by sector (agriculture, industry and services) or with the help of a more refined system known as the International Standard Industrial Classification (ISIC). This sectorial job classification is based on the place of work rather than the kind of work; accordingly, someone working as a secretary in an agricultural or industrial business will be classified in the sector where the business mainly operates.

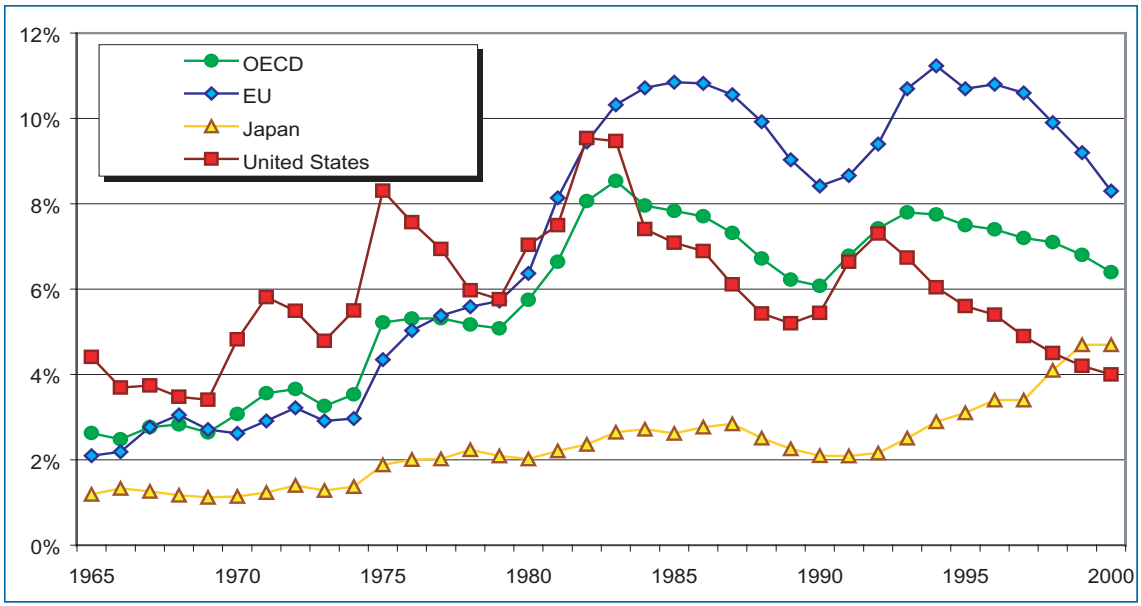
METHODS AND PROBLEMS OF MEASUREMENT

The main challenge when it comes to counting is how to eliminate institutional differences. The data compiled by the ILO are gathered at national level, where the most commonly used sources are population and business censuses, administrative data (especially from social security agencies and employment offices) and labour force surveys. However, each of these methods has its drawbacks. Counts based on population censuses are bound to be imprecise, since the questions about work are extremely vague. Business censuses only take account of the employed population, and hence provide no information about unemployed or non-active people. The data provided by social security agencies and employment offices are over-dependent on institutional factors. Labour force surveys would appear to be the most reliable source. However, despite the ILO's efforts to standardize methods, there are still very great differences between countries, and these are major obstacles to international comparison. For example, definitions of the working-age population vary according to the age of retirement, which each country determines separately (within the European Union it ranges from 60 to 67 years). In failing to take account of the legal age of retirement, as well as work carried out by children under 15, standardization of national data on the basis of a conventional definition of the working-age population as everyone aged 15 and over leads to serious distortions.

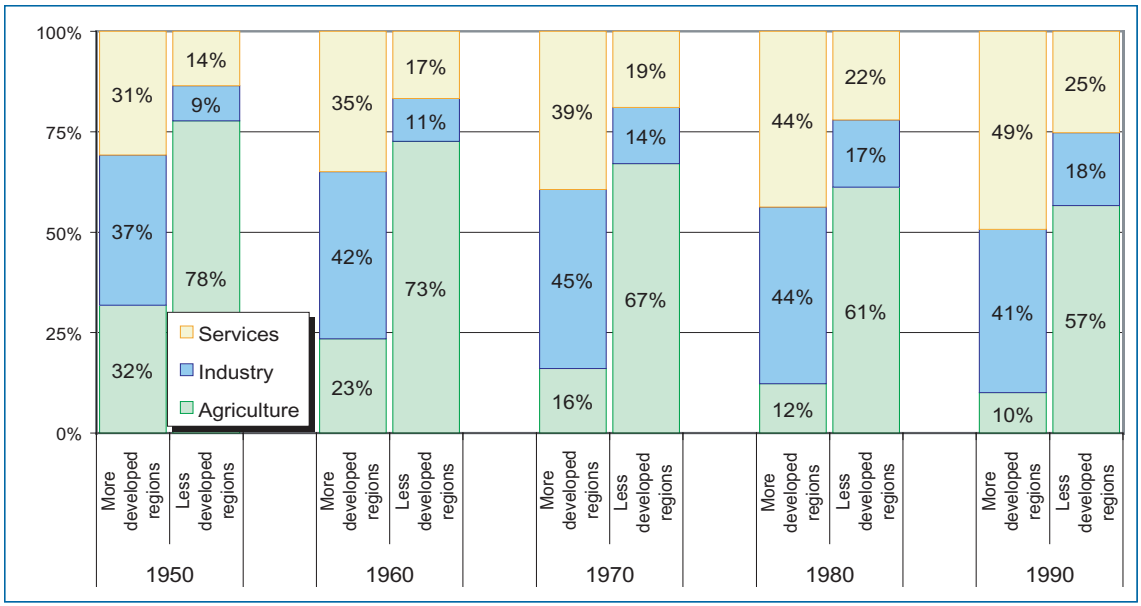
Other difficulties concern the counting of informal employment which, since it is irregular, is often overlooked by surveys that gather data over a limited period (a day or a week). Furthermore, people are less willing to report such employment to official investigators; as a result, economic activity rates are seriously underestimated in countries where informal employment is common. For similar reasons, it is very difficult to compare rates of female employment, since in many countries women work as unpaid home helps and are not treated as part of the labour force. The same is even more true of child labour.

Finally, no satisfactory solution has been found to the problem of the length of time worked. According to conventional ILO definitions, people who have worked for one hour during the period of the survey are recorded as economically active in

2.1.C. Unemployment rates in industrialized countries, in per cent, 1965-2000



2.1.D. Economically active population by economic sector and by level of development, in per cent, 1950-1990



Primary data: ILO, Key Indicators of the Labour Market; ILO, Economically Active Population 1950-2010; World Bank, World Development Indicators; OCDE Perspectives de l'emploi de l'OCDE 2001. Grouping of countries: Fig. C cf OCDE; Fig. D cf ILO

exactly the same way as ones who have worked for 40 hours or more. This method of calculation biases the figures in favour of countries where part-time work is common. It should be mentioned here that the European Union is currently working to develop employment statistics based on full-time equivalents, which would eliminate this distorting factor. At this stage, however, there is no likelihood of this method being extended to developing countries.

Classification by economic sector, which is based on the same sources, also raises a number of problems. First of all, the fact that many countries do not use the ISIC complicates international comparison. Secondly, since sectorial classification is based on the place of work, the role of services in the economy is underestimated; many agricultural and industrial businesses include services jobs which are not recorded as such. Finally, sectorial classification is governed by different rules in different countries. For example, members of the armed forces, self-employed people and home helps are not always recorded. When the armed forces are included, they are classified under the service sector, which is thus overestimated in comparison with countries where the armed forces are not included. Similarly, if home helps are disregarded, the agricultural sector (where such jobs are more common) is underestimated. Finally, some censuses exclude the unemployed, whereas others include the whole labour force.

There are thus two main kinds of problem involved in calculating the economically active population: ways of defining people's employment status (which vary considerably from country to country), and counting methods. This means that labour market statistics can only be interpreted and compared internationally with the utmost caution.

RECENT TRENDS

1. Changes in the economically active population (Fig. A)

In both developed and developing countries, the economic activity rate remained stable (at around 50% of the total population) throughout the period 1950-2000. In absolute terms, however, both of these variables grew much faster in developing countries. As a result, rich countries' share of the total economically active population has declined considerably, and will have fallen to just 18% by 2010.

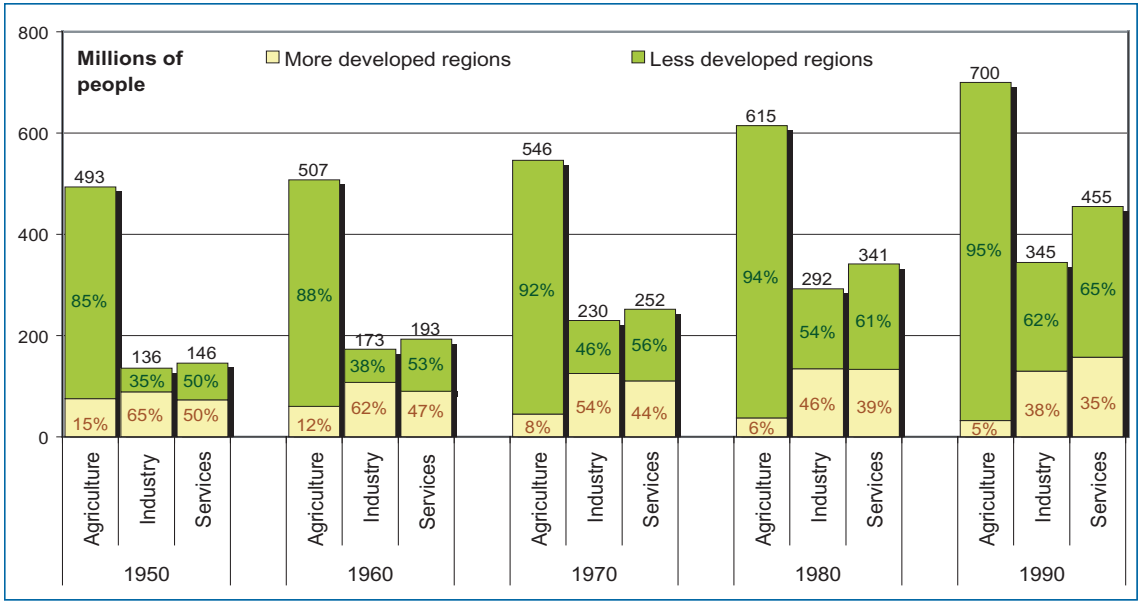
2. Economically active population and age groups (Fig. B)

A breakdown of the data by age group reveals two things. Firstly, in the developed countries, the economic activity rate in the 25-54 age group increased regularly from 1950 to 1990 and then stabilized, whereas in all other age groups the rate of employment declined considerably (and child labour disappeared almost entirely). These figures reflect the increase in the number of years spent in education during the period concerned, as well as the creation of retirement and early retirement schemes which enabled older people to stop working without getting into financial difficulties. Secondly, in poor countries, the economic activity rate increased only slightly in the 25-54 age group and declined in other age groups, although less markedly than in the rich countries. In poor countries there is less age discrimination in the labour market; weak social security systems and economic constraints have ensured that rates of employment among younger and older people remain relatively high.

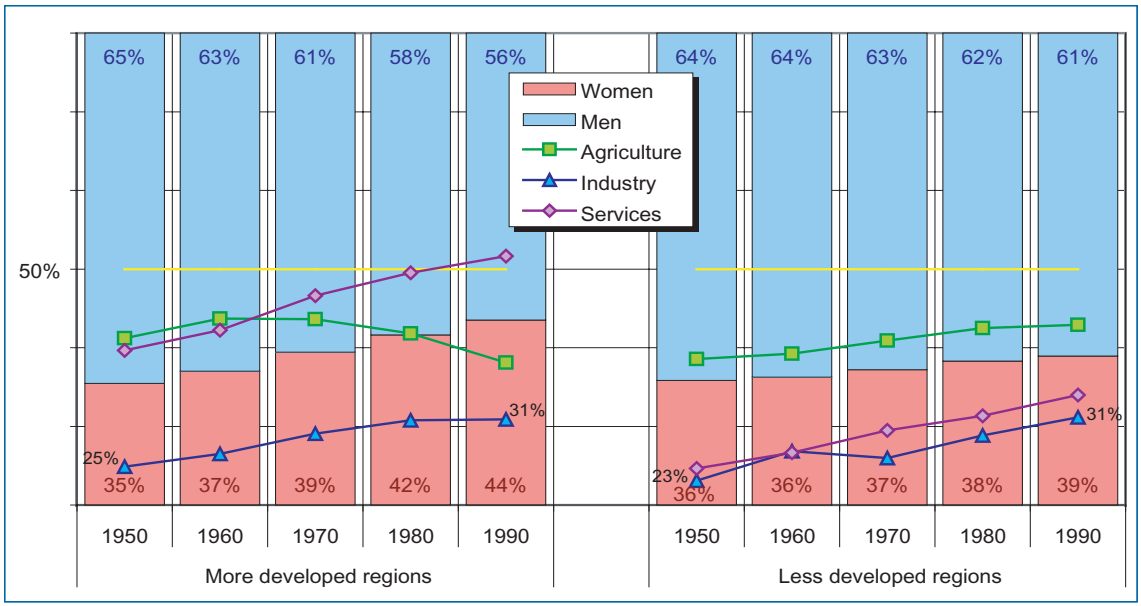
3. Unemployment (Fig. C)

International unemployment figures are very

2.1.E. Economically active population in each economic sector, in millions, distributed by level of development in per cent, 1950-1990



2.1.F. Male-female distribution in the economically active population and by economic sector, by level of development and in per cent, 1950-1990



Primary data: ILO, Key Indicators of the Labour Market; ILO, Economically Active Population 1950-2010; World Bank, World Development Indicators
Grouping of countries: Fig. E et F cf ILO.

difficult to interpret in the long term. Ways of assessing unemployment vary from country to country (and over time within countries), and this is reflected in the way that the numbers of unemployed are counted. Figure C - which appears to indicate that unemployment is a specifically European problem which the United States has solved - is therefore misleading, since unemployment is recorded very differently on the two sides of the Atlantic. It is a faulty extrapolation to suggest, on the basis of such charts, that the European labour market is unusually inflexible.

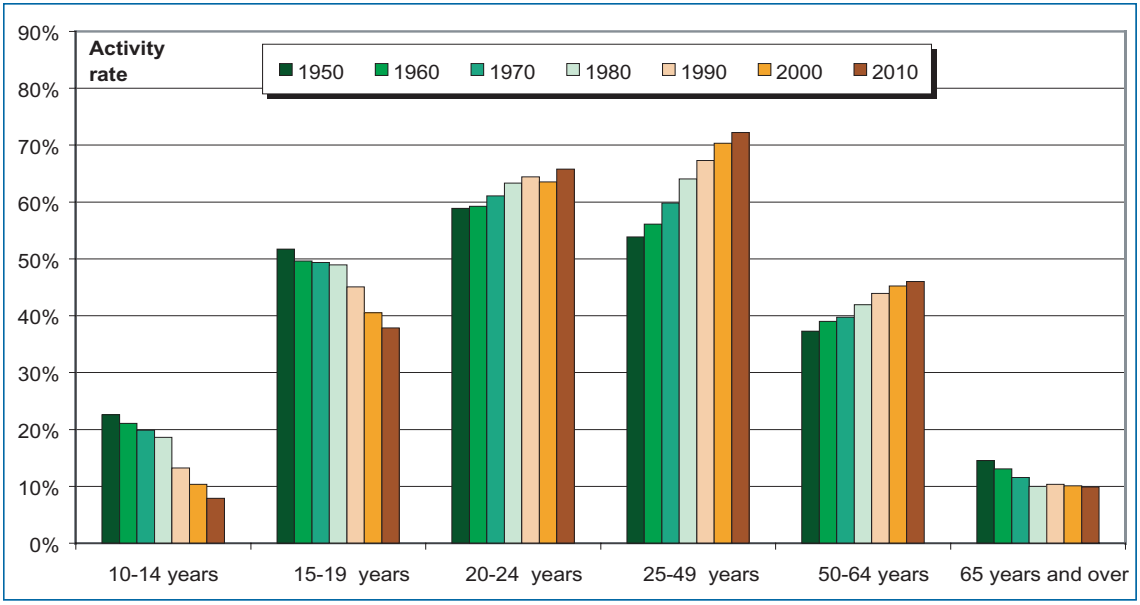
4. Sectorial distribution (Fig. D and E)

In developed countries there has been a major shift towards the tertiary sector, at the expense of agriculture, which lost over two thirds of its jobs between 1950 and 1990. These countries now account for just 5% of the world's agricultural workers, but they include 38% of its industrial workers and 35% of its service workers (i.e. twice their share of the population). In contrast, the developing countries are still largely agricultural, with over half of their economically active populations employed in this sector in 1990. Even there, however, there is a shift away from agriculture towards industry and services.

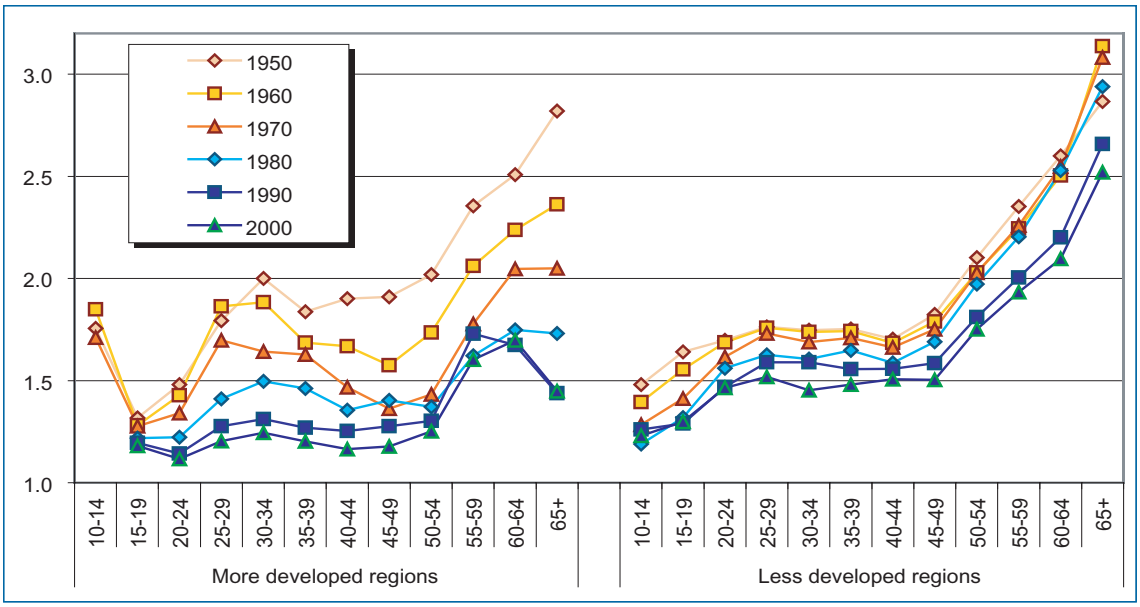
5. Employment of women (Fig. F, G and H)

Employment of women has increased more noticeably in the developed world than it has in the most disadvantaged regions. In the developed countries, the share of female employment has grown considerably in the service and industrial sectors but has fallen in agriculture, while in the developing countries the proportion of women has increased slightly in all three sectors. Female economic activity rates have continued to expand, the most spectacular rates of growth being in the 25-49 age group. The greatest fall has been in the 10-14 age group (from 23% to 8% over the period concerned). In the rich countries, the ratio of men to women has generally tended to balance out in the long term, approaching equality over the period 1950-2000. This trend is most noticeable in the 15-54 age group in developed countries (where there is still a marked discrepancy among older people) and the 10-20 age group in developing ones (where division of labour by gender is still very common above the age of 20). Developed countries have thus seen a spectacular increase in female employment and in the service sector, but this process - which some would consider a feature of modernization - has scarcely got under way in developing countries.

2.1.G. Female economic activity rates, by age group, 1950-2010



2.1.H. Number of economically active men per economically active woman, by age group and by level of development, 1950-2000



Primary data: ILO, Key Indicators of the Labour Market; ILO, Economically Active Population 1950-2010; World Bank, World Development Indicators
Grouping of countries: Fig. G et H cf ILO.

2.2 Major corporations

CONCEPTS AND DEFINITIONS

Even though mainstream economists would deny this, the focal reference of the economic theory is an idealized vision of a market in which there is perfect competition and an infinite number of individual businesses battle for the favours of an equally innumerable crowd of buyers. In practice, things are very different. In each sector or industry there is a finite number of businesses that differ from one another, above all in size. These businesses pursue different strategies and have a variety of mutual relationships ranging from competition through various degrees of dependence to outright cooperation. Study of existing businesses and their dynamics is thus essential in order to understand how effectively competition operates and hence, indirectly, how efficient the economy is.

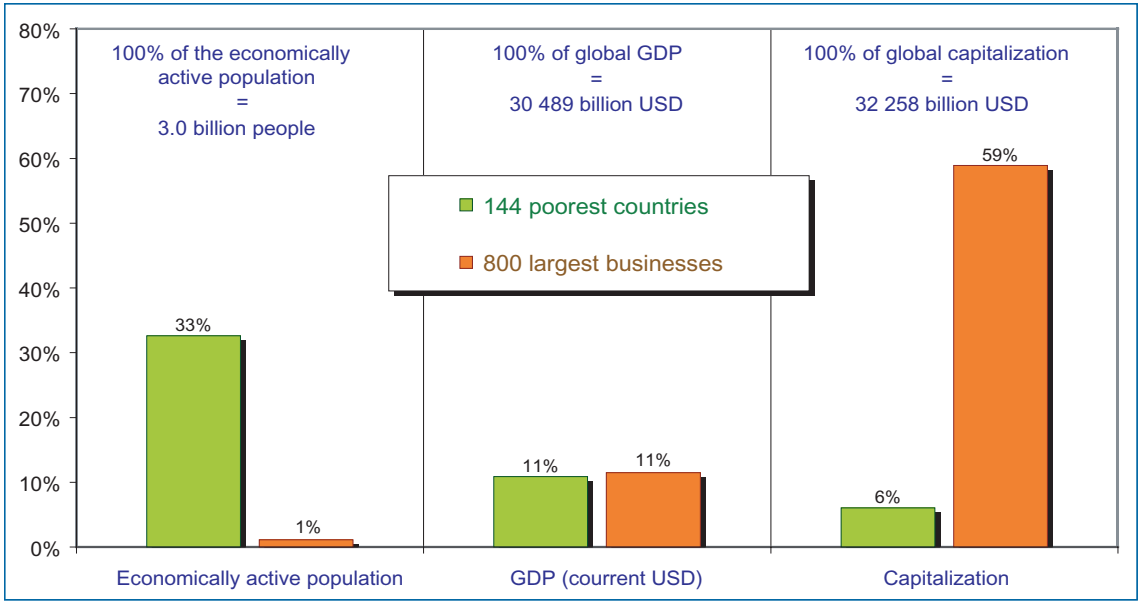
Major corporations play a particularly important part in the global economic structure, owing to the resources that they can muster and the length of the timeframe on which they can base their decisions. They have an undeniable influence on the way in which smaller businesses upstream or downstream of them operate, as well as on the countries and regions where their subsidiaries are located.

There are four main features that distinguish major corporations from other businesses:

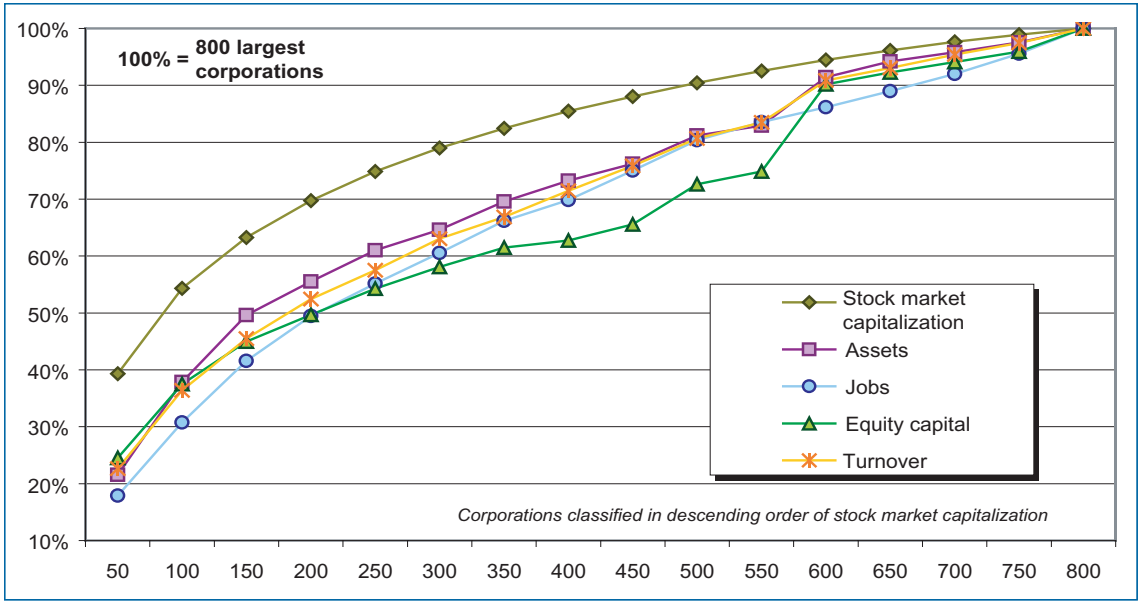
- Their securities are usually listed on stock markets and very liquid, which gives them preferential access to financial markets, and hence to finance on extremely favourable terms. The price they pay for this is close supervision by stock market authorities.
- They are high-profile companies which polish and protect their images and reputations with the help of advertising and marketing campaigns. Their brand names or other identifying features enable them to interact directly with the consumers of their products and services, and in doing so they can often bypass distributors. In this way they can differentiate themselves from their competitors and dominate the markets they are in.
- They spend considerable amounts on R & D for new generations of products or services. In fact, what they are trying to do is control the speed of innovation. Each business does what it can to match the speed of innovation to its own investment cycle and so optimize its profitability.
- They are able to set up worldwide networks of subsidiaries. This enables them not only to choose new sites to suit their needs, but also to optimize their global activities and skills.

In industrial society, the strength of major corporations lay in their ability to take full advantage of their production facilities (economies of scale) and hence charge lower prices than their smaller competitors could ever achieve. In post-industrial society, in which services have a greater part to play, the nature of these advantages has changed. The strength of major corporations now lies less in economies of scale than in their ability to carry out parallel activities which, even though they result in different products or services, make use of the same basic skills (economies of scope).

2.2.A. Major corporations and the poorest countries: a comparison, 2000



2.2.B. Concentration of the 800 largest corporations, 2000



Primary data: Thomson Financial, Datastream Advance; WorldBank, World Development Indicators; ILO, Economically Active Population 1950-2010

METHODS AND PROBLEMS OF MEASUREMENT

How can the "size" of a business be measured? There is no single answer to this question, which can be approached from various angles according to context:

- from the market point of view: in terms of market share
- from the macroeconomic point of view: in terms of value added
- from the financial point of view: in terms of its balance sheet or level of capitalization
- from the operational point of view: in terms of its turnover

Identifying major corporations raises serious methodological problems. Even though most countries hold business censuses from time to time, the respondents are anonymous and hence cannot be identified. One must therefore resort to private sources such as the financial press and other media, which make use of financial databases such as Reuters, Standard & Poor's, Dow Jones, Worldscope and Thomson Financial to produce lists which in some cases have built up almost mythical reputations. In 1954, the American monthly Fortune published the first-ever league table of America's 500 largest industrial companies. More than 40 years later, this was replaced by a list of the largest global businesses. The entire financial press has since followed suit. Over the years the Financial Times, Business Week and many others have got into the habit of publishing regular league tables of businesses based on specific criteria, at both national and global level.

Like databases, these league tables are not always easy to use. The first problem is the choice of classification criteria. Published lists are based on a priori criteria which vary from publication to publication. As for databases, a major obstacle may be the limited number of processing options, as determined by the supplier. Once the criteria have been identified, it is important to know just what data the supplier has focused on and to determine how serious the gaps are.

The raw data for the published lists essentially come from reports which the businesses submit to the supervisory authorities. Unfortunately, standards for the presentation of accounts and additional information vary from one jurisdiction to the next. Even such basic figures as the balance-sheet total will differ in content depending on whether they are drawn up in accordance with the Generally Accepted Accounting Principles (United States), the International Accounting Standards (Europe) or whatever. The same applies to additional information such as the number of employees, which quoted businesses in the United States publish at their own discretion, whereas in most European countries this is compulsory.

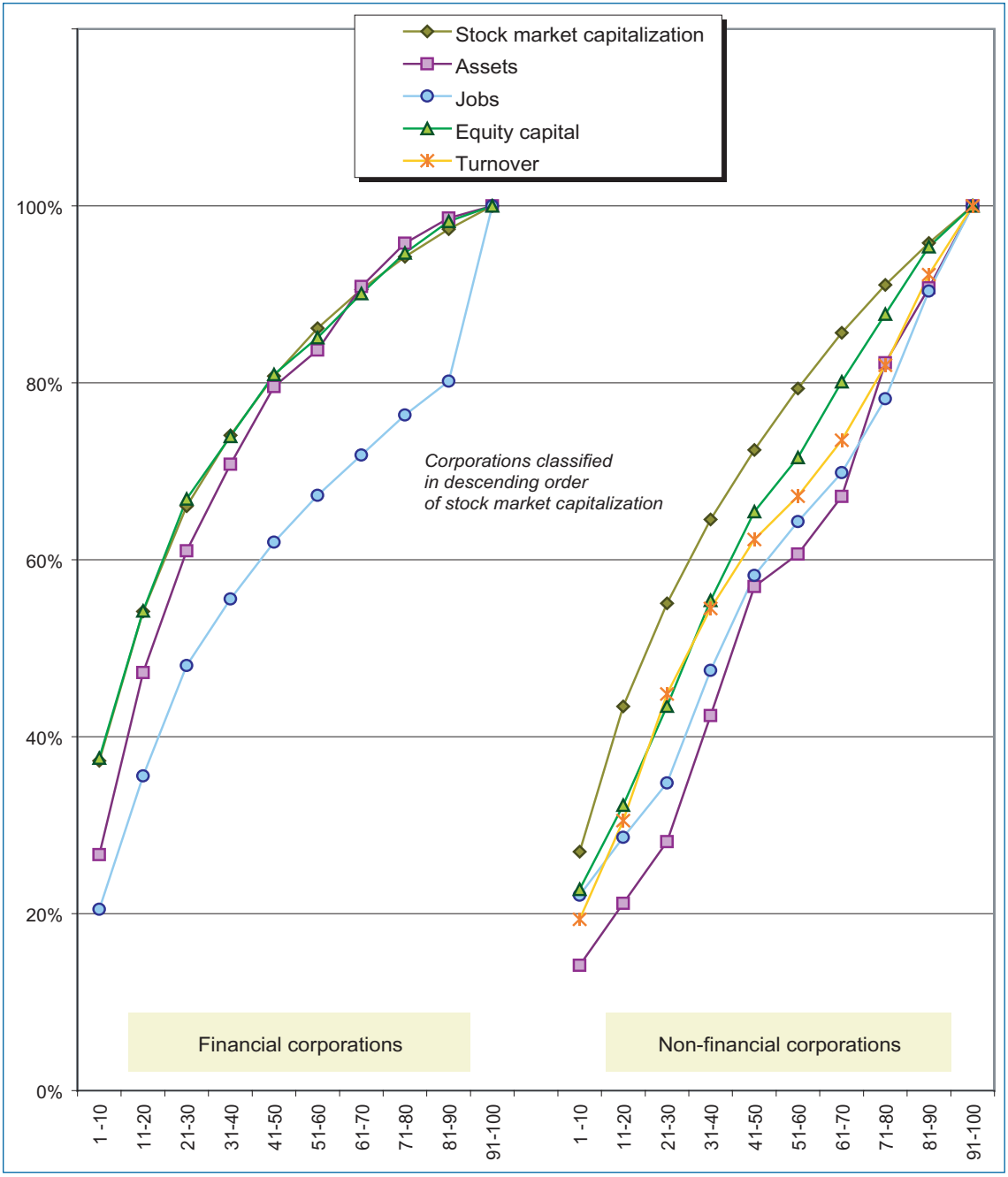
The information presented here comes from a database made available free of charge by Thomson Financial. The world's 800 largest industrial companies (on the basis of capitalization) and 100 largest financial institutions have been included in our analysis.

RECENT TRENDS

1. Considerable macroeconomic influence (Fig. A)

Since company reports do not mention value added, the influence of a given corporation on the economy cannot be calculated directly. However, if it is assumed that a business's turnover equals the value added at every point of the chain (including upstream), turnover can be said to give a picture of the activities that are directly or

2.2.C. The 100 largest industrial and financial corporations: comparison of concentration, 2000



Primary data: Thomson Financial, Datastream Advance; WorldBank, World Development Indicators; ILO, Economically Active Population 1950-2010

indirectly controlled by major corporations. Thus the total turnover of the world's 800 largest non-financial businesses is equivalent to 33% of global product. Clearly, this is an approximate figure which does not take account of such things as cross transactions. However, it does give a general idea of the influence of major corporations on the structure of the global economy. For example, individual studies have shown that value added in major corporations is equivalent to one third of their turnover. Thus the 800 largest businesses are thought to produce about 11% of global GDP, to employ about 1% of the working population (30 million people) and to account for almost 60% of global stock market capitalization. At the other end of the scale, 11% of global GDP is produced by 144 of the poorest countries employing one billion people. Stock market capitalization in these countries accounts for 6% of global one.

2. The largest financial and industrial corporations (Fig. B and C)

The available data enable us to compare the degree of concentration within, and between, various groups of businesses. Thus, among the 800 largest non-financial businesses (800 = 100%), the greatest degree of concentration concerns capitalization (with 80 businesses accounting for 50% of the total), whereas at the other end of the scale 200 of them account for 50% of total employment. However, these figures are incomplete and should therefore be used with caution. These orders of magnitude illustrate the degrees of concentration achieved and raise questions about the underlying factors: are these businesses really so efficient, or is it simply a case of short-term thinking by financial markets?

The emergence of global financial groups is a recent phenomenon. At present the sum of the balance-sheet totals of the 100 largest financial groups is fairly close to that of the 100 largest industrial businesses, with which they have close links (even if banks are lending less, they are still fighting for the best clients). It is therefore very likely that loans to the largest businesses account for a considerable share of the balance sheets of the largest financial institutions.

3. A fast-growing but unstable group

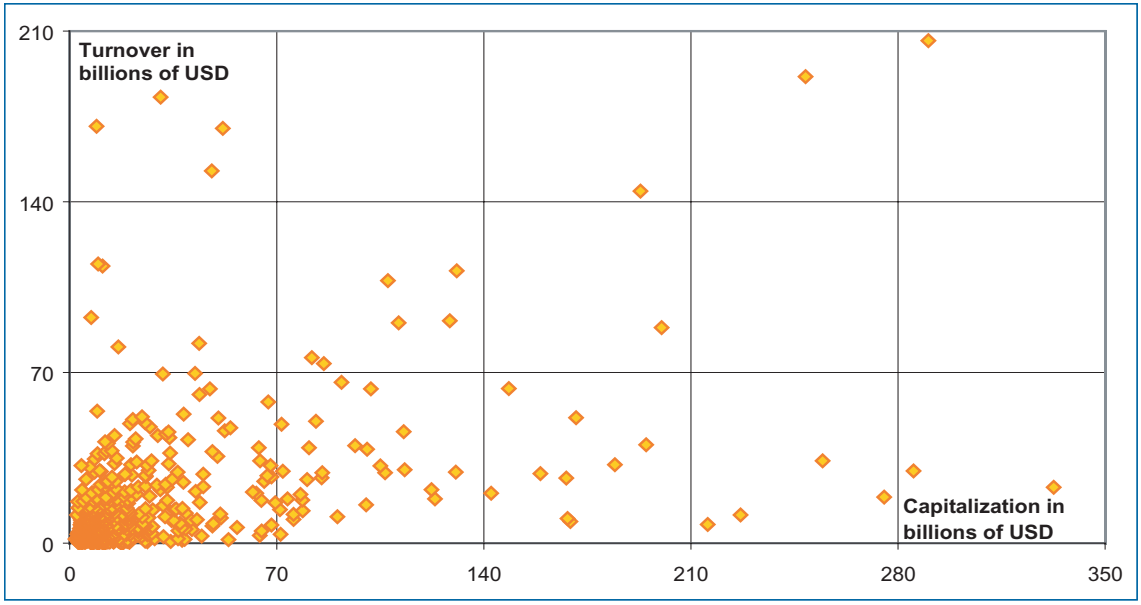
Of the 800 largest businesses quoted on the stock market in 2001, only 558 were quoted in 1990. The others are new arrivals or the result of supermergers, which were very common in the 1990s. Typical examples of fast-growing businesses which were already quoted in 1990 are Nokia and Dell Computer, which increased their levels of capitalization more than a thousandfold in the space of ten years and are now about twentieth and sixtieth in this highly volatile league table.

4. The mysteries of productivity and capitalization (Fig. D and E)

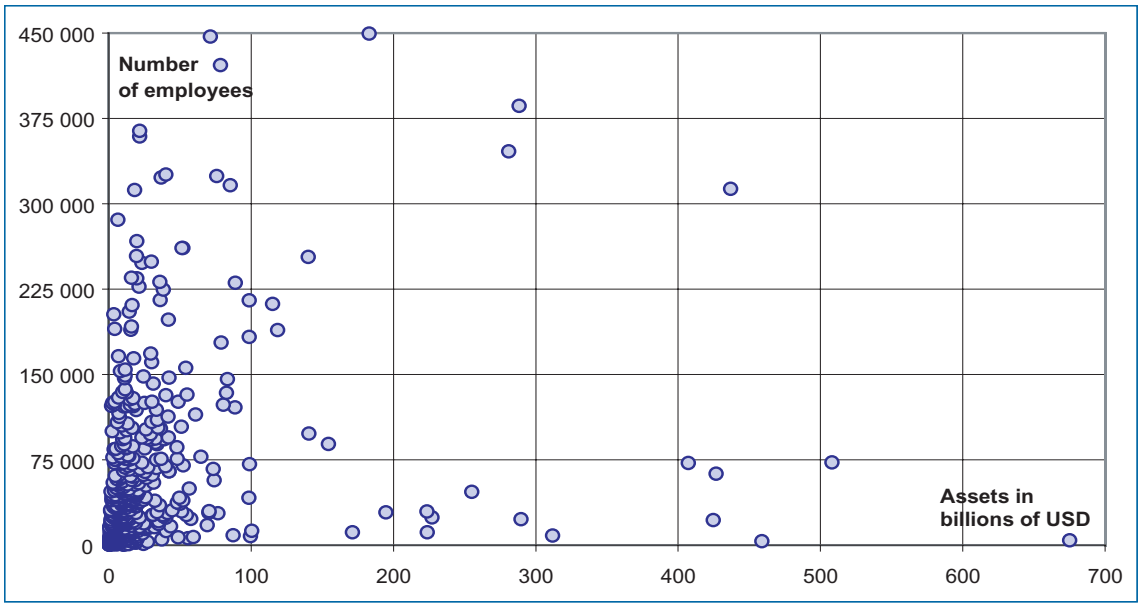
Labour and capital are the two factors of production that help to create value added. While labour can be crudely quantified in terms of numbers of people employed, the balance-sheet total is only a very imperfect indicator of the amount of capital used. However, for want of anything better, comparison of these two figures for the 800 largest businesses reveals two things: (a) in the few businesses located in the centre of Fig. E, capital and labour appear to be following the same trend, suggesting a certain degree of complementarity between the two factors; (b) each of the businesses located along the two axes relies heavily on one of the two factors (either labour or capital), which suggests substitution rather than complementarity.

On the other hand, the relationship between stock market performance and turnover is not so clear, since a company's stock market performance depends on financial data and medium-term prospects rather than its contribution to GDP (for which turnover is a very imperfect indicator).

2.2.D. Relationship between turnover and capitalization for the 800 largest industrial corporations, 2000



2.2.E. Relationship between jobs and balance-sheet totals for the 800 largest industrial corporations, 2000



Primary data: Thomson Financial, Datastream Advance; WorldBank, World Development Indicators; ILO, Economically Active Population 1950-2010

2.3 Small and medium-sized enterprises

CONCEPTS AND PROBLEMS OF MEASUREMENT

While only Western civilization has produced major corporations, there are small businesses all over the world. Any definition of small and medium-sized enterprises (SMEs) must therefore take the diversity of legal, cultural, social, economic, sociological and ethnographic contexts into account. Things become even more difficult if we attempt to classify the very smallest businesses (micro-enterprises), which are informal, often short-lived and located at the boundary between domestic and the formal economy.

In economic terms, a "business" can be said to exist as soon as an activity gives at least one person a lasting means of subsistence. However, this economic definition has no universal legal basis. The OECD countries regularly hold business censuses which are mainly based on national legislation (particularly tax and employment legislation), and the resulting definitions and statistical series are far from coherent at international level. In developing countries the term "unit of activity" is often used to describe entities that resemble businesses, but censuses are rare, especially as the informal economy is so large.

In 1996, after years of procrastination, the European Union proposed three criteria to distinguish SMEs from large enterprises (even though this definition is not actually used in censuses):

- size: the number of people employed must not exceed 250, the balance sheet must be less than 27 million euros, and turnover must be less than 40 million euros
- management: the main owners (shareholders) must be directly involved in the business's day-to-day activities
- independence and power: an SME must not hold dominate the market it is in, and must also be independent (i.e. no major business must hold more than 25% of its capital).

TRECENT TRENDS

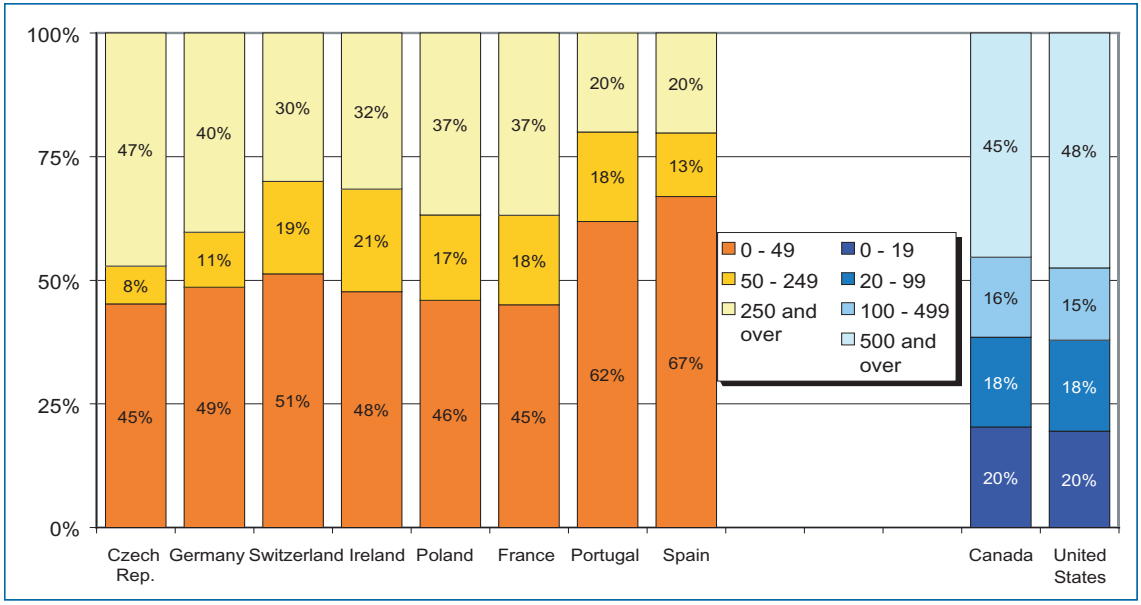
1. Is small beautiful?

In the early 1980s the OECD countries discovered small and medium-sized enterprises through the work of David Birch, who showed that they had created jobs after the 1974 oil crisis while major corporations were cutting back on them. This message was repeated ad infinitum around the globe; SMEs are now often considered synonymous with innovation, growth, job creation and flexibility, and in every country in the world there are government schemes to boost them and help them compensate for their small size. From a statistical point of view, however, things may not be so clear, following the announcement that the number of SMEs which are in fact subsidiaries of major corporations has greatly increased.

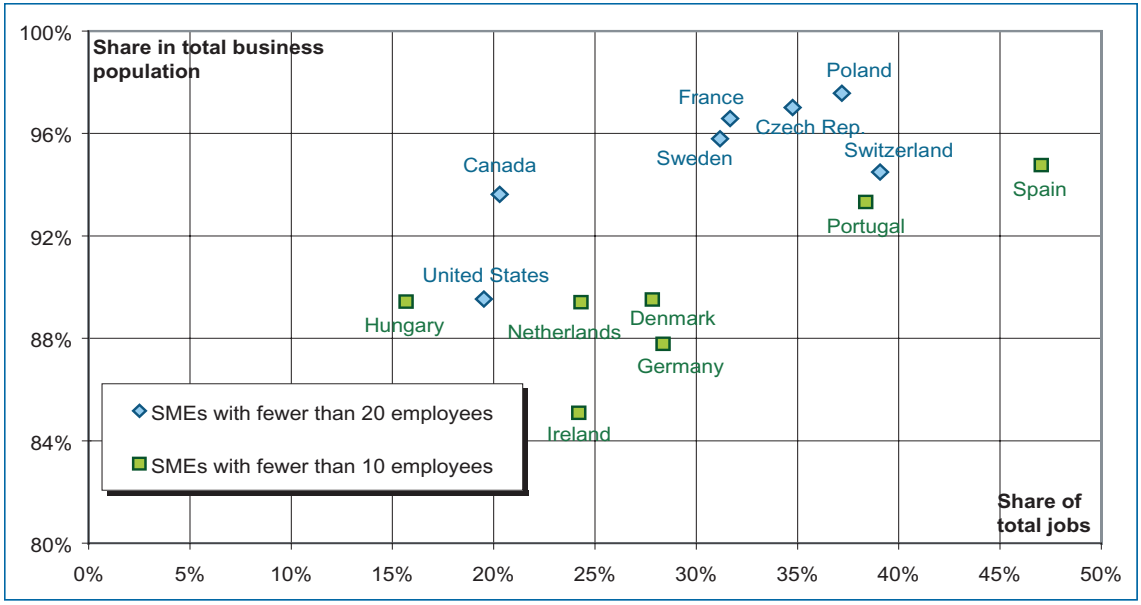
2. Very different population trends (Fig. A and B)

Even among the OECD countries, the distribution of businesses by size is very different in the countries of North America (where major corporations account for nearly 50% of jobs) and the rest (where the equivalent figure is between 20% and 40%, except in the Czech Republic). The same differences are found at the opposite end of the scale: in North America only one fifth of jobs are provided by businesses with fewer than 20 employees, whereas in Spain and Portugal business with fewer than 10 employees account for more than one third of jobs.

2.3.A. Distribution of total jobs by size of business, 1996



2.3.B. Share of micro-businesses in total jobs and in business population, selected countries , in 1996



Primary data: Thomson Financial, Datastream Advance; WorldBank, World Development Indicators; ILO, Economically Active Population 1950-2010

2.4 Public budgets and deficits

CONCEPTS AND DEFINITIONS

The modern state performs three main economic functions:

- It provides public goods and services whose technical characteristics are such that they cannot be produced and sold by the private sector.
- It uses appropriate instruments to alter the distribution of wealth between individuals if society deems the distribution effected by market forces to be unfair.
- It helps to stabilize economic fluctuations by controlling unemployment and inflation.

It is not easy to define the limits of the state. In the broad sense, the public sector includes all institutions that take political decisions. This means government bodies at all levels, social security agencies and public enterprises. In practice, certain institutions are not easy to classify. For example, although private insurance schemes that perform a social security function are normally treated as part of the public sector, this is not necessarily the case when they provide non-compulsory services with tax incentives from the state. Similarly, production companies that supply commercial goods or services tend to be considered part of the private sector even if they are state-owned.

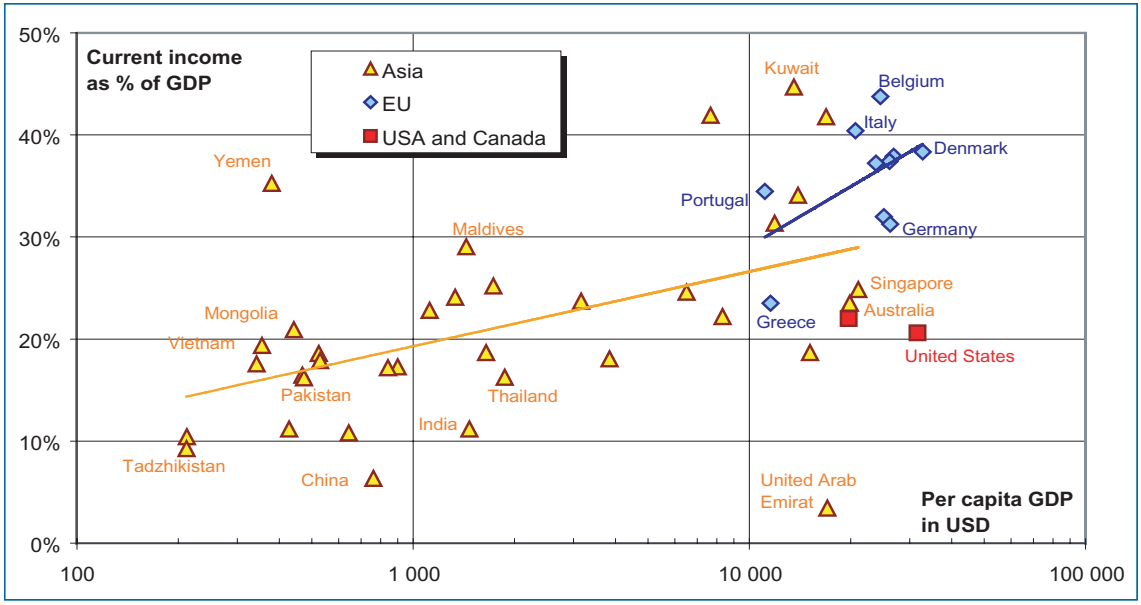
Public spending is payment for services which it is the government's duty to provide, such as paying teachers or financing national defence. It can be classified in more than one way. The economic classification distinguishes between the purchase of goods and services, remuneration of production factors and transfers to third parties, to public enterprises and establishments or to other community bodies. The functional classification breaks down spending according to the government function to which it is allocated (public safety, teaching, health, etc.). Current expenditure is likewise distinguished from capital spending on equipment, buildings and infrastructure.

Public revenue comprises payments that the state receives in order to help finance its activities. A major part of this is taxation. Taxes may be defined as compulsory levies on economic agents for the benefit of government. Compulsory social security contributions may be considered equivalent to taxes. The state also has other revenue, including duties and income from the sales of goods or services.

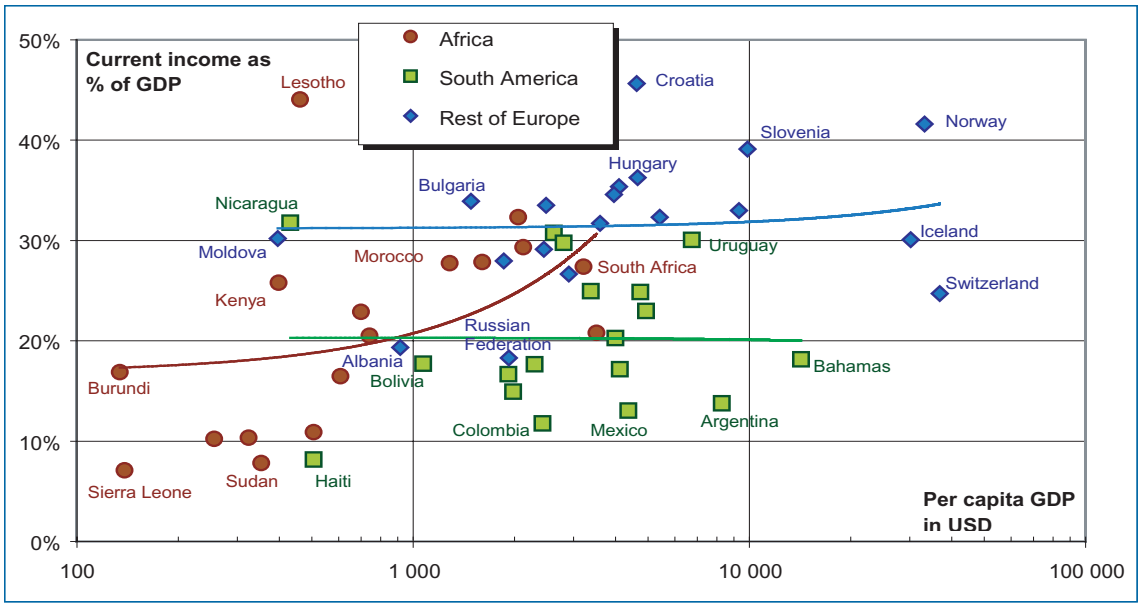
Governments work on the basis of a budget which indicates foreseen spending on the various government programmes and the revenue needed to fund them. A deficit is an excess of spending over revenue, and always relates to a given government body. The term "deficit" usually means a negative balance between current revenue and spending. However, in addition to current spending (whose impact is, by definition, limited to the current year), the state has investment spending whose impact extends beyond the budget year. The state's financing needs - the financial deficit - are determined by adding the balance of capital spending and revenue to the current balance. When studying public debt, reference is often made to the notion of a primary deficit (or surplus), defined as the balance of the financial account, minus interest payments. This gives a better picture of a country's ability to withstand a deficit without spiralling into debt.

The state's gross debt is the sum total of its financial commitments arising from successive financial deficits. To calculate net debt, one must deduct the value of financial assets, but not the value of public infrastructure used in carrying out public tasks. Classic debt indicators, such as the debt/GDP ratio, are based on gross debt.

2.4.A. Public revenue as a percentage of GDP in relation to per capita income, 1998



2.4.B. Public revenue as a percentage of GDP in relation to per capita income, 1998



Primary data: WorldBank, World Development Indicators; IMF, Government Finance Statistics Yearbook

METHODS AND PROBLEMS OF MEASUREMENT

The way in which the public sector is organized, taxes are collected and public disbursements are effected varies considerably from country to country. There are major differences in the definition and statistical significance of concepts such as public budgets or deficits. Defining the limits of the public sector is difficult in all countries. The problems concern the way in which activities are accounted for and recorded, and the way in which financial relationships between the various public bodies are taken into account. Nevertheless, the quality of reporting on public finances is a major contributing factor to transparency in this sector and a guarantee of a smoothly operating democracy. Indeed, there are those who claim that the quality of democratic institutions is reflected in the accuracy of public accounting.

At international level, the International Monetary Fund (IMF) has been trying since the mid-1980s to organize what is extremely disparate national information into a single framework and so create an internationally comparable database on public finance. To the IMF, the public sector consists of governments and public enterprises (including central banks). State revenue includes taxation, income from ownership of assets, income from the sale of goods and services, and transfers, but does not include social security contributions. Transfers include sums received from other states, international organizations or private institutions (for example in the form of development aid or irrecuperable contributions to investment), as well as payments between the various tiers of government (especially in federal countries). The IMF does not treat social security contributions as taxation, because the contributors receive something in return - although often much later - in the form of social services if the insured "risk" (sickness, old age, etc.) occurs.

The OECD's approach to public revenue statistics is different. It treats social security contributions (which are usually levied on income from employment) as taxation, since the contributions and the services received in return for them are not necessarily equivalent and social security schemes are specifically designed to redistribute wealth between the rich and the poor and/or between generations.

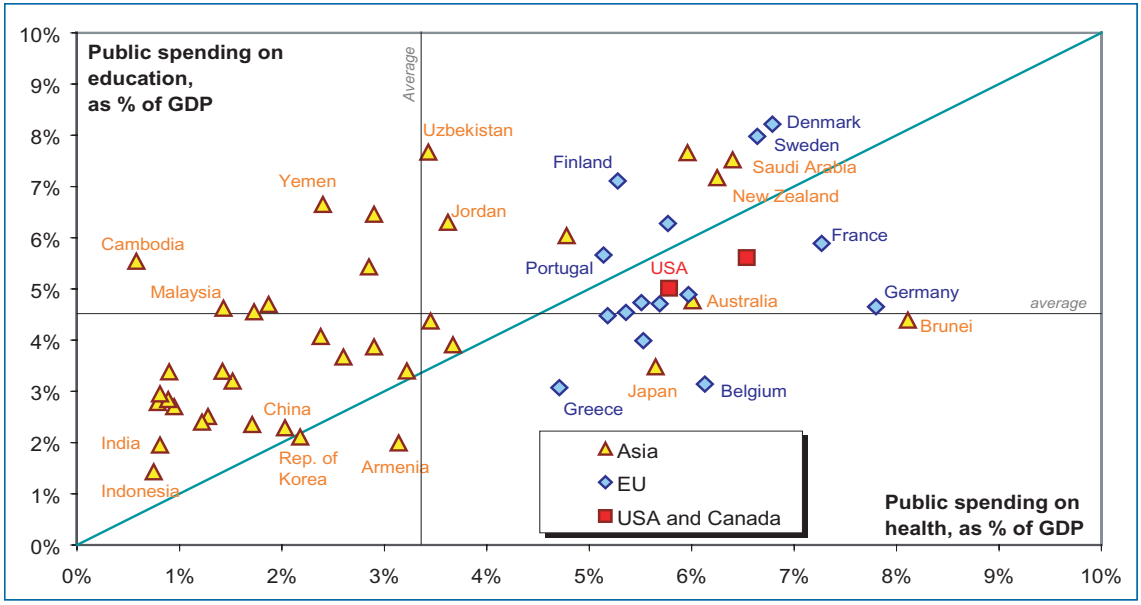
For the time being, the available international figures are mostly those relating to central government, since these are relatively trustworthy and readily accessible. The same is true of budget balances or public debt. On the other hand, it is difficult to draw a clear boundary between central government and other public bodies, owing to transfers between the various tiers of government. The IMF normally assigns revenue to the body that has the main power of decision as to what the tax base and rates of taxation are and how the revenue is used. Despite their inadequacies, IMF public finance statistics are the fullest set of data available on the subject.

RECENT TRENDS

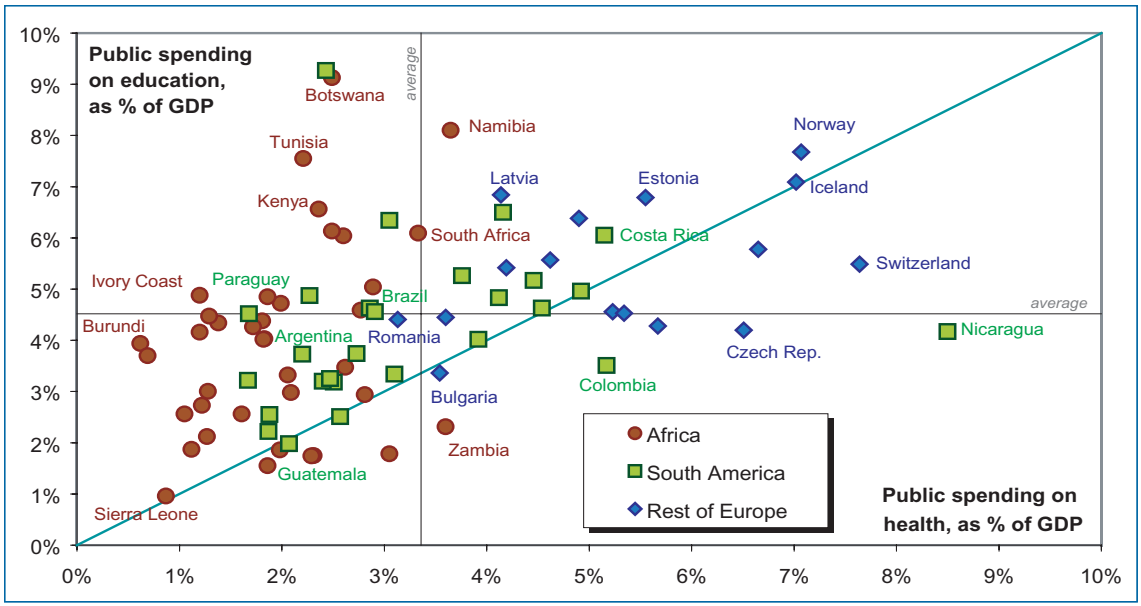
1. The importance of the public sector increases with income (Fig. A and B)

Public finance is usually analysed in relation to GDP. This enables the size of government to be compared with that of the national economy and allows price increases to be taken into account. However, the picture is distorted if price increases in the government sector are significantly different from those measured by the implicit price index of GDP. The relative amount of funding needed for current government activities (other than investment and social security) is indicated

2.4.C. Public spending on health and education as a percentage of GDP, 1998



2.4.D. Public spending on health and education as a percentage of GDP, 1998



Primary data: WorldBank, World Development Indicators; IMF, Government Finance Statistics Yearbook

by current revenue as a percentage of GDP. Whereas the revenue accruing to the central governments of United States, Canada and Switzerland is around 20% of GDP, the equivalent figure for the countries of the European Union, Norway and Iceland is between 30% and 40%. The same is true of the Central and Eastern European countries, which have inherited a considerable amount of government apparatus. On the other hand, the figures for the Asian countries are lower (between 10% and 30%). In dynamic terms, however, the economic importance of the state appears to increase with per capita income, as expressed by Wagner's law on the development of government activity. The same "law" appears to hold true for the African countries, but not for those in Latin America.

2. Health and education: the two pillars of development (Fig. C and D)

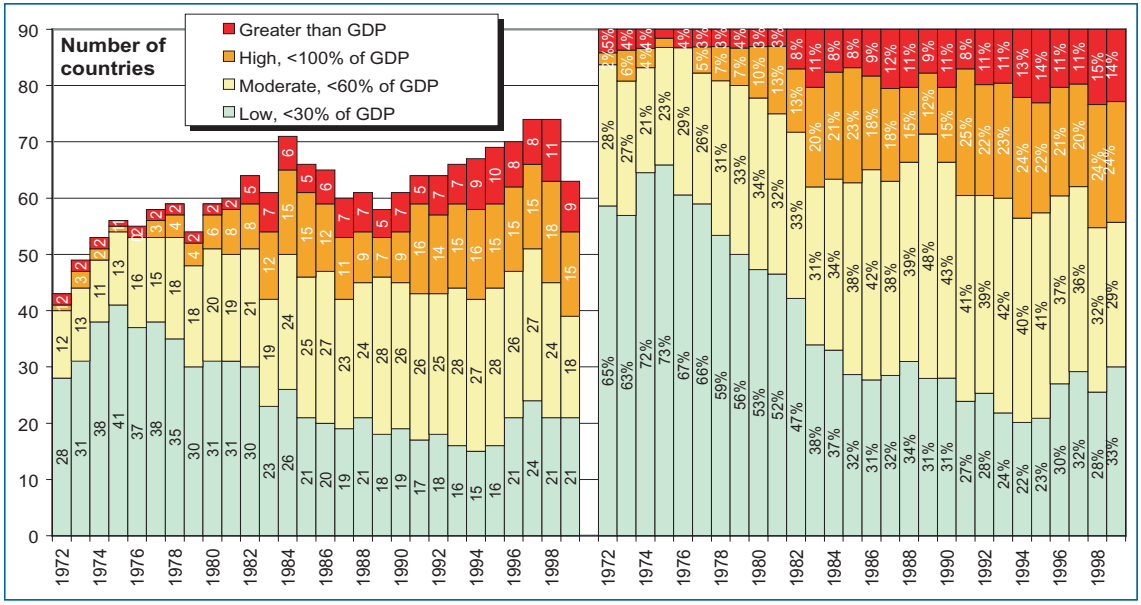
Health and education are two major functions of all governments, and activities in these areas are essential to the welfare of the population and the development of the economy. Seen in relation to GDP, these two categories of spending reveal that the OECD countries - particularly those in the EU - spend a far greater share than average on health and education. In those countries the amount of resources devoted to health is underestimated in public spending figures, since a not insignificant proportion of activities is often funded from extra-budgetary sources (donations, development aid and funds provided by social security institutions, households and businesses).

3. Bearable debt (Fig. E and F)

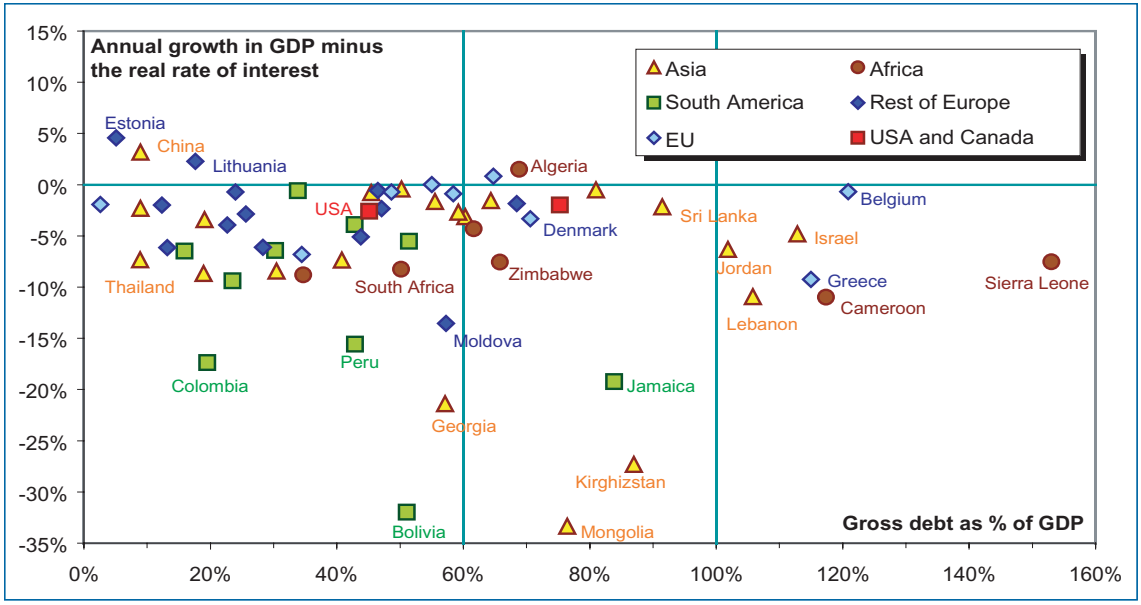
A high level of debt may, because of the cost of servicing it, significantly reduce governments' room for manoeuvre in financing their activities. Public debt has greatly increased all over the world owing to the growing, persistent deficits of the 1970s and 1980s. The proportion of countries with comparable central government statistics and levels of debt exceeding 60% of GDP has tripled in 20 years.

A high level of debt is particularly dangerous when persistent deficits have to be serviced at interest rates exceeding the country's rate of economic growth. The interest rate determines the cost of the debt to be paid by the state, while the rate of economic growth determines the rate at which the revenue needed to service the debt increases. In most countries the costs of debt exceeded the average rate of growth between 1995 and 1999. In countries with a high debt differential or level of debt, there is a serious risk that the situation will get out of hand. In a large number of developing countries, the macroeconomic stabilization programmes set up by the IMF and the World Bank are designed to control - as far as possible - explosive growth in the level of public debt.

2.4.E. Level of public debt as a percentage of GDP, by group of countries, 1972-1999



2.4.F. National indicators of debt viability, average values, 1995-1999



Primary data: WorldBank, World Development Indicators; IMF, Government Finance Statistics Yearbook

2.5 The International Monetary Fund: Reserves and Interventions

CONCEPTS AND DEFINITIONS

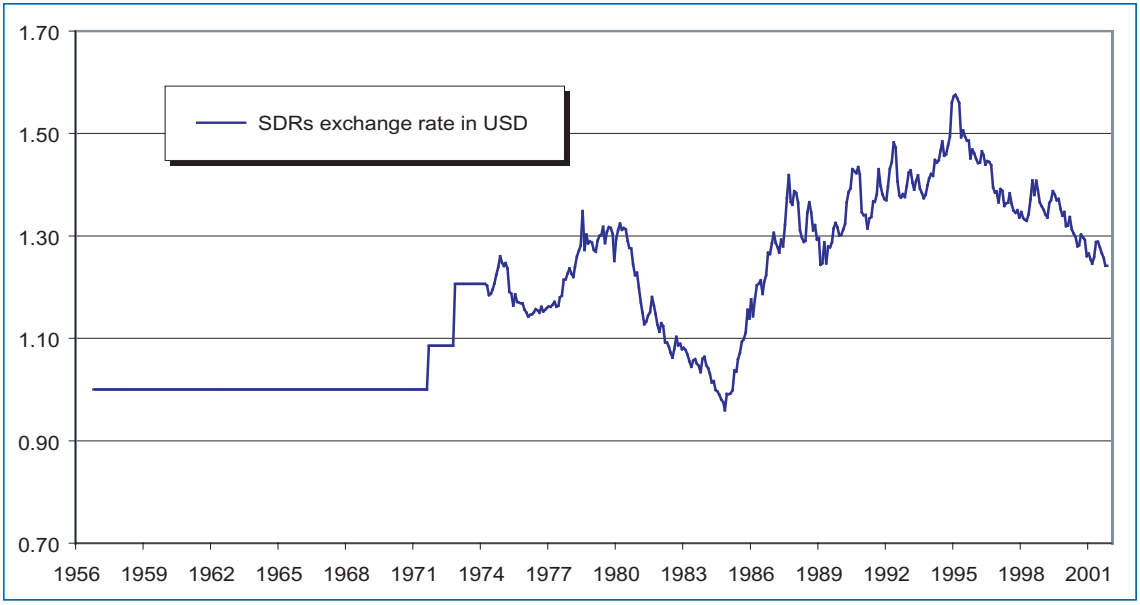
The statutes of the International Monetary Fund (IMF) were adopted at the Bretton Woods conference in summer 1944. They formally took effect in December 1945, but the IMF did not commence operations until 1947. As Article 1 of the statutes recalls, the IMF was set up in order to "promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration". The aim of this collaboration was to stabilize exchange rates and so prevent competitive depreciation, thereby creating favourable conditions for a well-balanced increase in trade and hence in income and unemployment. At the same time, the statutes introduced mechanisms designed to reduce the scale and duration of balance-of-payment problems in member countries. The creation of the IMF was thus part of a view of the global economy in which monetary instability was potentially as harmful as protectionism and needed to be curbed in the same way. This view bore the marks of the painful experience and political fall-out of the 1930s depression.

The global economic order sketched out at the Bretton Woods conference was to be built on three institutional pillars: (1) a world organization to promote free trade in goods and services - originally the General Agreement on Tariffs and Trade (GATT), and now the World Trade Organization (WTO); (2) a bank to facilitate the funding of reconstruction and development (the International Bank for Reconstruction and Development, now known as the World Bank); and (3) a "central banks' central bank" - the IMF - to maintain exchange rate stability. The institutional mission of the IMF can thus only be understood with explicit reference to the context in which it was first established.

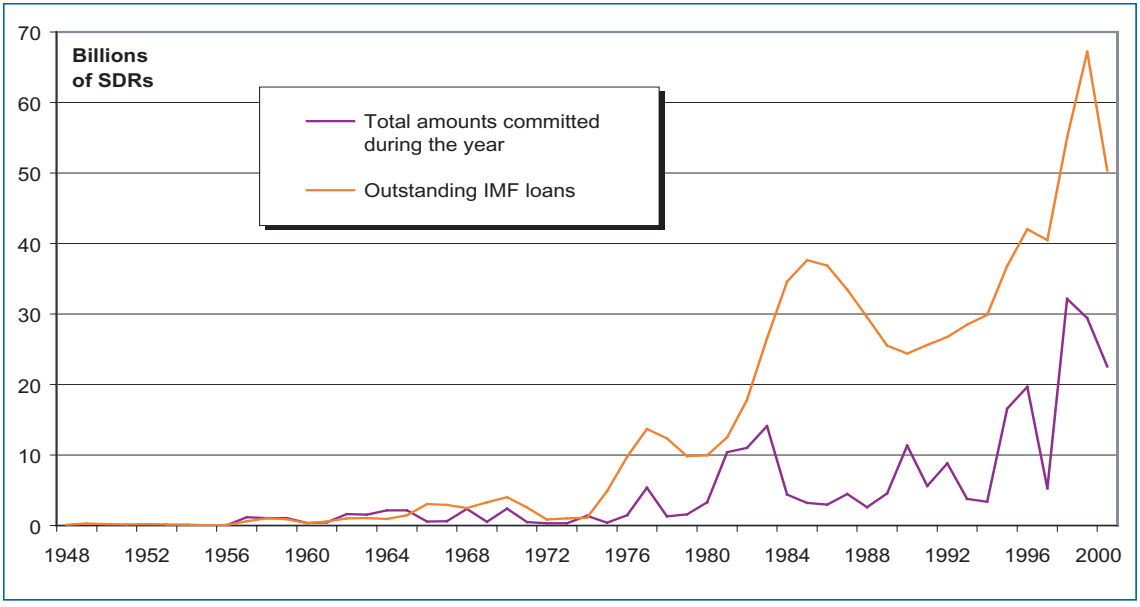
The IMF's financial power is based on the contributions (quotas) paid by member countries in proportion to their respective shares of global product. The rich countries' contributions to IMF resources are thus larger, as is their decision-making power, which is based on each country's financial contributions. As a result, the OECD countries enjoy a comfortable majority within the IMF (as well as the World Bank).

The IMF was originally set up to ensure the smooth running of a system of fixed exchange rates based on the US dollar, which was on the gold standard – the so-called dollar exchange system. Under this arrangement - in which the dollar was the linchpin of the system - all convertible currencies were effectively tied to gold. From the late 1960s onwards this mechanism came under great strain, partly because of the American trade deficit brought on by the Vietnam war and partly because of the rapid growth in international flows of private capital. On 14 August 1971, fearful of having to honour requests to convert a large proportion of the dollars in circulation into gold and thus seeing the United States' gold reserves depleted, the American president Richard Nixon unilaterally took the dollar off the gold standard. The exchange rate system that had been so carefully maintained by the IMF was instantly shattered, and the world has been searching for a new equilibrium in foreign exchange ever since. The debate on tomorrow's "international monetary and financial architecture" has been going on for thirty years now, and there is still no sign of any solution.

2.5.A. Exchange rate of Special Drawing Rights in USD, 1956-2001



2.5.B. IMF's outstanding loans and commitments, in billions of SDRs, 1948-2000



Primary data: IMF, Annual Report; Thomson Financial, Datastream Advance

METHODS AND PROBLEMS OF MEASUREMENT

Under the IMF's initial statutes, countries wishing to join the Fund were required to make a contribution to IMF resources (known as a quota). Part of this was to be paid in gold or foreign currency (25%) and the rest in national currency (75%). In 1944, quotas totalled USD 7.5 billion. Today, following an increase in quotas in 1999, the IMF's resources are 28 times greater: 212 billion special drawing rights (SDRs), equivalent to about USD 264 billion. Furthermore, in 1962, the IMF reached a series of agreements with the ten richest countries (the General Arrangements to Borrow and the New Arrangements to Borrow) whereby it can easily obtain additional sums when needed, particularly when the international financial and monetary system is threatened.

RECENT TRENDS

1. The SDR: a unit of account and a liquidity instrument (Fig. A)

Ever since the SDR was created in 1970, the IMF has used it as a unit of account. The SDR is an artificial currency which was first defined as 0.888671 grams of gold (or 1 US dollar), and later as a basket of the main currencies, whose weighting is periodically renegotiated. The composition of the basket is currently as follows: 45% US dollars, 29% euros, 15% yens and 11% pounds sterling. The SDR was created to act as an additional reserve instrument at international level, and the IMF regulates the volume of SDRs by periodically allocating them. These decisions are very infrequent and have major political implications.

2. Increase in outstanding loans (Fig. B and C)

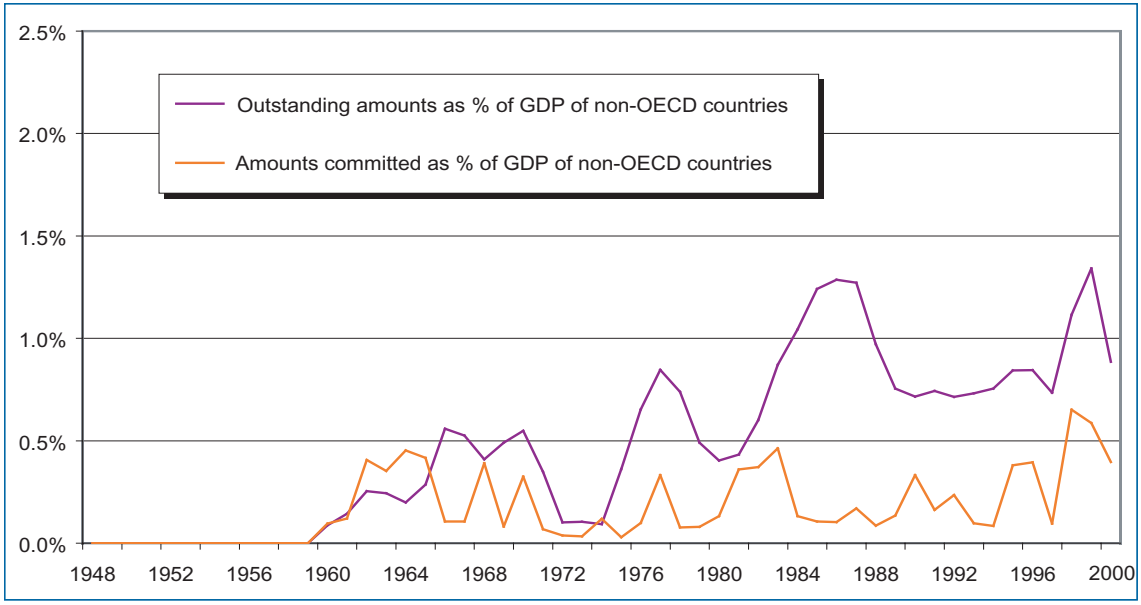
Apart from cooperation, the IMF was set up to make funds available to countries in need, so that they could deal with balance-of-payments problems in an orderly manner and draw up policies to restore equilibrium. The IMF fulfils its task of supervising exchange rate stability by protecting the weakest links in the chain. Whenever there is an international crisis, member countries' outstanding debts increase. The debt crisis in the early 1980s, the collapse of the Soviet bloc, the second Mexican crisis and the Asian and Russian crises have caused outstanding debts to the IMF to double since 1983. However, current annual commitments do not exceed 0.5% of non-OECD countries' GDP, and the relative weight of the stock of outstanding debt is still less than 1%.

3. Means of access to IMF funding (Fig. D)

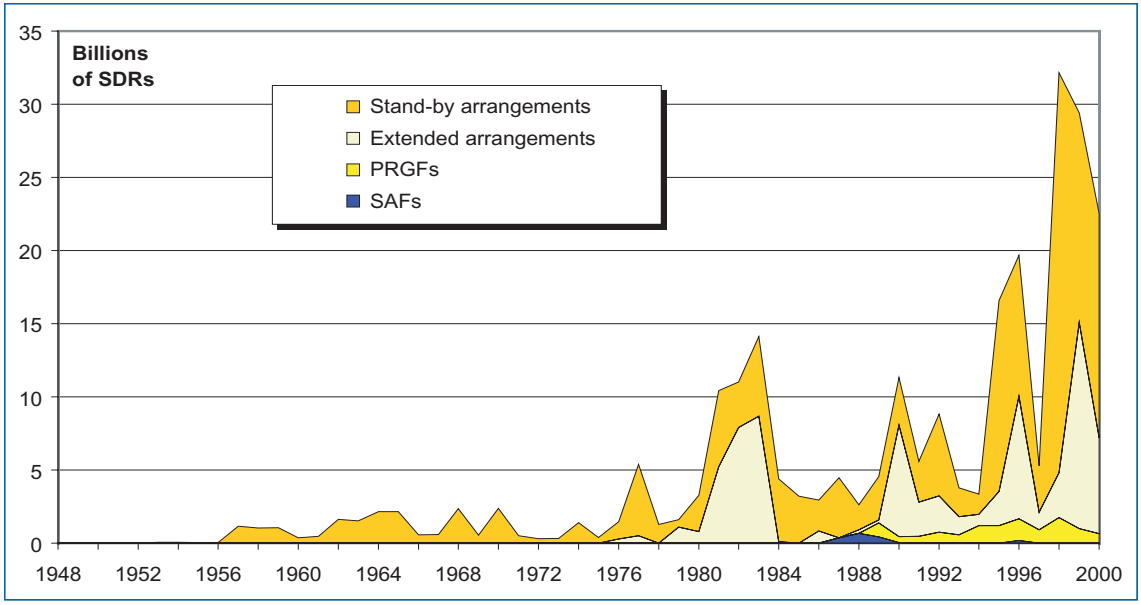
A key aspect of the operation of the IMF has been the establishment by the member countries of procedures for access to the Fund's resources. The principle adopted at the outset was that each country has more or less automatic access to the sums it has paid in gold or foreign currency, but can only obtain additional funding on certain conditions. In 1968 the "conditionality" principle was introduced for IMF loans. Whenever a country applies for IMF funding, the Fund and the country jointly agree on how it will be used, i.e. the expected macroeconomic performance and the economic policy measures that the country's government will take to achieve the intended results. Stand-by arrangements (SBAs) are still the most important instrument for the use of IMF resources.

True to its original goals, the IMF has responded to the financial crises that have shaken the international monetary system at regular intervals. Besides its ordinary lending activities, the Fund has set up funding arrangements to deal with specific situations such as explosive increases in the price of oil, natural disasters, sudden changes in prices of raw materials, the collapse of the Soviet

2.5.C. IMF's outstanding loans and commitments, as a percentage of the GDP of non-OECD countries, 1948-2000



2.5.D. Distribution of IMF commitments by type of arrangement, in billions of SDRs, 1948-2000



Primary data: IMF, Annual Report; Thomson Financial, Datastream Advance

bloc or poverty reduction programmes. In IMF jargon these arrangements are known as "facilities", the most common of which are currently the Structural Adjustment Facility (SAF) and the Poverty Reduction and Growth Facility (PRGF).

4. Challenges to conditionality

Lending agreements, referred to in IMF jargon as "stand-by arrangements", contain specific clauses concerning the measures that the country has agreed to take. The "macroeconomic stabilization programmes" that the IMF encourages applicant countries to adopt are based on a view of the economy which is increasingly questioned even by economists. According to the model used by the IMF for many years, balance-of-payments equilibrium depends in the short term on balanced public finances and the level of inflation and in the medium term on structural policies to promote the development of local businesses. Accordingly, IMF stand-by arrangements always require borrowing countries to reduce public spending and liberalize their domestic economies. In recent months this standard model has begun to be challenged not only by civil society, but even by the IMF and some of its member countries.

III. The economy and trade

3.1 National product and value added

CONCEPTS AND DEFINITIONS

The related concepts "national income" and "national product" refer to the productive activities that take place within a country over a given period of time. They include flows of value added, consumption or expenditure. Yet neither concept grasps the full extent of a country's wealth in the sense of the stock of resources - gold, raw materials, productive capital - that may be located there.

"National product" is not an intuitive concept. It is part of a model-based view of how countries' economies work, better known as the "circular flow of income". This sees a country's economy as a circular flow of transactions between the various categories of economic agents, chief among which are households, businesses, government and the rest of the world. The circular flow approach claims to identify all the transactions that take place within an economy over a given period of time and to record them simultaneously as one agent's incomings and another's outgoings. It also assumes that all agents spend all the available resources on consumption, investment or exports and that all the income thus generated is used for the purchase of goods and services, for transfers or for savings. This means that the circular flow is always closed and in overall equilibrium. It serves as a reference model for the system of national accounts which is to macroeconomics what double-entry bookkeeping is to businesses, namely an essential tool for grasping reality.

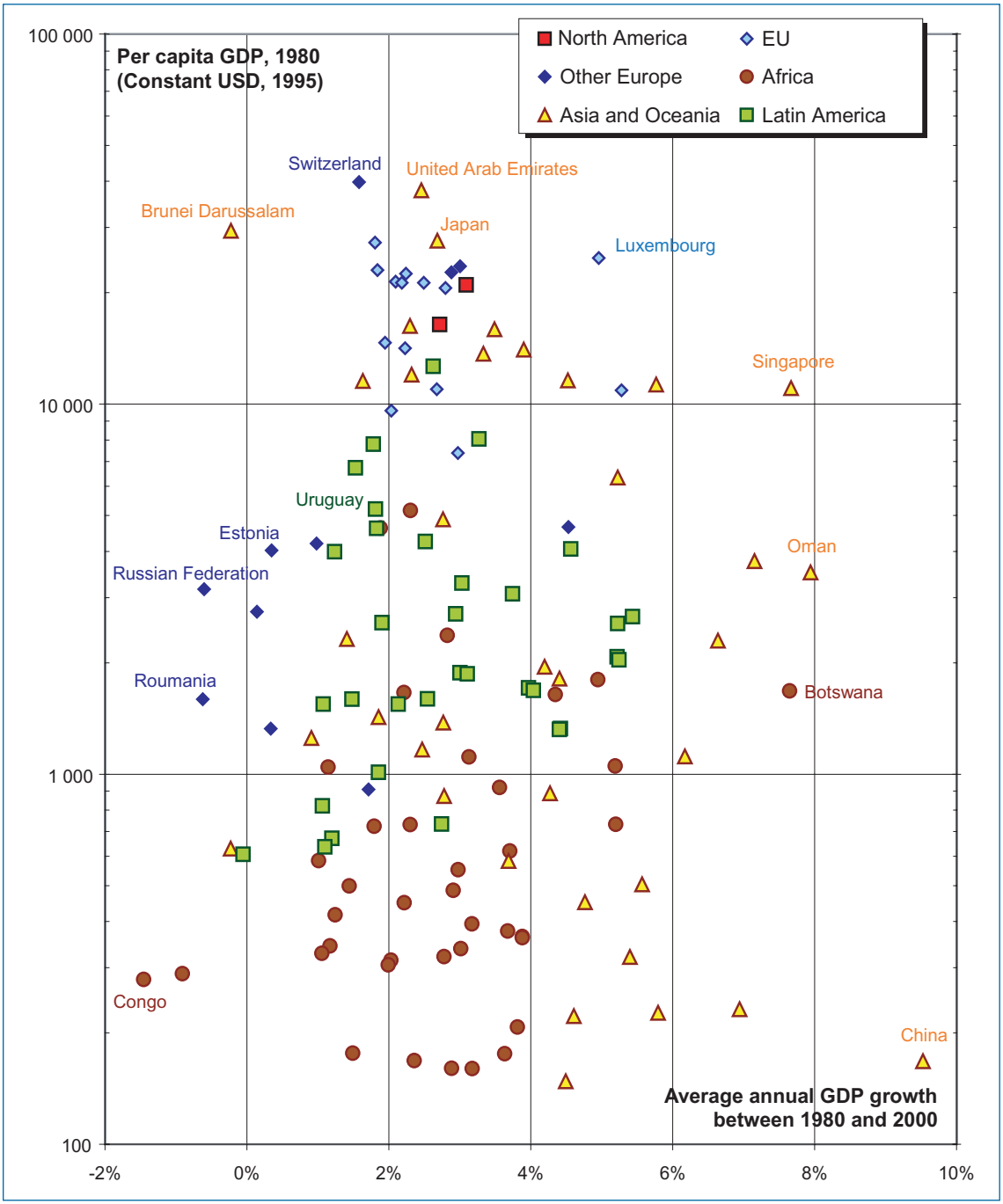
This view of the economy became firmly established in the period between the two world wars. The concept of "national product", in the contemporary meaning of the term, is therefore a recent one. Its emergence and its quantification mark the birth of present-day macroeconomics and the development of economic policy as a set of intervention tools for managing the growth and distribution of national product.

National accounts tell us how a country's national product is distributed within the economy. The very substance of national product is captured by the notion of value added, which identifies all the efforts made by the country's factors of production (land, capital and labour) to enhance and increase the value of what is used in the process of producing goods and services for end users. Thus value added does not arise at the point of production, but at the point where a user purchases the good or service offered for sale. Thus defined, value added should not be confused with turnover, which may include value that was added at earlier stages of production. When measuring value added, the technical challenge is to avoid duplication and to identify only the portion of value that is actually added at the stage of production under consideration.

If the economy is seen as a circular flow, national product can be approached from three different points of view. Theoretically, disregarding problems of measurement, the same aggregate should result in each case:

- The production approach measures the value of goods and services at the point where they leave the production sector (businesses) to satisfy the end demand of households, government or foreign buyers. By focusing on the point of exit from the production sector, this approach avoids double counting of intermediate goods and services, i.e. ones that are involved in the production of other goods and services.
- The expenditure approach adds up the value of goods and services as represented by the final demand of economic agents. This includes not only private and public consumption and private and public investment, but also exported goods and services, minus the imported goods and services which appear in all the components of expenditure, like consumer goods imported for the benefit of households.

3.1.A. Growth rates in regions of the world based on per capita GDP, 1980



Primary data: World Bank, "World Development Indicators"; United Nations, "System of National Accounts"

- The income approach focuses on remuneration of factors of production. At the same time as they create value added, producers reward the agents who have made factors of production available to them. Total income includes all the remuneration of labour (wages, salaries, social security contributions) and capital (dividends, interest, rent, etc.).

Among the most common terms used in relation to "national product" are gross national product (GNP) and gross domestic product (GDP). GNP concerns productive efforts (at home and abroad) by agents resident in the country. GDP, on the other hand, only records production within the country, but includes non-resident as well as resident agents. The difference - which is considerable in certain countries with very open markets - is the balance of remittances and current transfers effected between the country and the rest of the world. For example, GNP includes remuneration of labour and capital (wages, repatriated profits, dividends and interest) in return for the supply of factors of production to other countries by resident agents (residents working abroad for short periods, foreign investment, etc.), but does not include similar remittances which residents pay to the rest of the world.

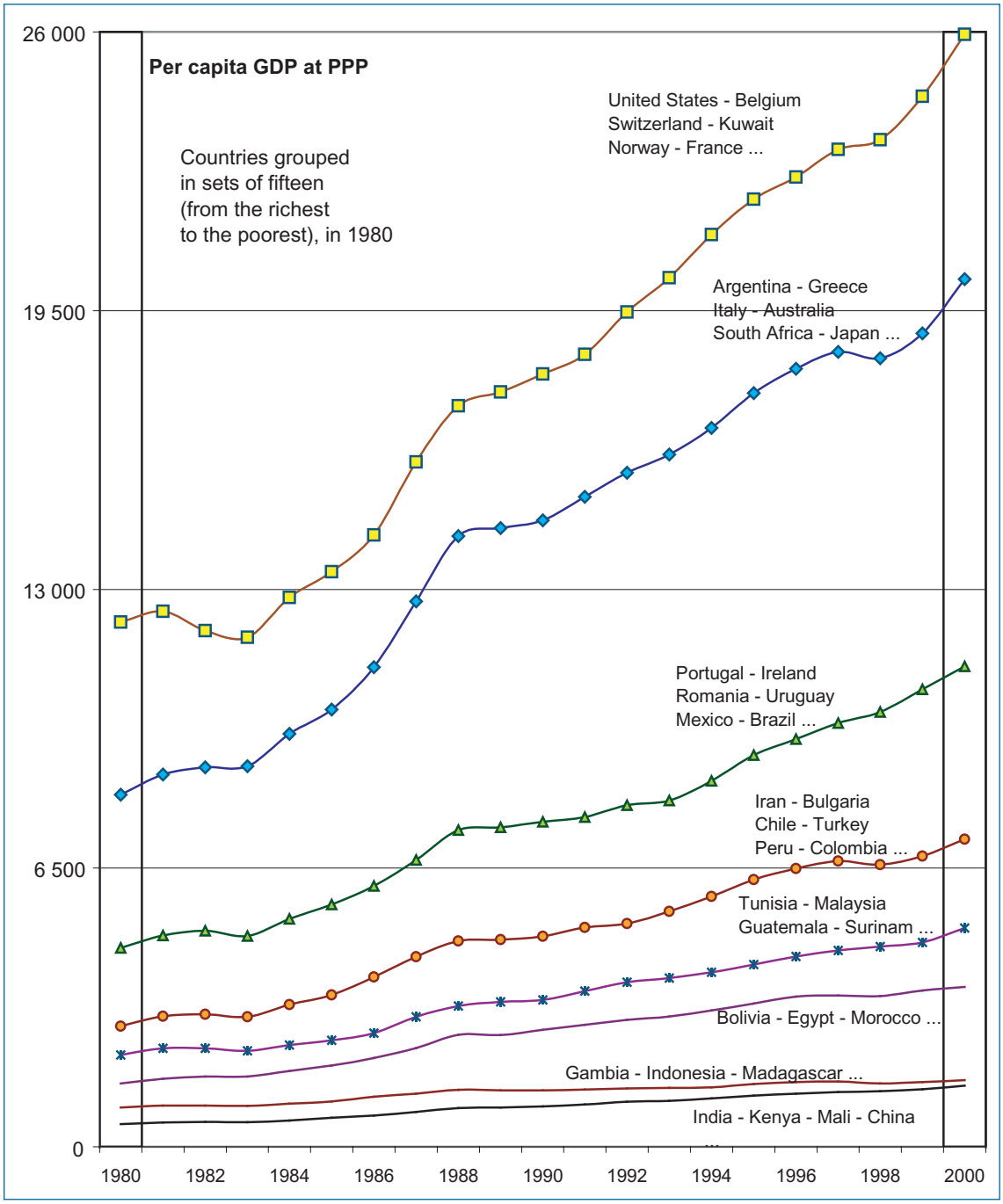
Despite its undeniable advantages and its ability to grasp the market value of most goods and services, national product is not a measure of welfare. At best, it measures users' assessment of the products that supposedly contribute to their welfare. National product takes no account of external effects, it fails to assess the costs of public activities properly, and it overlooks certain non-commercial economic activities. Ironically, it includes expenditure incurred in order to repair damage - for example, the costs generated by a road accident - even though the accident effectively reduces the victim's welfare. Capital losses (the car, the victim's health, etc.) are not deducted from the costs of repair or recovery. The same can be said of costs incurred in order to combat pollution, in other words to repair the damage sustained by nature. Attempts to correct GDP so that it measures people's welfare more effectively have failed for lack of a consensus as to what exactly increases or reduces it. However, the main use of GDP is a different one: in combination with national income, it is the most widely used summary account of the state and overall development of a country's economy.

METHODS AND PROBLEMS OF MEASUREMENT

The first version of the System of National Accounts, a methodological and conceptual guide for national statistical authorities, was drawn up by the United Nations in 1952. The latest version of this reference book, the result of joint efforts by the United Nations, the European Commission, the OECD, the IMF and the World Bank, was published in 1993. Specific implementation of the system is left up to individual countries. As a result, its quality varies considerably from country to country, depending on the available resources, the volume and quality of the basic statistics and the efficiency of the institutions involved. Accordingly, a certain proportion of economic activity, namely the informal economy, is not directly quantified, especially in developing countries, owing to institutional failings and local habits of payment. In theory, published GDP figures include estimates of informal economic activity, but in practice such estimates are hazardous.

GDP has numerous limitations and has been greatly criticized for conceptual inadequacy, arbitrary processing of statistics and classification of activities, and statistical difficulties which

3.1.B. Growth paths in groups of countries based on per capita GDP levels at PPP



Primary data: World Bank, "World Development Indicators"; United Nations, "System of National Accounts"

inevitably mean that estimates include margins of error. Two of these problems merit closer examination:

- The notion of national product is based on a commercial valuation of goods and services. Inclusion of the public sector is therefore a problem, since in the absence of reference markets government activities are assessed in terms of production costs rather than value added. Furthermore, government activities are treated by definition as final consumption, whereas at least part of them also benefit businesses. For instance, government spending on infrastructure is viewed as depreciable investment, and this directly affects the level of national product.
- Similarly, GDP/GNP includes depreciation of the capital stock used by businesses (which is really intermediate consumption). Although this "consumption of fixed capital" is the estimated cost of wear and tear and technological obsolescence during the working life of equipment and infrastructure, it in fact serves to finance substitution investment which keeps the capital stock constant. These resources, which are counted as income, are included in gross value added (GDP), but do not actually contribute to the growth of agents' freely disposable income. A more accurate estimate of income from production should therefore exclude depreciation (net product); this, however, is seldom feasible, since the margin of error in calculating depreciation is very large.

Certain forms of production and consumption are excluded from national product by definition, regardless of the difficulty of assessing their value. Examples include housework and illegal activities. This is because national accounts focus on legal, official forms of production whose factors receive a monetary reward. The inevitable result is a difference in treatment between two forms of consumption, for example housework done at home (excluded from GDP/GNP) and the same work done by a paid employee (included in GDP/GNP).

In practice, measurement of national product depends on (a) the availability, quality and accuracy of the basic statistics and (b) their exhaustiveness, and hence the estimates and assumptions (of varying reliability) that statistical authorities are forced to make in order to make up for the inadequacies. Statistical research is limited not only by the amount of resources invested, but also by such factors as the classification systems used, data protection, the degree to which economic agents are prepared to be surveyed, and also the difficulty of accurately defining and measuring services (which are less uniform and standardized than goods). For all these reasons, figures on the level of and growth in national product are often subject to extensive revision. Since it takes between 18 and 24 months to calculate national product exactly, in the shorter term it is based on quarterly estimates such as production indicators (industry, total wages, employment, etc.) or even on forecasts derived from economic models of varying sophistication.

RECENT TRENDS

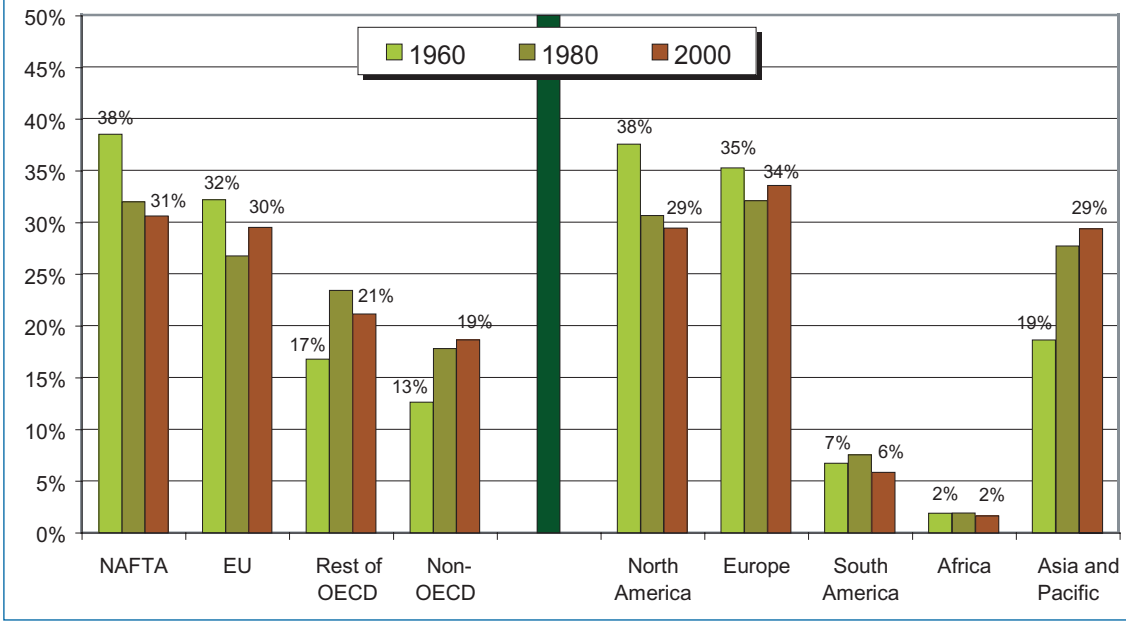
1. Diverging growth paths (Fig. A and B)

Statistical authorities estimate national product in terms of nominal value, i.e. at actual prices. As soon as the time dimension is introduced, things get complicated. An increase in national product can mean one of two things: an increase in the prices of goods and services, or an increase in the quantities of goods and services produced (or in their quality). The former situation is called inflation and the latter economic growth. To neutralize the impact of price changes on national product, each of its components must be deflated with the help of appropriate price indexes. National product expressed in terms of "real value" is thus the sum total of aggregates expressed in terms of the prices that prevailed in the chosen base year (e.g.

3.1.C. Comparison of per capita GDP using three calculation methods, 1980 and 2000

	2000 (1980)								
	Current USD			Constant USD, 1995			PPP		
Luxembourg	**1**	42 550	(10)	**1**	56 162	(6)	**1**	47 114	
Japan	**2**	36 894	(23)	**3**	43 054	(4)	**11**	26 172	
United States	**3**	35 102	(15)	**8**	32 053	(14)	**2**	34 260	
Switzerland	**4**	33 471	(5)	**2**	46 465	(1)	**6**	28 671	
Norway	**5**	33 248	(8)	**5**	38 021	(7)	**3**	30 072	
Iceland	**6**	31 435	(9)	**10**	31 407	(9)	**4**	29 423	
Denmark	**7**	30 109	(11)	**4**	38 252	(5)	**8**	27 404	
Sweden	**8**	25 636	(7)	**12**	31 020	(8)	**18**	24 291	
Ireland	**9**	24 878	(31)	**16**	27 616	(30)	**5**	29 394	
Hong Kong, China	**10**	24 016	(35)	**18**	24 227	(27)	**15**	25 248	
United Kingdom	**11**	23 660	(21)	**20**	21 614	(20)	**21**	23 417	
Austria	**12**	23 581	(20)	**6**	32 661	(10)	**10**	26 835	
Finland	**13**	23 132	(18)	**9**	31 999	(15)	**16**	25 154	
Singapore	**14**	22 960	(39)	**15**	28 230	(28)	**22**	23 416	
Netherlands	**15**	22 925	(12)	**11**	31 266	(12)	**13**	25 957	
Germany	**16**	22 765	-	**7**	32 653	-	**14**	25 250	
Belgium	**17**	22 534	(14)	**13**	30 737	(13)	**9**	27 237	
Canada	**18**	22 435	(19)	**19**	22 617	(16)	**7**	28 198	
France	**19**	21 856	(13)	**14**	29 798	(11)	**17**	24 342	
Australia	**20**	20 528	(17)	**17**	24 245	(18)	**12**	26 130	
Italy	**21**	18 525	(26)	**21**	20 748	(19)	**19**	23 559	

3.1.D. Comparison of distribution of global product, in constant 1995 USD



Primary data: World Bank, "World Development Indicators"; United Nations, "System of National Accounts"

1990). Consequently, the rate of growth of an economy is measured by the percentage change in real national product from one period to the next.

Leaving aside this cyclical analysis based on short-term fluctuations in GDP, the real GDP data (based on the exchange rate of the US dollar in 1995) supplied by the World Bank show that the rich countries and the countries of Africa and Latin America had annual rates of growth averaging between 2% and 4% in the 1980s, whereas a large number of Asian countries had considerably higher rates of growth. In the light of this, the analysis can be sharpened by taking account of population (per capita GDP) and differences in purchasing power (GDP expressed in terms of purchasing power parity, or PPP). When per capita GDP is expressed in terms of PPP, it reveals major divergences in growth paths between developed and developing countries. In terms of per capita GDP, which takes account of population growth, divergences in rates of economic growth are emerging. This shows that there are limits to the convergence of income between developed and developing countries, when differing price levels are taken into account.

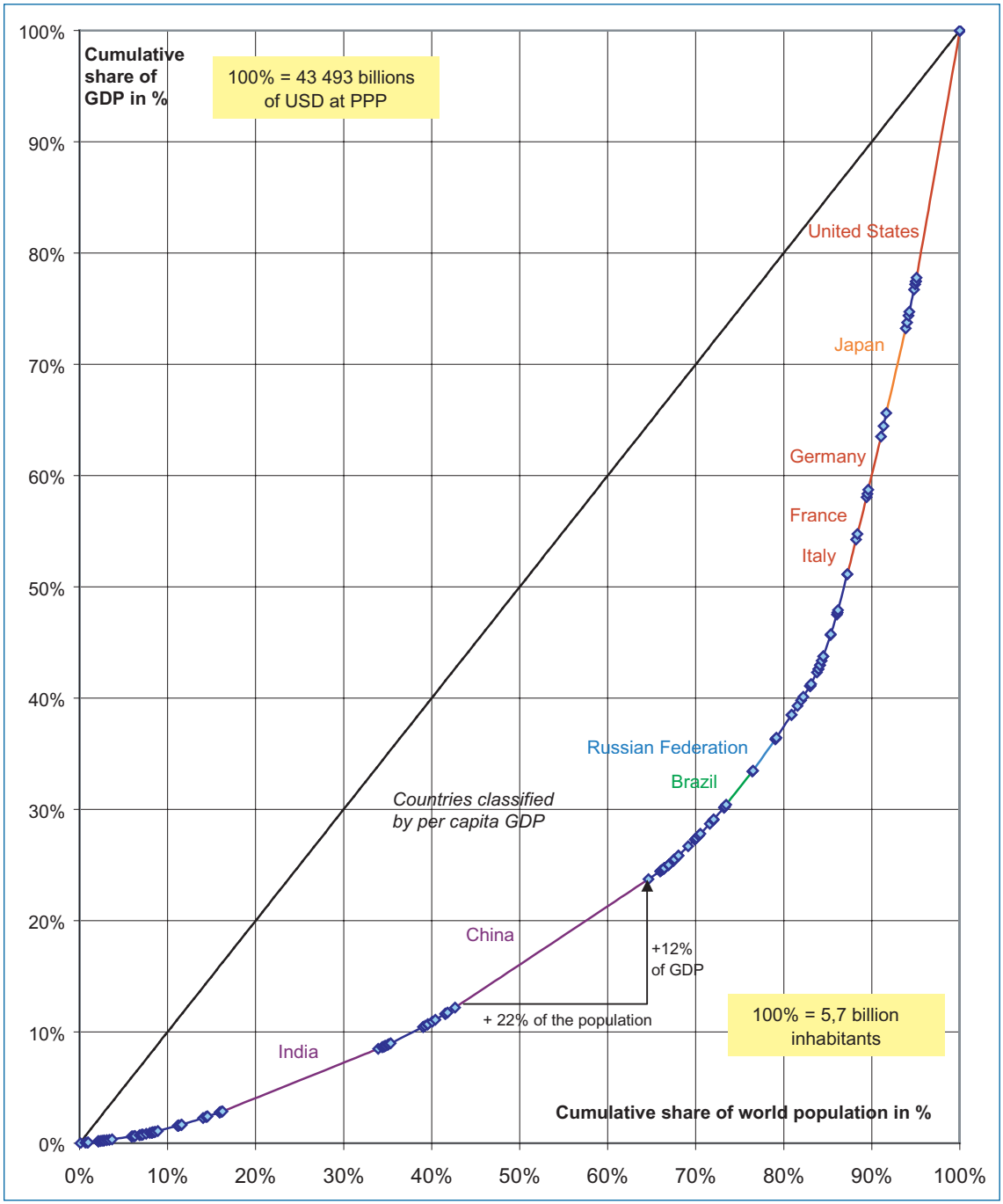
2. International comparison (Fig. C)

International comparison of per capita national product is hampered by two factors: exchange rates of national currencies and differences in purchasing power. The World Bank uses the exchange rate in a given reference year to calculate the national products of the various countries in terms of constant US dollars. As for purchasing power, it depends on average income levels and overall price levels. International comparison of price levels involves comparing what must be spent in order to purchase the same basket of goods and services in the various countries. The ratio between the amounts spent in two different countries indicates the exchange rate at purchasing power parity. Thus, depending on which system of measurement is adopted, the classification of countries as rich or poor may change significantly.

3. Many are poor and few are rich (Fig. D and E)

A country's national product tells us nothing about how income is distributed among its people. Similarly, global product at purchasing power parity reveals nothing about how it is distributed among the various countries. The OECD countries account for more than 80% of global production (72% in 1960) but contain only 18% of the world population. Asian and Pacific countries' share of global production (Japan included) has increased from 19% to 29% in thirty years. The highly unequal distribution of global product (per capita PPP) is reflected in widening gaps between countries: in twenty years the differential between Sierra Leone and Luxembourg has increased from 17 to almost 100.

3.1.E. Distribution of global product at PPP over the world population, based on country of residence, Lorenz curve, 2000



Primary data: World Bank, "World Development Indicators"; United Nations, "System of National Accounts"

3.2 Inflation

CONCEPTS AND DEFINITIONS

The notion of inflation is a key economic concept, since it captures the dynamic relationship between money and goods and services intended for sale. From the point of view of money, inflation may be seen as a measure of its purchasing power, whereas from the point of view of goods and services it reflects overall changes in prices. When prices remain stable, so does the value of money, but when prices shoot up, the value of money shrinks. The notion of inflation thus requires one to differentiate between a relative change in price (e.g. an increase in the price of oil compared with all other goods), which is not true inflation, and a overall change in price (an increase in all prices to the same degree), which is inflation.

Aside from definitions - and problems of measurement - inflation is a central concept in contemporary economic thinking. The main point of disagreement between monetarists and Keynesians concerns the position and role of inflation. As monetarists see it, inflation undermines confidence in money, encourages postponement of productive investment and hence leads to unemployment and recession. They believe that the only way to combat inflation is to maintain equilibrium in public finances and to keep a tight rein on monetary policy. They also argue that, once inflation has taken hold in an economy, it tends to persist because people start to behave on the assumption that it will. The Keynesian position is more qualified. Keynesians believe that moderate inflation is not a disaster and that it may even encourage growth. Whereas monetarists see inflation as an absolute evil, Keynesians are more inclined to analyse the costs and benefits of each particular case before pronouncing judgement. Despite these differences, it is accepted that inflation has an income distribution effect which is generally detrimental to income from capital.

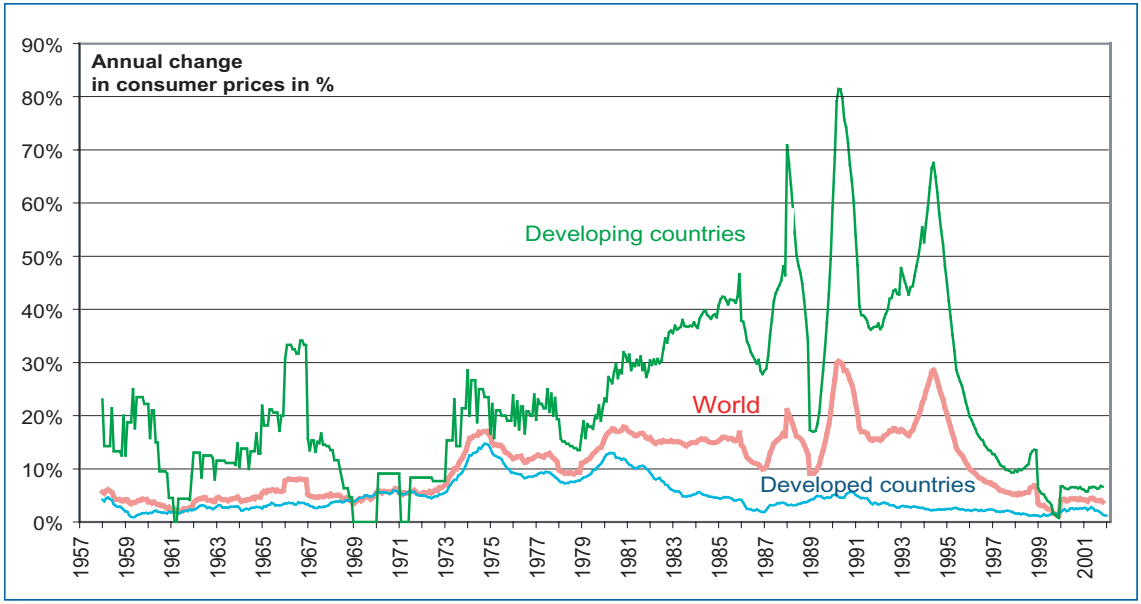
METHODS AND PROBLEMS OF MEASUREMENT

Overall changes in price levels are measured using a complex data gathering methodology and methods of calculation which not all experts agree on.

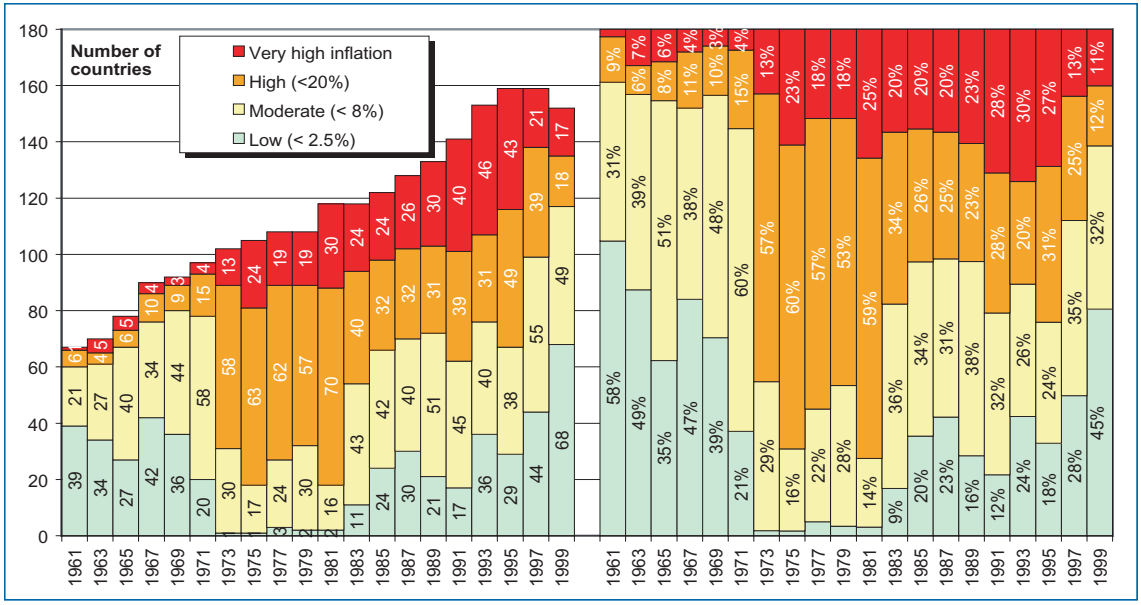
The first stage involves determining which viewpoint to measure inflation from. The usual answer is to focus on consumer prices, but there are other options: wholesale prices, import or export prices, prices derived from GDP, etc. Movements in overall price levels cannot be quantified without choosing a point of reference to observe them from. This may be linked to a given category of players, or to a particular geographical area; for example, there are certain cities or regions that draw up their own price indexes. Drawing up a consumer price index involves determining weighting coefficients which will be used to aggregate individual observations. The choice of coefficients has strategic implications for the relevance of the results. It is therefore not surprising to find that some countries have several consumer price indexes, which may even compete with one another.

As for the actual calculation, there are two schools of thought regarding the structure of the index. In the Laspeyres method, which is the one most commonly used, the physical make-up of the typical basket is assumed to be stable in the medium term. From one revision to the next, it indicates how recorded prices should be weighted during the period concerned. The Paasche method takes

3.2.A. Annual changes in consumer prices, 1957-2001



3.2.B. Distribution of countries by level of inflation, 1961-1999



Primary data: Thomson Financial, Datastream Advance; IMF, International Financial Statistics; World Bank, World Development Indicators

Grouping of countries: Fig. A cf IMF

account of changes in consumption and assesses the current make-up of the basket at historical earlier prices. In other words, this method compares differently made-up baskets. The difference between the two methods thus lies in the way they take changes in consumer behaviour into account.

Monitoring overall price levels is a delicate exercise which presupposes political and economic stability and requires the authorities to muster considerable resources. Over the last quarter of a century many countries have experienced major political and economic upheavals, border changes, crises, wars and civil wars. Under such circumstances it is clear that changes in overall price levels can only be measured approximately.

Each country is free to choose its own method of monitoring changes in price level. The results are usually forwarded to the IMF and the World Bank. The IMF uses these primary data to calculated the global rate of inflation and the corresponding rates for developed (OECD) and developing countries. This aggregation is based on weighting coefficients derived from each country's share of global product.

RECENT TRENDS

1. Inflation: the gap between North and South (Fig. A)

Long-term trends in global inflation point to two distinct phases. During the first, which ended in the early 1970s, global inflation remained within the 3% to 6% range. This was due to extremely low inflation in the developed countries and inflation which, although high, was usually within the 8% to 20% range in the developing ones, whose economic influence was in any case minimal. The second phase began when the US dollar was taken off the gold standard and the oil crisis broke out, and appeared to be ending at the close of the twentieth century. This phase was marked by a very considerable increase in global inflation, which was henceforth in the 10% to 20% range. Behind this global trend lay contrasting developments. The developed countries stabilized inflation at around 5% from the early 1980s onwards, but in developing countries the aggregated rate of inflation rose to levels of 30% or 40%, and was highly volatile. After a period of considerable divergence, inflation rates in the two groups of countries appear to have been converging since the second half of the 1990s.

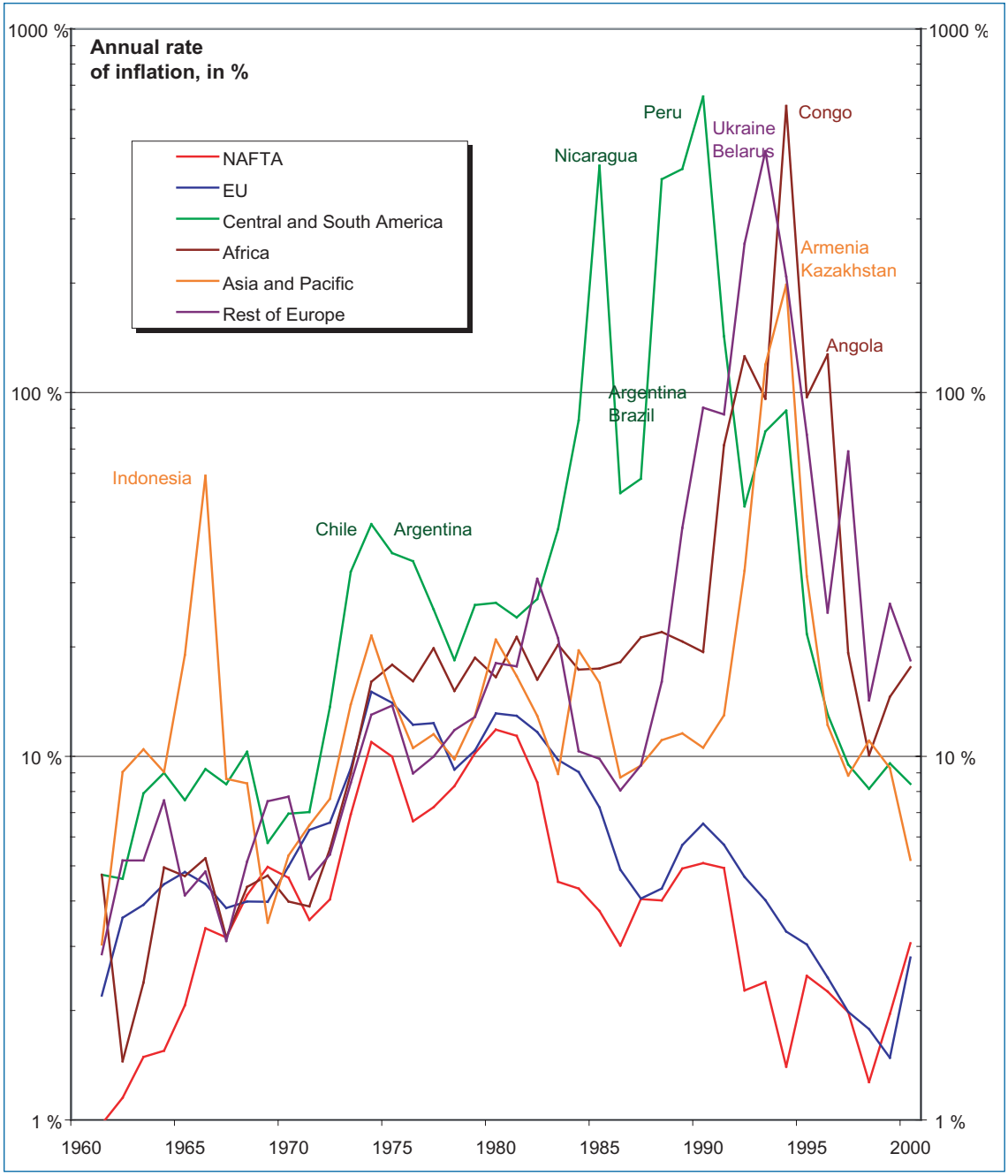
2. External and internal shocks: disrupted economies (Fig. C)

If high inflation can be seen as a symptom of a seriously disrupted economy, the number of "dysfunctional" countries does not appear to have decreased significantly in the last 25 years. Major bursts of inflation have coincided with a wide variety of domestic situations: financial crises (of which Latin America has had repeated experience), political upheavals (as in the former Soviet bloc) and war (as in certain African countries). The significance of inflation thus extends well beyond the purely cyclical dimension.

3. Variable degrees of inflation (Fig. B)

The global rate of inflation is determined by aggregating weighted national rates. Comparisons over time are limited by the availability of data. Between 1980 and 2000 the number of countries covered by IMF statistics rose from 110 to over 150. A breakdown of countries by inflation bracket highlights the change of phase that occurred in the early 1970s. Since 1975 the number of countries with high rates of inflation has never fallen below 19 (except in 1999), and countries with moderate inflation have followed the same trend.

3.2.C. Annual changes in consumer prices, logarithmic scale, 1960-2000



Primary data: Thomson Financial, "Datastream Advance"; IMF, "International Financial Statistics"; World Bank, "World Development Indicators"

3.3 Development indicators

TERMS AND DEFINITIONS

For many years contemporary economists automatically spoke of development in terms of growth, claiming that the economic dimension of development was the only one not to involve value judgements. This approach reduces development to the production and consumption of commercial values and takes per capita income as the only scale of measurement. Yet development is not merely economic or social, but is primarily a philosophical and cultural notion which ultimately refers to values. There is now a global consensus on a concept of human development based not only on the notion of welfare, but above all on that of human (civil, economic, social, political and cultural) rights.

Expressing this current consensus, the United National Development Programme (UNDP) has defined human development as a process that fosters the creation of an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. Such a definition implies a long list of rights and conditions that are considered essential to human development. The most important of these are access to education and culture, a decent standard of living, safety, freedom and social justice. In modern societies the various facets of development are interdependent and, it is increasingly clear, inseparable. Political and social rights thus appear to be essential to economic development, which can only take place if players have access to decent pay, education and health services.

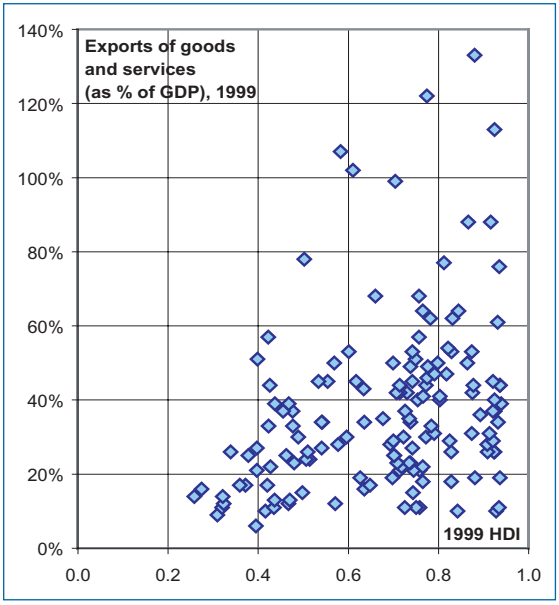
The need to reconsider the notion of development and ensure that it is no longer measured in purely economic terms - particularly at the instigation of the United Nations, which launched a new world development decade in 1988 - has also been encouraged by the expansion in international statistical data. It was above all in the 1990s that the first composite development indicators appeared, attempting (with varying success) to combine the economic, social and cultural dimensions of development such as per capita income, life expectancy, infant mortality, education and so on. The Human Development Index (HDI) introduced by UNDP in 1990 is the best known and most useful of these attempts, and has been extended at least twice:

- In 1991-92, UNDP attempted to incorporate civil and political rights into its index. However, the idea was abandoned because this extension was not based on quantitative data, but solely on assessments by an independent committee which gave each country a score from 1 to 10 for the five basic freedoms – a method which led to endless wrangling.
- In 1995 UNDP introduced a "gender-specific" development index (GDI), which has proved more acceptable. This index identifies differences between men and women in a country's HDI.

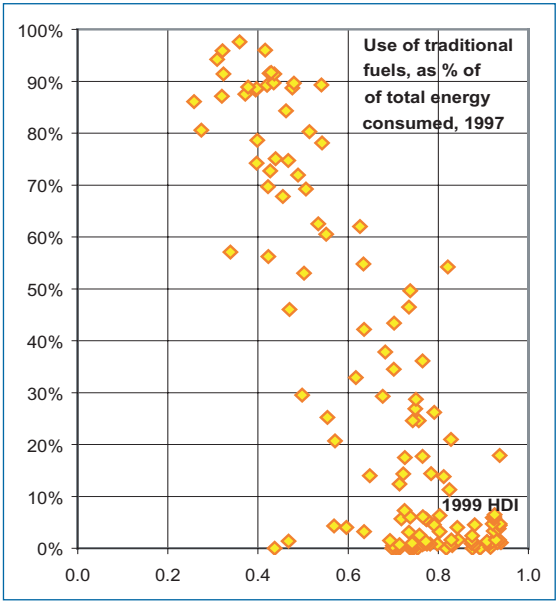
As these indicators have been refined, another concept has been emerging - that of sustainable development, first mentioned in 1987 in the Brundtland report to the United Nations Conference on Environment and Development (entitled "Our Common Future"). Although this concept is still rather vague, it emphasizes the component of development which "meets the needs of the present without compromising the ability of future generations to meet their own needs". In particular, intergenerational solidarity presupposes the protection of environmental resources. The IMF and the OECD have since introduced the notion of sustainable economic development, while World Bank reports refer to sustainable, equitable development.

Currently, research by universities and international agencies is progressing in two directions:

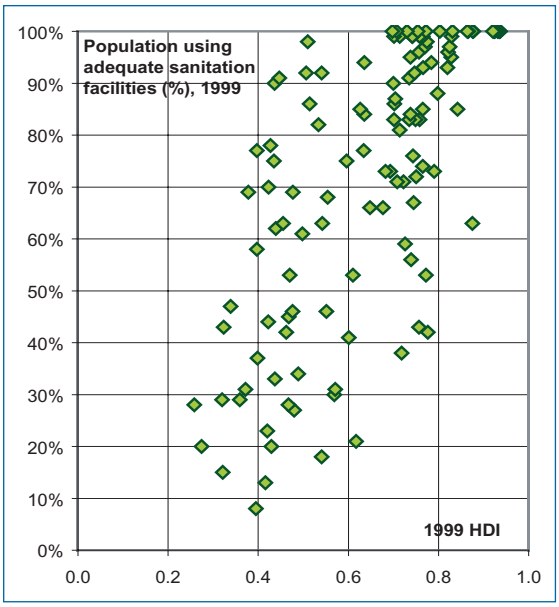
3.3.A. Limits to the relevance of HDIs: correlation with exports



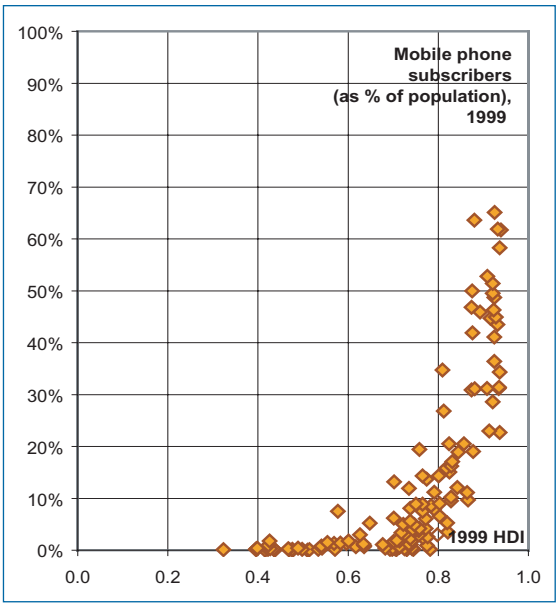
3.3.B. Limits to the relevance of HDIs: correlation with use of fossil fuels



3.3.C. Limits to the relevance of HDIs: correlation with use of sanitation



3.3.D. Limits to the relevance of HDIs: correlation with density of mobile phones



Primary data: World Bank, UNDP, Human Development Report; World Bank, World Development Indicators

(a) seeking ways of incorporating sustainability into development indicators and (b) attempting to incorporate empirical data on fundamental rights into them. All this is taking place amid a debate on how globalization affects development and vice versa.

METHODS AND PROBLEMS OF MEASUREMENT

1. The structure of the HDI

First published by UNDP in 1990, the Human Development Report introduced the HDI, which currently strikes the most successful balance between the number of factors included and the complexity of the method of calculation. The HDI combines life expectancy, standard of living and standard of education. Each country is given a score from 0 to 1 for each of these factors. A country's HDI is the average of the three scores.

- For life expectancy, the minimum is set at 25 years and the maximum at 85 years. A country where life expectancy is 55 years will score 0.5.
- In the absence of satisfactory statistics on the average standard of living, the HDI uses per capita GDP. The few income data that currently exist come from polls or surveys which are unreliable and difficult to compare. Per capita GDP is calculated by the purchasing power parity (PPP) method, which takes account of differences in price levels between countries, for the same kinds of goods and services. PPP is calculated by comparing the prices of similar articles in different countries. This method has been criticized because the articles available in the various countries at various periods are not strictly identical. Nevertheless, real per capita GDP at PPP remains the best currently available indicator of a country's standard of living. The scale ranges from USD 100 to USD 40'000 per capita per annum.
- For standard of education, UNDP aggregates weighted data on rates of primary and secondary school attendance (weighted at 0.33) and rates of adult literacy (weighted at 0.66). The scale adopted for this factor ranges from a minimum of 0% to a maximum of 100%.

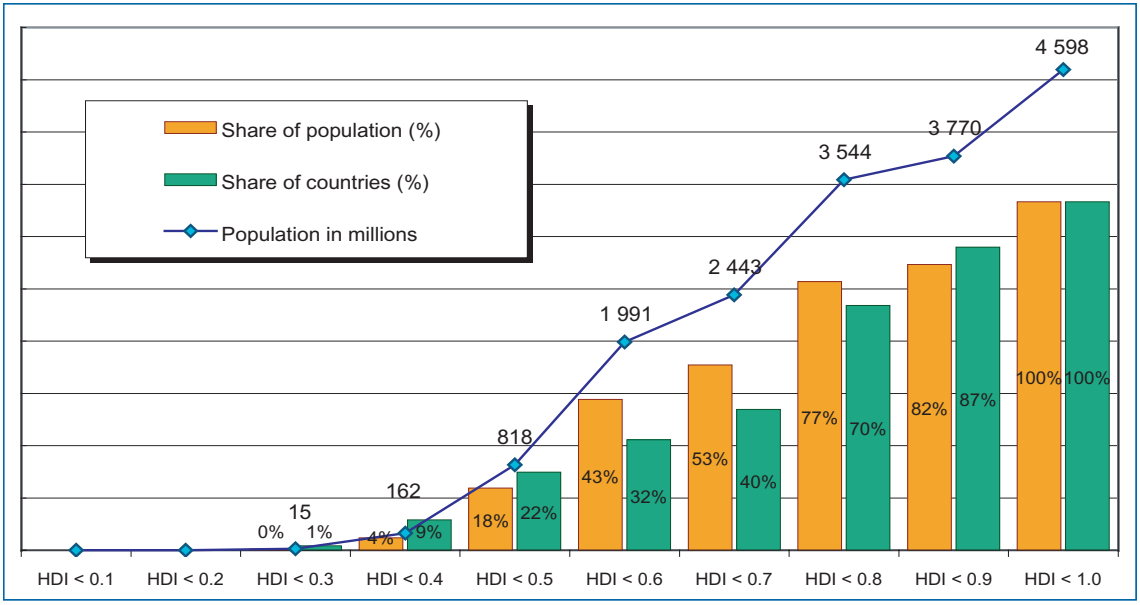
By combining these essential dimensions, the HDI also takes account of health infrastructure, safety and cultural standards, but disregards civil and political rights. Research is currently taking place into ways of incorporating these two dimensions into development indicators in the future.

2. Measuring development - a constant challenge

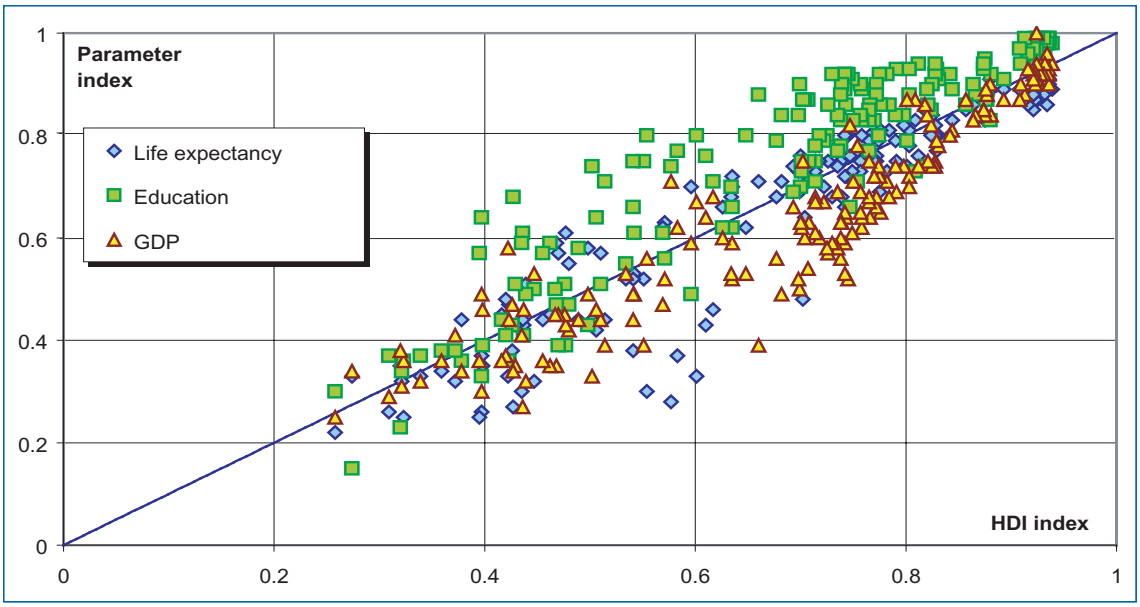
Although the HDI has undeniably made it easier to quantify human development without measuring it in purely economic terms, there are still a large number of problems:

- In publishing the HDI, UNDP reveals the progress of development at global level, but at the same time it exposes the spread of poverty, inequality and social exclusion (which the HDI does not measure). Extreme poverty is the most serious limitation to development indicators, since the poorest are not usually included in statistics. The same is even true of such specialized indicators as the UNDP's Human Poverty Index (HPI) or the Physical Quality of Life Index (PQLI) which the World Bank uses to draw up its list of Least Advanced Countries (LACs). This raises the key issue of what can currently be measured and what cannot. This is an important question, and it should not be obscured by squabbles over methods of calculation. Statistics can also help to exclude people.
- Another major problem is the arithmetical structure of the indexes, since ultimately the units of measurement used for the various factors are not comparable. The difficulty lies in correctly assessing the importance of each parameter and weighting it accordingly.
- The larger the number of parameters included in an index, the more delicate the issue of weighting becomes. There are those who boast of creating indexes with 50 or more parameters, but they dodge the problem by simply using identical weighting coefficients. Such approaches may create more

3.3.E. Distribution of countries and population according to their 1999 HDI level



3.3.F. Country-by-country analysis of each component's contribution to the 1999 HDI



Primary data: World Bank, UNDP, Human Development Report; World Bank, World Development Indicators

confusion than they are worth, for they take no account of the importance of the various parameters or the correlations between them. Given the abundance of data, it makes more sense, for example, to list each parameter separately, as the World Bank does in its annual publication World Development Indicators.

- Another serious problem is how to take account of inequality. Most of the parameters used are averages and hence take no account of distribution (for example, distribution of income, which is often very unequal). However, the fact that Gini, Theil or Atkinson indexes cannot be calculated on the basis of reliable data does not mean that we should abandon them altogether. The GDI is a first step in the right direction, since it takes account of the differences between men and women.

RECENT TRENDS

1. The HDI - a useful indicator (Fig. A, B, C and D)

The relevance of the methodological choices on which the HDI is based is partly enhanced by its ability to grasp a broader reality than that covered by its components. Thanks to a judicious choice of factors, the HDI correlates well with other variables measured elsewhere, such as consumption of traditional fuels or the number of doctors per 100,000 inhabitants. However, the limitations of the HDI become apparent when it is set against other factors such as exports of goods and services as a percentage of GDP, etc.

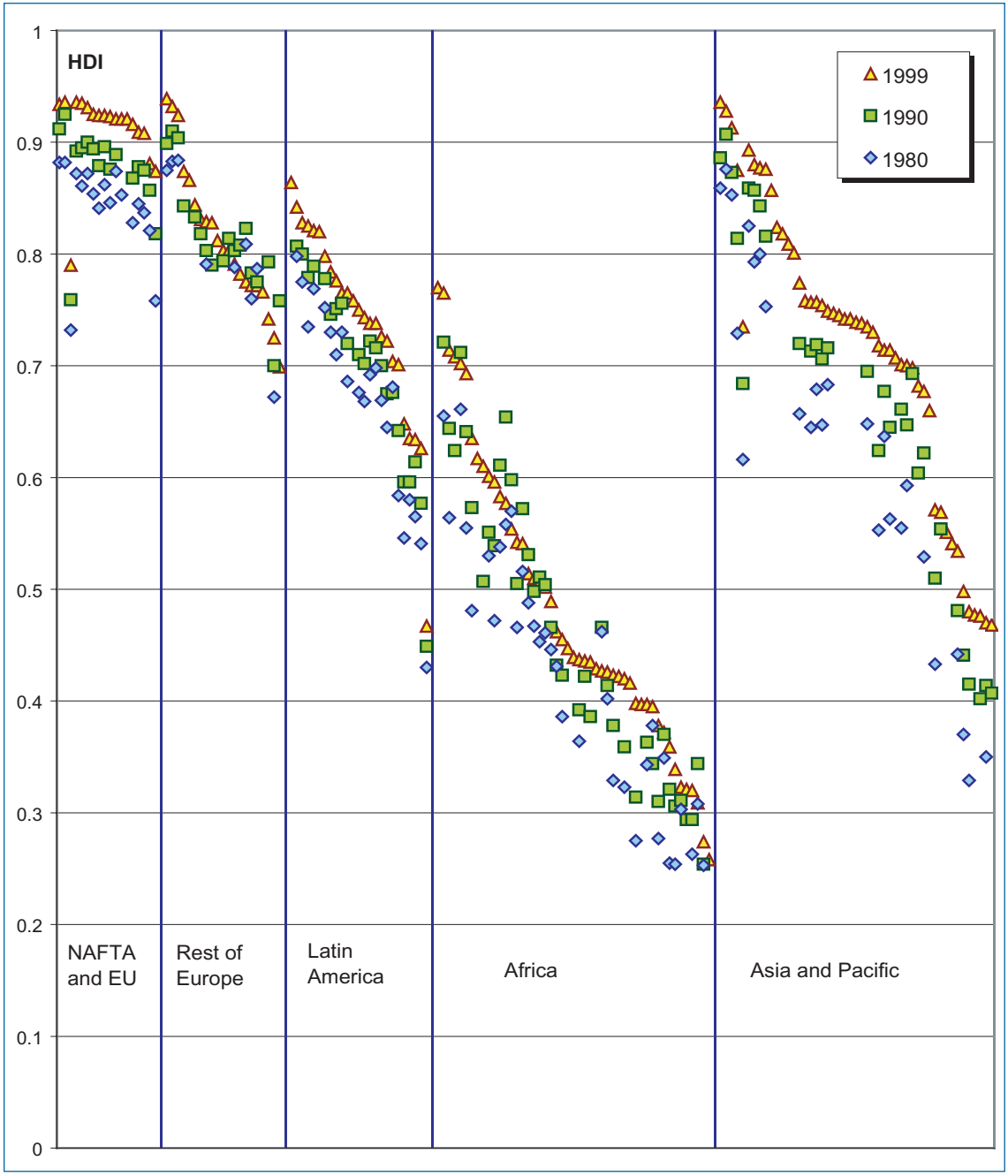
2. Africa - a ravaged continent (Fig. E and G)

Although in most countries the HDI is increasing year by year, in many of them the absolute level of the index remains low. Only 48 countries - 30% of those analysed - have an HDI greater than 0.8. Of the world population covered by the study, 77% live in countries with an HDI below 0.8, and the number of people living below the 0.5 mark exceeds the population of the United States and the European Union put together. Geographically, most of the people excluded from development live in Africa. Hostage by turns to its wealth of raw materials, Aids and warfare, Africa is finding it very difficult to catch the development train.

3. Education is causing the HDI to rise (Fig. F)

A breakdown of the 1999 HDI into education, life expectancy and per capita income indexes shows that overall standards of education are causing the HDI to rise: 75% of countries have an education indicator greater than 0.62. The same is not true of life expectancy and real per capita income, for which only 25% of countries have indexes greater than 0.49.

3.3.G. Dispersion of national HDIs in the five regions and changes in this between 1980 and 1999



Primary data: World Bank, UNDP, Human Development Report; World Bank, World Development Indicators

3.4 International trade

CONCEPTS AND DEFINITIONS

Exports and imports, known jointly as "international trade", are at the heart of international economic relations. According to the long-established pure theory of international trade, trade brings about gains in efficiency, increases wealth and encourages growth.

There are three reasons why cross-border transactions occur. A country imports goods and services either because it is unable to produce them locally (e.g. certain raw materials), or because local products are more expensive or of poorer quality than foreign ones. The third reason why a country becomes involved in international trade is that certain production units within its borders have built up special business relationships with foreign partners. The first two reasons were identified long ago and have been known since the days of Adam Smith and David Ricardo as the theories of absolute and comparative advantage. According to the latter theory, a country specializes in goods and services which it can produce at lower prices than other countries. However, the theory of comparative advantage does not provide a simple explanation for trade resulting from special relationships between businesses (e.g. complementary technology, other synergies or joint ownership).

Accounts record trade flows in the balance of trade which is a component of the current account, itself part of the balance of payments. As its name suggests, the balance of payments records all the payments between a country and the rest of the world; imports appear as outflows or expenditure and exports as inflows or earnings. If there is a surplus or a deficit on the balance of trade, the other components of the balance of payments must – in accounting terms – correct the disequilibrium by creating flows of opposite sign in the opposition direction, such as foreign direct investment in the country, increased foreign debt or repatriation of profits made by foreign branches of the country's businesses.

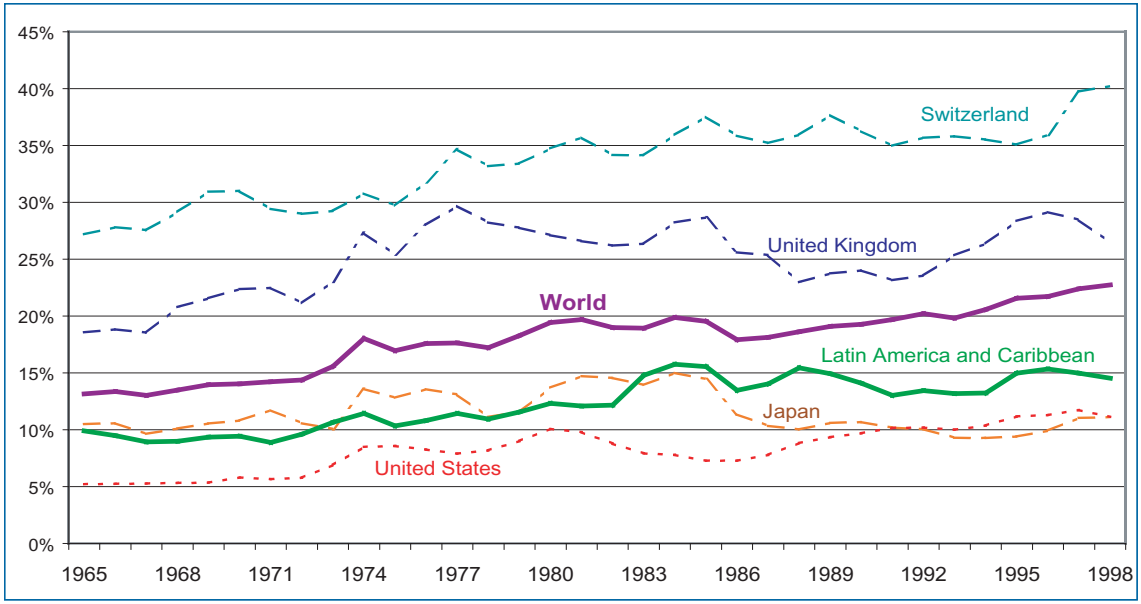
METHODS AND PROBLEMS OF MEASUREMENT

In theory, trade flows are divided into three groups according to their content: commodities (agricultural products and mining products), manufactures, and services. Together, commodities and manufactures make up the category commonly known as “merchandise”. In practice, the way in which the flows of each of these components are quantified will depend on the particular country's institutional and legislative arrangements.

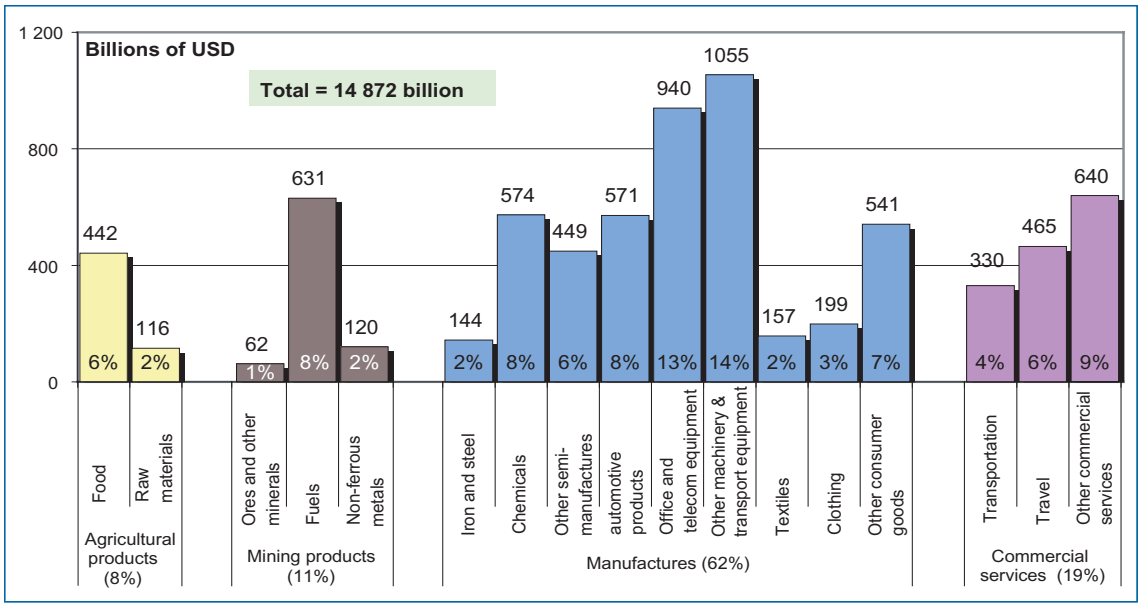
In most countries, primary data on exports and imports of goods and services are provided by the customs authorities. However, since nomenclature and methods differ from country to country, data have to be harmonized at international level. The differences may concern the types of transactions covered (for example, is mail traffic included or not?), the point at which the transaction is recorded (the IMF uses the point at which ownership changes, whereas certain countries use the point at which the article crosses the border), the method of assessment (CIF or FOB) or the type of classification used.

Other differences in national practice concern the degree of detail in the information provided and the time taken to publish data. Since most

3.4.A. Exports of goods and services as a percentage of GDP, at current prices, 1965-1998



3.4.B. Components of global trade, as a percentage and in terms of value, 2000



Primary data: WTO, International trade statistics 2000; WTO, Annual Report; World Bank, World Development Indicators

Grouping of countries: Fig. A cf WB

countries do not publish information on trade in weapons or gold, trade flows are always underestimated. Another area in which they are seriously underestimated is trade in services, which usually does not involve the customs. In countries where this is possible, central bank statistics on international payments and transactions are used to obtain a more reliable picture of trade in services.

Since methods of gathering data on trade are constantly changing, it is becoming increasingly difficult to compare statistical series over time. This particularly applies to changes in political or commercial borders; examples in recent years include the break-up of the Soviet Union into a large number of successor states, and the emergence of the European Union as a single trading entity. Trade between EU Member States accounted for 25% of world trade in 1999; however, once such flows are treated as domestic, international trade will diminish by a quarter - purely in statistical terms.

The IMF adjusts national data on trade to produce harmonized statistics which can be compared internationally. In addition to the IMF, other international organizations make efforts to produce coherent international statistics; examples are the OECD (which publishes Special Trade Statistics), the United Nations (which has the fullest and most detailed database on trade) and the WTO (which produces regional aggregates and seasonal adjustments).

Commercial transactions are initially recorded in nominal terms, i.e. in terms of value. However, economists often use sophisticated methods to obtain data based on volume. The purpose of this is to eliminate the background noise supposedly caused by price changes and so obtain a more accurate picture of reality. Yet, despite their name, "volume-based" data are not provided in physical units, but simply in constant prices from a given reference year. The relevance of the results will therefore very much depend on which base year is chosen and how carefully the data are processed. In any case, there are many who would challenge the view that price changes are mere background noise, since they may in fact reflect changes in quality or in patterns of consumption or production. In this publication we prefer to provide primary data rather than the results of complex technical processing. Most of the data on trade are therefore presented here in nominal terms.

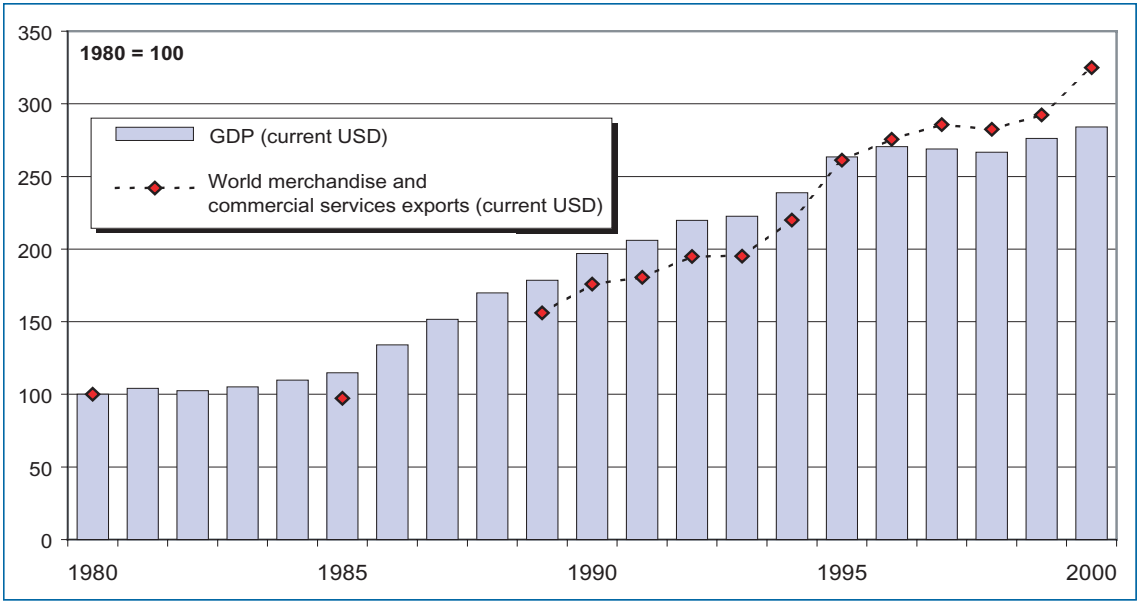
RECENT TRENDS

1. Openness to trade (Fig. A and C)

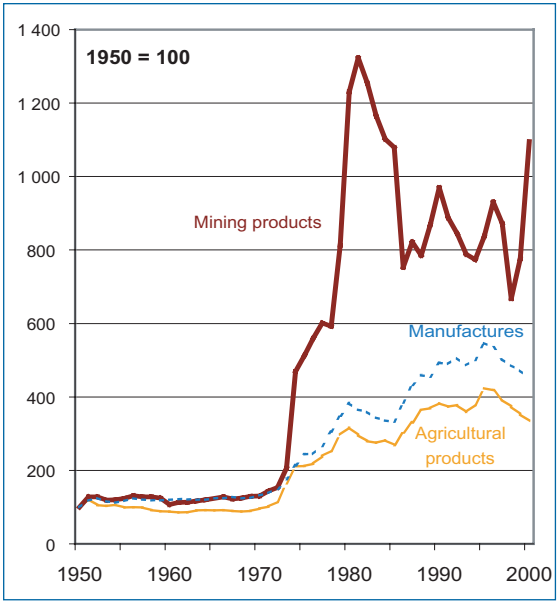
Despite the decreasing share of in product, the value of trade in merchandise (exports or imports) expressed in terms of global product has been increasing over time. This ratio - known as "openness to trade" - can be calculated for countries, regions or the whole world. The openness to trade of the global economy rose from 12.6% in 1960 to 22.7% in 1998 and 26.8% in 1999. The same trend can be seen in most countries, although at very different levels and rates. For example, openness to trade has remained relatively low (around 10%) in Japan and the United States, whereas in most European countries it has risen by 10 to 20 percentage points. In certain high-income non-OECD countries such as Taiwan, Hongkong and Singapore, openness to trade has skyrocketed and has now reached 60% to 80% of GDP; at the other end of the spectrum, well below the global average, is Latin America, mainly because Argentina and Brazil are so relatively closed to trade.

The fact that in the long term trade in merchandise has increased more rapidly than its production suggests that there is a close relationship between international trade and growth. Standard economic theory sees this as a causal relationship,

3.4.C. Global product and exports of goods and services, at current prices, as an index, 1980-2000



3.4.D. Unit value of merchandise exported, as an index, 1950-2000



3.4.E. Summary indicator of trade restrivtiveness, 1997 and 2000

		1997	2000
World	**free access**	**47%**	**57%**
	moderate	30%	29%
	high	23%	14%
Asia	**free access**	**43%**	**57%**
	moderate	33%	27%
	high	23%	17%
Europe	**free access**	**79%**	**91%**
	moderate	15%	9%
	high	6%	0%
Sub-Saharan Africa	**free access**	**30%**	**43%**
	moderate	32%	43%
	high	39%	14%
Western hemisphere	**free access**	**44%**	**50%**
	moderate	50%	47%
	high	6%	3%

Primary data: WTO, International trade statistics 2000; WTO, Annual Report; World Bank, World Development Indicators

Grouping of countries: Fig. E cf WTO

yet this is only a likelihood, not a certainty. According to this view, trade, by bringing gains, increases efficiency and boosts growth. However, even if trade leads to considerable gains in efficiency at global level, the question remains how these gains are distributed among the various players.

There has been much greater long-term growth in trade in merchandise than in the production of the goods concerned. According to the WTO, between 1948 and 2000 (at constant prices) global trade in merchandise increased by an average of 6.1% a year, whereas industrial production of goods increased by only 3.9% a year. However, these figures take no account of the share of services in either trade or production. Once services are included, growth in international trade is the same as growth in national product.

2. Geographical distribution of trade (Fig. F)

The matrix of global trade flows has changed significantly over the last twenty years.

- The European Union is the world's leading trading power, accounting for 53.5% of global trade in merchandise. Of EU trade, 48% takes place between Member States, 17% with the other two members of the Triad (13% with NAFTA and 4% with Japan) and 35% with the rest of the world.
- In twenty years, from 1979 to 1999, the concentration of trade in merchandise within the Triad (the EU, NAFTA and Japan) increased from 35% to 45%. Over the same period, the share of trade between the Triad and the rest of the world fell from 56% to 41%, while trade between non-Triad countries rose from 9% of 14% of global trade.
- In 1999, 42% of global trade took place within the major regional blocs; the rest was interregional. A long-term trend appears to be emerging here, with the share of transcontinental trade diminishing in favour of intraregional trade. This trend is being boosted by an explosive growth in the number of regional trade agreements, of which the WTO had identified 220 in 2001.

3. The composition of trade (Fig. B, D and G)

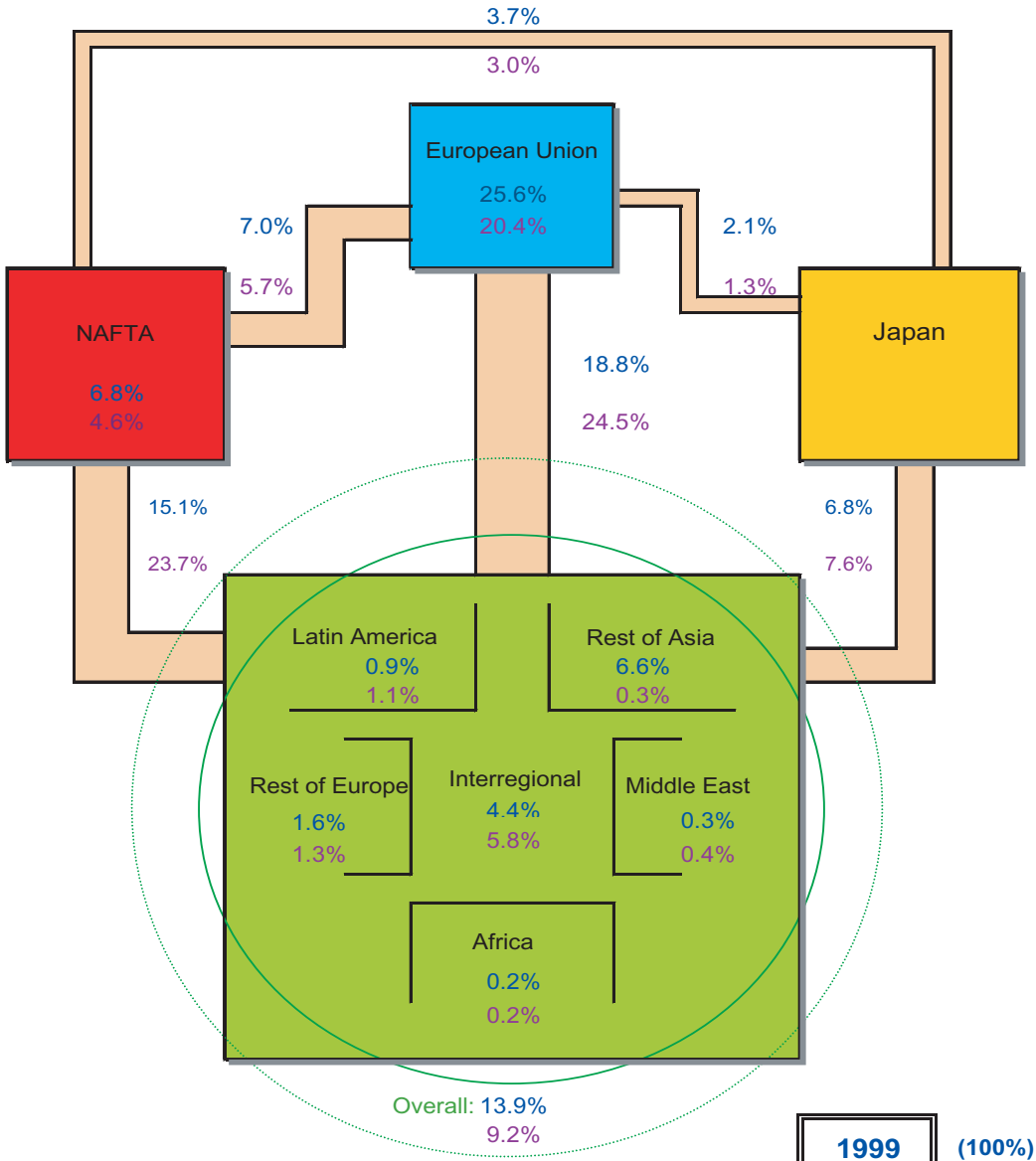
The composition of global flows of trade in merchandise in terms of volume (at constant 1950 prices) has changed considerably over the last forty years, particularly as rates of growth in the various product groups have been very different. For example, trade in manufactures has multiplied by 20, whereas trade in agricultural and mining products has risen by a factor of 3.5 to 4.

- The share of manufactures skyrocketed, from 41% of the total in 1960 to 73% in 2000.
- The share of agricultural products collapsed, from 35% of the total in 1960 to 12% in 2000.
- The share of mining products fell significantly, from 15% to 5% of the total over the same period.

Services, which did not appear as a separate category in international trade statistics until 1983, now account for 19% of the total. Trade in services is not growing as quickly as trade in general, despite the rapid growth in their share of overall economic activity. This suggests an inconsistency between the share of services in the GNP of OECD countries (between 55% and 65%) and their share of trade (19%). The answer may well be that trade in services has been underestimated, owing to the difficulty of recording actual exchanges of services, which by definition are intangible. However, this is merely a hypothesis.

Unit value is the ratio between the value and volume of trade flows. The unit value of the various groups of merchandise has behaved differently in the long term. While the unit value of manufactures and agricultural products has more or less followed the rate of inflation, the unit value of mining products - particularly oil - has been guided, ever since the 1973-74 crisis, by political considerations as much as it has by supply and demand.

3.4.F. Trade in goods within and between the main regions, 1979 and 1999



Primary data: WTO, International trade statistics 2000; WTO, Annual Report; World Bank, World Development Indicators
Grouping of countries: Fig. F cf WTO

4. Internationalized production

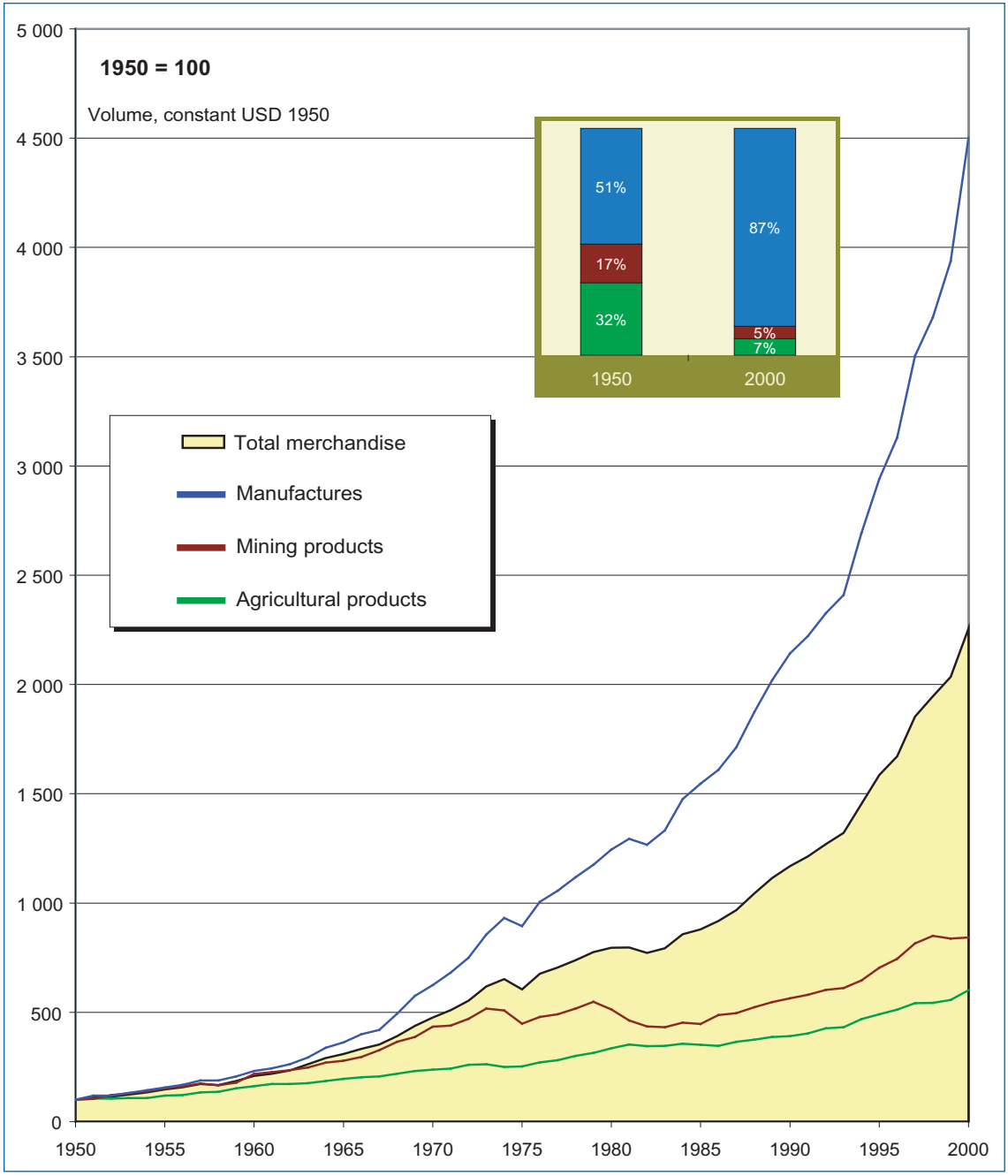
The explosive growth in trade in manufactures may reflect changes in the way transnational corporations operate. The term "internationalized production" refers to the increasing tendency of transnational companies to make their various sites specialize in the production or assembly of specific components. Once manufactured, the components are transported to another site to be assembled, and the finished products are then distributed to the various markets. Although the products never leave the company at any stage of this process, they do cross political borders. This trend towards internationalized production may explain the exponential growth in the share of semi-manufactures in international trade, called also intra-industry trade.

5. The role of the WTO: liberalization of trade (Fig. E)

Growth in trade, which has been apparent since the end of the Second World War, has been facilitated by constant efforts to liberalize trade. On a theoretical level, the principle of free trade and distrust of protectionism were expressed as long ago as the 1944 Bretton Woods conference. In 1948 an ad hoc negotiation platform (GATT) was set up in Geneva, and by 2002 four full rounds of negotiations had been completed: the Dillon Round in 1947, the Kennedy Round in 1968, the Tokyo Round in 1979 and the Uruguay Round in 1994. This latter round saw the birth of an international organization in the full sense of the term: the World Trade Organization, whose sole purpose is to liberalize trade. In late 2001 the Doha Round was launched under the auspices of the WTO.

The contents of these successive rounds of trade negotiations reflect the changes that have taken place in the global economy. Until 1970 the main issue was customs tariffs and quotas. In the 1980s, the agenda was extended to include non-tariff barriers and services. In the 1990s the focus was on access to markets and non-discriminatory treatment of foreign and domestic players. Finally, the Doha Round is mainly concerned with protectionism in the agricultural and textile sectors, as well as issues relating to the environment, the social clause and competition policy.

3.4.G. Global trends in trade, at constant prices, for the main categories of goods, as an index, 1950-1999



Primary data: WTO, International trade statistics 2000; WTO, Annual Report; World Bank, World Development Indicators

3.5 Foreign direct investment

CONCEPTS AND DEFINITIONS

As used in the narrow sense in the international economy, the term "foreign direct investment" (FDI) means resources which are transferred from one country to another and which, in the host country, directly contribute to gross capital formation and hence to growth in productive capacity. However, in everyday usage (particularly that of the IMF and the OECD), the notion of FDI is broader than it is in theory, referring instead to all transactions whereby a foreign player takes lasting control of national assets. According to this definition, there are, operationally speaking, three key elements in any FDI transaction:

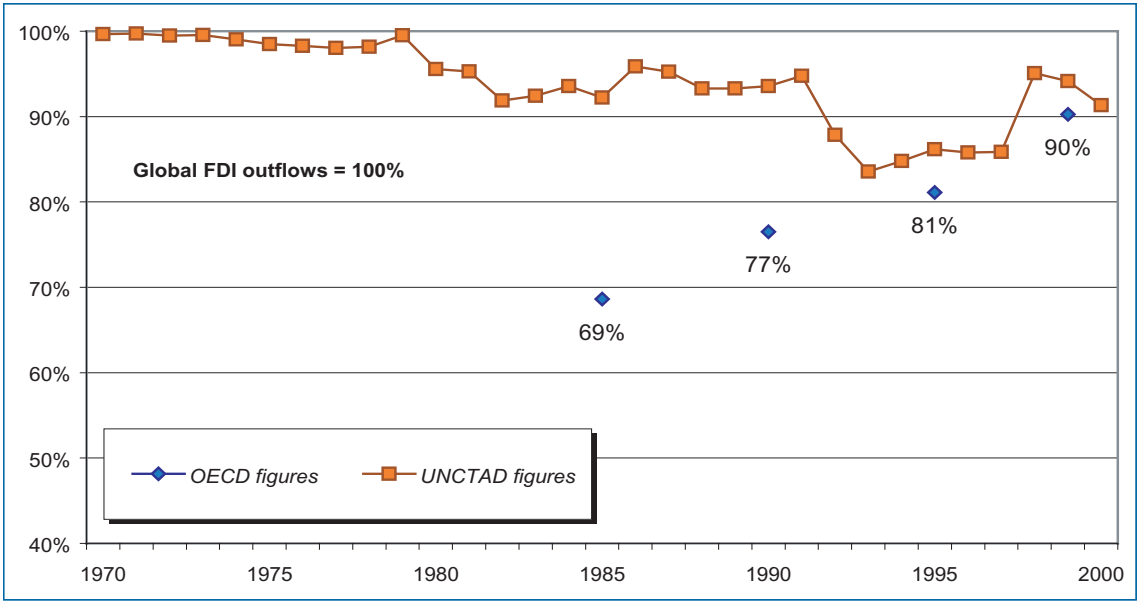
- inflow of foreign capital;
- long-term commitment to the host country by the owner of the capital, which distinguishes FDI from the purely financial – and usually short-term - investment known as "portfolio investment";
- foreign control of national assets. This highlights the basic difference between the broader and narrower meanings of FDI as illustrated by the example of cross-border mergers and acquisitions. In such transactions, control of the host country's companies passes into foreign hands (in accordance with the broader definition of FDI), but the sums involved do not automatically contribute to gross capital formation in the country (as the narrower definition would require).

The broader definition also raises the difficulty of identifying the point at which control changes hands. In FDI theory, a business is under foreign control if 10% of its share capital is held by a foreign player. In practice, however, the make-up of shareholdings does not necessarily determine who is in charge of the business. Management contracts, franchises and licensing or royalty agreements can result in foreign control of a business just as effectively as a 10% shareholding could ever do. Such transactions involving a foreign partner are, in terms of foreign control, similar to a classic FDI transaction, even if they do not and should not appear in balance-of-payments statistics.

Conceptually, FDI is not restricted to the initial transaction whereby a foreign parent company acquires or establishes a local subsidiary, but also includes all subsequent payments between the two parties. Thus, for FDI purposes, inflows into the host country cover the initial transaction whereby control changes hands, whereas subsequent outflows include the local subsidiary's undistributed profits. Loans and credits between a parent company and its subsidiary are also FDI transactions.

Most FDI transactions are triggered off by a combination of two sets of factors: (a) the strategies of private companies (especially transnational corporations) which use FDI to expand their global networks, and (b) macroeconomic variables such as exchange rates, growth potential, market size and, more generally, the competitiveness of the host country (although this is difficult to determine). FDI thus lends itself to both microeconomic and macroeconomic analysis. In the globalization debate, FDI is used as an indicator of the extent to which a country is integrated into the global production network shaped by transnational corporations' internationalization policies. In the context of classic international economics, inflows of FDI are part of the capital account which - in some countries - may play an important part in balancing the overall balance of payments.

3.5.A. Deviations in assessment of FDI outflows from OECD countries, in per cent, 1970-2000



3.5.B. Top 20 countries receiving FDI flows, 2000

FDI inflows, *in billions of USD*			World = 100%			FDI outflows, *in billions of USD*			World = 100%		
Rank in 2000				*Cumul*	*all 5*	*Rank in 2000*				*Cumul*	*all 5*
1	United States	281	22%	22%		1	United Kingdom	249	22%	22%	
2	Germany	176	14%	36%		2	France	172	15%	37%	
3	United Kingdom	130	10%	46%	58%	3	United States	139	12%	49%	62%
4	Belgium and Luxembourg	87	7%	53%		4	Belgium and Luxembourg	82	7%	56%	
5	Hong Kong, China	64	5%	58%		5	Netherlands	73	6%	62%	
6	Canada	63	5%	63%		6	Hong Kong, China	63	5%	68%	
7	Netherlands	55	4%	67%		7	Spain	53	5%	73%	
8	France	44	3%	71%	19%	8	Germany	48	4%	77%	22%
9	China	40	3%	74%		9	Canada	44	4%	81%	
10	Spain	36	3%	77%		10	Switzerland	39	3%	84%	
11	Brazil	33	3%	80%		11	Sweden	39	3%	87%	
12	Sweden	21	2%	81%		12	Japan	32	3%	90%	
13	Ireland	16	1%	83%	8%	13	Finland	23	2%	92%	10%
14	Denmark	15	1%	84%		14	Italy	12	1%	93%	
15	Mexico	13	1%	85%		15	Denmark	8	1%	94%	
16	Australia	11	1%	86%		16	Norway	7	1%	95%	
17	Italy	11	1%	87%		17	Taiwan	6	1%	95%	
18	Argentina	11	1%	88%	4%	18	Portugal	5	1%	96%	3%
19	South Korea	10	1%	88%		19	Australia	5	.5%	96%	
20	Poland	10	1%	89%		20	Chile	4	.4%	97%	

Primary data: UNCTAD, World Investment Report; OECD, Financial Market Trends

METHODS AND PROBLEMS OF MEASUREMENT

The complexity of FDI in actual practice makes it extremely difficult to measure statistically or even to estimate. The most serious attempts to measure FDI focus on flows, whereas stocks of assets under foreign control are merely estimated. Apart from subsidiaries' undistributed profits and takeovers that do not involve shareholdings, all other FDI transactions involve international payments. Theoretically, therefore, they should be identifiable from the balance of payments, but in practice things are a good deal more complicated.

The main publication on FDI is UNCTAD's annual World Investment Report. This focuses on information on FDI flows provided directly by national authorities. In the event of gaps or gross inconsistencies, the data are matched up and adjusted with the help of information from other organizations such as the IMF or the OECD. What makes this task particularly difficult is that the operational definitions used by the various organizations do not altogether coincide. This particularly applies to FDI transactions relating to mergers and acquisitions. These are estimated by UNCTAD on the basis of information from the Worldscope data bank set up by the Thomson Financial company.

The seriousness of the statistical problems associated with FDI data is illustrated by the major discrepancy between the sum totals (calculated at global level) of FDI inflows and outflows, a discrepancy known as the "global FDI deficit". This situation is due to the lack of symmetry between statistical records in countries of origin and countries of destination. Consequently there is still no clear picture of FDI inflows and outflows. This lack of precision indicates just how profound the statistical problems are, and forces the bodies that produce FDI data (the IMF, the OECD and UNCTAD) to update them retrospectively at frequent intervals.

Data on FDI stocks are even more uncertain than data on flows. They are obtained from two sources: (a) the sum total of historical flows or (b) information on foreign assets in annual reports by transnational corporations. In the latter case, foreign assets appearing on the consolidated balance sheet are often considered an indirect assessment of the value of FDI stocks. Since methods of consolidation and assessment vary from company to company, it seems unlikely that the aggregated figure can be anything more than an approximate order of magnitude. Moreover, the fact that substantial discrepancies emerge whenever two different methods are used to estimate FDI stocks confirms the need for caution.

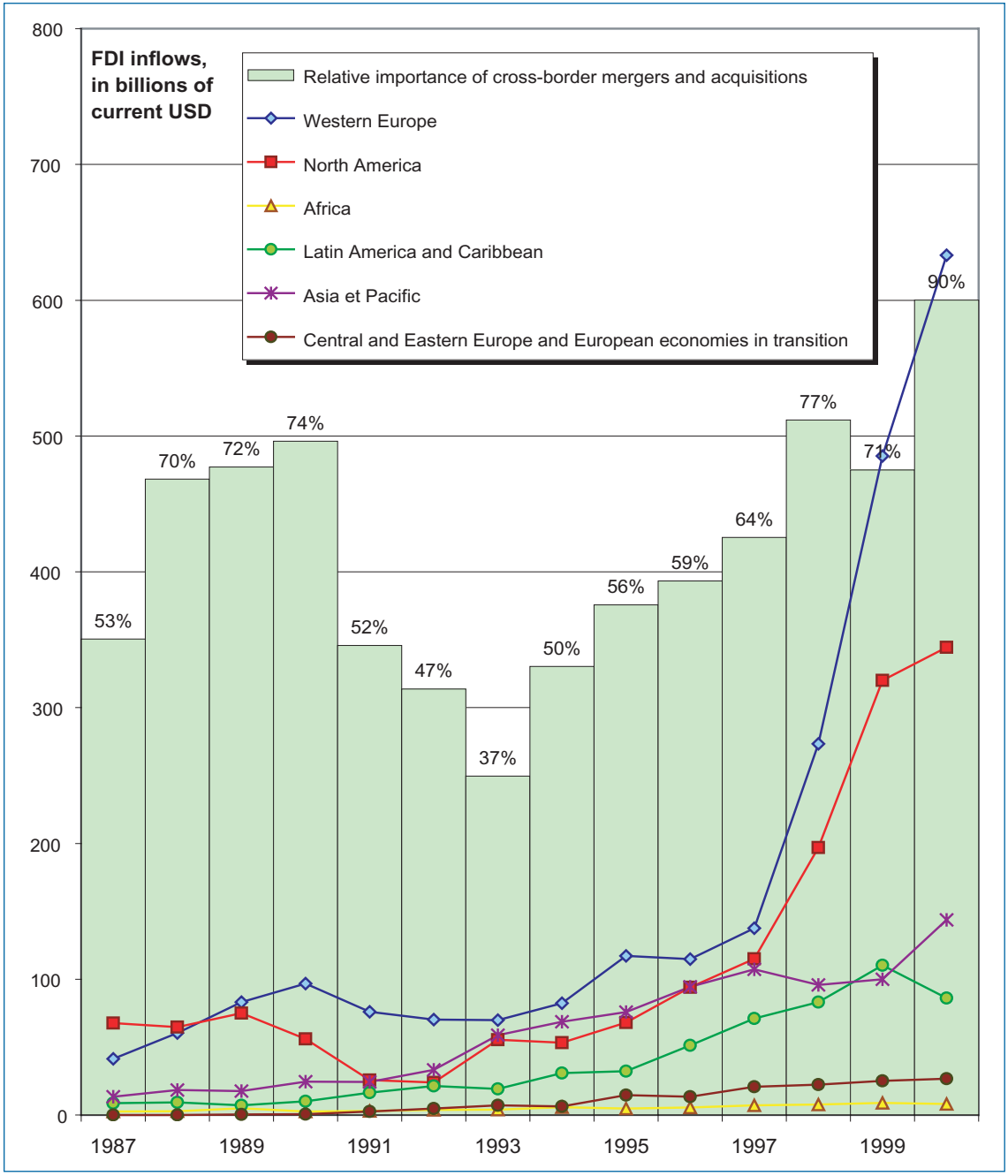
Consequently, FDI statistics must be used with great care, since on the one hand data on flows are much more reliable than stocks estimates and growth rates and, on the other, percentages are more significant than absolute values. Despite these drawbacks, FDI statistics are of crucial importance in understanding one of the essential aspects of globalization, namely the expansion of production by transnational corporations.

RECENT TRENDS

1. FDI: an OECD activity (Fig. A, B and D)

In 1998, according to UNCTAD figures, there were some 53,000 parent companies running 449,000 foreign subsidiaries around the world. The estimated contribution by foreign subsidiaries to gross global product doubled between 1982 and 1999, from about 5% to almost 10%. That would mean that assets under foreign control currently generate about one tenth of global product.

3.5.C. FDI flows by region, in billions of USD, and relative share of mergers and acquisitions in per cent, 1987-2000



Primary data: WTO, International trade statistics 2000; WTO, Annual Report; World Bank, World Development Indicators
Grouping of countries: Fig. C cf UNCTAD

By the end of the twentieth century, about 80% of total FDI flows were between OECD countries. This percentage has greatly increased over the last fifteen years. According to the OECD, 69% of global FDI originated in its member countries in 1985, but by 1999 this figure had risen to over 90%. The same countries absorbed 77% of world FDI flows in 1999, compared with 67% in 1993. In other words, in 1999 fewer than 10% of FDI flows originated in non-OECD countries and about 23% had such countries as their destination. However, there is a considerable discrepancy between OECD and UNCTAD figures on the subject.

Analysis of FDI stocks by area of origin indicates three things:

- since the early 1990s, western Europe has remained the largest net foreign investor
- the position of North America appears balanced (although the American authorities state that the USA's net investment position at the end of 2000 was negative, totalling some USD 750,000 billion).
- the Asia-Pacific zone is above all a net absorber of FDI.

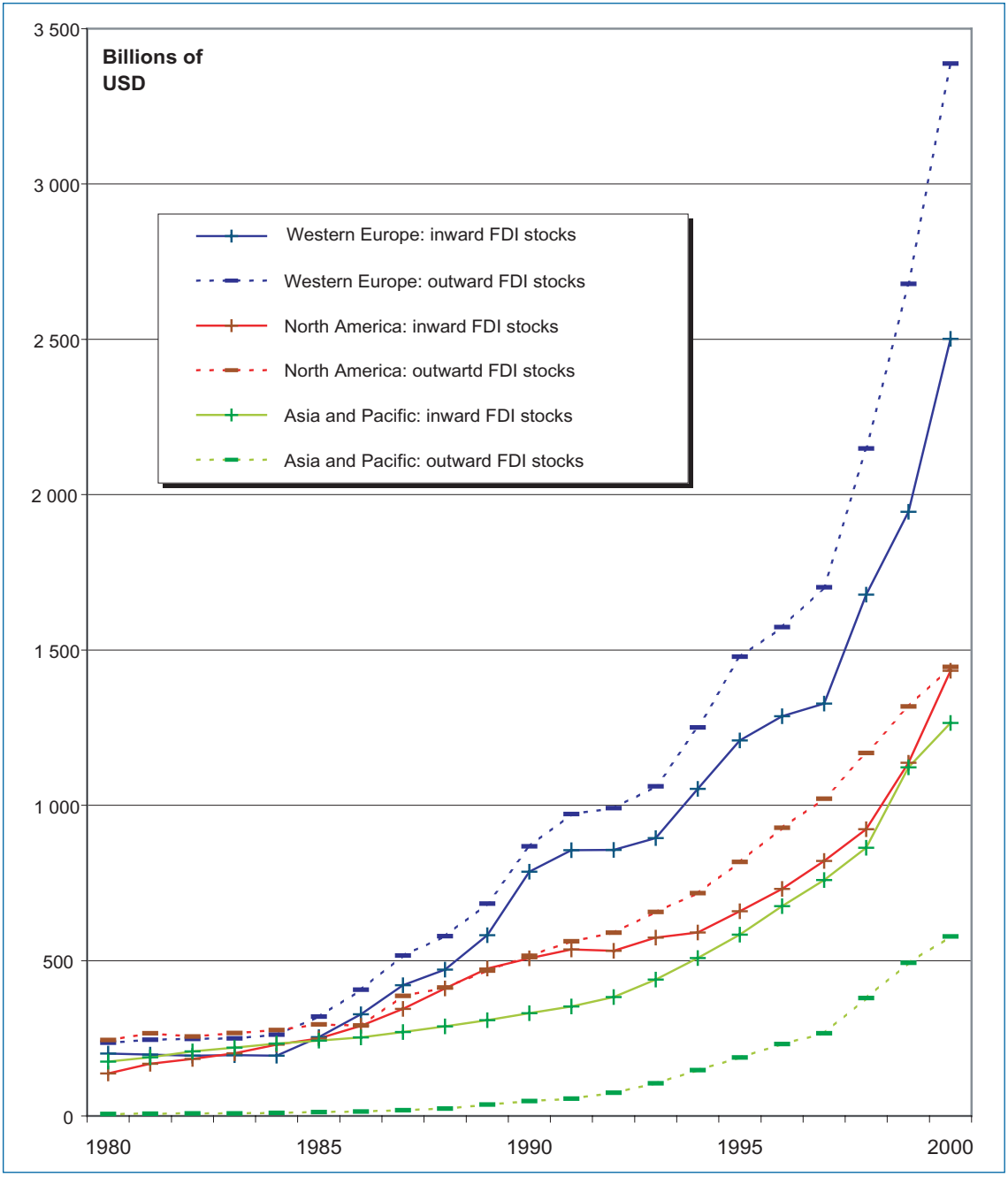
2. The select club of recipient countries (Fig. B)

FDI flows from OECD to non-OECD countries are increasingly concentrated on a small group of countries in Asia (Singapore, Hongkong, Thailand, Malaysia, China and Taiwan) and Latin America (Brazil, Argentina, Chile, Colombia and Venezuela). In Africa, only Egypt and South Africa are on this select list. In 1985 some 20% of this investment went to the ten main recipients; by 1999 this figure had risen to 45%.

3. The ambiguous role of mergers and acquisitions (Fig. C)

Cross-border mergers and acquisitions have traditionally been a highly volatile, yet important, component of FDI. By 2000 their share had shot up to 90% of global FDI (compared with about 37% in 1993). The volume of cross-border mergers and acquisitions suggests that localization of assets is gradually making way for industrial consolidation at global level, with the major transnational corporations leading the way. Nevertheless, the true importance of mergers and acquisitions is hard to assess, since the amounts involved have been blown up by the financial euphoria which drove share prices to such dizzying heights in the second half of the 1990s.

3.5.D. Inward and outward FDI stocks in the three main economic regions, in billions of USD, 1980-2000



Primary data: UNCTAD, World Investment Report; OECD, Financial Market Trends
Grouping of countries: Fig. D cf UNCTAD

IV. Money and finance

4.1 International debt

CONCEPTS AND DEFINITIONS

The notion of international debt involves two concepts (debt, and the international nature of debt) and two disciplinary approaches (legal, and financial or economic).

Seen in legal terms, debt is an obligation on the part of an individual or a legal entity to pay back money. However, a country is not a legal entity and therefore cannot be under an obligation to pay anything back. From a strictly legal point of view, the notion of debt can thus only apply to a country by analogy. However, the same is not true of the economic players (public or private) who live there.

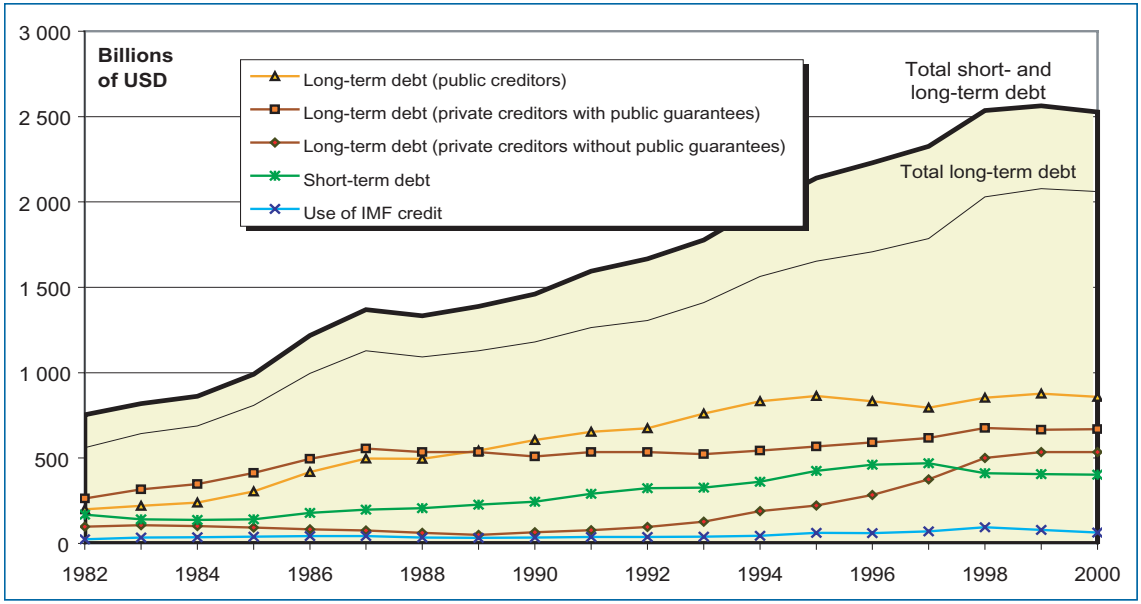
The statistical aggregate known as "international debt" is heterogeneous, for it comprises four different kinds of cross-border debt contracts, depending on whether the national debtor and the foreign creditor fall under public or private law: (a) both parties to the contract are private; (b) the creditor is private and the debtor is public; (c) the creditor is public and the debtor is private; and (d) both parties are public. In practice, two other considerations must also be taken into account: (a) some private debts are guaranteed by the state; and (b) public creditors include international organizations.

Seen in macroeconomic terms, the notion of international debt does not refer to individual contracts, but to the burden imposed on the national economy by all the financial obligations incurred by players resident in the country towards the rest of the world. The economic approach thus focuses on the indirect mechanisms whereby international financial obligations may affect all or some of the players in a country. These mechanisms include changes in interest rates, in exchange rates or in inflation.

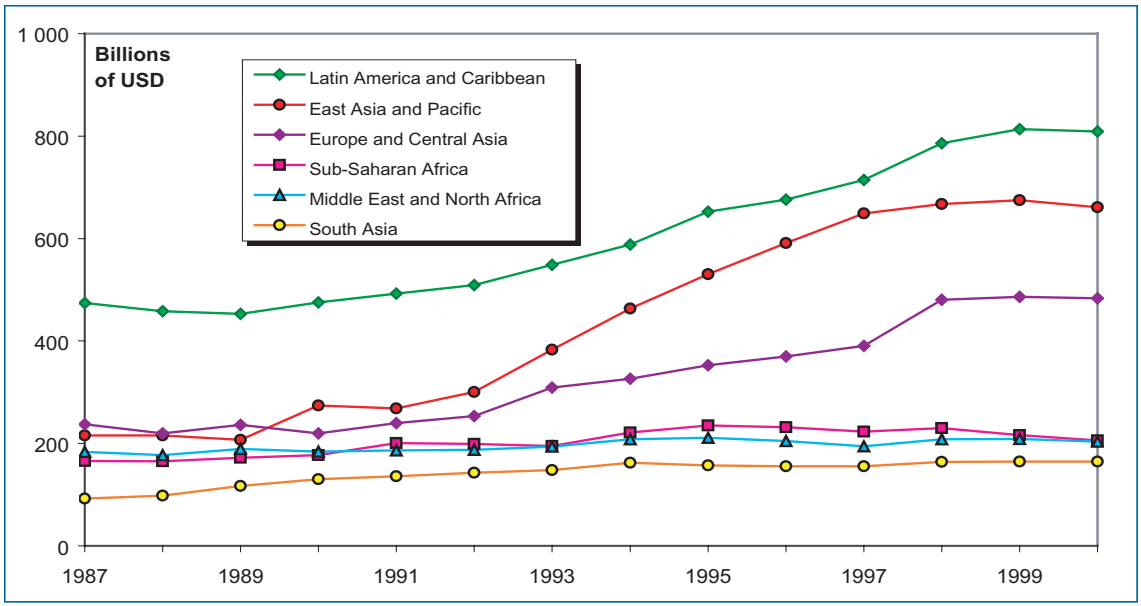
Economists are less interested in the total value of commitments (gross debt) than in net debt, i.e. what is left after commitments by the rest of the world towards players resident in the country are subtracted. In theory, this net debt is the cumulative total of balances, before "compensatory" transactions to finance the country's balance of payments. In practice, however, the level of net debt is determined by matching up information obtained from debtors and creditors. For this reason, quantification of foreign debt (also known as international debt) depends on legal and accounting definitions, careful recording of positions and complex statistical calculations.

Although the notion of international debt is theoretically applicable to all countries, it is mainly used in relation to developing or transitional countries. The reasons for this are both practical and political. When markets operate well and all the available information is continually used to help determine exchange rates and interest rates, individual players (both debtors and creditors) manage their international exposure in real time. This being the case, as far as any given player (whether a government, a bank or a business) is concerned, the only difference between international debt and domestic debt lies in the technical instruments used to manage commitments and risks. From the point of view of economic policy, the way to control a country's international debt in such circumstances is to monitor its public debt and supervise its financial players' international exposure (i.e. their exposure to foreign players and exposure in foreign currencies). In countries with highly developed, intricate financial systems, monitoring the components of a country's debt is more important than measuring its level of international debt as such.

4.1.A. Total external debt of developing and transitional countries, by type of creditor and maturity, in billions of USD, 1982-2000



4.1.B. Levels of international debt by region, in billions of USD, 1987-2000



Primary data: Inter-Agency Task Force and Finance Statistics (World Bank, BIS, IMF et OECD); World Bank , Global Development Finance
Grouping of countries: Fig. B cf WB

METHODS AND PROBLEMS OF MEASUREMENT

A country's international debt is a diffuse phenomenon whose quantification requires considerable technical skill. The range of possible sources and methods is extremely wide, especially since debtors and creditors may have divergent interests. Mexico's default (in summer 1982) showed how ill-prepared the world was to foresee and cope with such a crisis, mainly for lack of appropriate statistical data. Since 1984 the main international organizations have been trying to come up with a single, coherent statistical framework that will capture all the dimensions of developing countries' foreign debt, so that future crises can be prevented more effectively.

In 1992 an Inter-Agency Task Force on Finance Statistics was set up under the chairmanship of the IMF, with the World Bank, the Bank for International Settlements (BIS) and the OECD as its leading members. Its task was to draw up a coherent set of statistics on developing and transitional countries' foreign debt. Each member of the task force contributes to its work in areas in which it has specific skills: the BIS supplies data provided by markets and financial institutions in developed countries, the World Bank supplies data provided by debtors through its Debtor Reporting System, and the OECD supplies data on bilateral loans as part of public development aid.

The quantification of a country's foreign debt has two main aspects: the debt "stock", i.e. the total amount owed, and the debt "flow", i.e. changes in the stock over a given period of time. Both the flow and the stock can be recorded in terms of net or gross value, the former being much harder to determine than the latter. This is because a country's debt is the aggregate of a multitude of separate commitments, each with its own financial instruments and its own repayment schedule. Under such circumstances it is extremely difficult to monitor the payments made and the changes they cause in terms of commitments simultaneously, which is why the data are so frequently (and often incompletely) revised.

In the available statistical framework there are two possible ways of breaking down net debt in the countries examined: (a) by type of instrument; and (b) by type of creditor.

Breakdown by type of instrument subdivides total debt into:

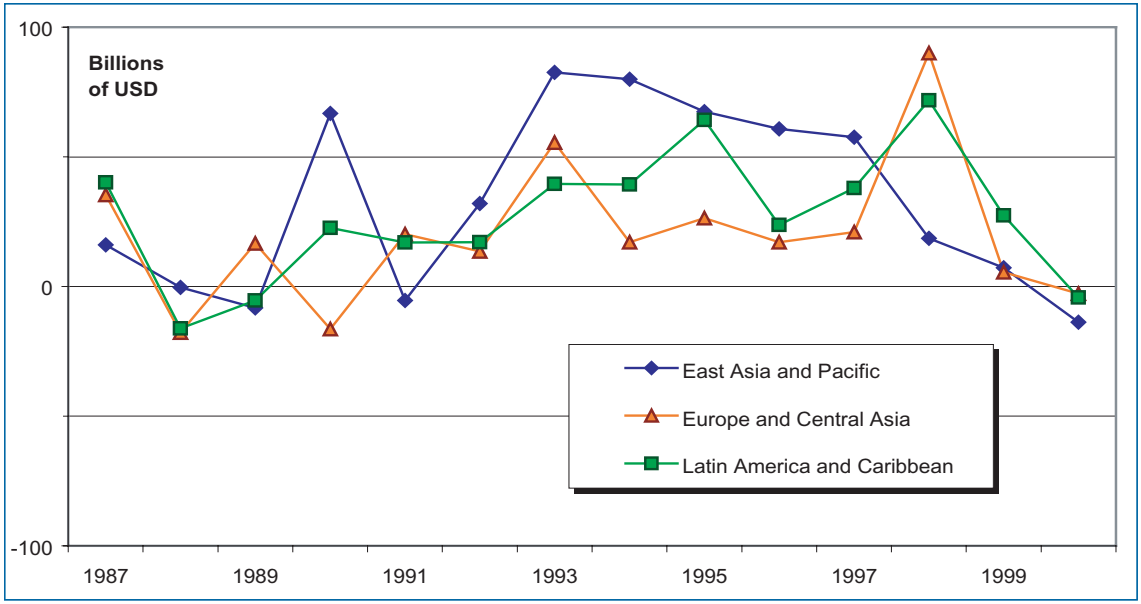
- loans from banks established in the 28 BIS reporting countries;
- international money and bond market instruments issued by the country's public and private debtors;
- Brady bonds resulting from the restructuring of developing countries' debts after the crises of the 1980s;
- commercial loans by non-banking institutions;
- debts to multilateral agencies;
- bilateral public loans by OECD member countries.

Breakdown by type of creditor - notably in the World Bank publication Global Development Finance (formerly World Debt Tables) - applies to long-term debt, which is subdivided (depending on the creditor or guarantor) into:

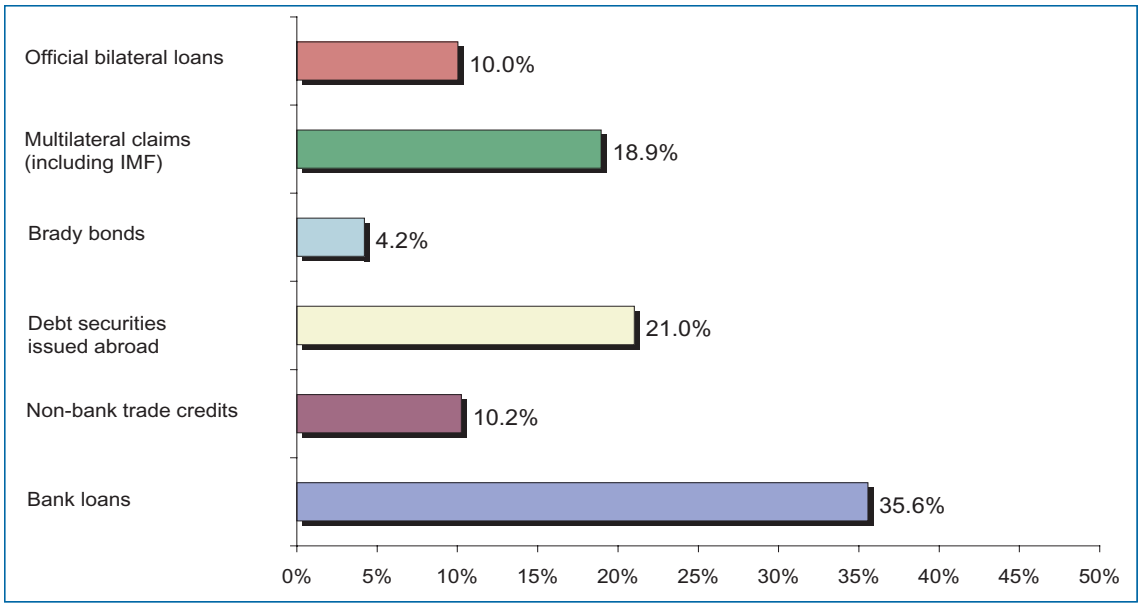
- government and multilateral agencies;
- the private sector;
- use of IMF credit lines;
- short-term debt, which for reasons of feasibility is not systematically broken down by type of creditor.

Each of these approaches applies to both debt stocks and debt flows, with a distinction between the long and the short term (the latter including any possible arrears). As regards sources, breakdown by type of instrument is based on data gathered from creditors, whereas breakdown by type of creditor is based on data provided by debtors. Although both approaches seek to define the same reality, the totals they yield are very different. In 2002, for example, the Inter-Agency Task Force

4.1.C. Annual changes in debt levels for the three most indebted regions, in billions of USD, 1987-2000



4.1.D. Composition of international debt by type of instrument, 2000



Primary data: Inter-Agency Task Force and Finance Statistics (World Bank, BIS, IMF et OECD); World Bank , Global Development Finance
Grouping of countries: Fig. C cf WB

on Finance Statistics estimated the total debts of developing and transitional countries at USD 1,986 billion, whereas Global Development Finance (which breaks down data by type of creditor) came to a total of USD 2,528 billion - a difference of 21.5%.

Another difficulty in monitoring statistics over time concerns changes in the number of countries covered by the various data-gathering instruments. A further complication is that countries are frequently reclassified under different groups by the World Bank but that the series are not all recalculated retrospectively. Historical series (particularly before 1987) should therefore be treated with caution in the absence of appropriate verification.

RECENT TRENDS

1. Changes in debt patterns (Fig. A, B and C)

Between 1980 and 2000, according to World Bank figures, developing and transitional countries' total debt multiplied by a factor of 4.3 in nominal terms. A similar trend was found in most categories of debt classified by type of creditor, especially in the case of multilateral creditors and private creditors not guaranteed by the state, whose shares of the total are tending to increase. At the same time, the share of short-term debt fell, from 24% to 16% of the total.

In dynamic terms, regions such as Africa, the Middle East, South Asia and Latin America saw their share of total debt decreased markedly; Latin America alone accounted for 44% of the total in 1980, but this figure had fallen to 32% by 2000. On the other hand, regions such as Central and South-East Asia and Eastern Europe saw their share rise sharply, from 25% to 45% of the total. These are therefore the regions that have contributed most to the growth in overall international debt.

There have been major changes in the overall pattern of international debt, with periods of euphoria succeeded by periods of great restraint (as in the years following the Asian and Russian crises of 1997-98).

2. Concentration and crisis (Fig. D and E)

Bank loans and international bond markets are still the most commonly used financial instruments, accounting for 57% of total debt. In all probability these instruments are favoured by private creditors.

The ten main debtor countries account for 57% of total debt in developing and transitional countries. Of these ten countries, eight have suffered serious financial crises in recent years, although strictly speaking no causal relationship can be identified. International debt has been a constant cause for concern over the past twenty years. On at least five occasions the international financial system has been shaken to its foundations by debt crises: Mexico in 1982 and 1995, South-East Asia in 1997, Russia in 1998 and Argentina in 2001-02. This means that, above a certain level, debt is a threat not only to the country directly affected, but also to its creditors. Thus, in order to avoid acute crises and irreversible situations, the parties usually find negotiated solutions in the form of moratoriums, rescheduling, restructuring or quite simply reduction of debt.

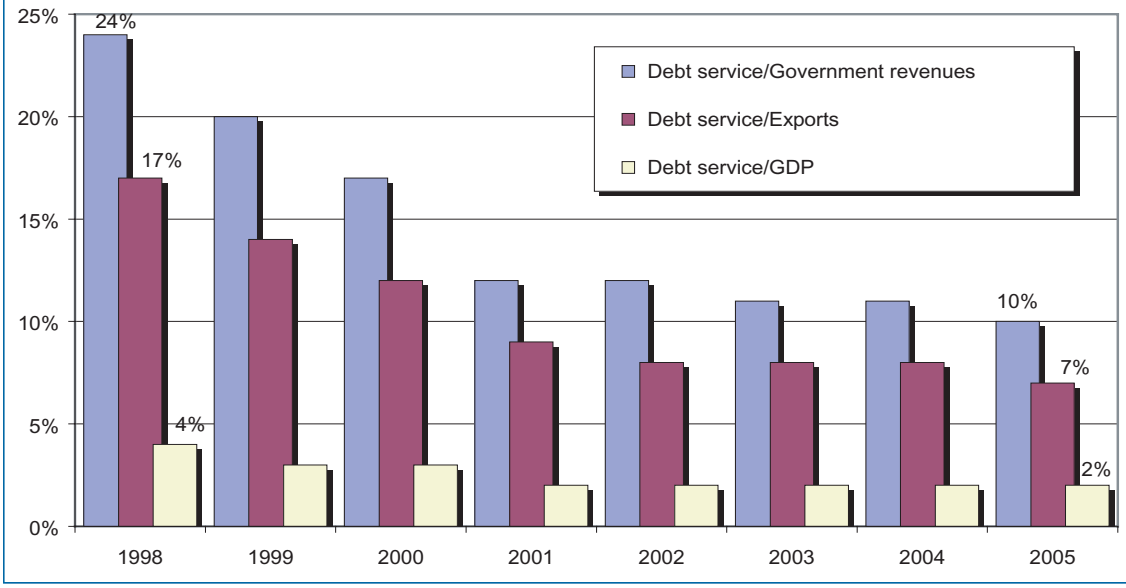
3. Towards a bearable level of debt (Fig. F, G and H)

Since 1996 creditor countries have become concerned about the poorest countries' burden of debt. On the initiative of the IMF and the World Bank, a scheme has been launched to alleviate the debts of highly indebted poor countries (HIPC), put them in a better position to fight poverty and encourage their development. Following an international campaign by civil society entitled Jubilee

4.1.E. Levels and concentrations of debt in the ten most indebted countries, 1998

		Total foreign debt						Interest/Exports	
		Billions of USD							
		1998			1993			1998	1993
				Cumul.			Cumul.		
1	Brazil	**232**	9%	*9%*	143	8%	*8%*	**74.1%**	24.4%
2	Russia	**183**	7%	*16%*	111	6%	*14%*	**12.1%**	3.3%
3	Mexico	**159**	6%	*23%*	131	7%	*22%*	**20.8%**	35.8%
4	China	**154**	6%	*29%*	85	5%	*27%*	**8.6%**	11.1%
5	Indonesia	**150**	6%	*35%*	89	5%	*32%*	**33.0%**	33.6%
6	Argentina	**144**	6%	*40%*	65	4%	*35%*	**58.2%**	30.9%
7	South Korea	**139**	5%	*46%*	47	3%	*38%*	**12.9%**	9.3%
8	Turkey	**102**	4%	*50%*	68	4%	*42%*	**21.2%**	28.6%
9	India	**98**	4%	*54%*	94	5%	*47%*	**20.6%**	25.5%
10	Thailand	**86**	3%	*57%*	52	3%	*50%*	**19.2%**	13.0%
	Total	***2536***	100%	*100%*	*1777*	100%	*100%*	**18.4%**	16.2%

4.1.F. Predicted effects of reductions in debt for the 24 HIPC countries, 1998-2005



Primary data: Inter-Agency Task Force and Finance Statistics (World Bank, BIS, IMF et OECD); World Bank , Global Development Finance

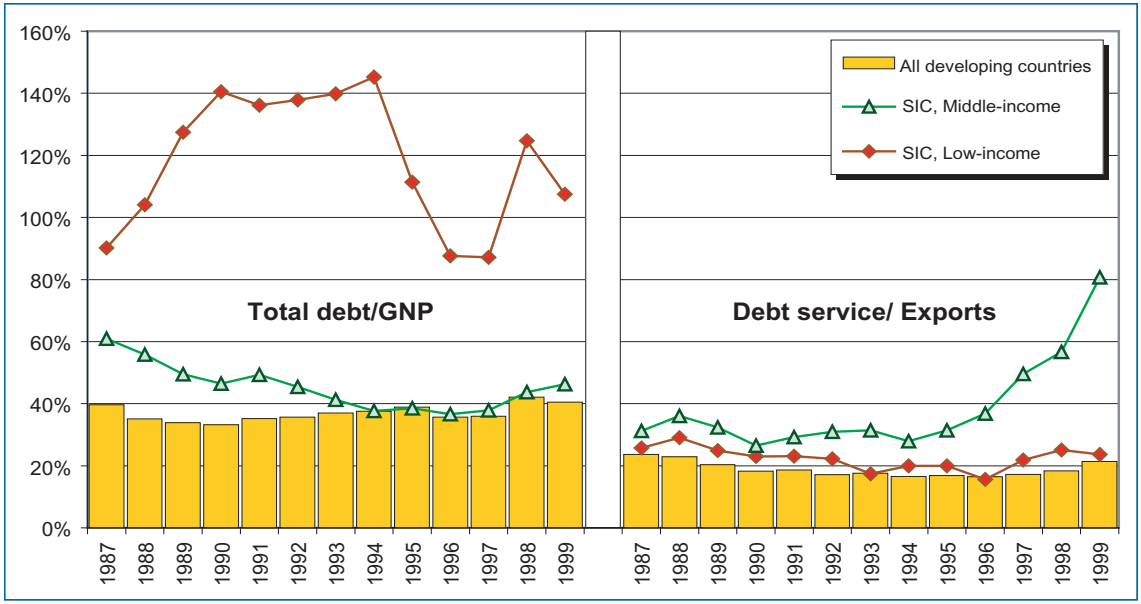
2000, the conditions for access to this scheme were relaxed in 1999. Countries that meet the conditions are entitled to a considerable reduction in debt servicing and cancellation of approximately 30% of the updated value of their debts. As of early 2002, 42 of the poorest countries were eligible for the HIPC scheme and 24 had already signed the relevant agreement. However, the total debts of these 42 countries represent no more than 10% of overall international debt.

The burden of international debt on a country's economy is usually measured with the help of three indicators:

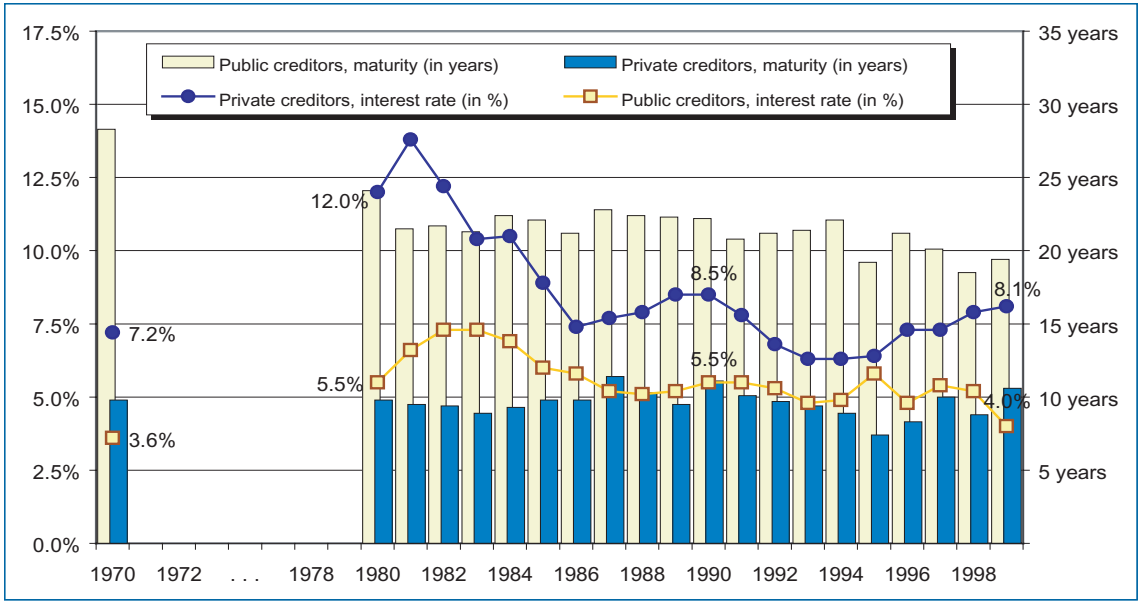
- the ratio between the country's total debt and its GNP;
- the ratio between the country's total debt and its exports;
- the ratio between the country's debt service and its exports.

The creditor countries' debt alleviation scheme has temporarily postponed the debate (launched by civil society) on how to determine a country's “bearable" level of debt. The major creditor countries and international institutions are afraid that, once a “bearable level” of debt has been defined, civil society may start to insist that debtors can legitimately repudiate “unbearable" levels of debt.

4.1.G. The burden of debt in 1987-1999, Severely Indebted Countries (SIC)



4.1.H. Average terms of new commitments by type of creditor, 1970-1999



Primary data: Inter-Agency Task Force and Finance Statistics (World Bank, BIS, IMF et OECD); World Bank , Global Development Finance
Grouping of countries: Fig. G cf WB

4.2 Foreign exchange regimes and exchange rates

CONCEPTS AND DEFINITIONS

The exchange rate is the price of a national currency expressed in terms of a foreign currency. The notion of an exchange rate refers to the broader notion of convertibility. A currency is said to be convertible if it can be legally exchanged for another currency. This means that there cannot be an exchange rate in the macroeconomic sense of the term unless the currency is convertible.

Since the 1944 Bretton Woods conference, the international monetary system has been built up on the basis of convertibility of member countries' currencies. However, the statutes of the IMF only require convertibility for current account transactions (commercial and similar transactions), and leave member countries free to apply exchange controls to movements of capital.

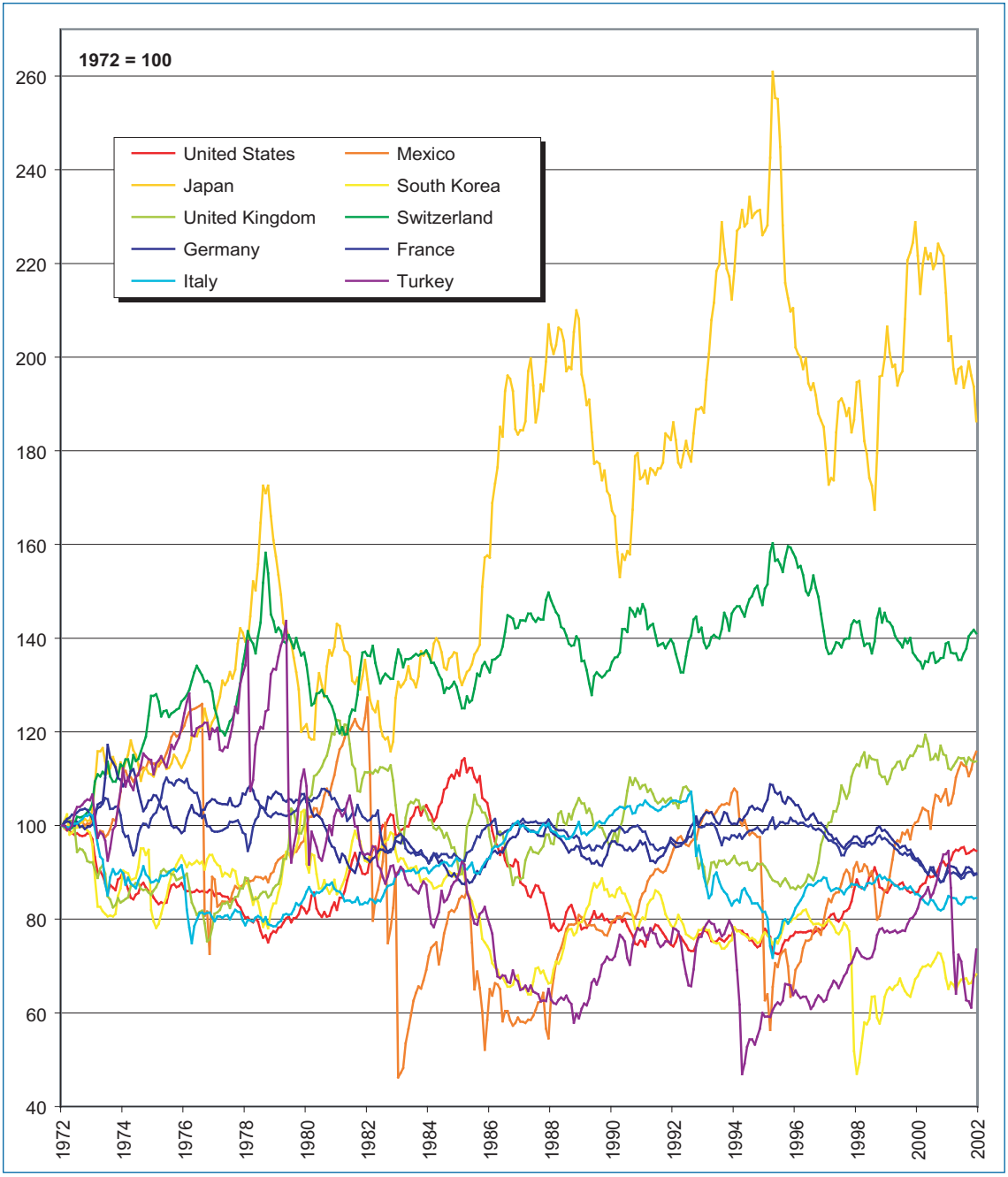
Which system of exchange rates a country chooses - i.e. which institutional arrangements it adopts with regard to exchange rates - is a key aspect of international monetary history. In theory, there are five regimes:

- non-convertibility, found in closed economies that trade with the rest of the world on a clearing basis;
- exchange controls or multiple exchange rates, in which foreign exchange transactions are authorized or prohibited depending on the rationale behind the transaction, or are permitted at specific conversion rates;
- fixed exchange rates, in which the price of the national currency in foreign currency (or in gold) is set by the central bank, which undertakes to apply this rate in its dealings with economic agents. This system operated globally until 1971, and now survives through currency boards that have been established unilaterally in some countries which peg their currency to another one;
- intermediate exchange rates regimes, in which the central bank undertakes to keep the exchange rate within a certain range;
- floating exchange rates, in which the monetary authorities deliberately allow the exchange rate to be set by the market.

The economic significance of exchange rates very much depends on which system of exchange rates prevails nationally and internationally. Recent financial crises have shown that individual countries - particularly the less important countries - do not have much room for manoeuvre when it comes to choosing their exchange rate regime. In every regime except non-convertibility or a system of globally fixed exchange rates, the monetary authorities operate under the vigilant gaze of capital markets, which can respond with devastating force to decisions they consider suspect.

In the 1970s, economic theory saw exchange rate levels as the outcome of flows of imports and exports. This neat explanation assumed the existence of an adjustment mechanism which kept a country's balance of trade in equilibrium and by the same token guided exchange rates towards what was known as equilibrium level. This view of the international economy, which prevailed when the IMF was first set up, became much less convincing following the massive expansion of cross-border flows of financial capital. Today it is by no means certain what factors determine exchange rates and what their relative influence is. Nevertheless, it is clear that movements of capital obey a very different logic from trade flows. They respond to a triad of factors (the rate of inflation, the interest rate and the exchange rate), but there is no way of knowing exactly what influences what, and to what extent.

4.2.A. Changes in the real effective exchange rates of the main currencies, as an index, 1972-2001



Primary data: Thomson Financial, Datastream Advance; IMF

METHODS AND PROBLEMS OF MEASUREMENT

In a system of fixed exchange rates, the nominal rates are known and are published by the monetary authorities; they are then adopted by financial intermediaries who, after incorporating their commission, make their offers to buy or sell foreign currency known to other economic agents. As a result, there may be minor differences in exchange rates between the various operators at retail level.

In a system of floating exchange rates, the nominal rates vary constantly, and transactions do not take place on an organized market. Rates are recorded and then made known by suppliers of financial information (Reuters and Bloomberg) whose technology also forms the backbone of the network in which foreign exchange transactions take place. In such interactions, the speed of information is crucial and the fees charged by suppliers depend on the delay. There may therefore be minor differences between the levels recorded because of opportunities for arbitrage.

Apart from the nominal exchange rate, economists often make use of the "real exchange rate", which takes account of differences in rates of inflation between the two countries. To take account of the composition of a country's trade flows, use is often made of the real effective exchange rate, which incorporates not only the differences in rates of inflation between the country and its trading partners, but also the composition of the country's trade in terms of the various foreign currencies.

RECENT TRENDS

1. Is a tripolar system emerging? (Fig. A)

Since 1999 the global foreign exchange system has been evolving towards an arrangement based on three main groups. The three main currencies - the US dollar, the euro and the yen - form the backbone of the system. Some currencies of intermediate importance - such as the Canadian dollar, the pound sterling and the Swiss franc – operate as free electrons within the system. All other currencies gravitate around one of the three main currencies.

Before the euro made its entry into the financial world in early 1999, the exchange rates of the eleven currencies which were initially part of it were irrevocably fixed. They had already been converging for some years. However, it would be unwise to attribute this convergence entirely to market forces; it also reflects an economic and monetary policy that was sufficiently rational and coherent to convince the financial markets.

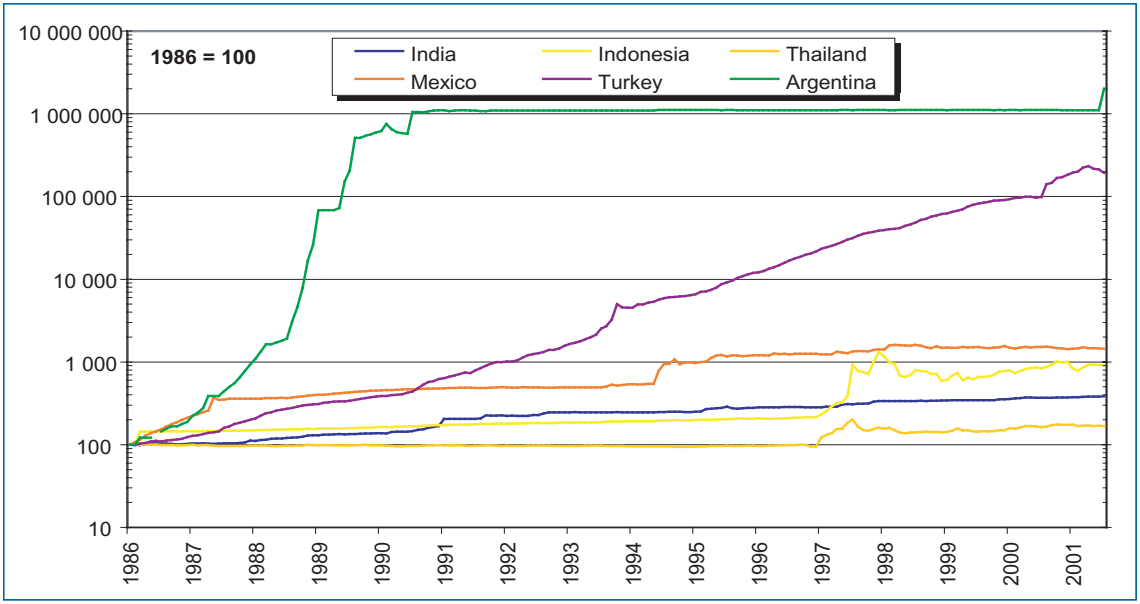
2. Financial crises and exchange rates (Fig. B)

In the 1990s a number of medium-sized economies were hit by monetary crises. The changes in exchange rates indicate just how great an adjustment these economies had to make in order to get back onto the world economic stage.

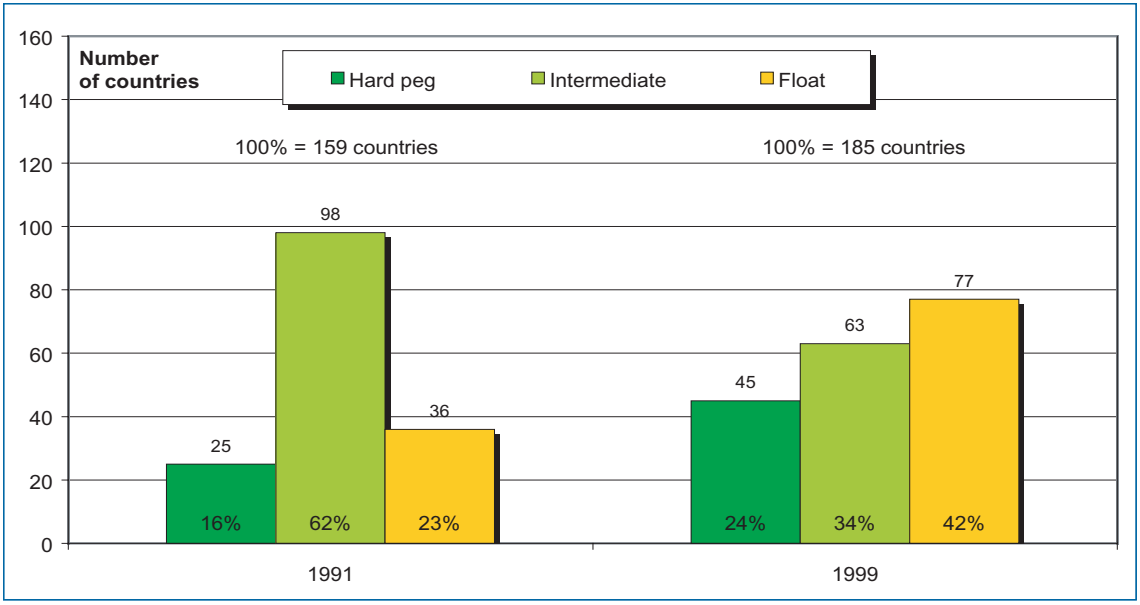
3. "Pure" regimes are preferred (Fig. C)

The last two decades have been marked by considerable strain on foreign exchange markets, often at the expense of medium-sized economies. This has induced many countries to review their exchange rate regimes. Thus, between 1991 and 1999, the proportion of countries with regimes equivalent to hard peg or fixed exchange rates rose from 16% to 24%. At the same time, the proportion of countries that allowed their currencies to float also increased (from 23% to 42%), while the proportion of countries with intermediate regimes fell by almost half (from 62% to 34%).

4.2.B. Examples of changes in nominal exchange rates in times of financial crisis, as an index, 1986-2001



4.2.C. Distribution of countries by foreign exchange regime, 1991 and 1999



Primary data: Thomson Financial, Datastream Advance; IMF

4.3 Interest rates

CONCEPTS AND DEFINITIONS

The interest rate is the price paid by a debtor over a period of time - usually a year - in order to make temporary use of a sum of money. The price is expressed as a percentage of the amount lent. In a world without inflation, the interest rate reflects the parties' preference for the present: the lender is willing to forgo immediate access to his assets in return for a premium in the form of the interest paid, while the borrower is willing to pay this premium in order to have immediate access to liquid assets.

A debt contract is different from a simple purchase or sale transaction, so determining the interest rate is more complicated than setting a price on a classic market for goods or services. A key aspect of finance is the notion of risk, to which the owner of funds is exposed if he allocates them to specific uses.

Risk has a number of dimensions, which concern (a) the type of debt instrument used, (b) the duration of the commitment, (c) the currency used, and (d) who the debtor is and what the project is. It is therefore only natural that interest rates should vary from contract to contract, according to these various parameters.

For all these reasons, interest rates at macroeconomic level differ from those applied at microeconomic level, which bind the parties contractually.

At macroeconomic level the purest expression of the price of money is what is known as the "risk-free" rate. In most countries this is represented by the yield on long-term government bonds. In a hypothetical world of efficient markets and perfect competition, the only differences between the various interest rates and the risk-free rate are caused by risk premiums.

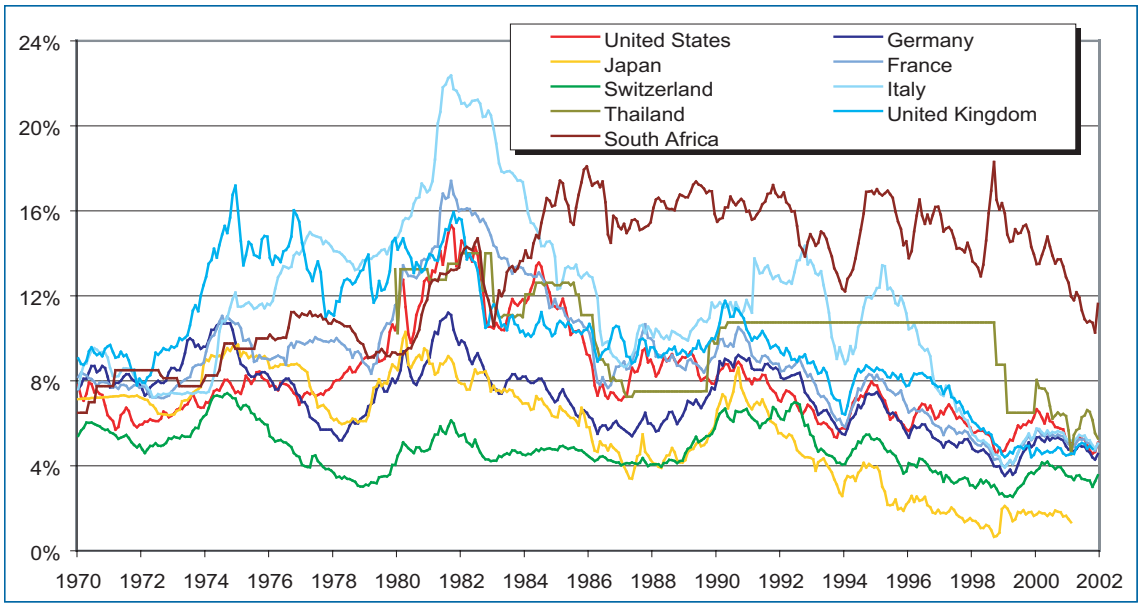
While economic policymakers and economists are agreed that the interest rate is a key variable in modern economies, opinions differ about its macroeconomic significance. This is because the interest rate may reflect at least four factors: (a) the relationship between savings (supply of funds) and investment projects (demand for funds); (b) liquidity preference, i.e. the tendency of all the players on the market to prefer the most liquid asset, namely cash; (c) the expected level of inflation; and (d) the policy pursued by the central bank. The various schools of thought classify these factors in different orders of importance.

The interest rate is a key factor in calculating the viability of investment projects, for it enables the present values of flows of expenditure and earnings that occur at different dates to be calculated. This allows the viability of alternative projects to be accurately assessed.

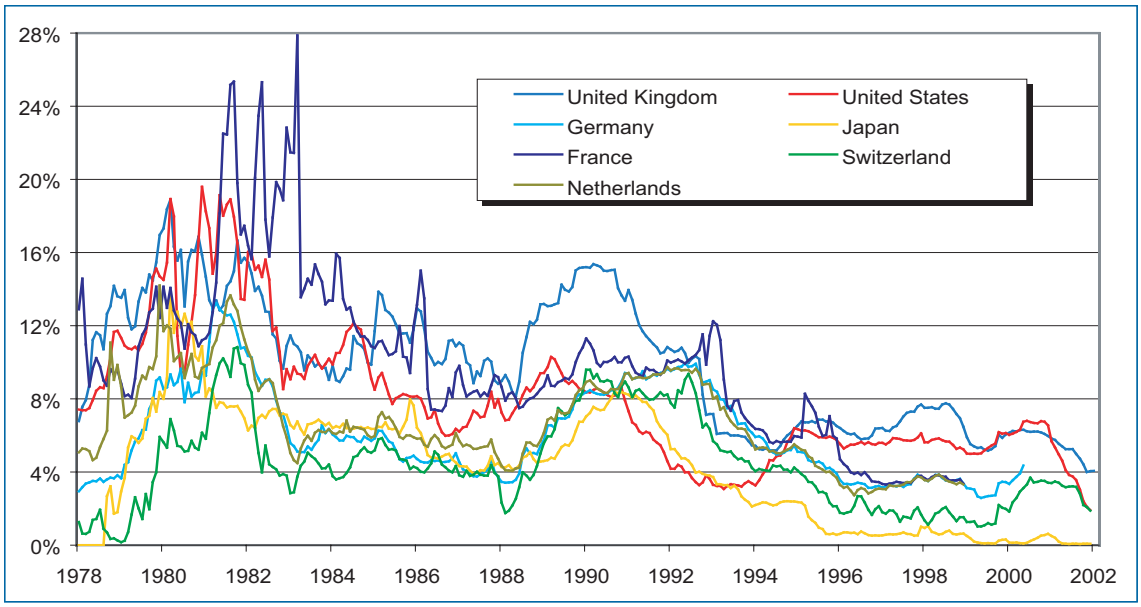
METHODS AND PROBLEMS OF MEASUREMENT

Not only are interest rates economically important, but there is a huge variety of interest rates on the various markets, which explains why there is such a large number of statistical series. Some of these are compiled by market operators, others by public bodies. Data may differ considerably from one source to the next, especially when it comes to retail rates. In developed countries the central banks (such as the European Central Bank) publish the main rates and forward them to

4.3.A. Changes in the nominal "risk-free" interest rate, 1970-2002



4.3.B. Changes in the LIBOR for various currencies, 1978-2002



Primary data: Thomson Financial, Datastream Advance

international organizations (the BIS, the IMF or the OECD).

As a price, the interest rate is a variable which is extremely sensitive to changes of all kinds, particularly ones affecting the overall price level. The economic impact of a 10% interest rate will differ according to whether prices are increasing by 5% or by 15% a year. Conversion from the nominal rate to the real rate (i.e. net of inflationary effects) thus raises serious problems of methodology. Firstly, an interest rate that is negotiated today is not based on the actual level of inflation, but on the level of inflation that the players expect. The real rate of interest can only be calculated ex post and after some time has elapsed. Secondly, it is not clear that use of the consumer price index as a deflator is the best way to convert from the nominal interest rate to the real one (in economic language the word "real" always suggests "true").

RECENT TRENDS

1. Reference rates and interest rate structure (Fig. A and B)

Interest rates are a key economic phenomenon and, like the prices of financial assets in general, they are constantly changing. A distinction must therefore be made between reference rates and other rates, which are in fact derived from the former. In most present-day economies, the short-term (risk-free) reference rate is represented by the terms on which the central bank refinances commercial banks, whereas the long-term reference rate is the effective yield of government bond issues.

International markets also have reference rates such as the London Interbank Offered Rate (LIBOR), represented by the terms on which international banks in London are willing to lend each other funds for a period of three months. The LIBOR, plus an ad hoc risk premium (the "spread"), is then used for contracts with less creditworthy debtors. In each country the reference rates form the base of an entire pyramid of interest rates which are used according to the amount involved and the creditworthiness of the parties. The rate at which a local bank lends to a medium-sized business will thus be very different from the rate at which an international bank makes funds available to a reputable multinational corporation. These differences will be due not only to the specific risks of each transaction, but also to the differing transaction costs and the banks' commission policies.

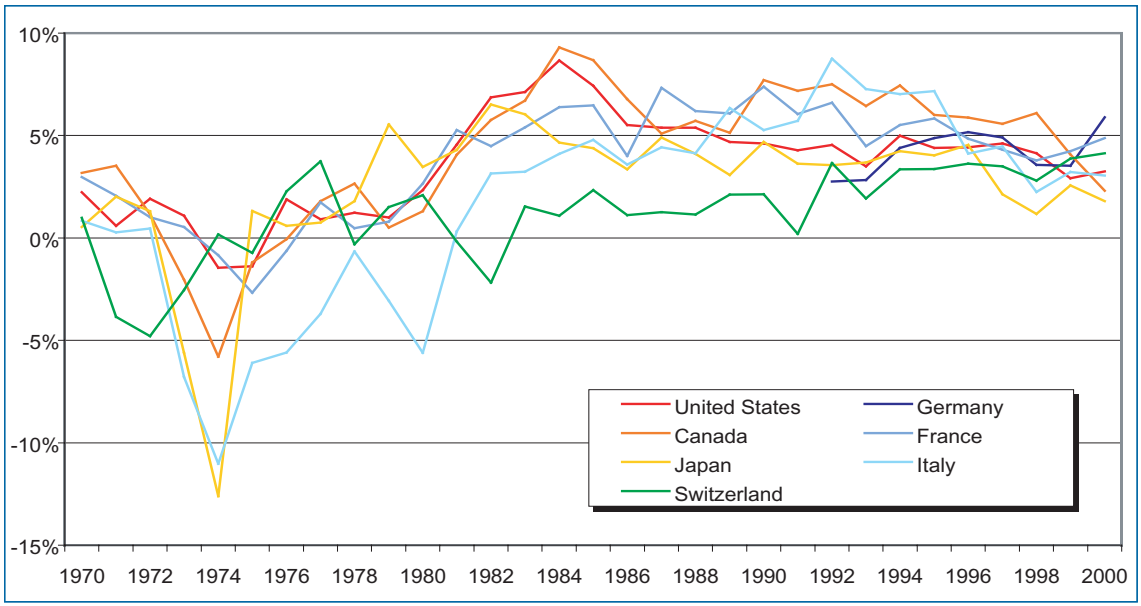
2. Convergence of long-term rates (Fig. A)

In a fully globalized economy one can conceive of a single reference rate which local rates will simply adapt to local conditions (inflation levels, exchange rates and so on). This suggests that interest rates – at least real ones - will converge at global level. Medium-term trends in interest rates in the OECD countries reveal increasingly similar fluctuations and smaller differences, particularly within the euro zone. Despite the run-up to the euro, the convergence of interest rates in the OECD countries may be considered a spontaneous phenomenon.

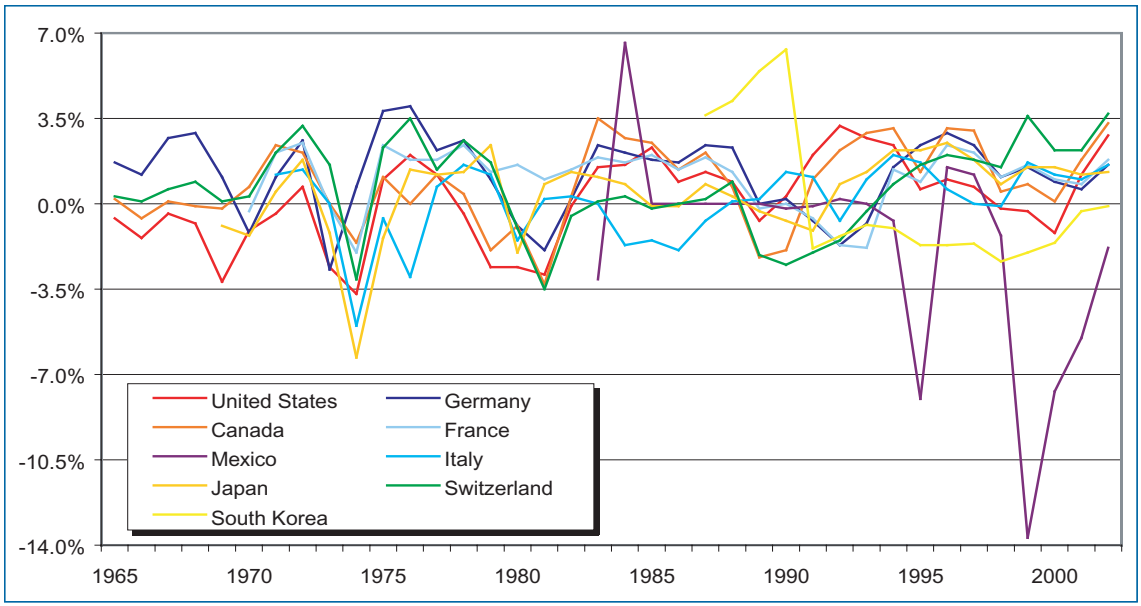
3. Interest rates and monetary policy (Fig. C and D)

In many respects the interest rate is the key variable in the economy, in that it brings together considerations of productive investment (long-term rates) - i.e. of the "real" economy - and ones of finance (short-term rates) and monetary policy. It is therefore not surprising that the shortest-term interest rates are a matter of serious concern to national monetary authorities, which are not all pursuing the same goals.

4.3.C. Changes in long-term interest rates, 1970-2000



4.3.D. Changes in the differential between long-term and short-term rates, 1965-2002



Primary data: Thomson Financial, Datastream Advance

4.4 Money and monetary aggregates

CONCEPTS AND DEFINITIONS

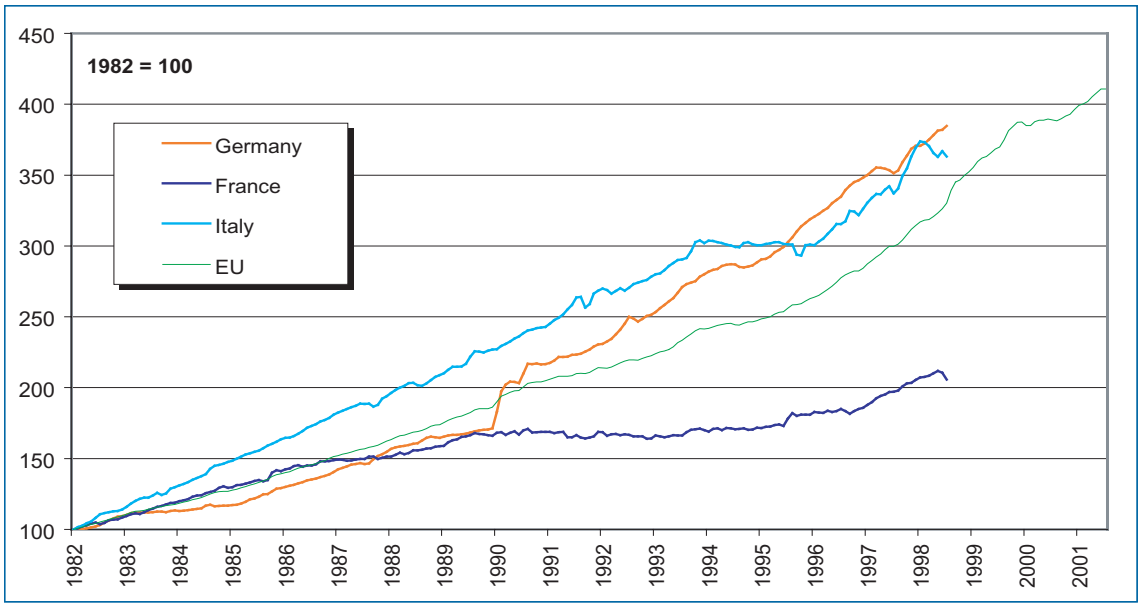
Money is at the heart of the contemporary economy, both as a monetary symbol and as a unit of measurement. In the course of history money has taken widely differing forms, from shells or salt to precious metal coins, banknotes and, most recently, intangible electronic transfers. Indeed, so varied have these forms been that there are some who wonder whether it is appropriate to refer to them all as "money". It would be pretentious to try and define money here, given that its mysteries have withstood attempts by mankind's sharpest minds to unravel them. Concerned not to get bogged down in an overly philosophical and sociological debate, economists have preferred to focus not on the substance of money – much less on its essence - but on the functions it performs in the economy and in contemporary society. It is therefore tempting to say that, from an economic point of view, anything which simultaneously performs the three or four functions of money may be referred to as such. These functions are: unit of account, means of payment, standard of value, and purchasing power reserve.

The dematerialization of monetary symbols which we are currently witnessing is forcing us to review the way in which we look at money. Monetary functions are no longer performed by tangible objects, as in the days when paper money held sway, but by institutional arrangements. It would therefore be more appropriate to talk of a monetary settings rather than money. Any monetary setting ultimately depends on an architecture which succeeds in gaining users' confidence. To do so, monetary settings rest to a differentiated extent on two pillars: the substance of the monetary vehicle, and the public institution that underpins it. The greater the emphasis on substance (as in the case of gold coins), the less important the institutional dimension will be. Conversely, the greater the emphasis on the institutional dimension (as in the case of electronic transfers), the less important the substance of the monetary symbol will be.

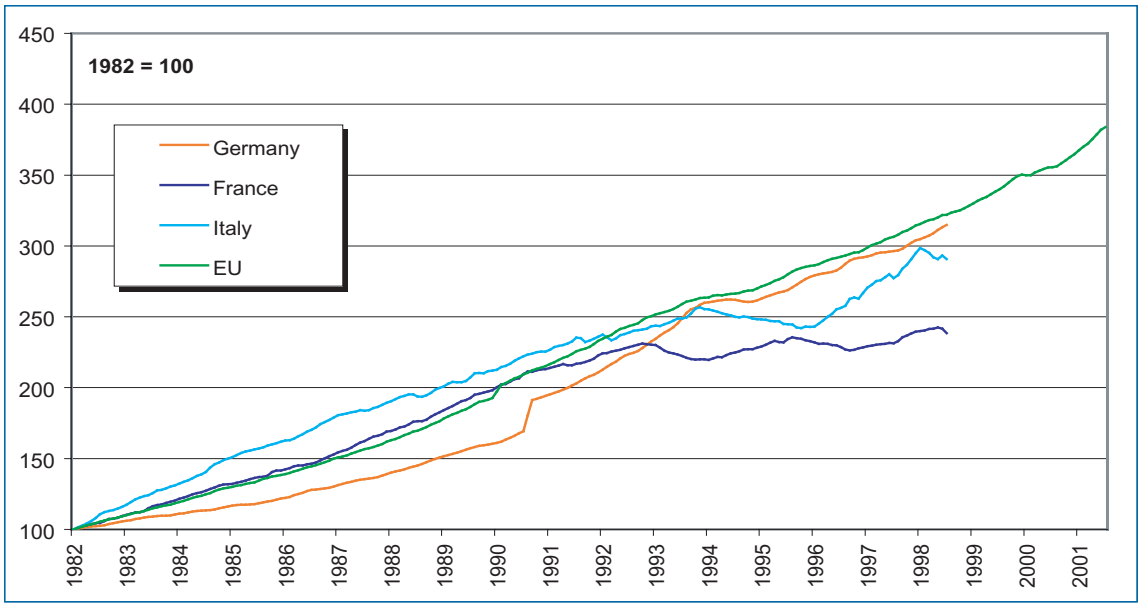
Any discussion of the monetary setting, and particularly the question of how to protect money against loss of value, naturally leads to the issue of how money is created and the related issue of the quantity of money in circulation. In contemporary monetary settings, the question of how money is created has two related but distinct aspects: the issuance of money in the form of banknotes and coins (which remains the prerogative of the central bank) and the creation of money through credit (which is the responsibility of commercial banks and other financial institutions). However, in all contemporary monetary settings, the central bank is responsible for managing the quantity of money in circulation, so as to ensure that the purchasing power of the currency is not eroded too quickly.

Monetary policy is a favourite topic of discussion among economists. Since the end of the eighteenth century there have basically been two opposing schools of thought on the subject, under varying names. There are those, nowadays known as monetarists, who believe that the money supply should be managed with the sole aim of keeping prices stable, and that the central bank should force the economy to accept the resulting money supply as exogenous and leave economic agents to cope with this as best they can. Others, known as Keynesians, believe that the money supply should be adapted to the economy's need for funding, and particularly in order to stimulate growth. Keynesians do not have a unanimous view about whether money should be created to finance public deficits, or about how best to balance growth requirements and the risk of inflation.

4.4.A. Growth in narrow money in certain EU countries, as an index, 1982-2001



4.4.B. Growth in broad money in certain EU countries, as an index, 1982-2001



Primary data: Thomson Financial, Datastream Advance; BIS, Statistics on payment systems in the Group of Ten countries - Figures for 1999, March 2001
Grouping of countries: Fig. A et B cf Thomson Financial

Given these great differences of opinion about monetary policy, the goals pursued by central banks may vary considerably from time to time and from place to place both in internal hierarchy and in coherence. A smoothly growing domestic market, a well-run payment system, stable prices, full employment and balanced foreign trade are among the considerations involved in determining monetary policy.

In the contemporary context, monetary policy - i.e. management of the volume of money in circulation - is made more complicated by the large number of assets which may to a varying extent perform some of the functions of money, even though they are not money in the physical sense of the term. The need to regulate the money supply naturally leads central banks to act indirectly on the ways in which such assets are created and destroyed, since their supply is beyond the central banks' immediate control.

METHODS AND PROBLEMS OF MEASUREMENT

The various assets which perform the functions of money are usually classified by degree of liquidity, i.e. the difficulty (and cost) of converting them into money immediately. Coins and banknotes in the domestic currency are, of course, the most liquid assets, followed in turn by current account deposits with banks and non-banking financial institutions (the post office in some countries), readily accessible savings deposits, and finally fixed-term deposits, other savings deposits, deposits in foreign currencies, government bonds and so on. As this list makes clear, financial innovation has created a continuum between money in the primary sense - i.e. cash - and financial assets. This has had, and will continue to have, major implications for monetary policy.

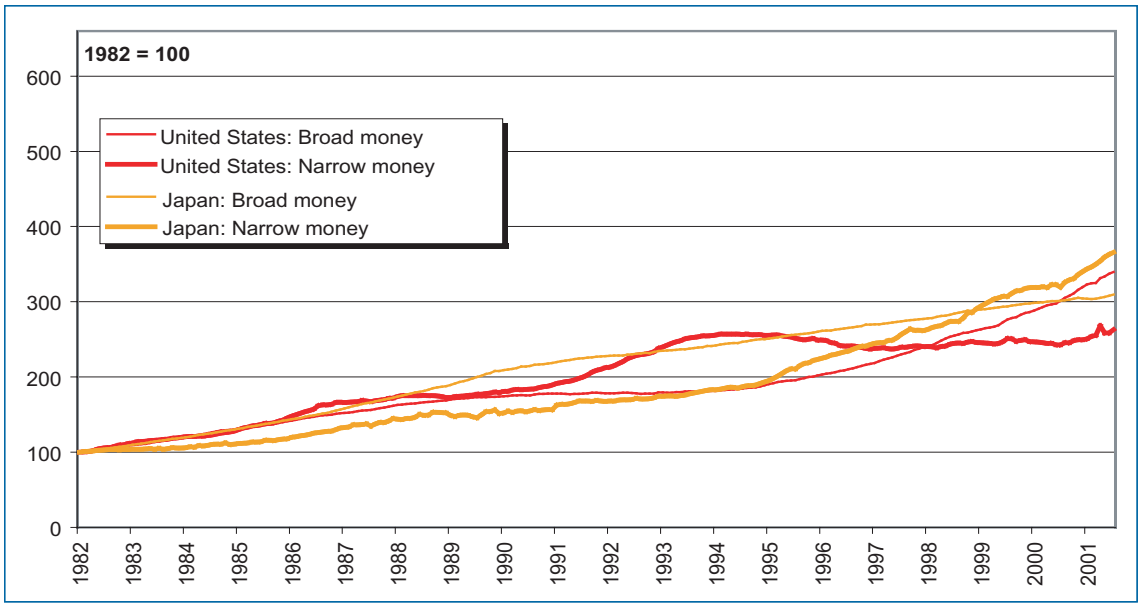
If managing the money supply is the central bank's main task, it is clearly of vital importance to quantify it. Since financial innovation is constantly adding to the range of assets that perform the functions of money, any classification of assets by the central bank in order to quantify and manage the money supply rapidly becomes obsolete. To overcome this difficulty, central banks use several monetary aggregates at once when drawing up and implementing their policies.

Each country defines its own monetary aggregates in accordance with its institutional framework. Many countries have a whole set of definitions of the money supply (M), while others have given up trying to define things too precisely so that they do not have to redefine their aggregates, and hence their statistical series, too often. Nevertheless, most countries use the following two types of aggregate:

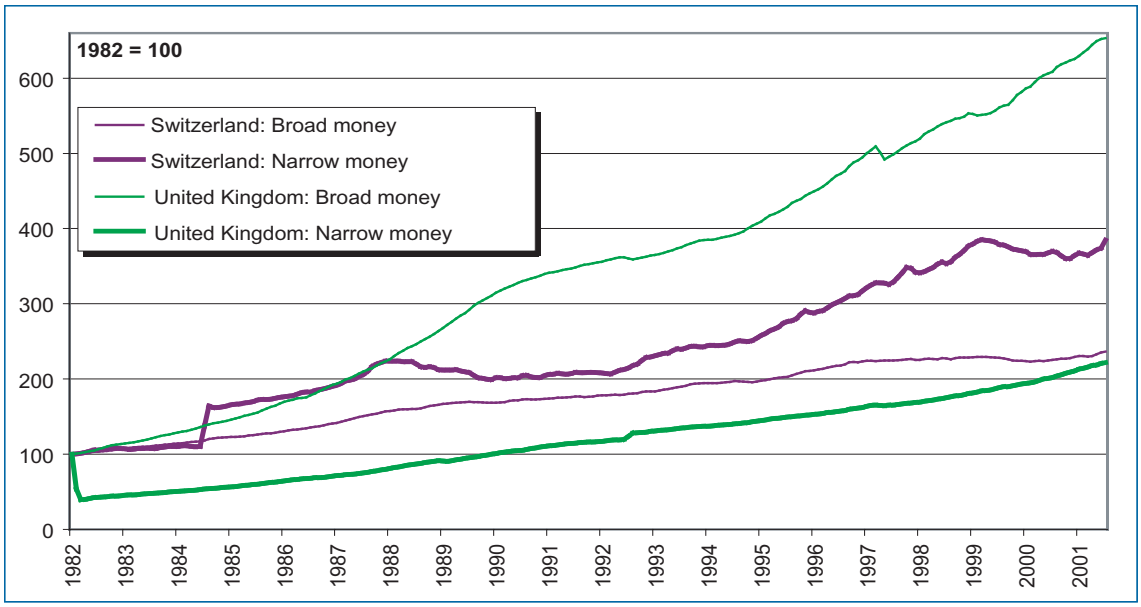
- "narrow money", which includes the most liquid assets, i.e. the ones that can instantly perform all the functions of money. In many countries this is known as "money supply 1", or "M1" for short.
- "broad money", which includes all the assets that can perform the functions of money. This is the broadest aggregate, known in some countries as M3 or M4.

In some countries, or under certain regimes, data on monetary aggregates may be treated as sensitive information, and the time lag and the degree of detail with which they are published may vary considerably from country to country. Many countries, particularly developed ones, have opted for great transparency on the subject; others are more discreet.

4.4.C. Growth in monetary aggregates in the United States and Japan, as an index, 1982-2001



4.4.D. Growth in monetary aggregates in the United Kingdom and Switzerland, as an index, 1982-2001



Primary data: Thomson Financial, Datastream Advance; BIS, Statistics on payment systems in the Group of Ten countries - Figures for 1999, March 2001
Grouping of countries: Fig. D cf Thomson Financial

RECENT TRENDS

1. "Broad money" in the Euro zone (Fig. A and B)

European monetary union has forced the member states to take a much closer look not only at their definitions of monetary aggregates, but also at the links between the money supply and economic performance, particularly in terms of growth and inflation. In 1999 the European Central Bank decided to focus its policy on M3 growth. A retrospective look at the behaviour of monetary aggregates in the Euro zone countries indicates divergence as compared with the whole of the European Union in the case of narrow money, and convergence in the case of broad money.

2. Greatly differing trends (Fig. C and D)

The great diversity of practice regarding monetary aggregates also makes international comparison very difficult, particularly when it comes to integrating assets held by non-banking financial institutions such as insurance companies, finance companies and pension funds. For this reason, despite considerable efforts by the IMF and the OECD to standardize data, domestic aggregates are still very hard to compare. These problems are usually avoided either by comparing countries with the help of indexes (with "broad money" on one side and "narrow money" on the other) or by expressing the various aggregates as a percentage of GNP.

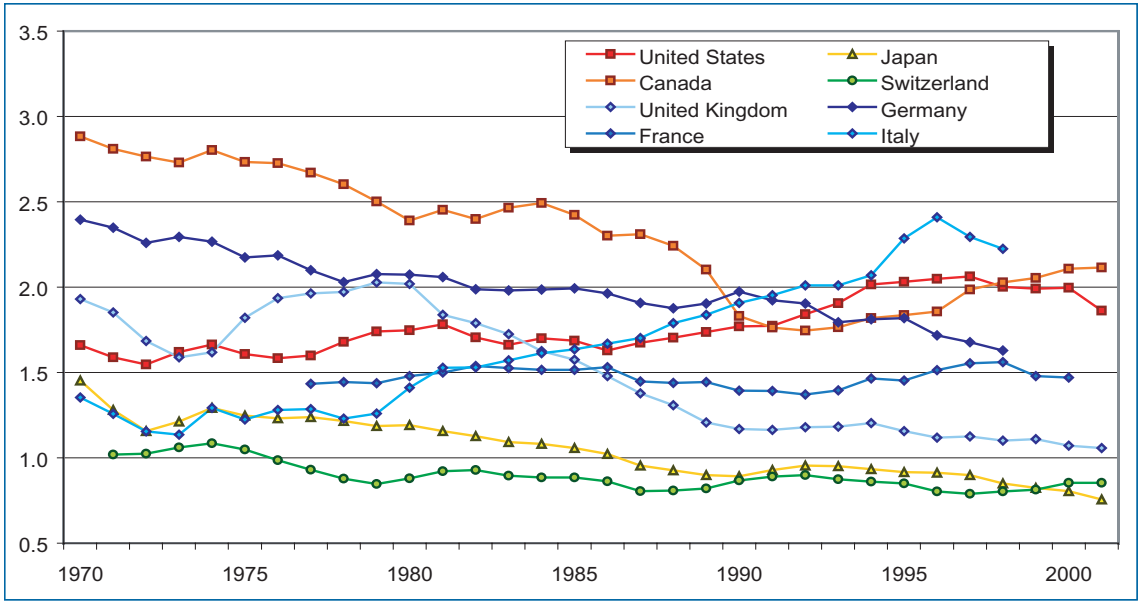
3. Towards a cashless society (Fig. E and F)

The speed of circulation of money varies from country to country, which indicates both differences in the exact definition of narrow money and differences in payment habits. The notion of "velocity of money" (technically defined as the ratio between GNP and narrow money) is used to determine the number of times a unit of currency is involved in a transaction. Despite differing levels, the velocity of money is tending to fall everywhere except Italy and the United States. One explication for this is the spread of cashless methods of payment (especially electronic money) in everyday transactions.

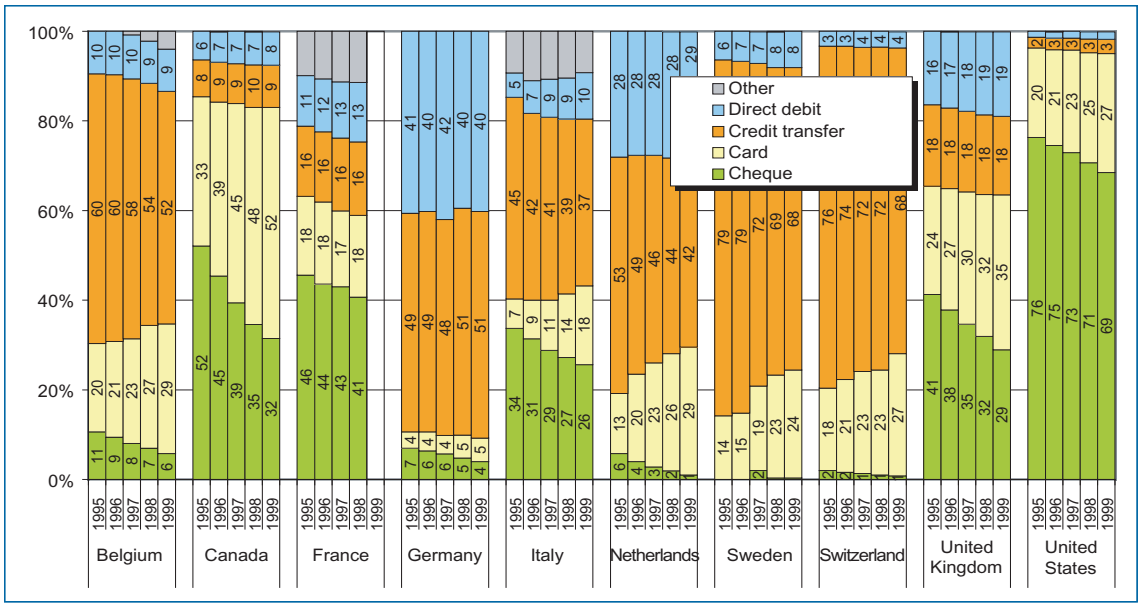
4. "Dollarization" of the world economy

Large amounts of the world's leading currencies - particularly the US dollar and the euro (and before that the German mark) – are in circulation outside their national borders. According to some estimates, up to one third of American banknotes may be circulating outside the United States. This tendency for internationally very liquid currencies to move around the world raises two major problems. Firstly, it makes it more difficult to pursue a monetary policy, and particularly to adapt the money supply to changes in habits of payment. Secondly, having large amounts of cash in circulation outside a country's borders conflicts with the political will, which has increased since 11 September, to make all major monetary transactions traceable. The existence of such unmonitored cash makes it easier for criminals to bribe officials and make other clandestine payments.

4.4.E. Velocity of money in certain developed countries, 1970-2001



4.4.F. Cashless payments, by instrument used, as a percentage of the number of non-cash transactions, 1995-1999



Primary data: Thomson Financial, Datastream Advance; BIS, Statistics on payment systems in the Group of Ten countries - Figures for 1999, March 2001

4.5 Central banks and their international reserves

CONCEPTS AND DEFINITIONS

At the beginning of 2002, the Bank for International Settlements (BIS) listed 125 central banks or monetary authorities - a considerably lower figure than the 190 countries that are members of the United Nations. Each of these banks or authorities has a separate history, is part of a different institutional framework and has its own particular mandate. Just as each country is free to choose its public institutions, it alone determines what form it will give its monetary authorities and what currency it will use.

The prerogatives of central banks vary from time and time and from place to place, but most of them have the following main tasks. Firstly, they are responsible for monetary policy, in other words for regulating the money supply in accordance with goals which are associated both with the domestic economy and the external value of the country's currency. Secondly, they are responsible for ensuring that the payment system operates smoothly and for supervising the country's financial and banking system. It is now generally accepted - although this may simply be a passing fashion - that in order to perform these tasks in the best interests of the population, central banks should enjoy a high degree of independence from governments. This is in order to shield them from pressure of all kinds, including pressure from governments that seek to finance their deficits by printing money, thereby boosting inflation. Although central banks are nowadays seen as the guardians of monetary stability, their independence from the political authorities is questioned whenever a country suffers financial hardship or crisis.

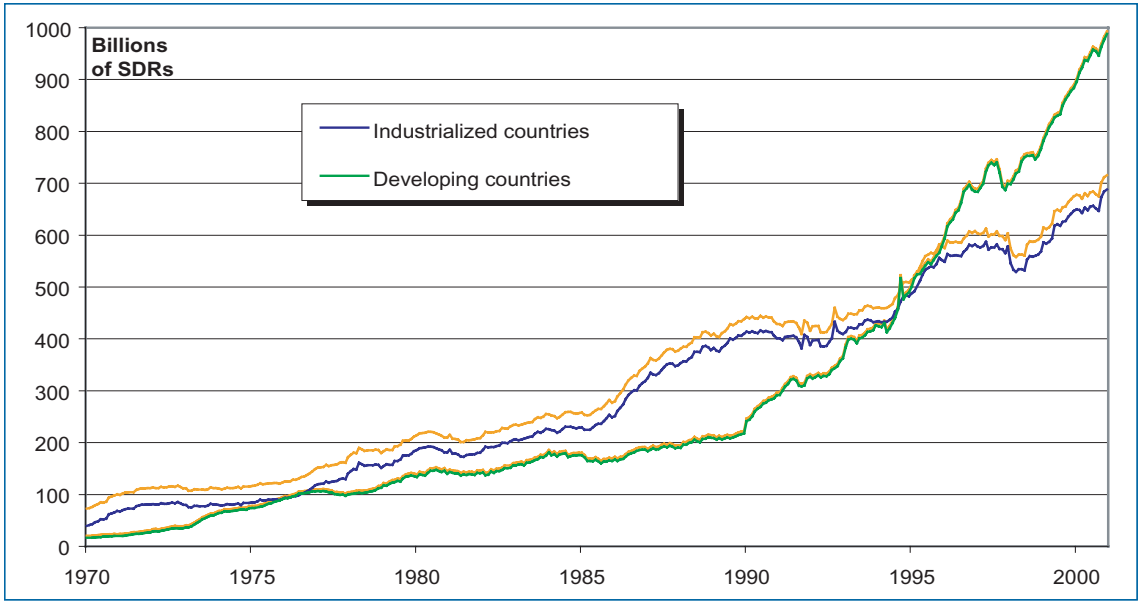
The world's oldest bank, the Bank of Sweden, was founded in 1656, and the Bank of England some forty years later, in 1694. It then took more than a century for the Bank of France to be created (in 1800), followed by the Swiss National Bank in 1906 and the US Federal Reserve System in 1913. In 2002, four years after it was founded, the European Central Bank introduced the euro, which has set the seal on monetary union between twelve countries of the European Union.

Although the circumstances in which these central banks came into being as institutions were very different, their mandate (in the modern sense of the term) always includes two features. The first is technical: the banknote, an invention which sparked off the development of contemporary banks and financial institutions. The second, which is political, did not emerge until much later: the political will to establish a public monopoly on the issuance of money and to assign responsibility for this to the central bank, which thus becomes responsible for maintaining public confidence in the domestic currency.

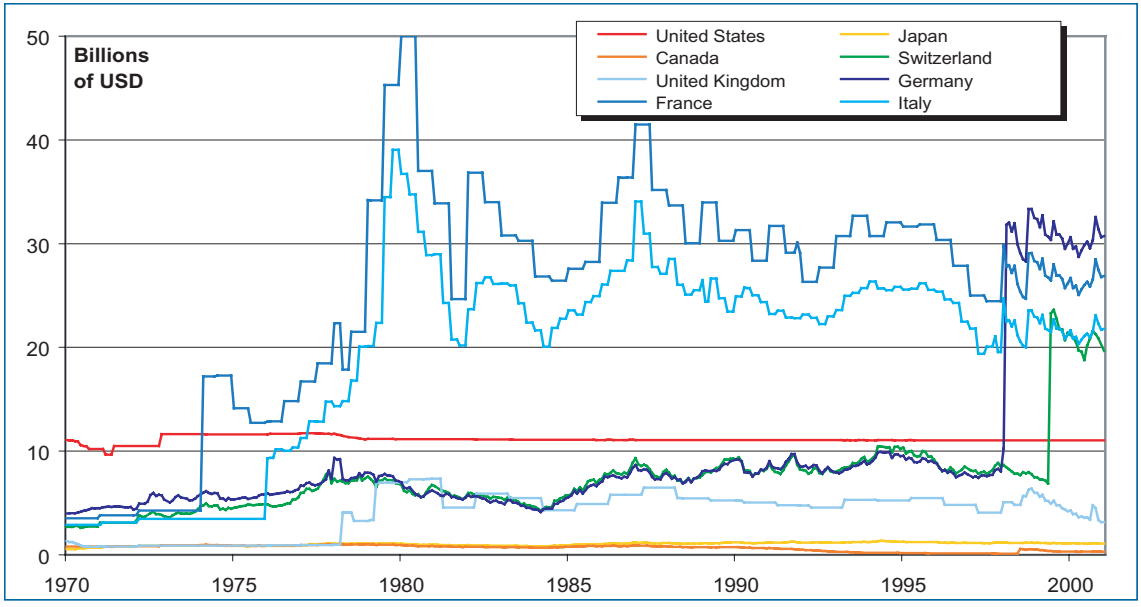
As the issuing authority, the central bank records domestic currency in circulation as a balance-sheet liability, and its reserves, which in accounting terms are counterparts to its notes and coins, as assets. The types of assets that central banks can hold are usually specified in national legislation. They are divided into three categories: domestic securities, gold and foreign currency. The latter two categories are jointly known as international reserves.

In the days when currencies were tied to gold, central bank reserves were quite literally the counterparts of the banknotes in circulation. However, any idea that the value of a currency was backed up by something outside the monetary system was finally swept away in 1971, when the

4.5.A. Foreign currency and gold reserves held by the central banks of developed and developing countries, in billions of SDRs (gold at current prices), 1970-2000



4.5.B. Gold stocks held by the central banks of certain developed countries at historical prices in billions of USD, 1970-2000



Primary data: Thomson Financial, Datastream Advance; IMF, Annual Report; IMF, International Finance Statistics

Grouping of countries: Fig. A cf Thomson Financial

US government unilaterally declared that the dollar would no longer be convertible into gold. Despite this radical break with the past, central bank reserves still play an important part in maintaining the credibility of a country's monetary policy on international markets.

From the point of view of the United States, which issues the international reference and reserve currency, the exchange rate of the dollar against other currencies has only a minimal impact on monetary policy, and the same can be said (more or less) of the euro authorities. Other countries, however, must maintain sufficiently large international reserves to ensure that their central banks' exchange rate policies remain credible.

Thus the crisis surrounding the Thai baht - which then spread to the other "Asian tigers" - was triggered off in July 1997 by the markets' suspicion that the Thai national bank's figures on the level of its international reserves were unreliable.

METHODS AND PROBLEMS OF MEASUREMENT

Gold and foreign currency are the two components of every central bank's international reserves. Each central bank has its own policy about whether or not to publish data on the subject. However, now that financial markets can mobilize speculative resources that far exceed the reserves of a medium-sized economy, regular publication of figures on central banks' international reserves has become a crucial factor in maintaining international monetary stability. In 1999, in the wake of the Asian crisis, the IMF tightened up its regulations on the publication of data concerning the state and composition of reserves. According to the new Data Dissemination Standard, such information must be published monthly and must relate to the situation in the month preceding the date of publication. By the beginning of 2002, 45 countries (including the world's leading economies) had adopted the standard.

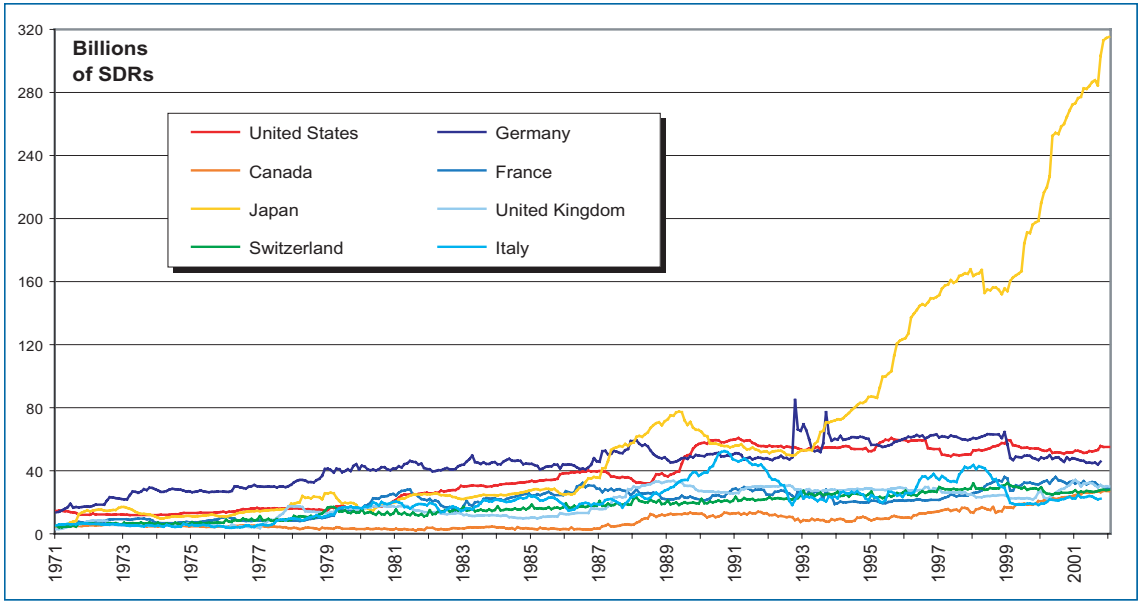
The IMF traditionally receives figures on the level of reserves from central banks. It standardizes and then aggregates them, breaking them down into two components: gold and foreign currency. Unlike most central banks, which officially assess the value of their gold reserves at a historical price, the IMF publishes the value of gold stocks based on the market price. The figures published by the IMF are in SDRs (Special Drawing Rights), a reserve currency administered by the IMF. The information available on the subject can thus be considered reliable and do not raise any specific problems of methodology other than the time lag until publication, details of positions and the way in which the value of the gold stock is assessed.

RECENT TRENDS

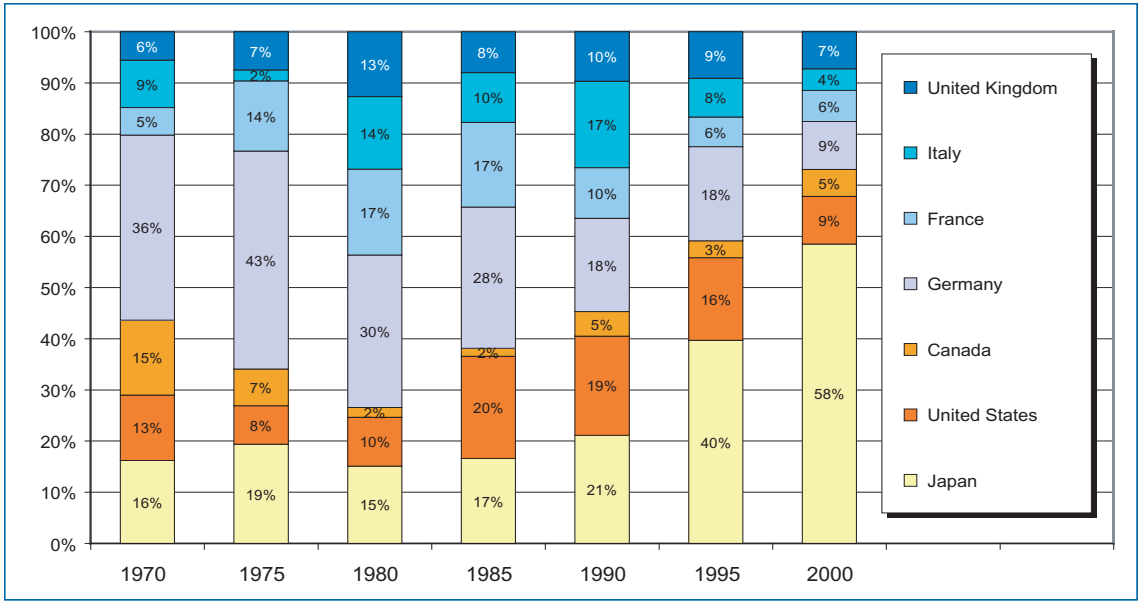
1. Southern countries' international reserves have increased sharply (Fig. A)

In thirty years (1970-2000) the world's international reserves (not including gold) increased seventeenfold from 100 to 1,700 billion SDRs (equivalent to less than 5% of global trade), while global GDP was increasing by a factor of 10.7. Over the same period, developed countries' reserves grew by a factor of 9, and those of developing countries by a factor of 44. Until the late 1980s, the annual rate of growth in developing countries' reserves was considerably lower than in developed countries. At that point, however, the trend was reversed, and in ten years (from 1990 to

4.5.C. Changes in the reserves held by the central banks of certain developed countries, in billions of SDRs (gold at current prices), 1971-2000



4.5.D. Distribution of the reserves held by the central banks of the G7 countries (gold at current prices), 1970-200



Primary data: Thomson Financial, Datastream Advance; IMF, Annual Report; IMF, International Finance Statistics

2000) developing countries' reserves grew five-fold, while those in developed countries only increased by 75%. How can such a marked growth in developing countries' reserves be accounted for? There are three possible explanations: (a) developing countries may have structural trade surpluses with developed ones (however, this is clearly not the case, except for oil- exporting countries); (b) the increase may reflect the influx of capital into developing countries through direct investment, debt or portfolio investment; (c) the "buffer" that the most exposed developing countries have created in order to dissuade speculative attacks by the markets, which were responsible for (among other things) the Asian and Russian crises.

2. Gold is losing its monetary importance (Fig. A and B)

In 1971, when it was announced that the US dollar would no longer convertible into gold, the yellow metal accounted for some 40% of global reserves. By 2000 this figure had fallen to barely 2%. This is the result of decisions, following the collapse of the system of fixed exchange rates in 1971, to demonetarize gold. These decisions meant that gold would no longer be used for payments between central banks, and that the gold held by central banks would be recorded at a historic price which would not be automatically adjusted to take account of fluctuations in its free market price. As a result of this difference between the historical price and the market price, the central banks built up considerable hidden reserves. Today a growing number of central banks – as well as the IMF - are deciding to reassess their gold stocks and cash in some of these reserves.

3. The Bank of Japan is swimming in dollars (Fig. C and D)

Although in developed countries the monetary reserves held by central banks have remained stable, over the past fifteen years those in Japan have skyrocketed - from 15% to 56% of the G8's total foreign exchange reserves - despite the increasingly endemic weakness of the Japanese economy. This is due to the huge long-term trade surplus which Japan has built up with the rest of the world, particularly the United States.

V. Capital markets

5.1 Stock market capitalization

CONCEPTS AND DEFINITIONS

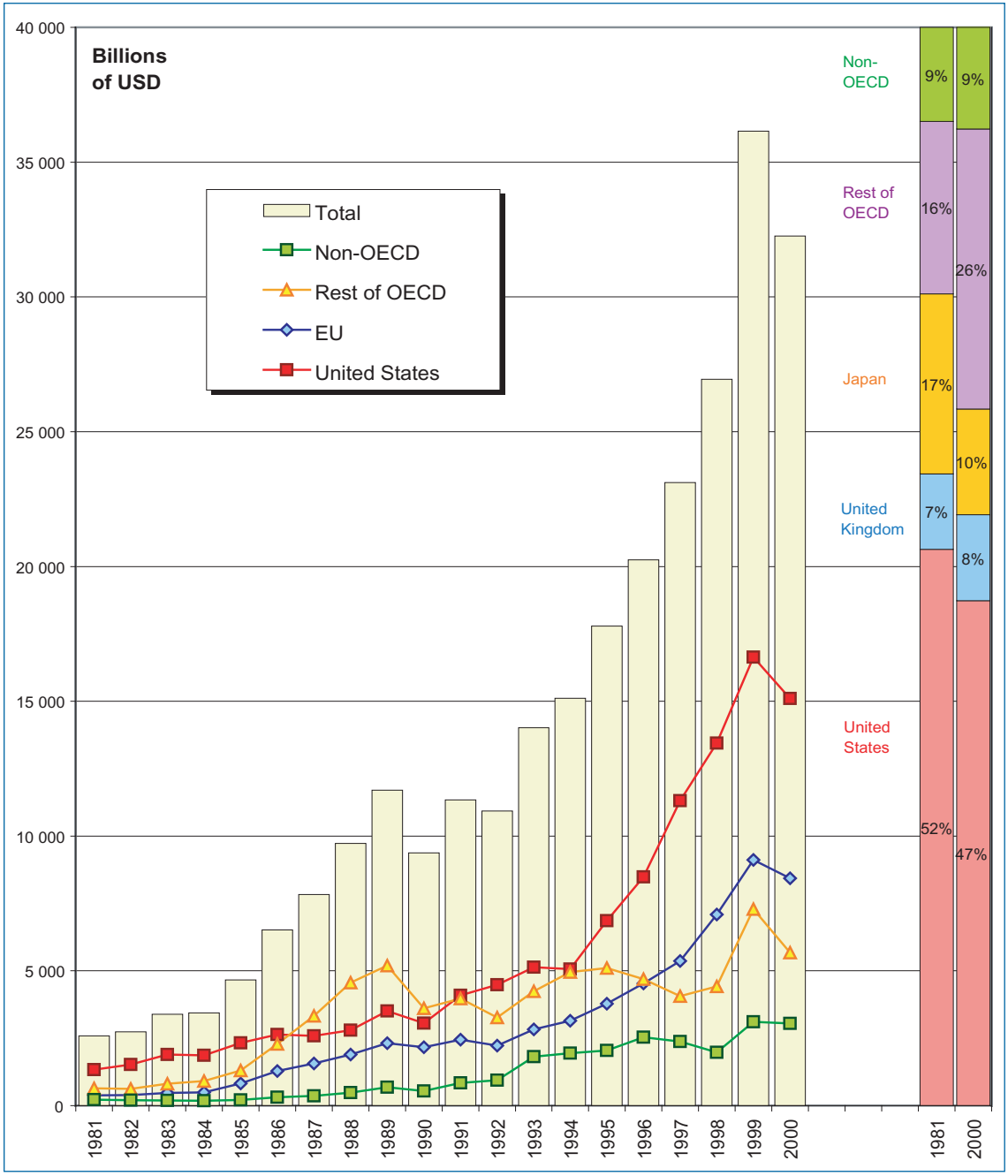
Just as certificates of ownership of commodities are negotiated on commodity or trading exchanges, stocks are negotiated on stock markets. Prices on such markets are determined by supply and demand. The idea of bringing all the market players together so that they can take account of all the relevant information on the prices of commodities or stocks is not new. There are some who claim it existed as far back as ancient Rome, but it first began to flourish in Renaissance Italy and has continued to develop from the early sixteenth century right up to the present day. Today the term “stock market” means an organized market for stocks (mainly shares, bonds and derivatives).

The rise of the stock market as we now know it is closely linked to the spread of the joint-stock company as a form of business organization and funding. Joint-stock companies raise capital by selling certificates (called shares) indicating that the bearer holds a share of the capital and is thus a co-owner of the business. Once issued, shares are identical and freely transferable bearer certificates, i.e. they can change hands without the business being directly involved. This means that the stock market no longer depends on how the businesses concerned are operating, and as a result share prices become public information which is of interest to a wider circle of people than just the shareholders. As the volume of shares and transactions they handle increases, stock markets enter the public sphere (even though legally speaking they are still, in many countries, private companies), for prices and transactions which directly or indirectly involve millions of people are undeniably matters of public interest.

The institutional consolidation of stock markets in the various countries depends on how successfully they are able to gain operators' confidence. This depends on two conditions: the technical choices they make must meet operators' requirements, and there must be regulations and procedures in place to ensure that decisions are transparent and impartial. In this connection there are four particularly sensitive areas:

- Conditions of admission to listing. Each stock market lays down conditions which businesses must meet in order for their shares to be quoted. At a minimum these conditions concern the quality of the business's accounts, its operating results and the number of shares it intends to issue;
- Method of quotation. Share prices are the most important "service" that a stock market provides. It is vital that the quality of share prices be as high as possible, i.e. that they be absolutely impartial and do not favour any of the parties to the transaction or any other player. Today there are two ways of setting prices: (a) prices are set by the market authorities at fixed times on the basis of offers to buy or sell (this arrangement is more suitable for smaller markets), and (b) continuous quotation, in which prices respond instantly to changes in buying or selling conditions (this method presupposes a large volume of transactions, and is mainly used by major world stock markets).
- Membership. Historically, stock markets were private clubs in which certain securities were traded on an exclusive basis. In other words, any player seeking to buy or sell securities used one of the members of the club as an intermediary and paid a commission for the privilege. Previously organized as cooperatives, some stock markets are now turning into joint-stock companies and can themselves be quoted.
- Public supervision. In almost every country, stock markets are subject to constant surveillance by a public supervisory body with wide-ranging powers, whose task is to prevent any manipulation of markets and prices (insider trading). This body helps maintain users' confidence in the market.

5.1.A. Global capitalization and the largest markets, in billions of USD, in per cent, 1981-2000



Primary data: STANDARD & POORS, Emerging Stock Market Factbook; World Bank, World Development Indicators

METHODS AND PROBLEMS OF MEASUREMENT

It is a fairly simple matter to record the activities of a given stock market in statistics; all that is necessary is to record the transactions that take place there. The quality of this primary information thus depends on the technical capability of the stock market to record its own activities. Accordingly, the most direct statistical information about a stock market is the total value of its transactions. However, when this figure is broken down into two components - the volume of securities traded and the price level - difficulties arise owing to the variety of the securities quoted and fluctuations in prices.

Stock market capitalization is the commonest way to determine the macroeconomic importance of a stock market. It reflects the current value of all securities quoted at a given moment, i.e. the current value of all quoted businesses. It thus measures one of the components of a country's wealth. Capitalization is calculated by multiplying the number of securities in circulation (rather than the number traded) by their prices.

Since they are in the public sphere, stock markets publish basic data about themselves. The data can be analysed in various ways:

- By identifying companies with head offices in the country concerned and thus assessing domestic companies' market share. However, given the current trend towards international stock market mergers (as witness the successful launch of Euronext in 2001), the link between stock markets and a particular country may in future be broken;
- By aggregating the data from several stock markets within a single country. This may lead to the compilation of figures on markets with very different statuses and ways of operating, such as NASDAQ (a system of over-the-counter trading in stocks of relatively small American companies) and the New York Stock Exchange (which is reserved for major US and global corporations). During the 1990s, stock markets specializing in medium-sized businesses were launched (under a variety of names) in a large number of countries.
- By aggregating data at international level, as occurs in the publications of the International Finance Corporation (IFC), a subsidiary of the World Bank. The problem here is which reference currency to adopt and which conversion rates to use.

RECENT TRENDS

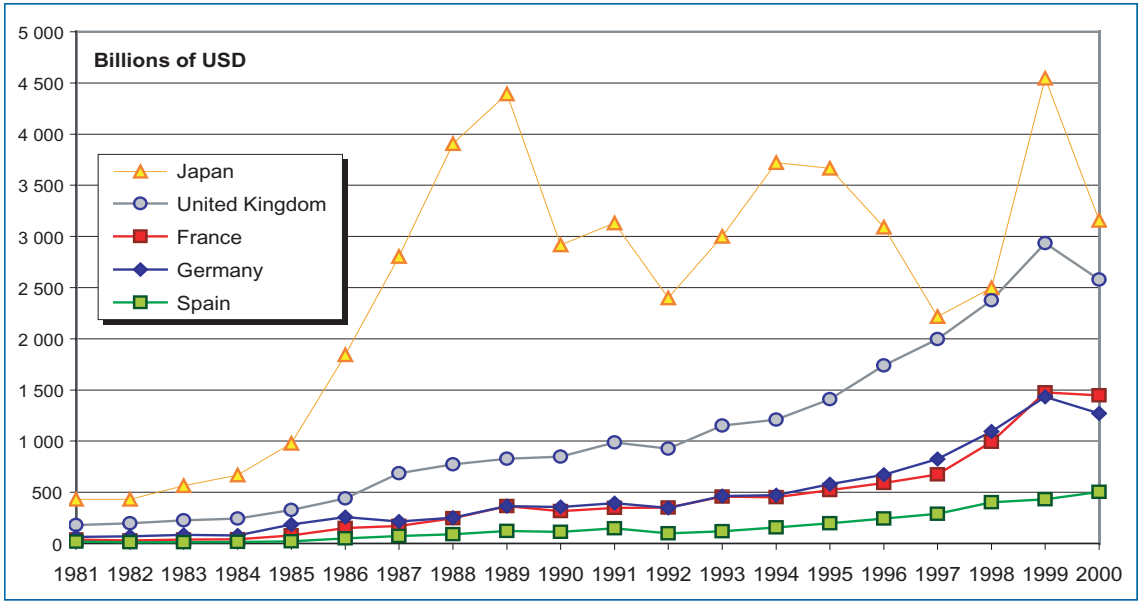
1. Proliferation of stock markets

According to IFC figures published in 1981, there were 47 countries with at least one stock market. Nineteen years later this figure had risen to 109. This increase reflects a fashionable trend which has swept through developing and transitional countries. From the 1980s until the crises of the late 1990s, it was assumed (including by international financial agencies such as the World Bank and the IMF) that setting up a stock market was bound to speed up development and facilitate transition, since stock markets had a reputation for attracting foreign portfolio investment and imposing standards of good governance on local quoted companies. All this was supposed to prepare the ground for an inflow of foreign direct investment However, the crises of the late 1990s clearly revealed the limitations of such claims.

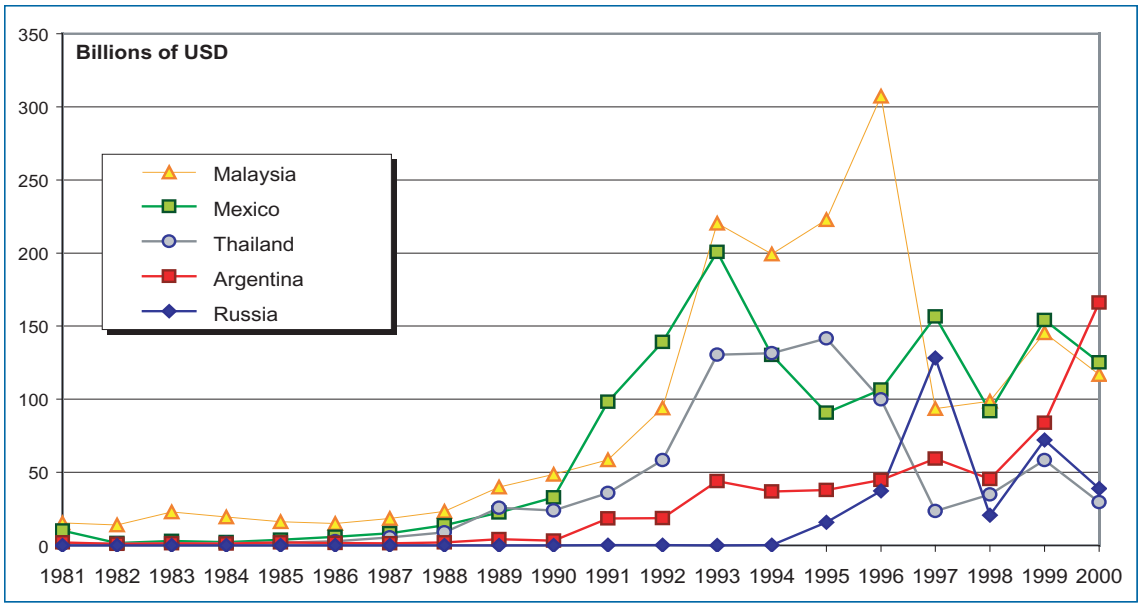
2. A more finance-oriented economy (Fig. A, B, C and D)

Stock markets have been at the heart of a profound change in the global economy, especially in the OECD countries - namely, that it has become

5.1.B. Stock market capitalization in selected developed countries, in billions of USD, 1981-1999



5.1.C. Stock market capitalization in selected developing countries, in billions of USD, 1981-1999



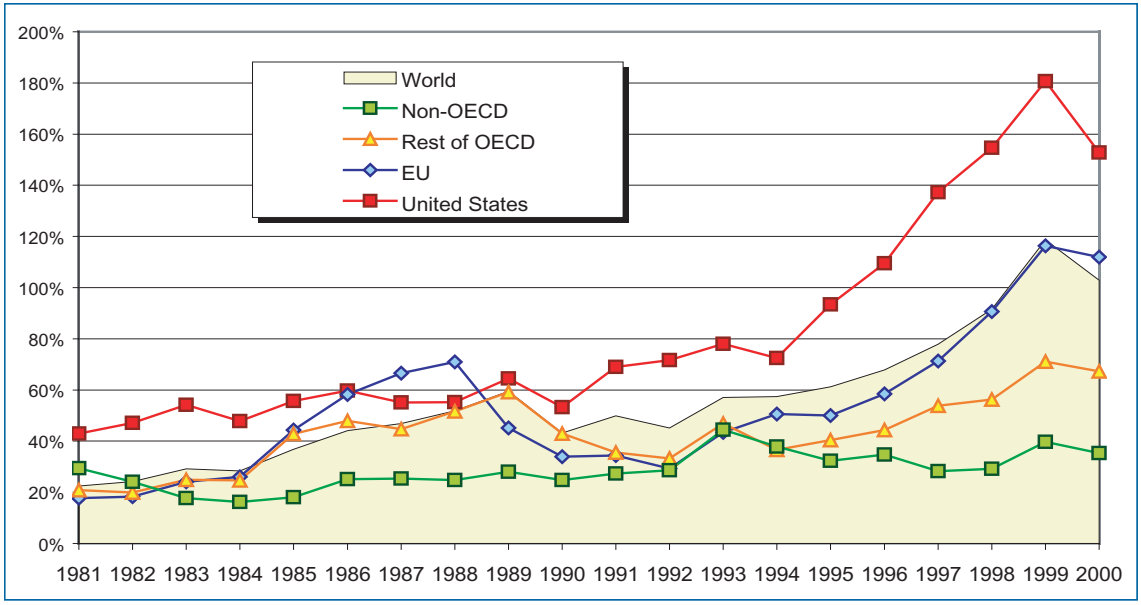
Primary data: STANDARD & POORS, Emerging Stock Market Factbook; World Bank, World Development Indicators

much more finance-oriented. Over the past twenty years, global stock market capitalization has increased five times faster than global product. This development has mainly taken place in the OECD countries, particularly the United States, where capitalization rose from 43% of GDP in 1981 to 153% in 2000. In non-OECD countries, on the other hand, capitalization expressed as a share of GDP remained hardly changed, increasing from 29% to 35% over the same period.

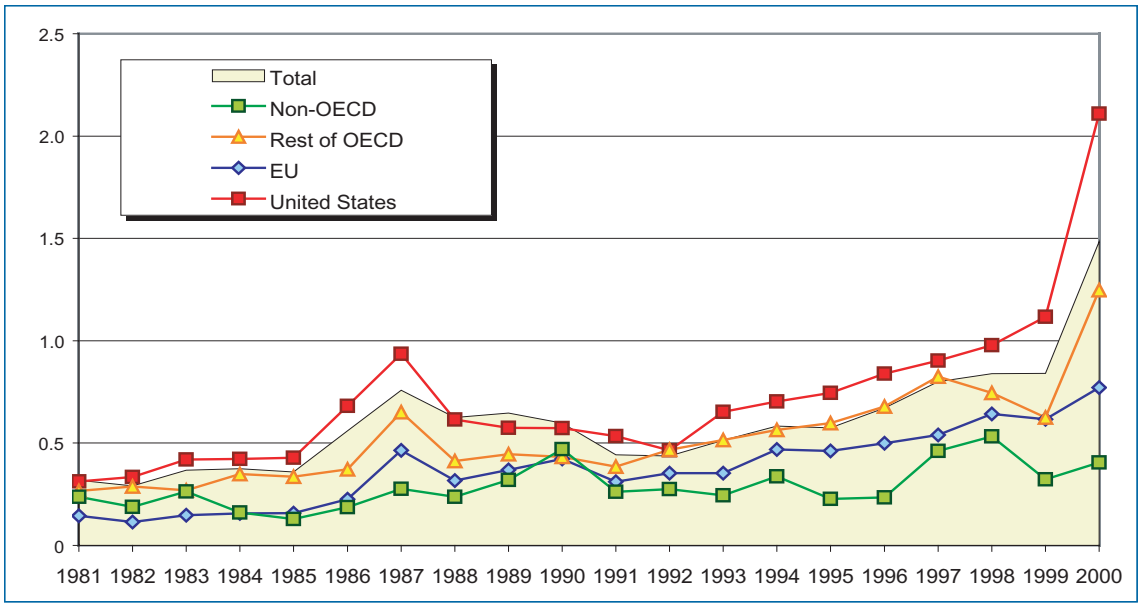
3. Higher turnover (Fig. E)

The above development has had a number of effects, including a significant increase in the turnover of quoted securities. This is the ratio between the total value of a stock market's transactions and its capitalization, and indicates what proportion of securities has been traded each year. In 1981 the figure for the United States was 0.3, indicating that one third of securities changed hands that year, compared with barely one fifth on other markets. By 2000, the rate of turnover had risen sharply all over the world, particularly in the United States, where securities were traded twice a year on average. This reflects a significant reduction in the average length of time that securities are held, which may be explained by increased speculation, encouraged by the reduction in commissions on financial transactions.

5.1.D. Stock market capitalization as a percentage of GDP, 1981-2000



5.1.E. Number of transactions per year on an average share, 1981-2000



Primary data: STANDARD & POORS, Emerging Stock Market Factbook; World Bank, World Development Indicators

5.2 Stock market prices and indexes

CONCEPTS AND DEFINITIONS

The price of a share is the price at which it is negotiated at a given moment in time. Numerous factors contribute to the overall level of share prices on a market, and to the level of individual prices. While some of these factors are peculiar to markets, others relate to certain types of shares and still others to specific securities. As finance grows increasingly complex - both as a field of knowledge and as a professional activity - the link between a share price and the performance of the underlying corporations (e.g. the value of its assets or its profit expectations or forecasts) becomes increasingly tenuous. Since the mid-twentieth century, methods of valuing securities have become more and more elaborate, and now take explicit account of the risk and yield associated with each one.

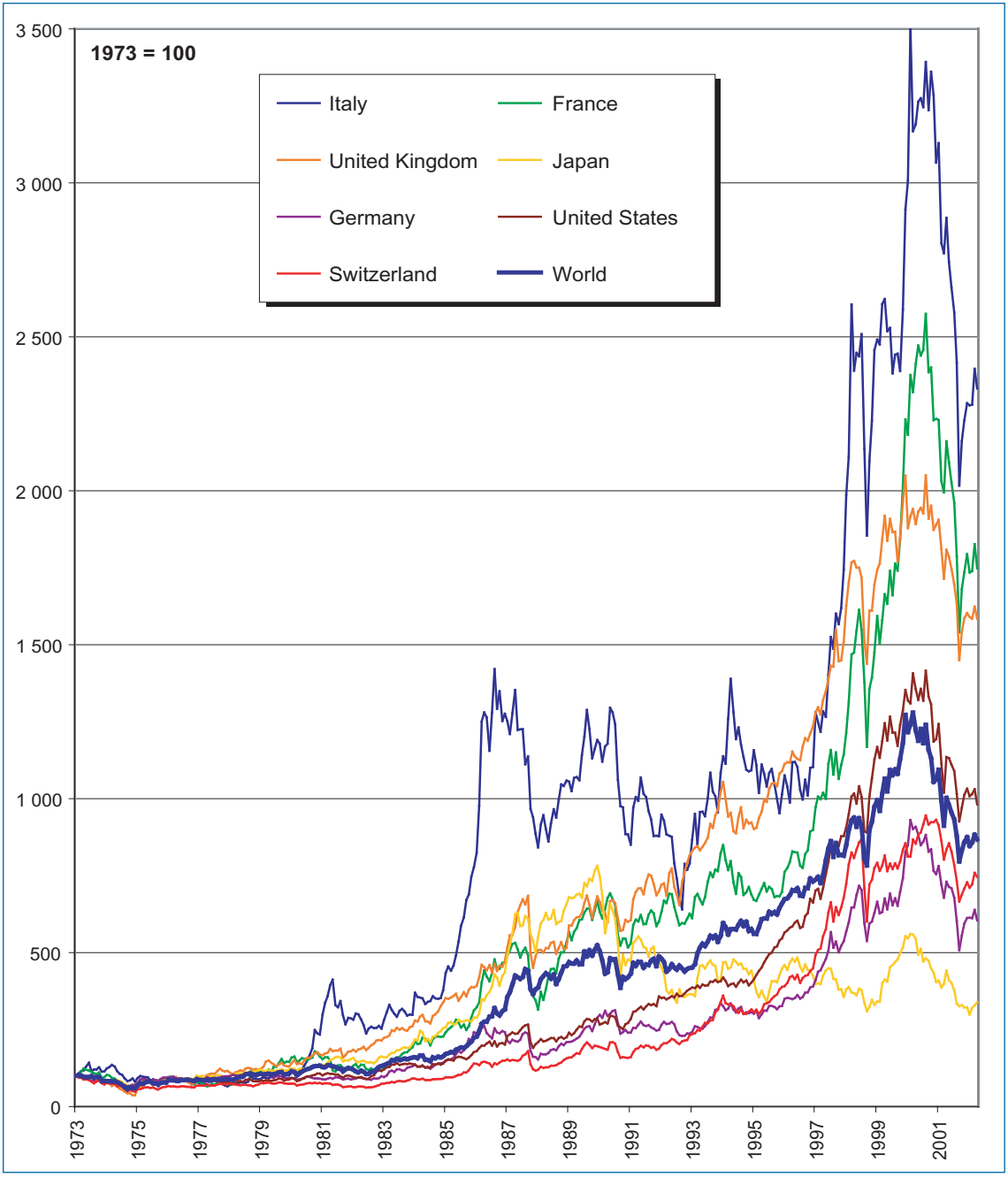
In today's world of globalized financial investment, individual securities matter less than markets seen in their entirety, particularly through indexes. Stock market indexes are powerful instruments which can be used to synthesize variations in the prices of a large number of securities which are considered representative of an even larger group. The first stock market index was created by Mr Dow and Mr Jones in 1884, and has been known since 1928 as the Dow Jones Industrial Average. At first it was simply an average of the stock prices of the eleven largest businesses on Wall Street; in 1928 the number of businesses was raised to 30, and has not changed since.

The structure of an index depends on two important choices. The first concerns the profile of the index, i.e. the reality it seeks to apprehend. The second concerns the method of calculation. Here there are two conceivable methods: either the index weights selected share prices in reference to such factors as capitalization, or else - like the celebrated Dow Jones index – it gives each security the same weight. If the coefficient method is adopted, the question remains how the coefficients are to be calculated. In most modern indexes, stock coefficients are based on capitalization, as in the famous SP500 (Standard & Poor's 500 Index) which covers some 75% of US stock market capitalization (Wall Street, NASDAQ, etc.). Of the weighted indexes, some (the Laspeyres type) set out from the initial situation, whereas others (the Paasche type) prefer continual updating.

Nowadays, most stock markets calculate indexes that reflect the activity on their particular market. Apart from the "official" indexes run by the stock markets themselves, banks and other providers of financial services offer investors an entire range of transnational indexes, each with their own specific geographical and/or sectorial features. The global proliferation of stock market indexes over the past twenty years is the result of (a) improved computing capacity and (b) the increasing use of stock market indexes in asset management strategies.

Stock market indexes have now become full-fledged management tools and play an increasingly important part in portfolio management strategies. The level of the index is a benchmark performance level which any manager who seeks an end-of-year bonus is expected to achieve and does his best to beat. Financial institutions have devised computer techniques to help managers make real-time adjustments to their portfolios in response to fluctuations in the index. Such programmes adjust the make-up of portfolios on the basis of price changes and the structural parameters of the index. At the same time, indexes have themselves become the subject of speculation, and forward transactions on stock market indexes have begun to emerge since the early 1980s. Unlike forward contracts or options whose

5.2.A. Changes in stock market indexes on the main markets, as an index, 1973-2001



Primary data: Thomson Financial, Datastream Advance

underlying assets are individual securities, these forward operations are based on a composite underlying asset corresponding to the composition of the index.

METHODS AND PROBLEMS OF MEASUREMENT

Given the importance of indexes in present-day financial practice, the methods of calculation and the rules governing their composition need to be fully transparent and accessible to all market players. Changes in the choice of securities or in weighting are based on preset rules, and are announced and substantiated. Professionalism is essential in this area, not only because investors use the index for their own management purposes, but also because it is important to listed businesses to have their shares included in an index.

The structure and composition of the index will largely depend on its claim to be representative of a larger whole, e.g. a market or a sector of the economy. Thus, in addition to classic (geographical or industrial) indexes which claim to be highly representative, there has been a proliferation of thematic indexes in recent years. These make no claim to be representative, but list companies on the basis of how they behave with regard to the environment, social welfare, ethics and so on. Their aim is always the same, namely to create a basket of securities that are distinct from those on the market, by a judicious choice of characteristics. They thus seek to identify the main players in a given sector. In some cases they may even be exhaustive, i.e. include all the businesses with certain features. Once compiled, the index is maintained daily by its owners, who calculate and publish it. They are constantly on the alert, for unforeseen events may force them to take certain companies off the list and replace them with others.

RECENT TRENDS

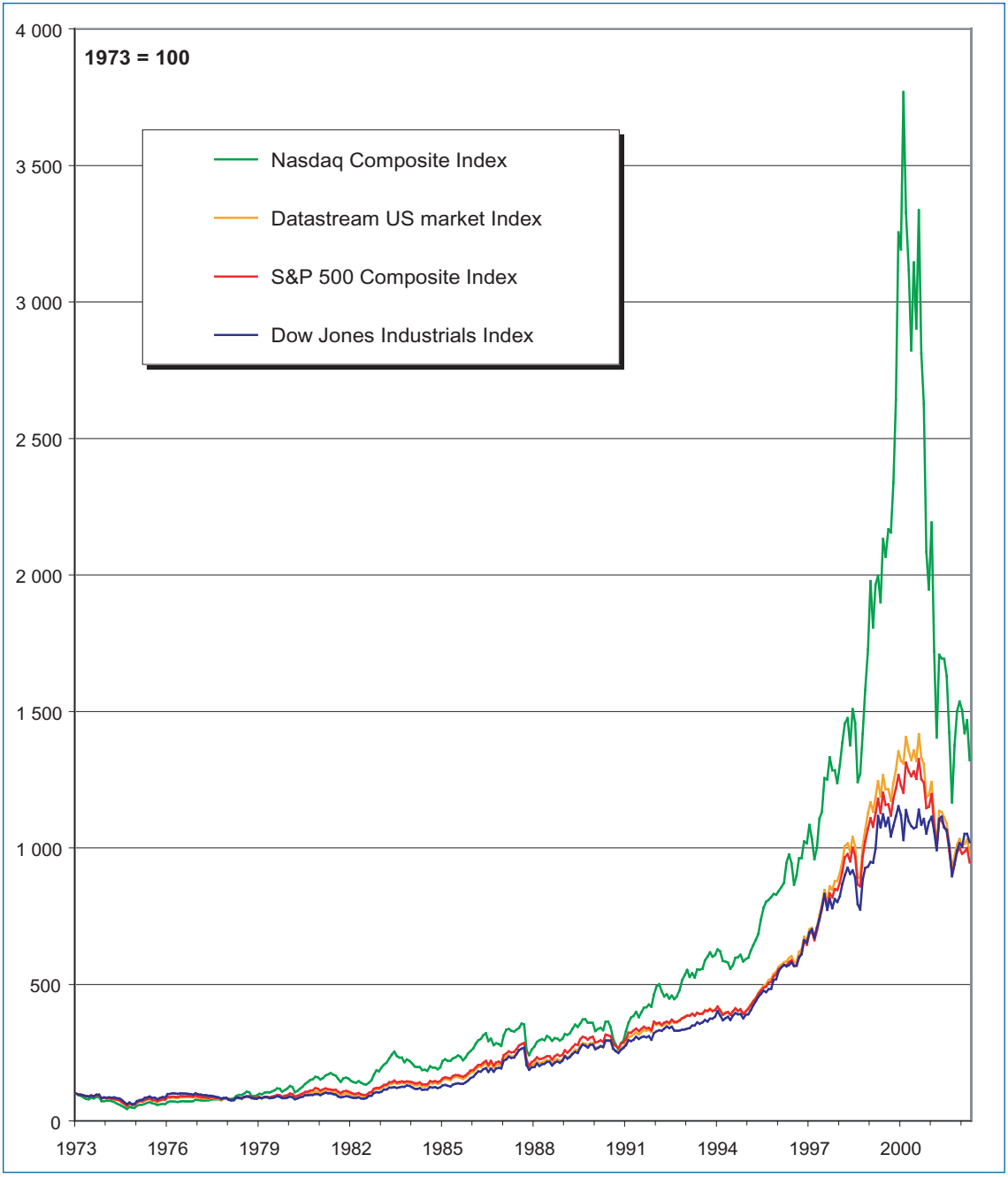
1. Stock market prices have shot up (Fig. A and B)

In the course of history, stock market indexes have been marked by a succession of crises. However, despite temporary reversals (as in October 1987), the last twenty-five years of the twentieth century were particularly favourable to stock markets, with index levels rising much faster than GDP in the countries concerned. This long-term trend, in which there have admittedly been one or two dips since the beginning of 2001, is due to a combination of at least two factors: (a) a very marked increase in the availability of funds for stock market investment, owing to the growth of pension funds and the tendency of banks to reduce lending and deposit collection; and (b) changes in ways of assessing the value of stocks, with appraisals of a business's past performance making way for forecasts of its future performance. In other words, a fundamental change has taken place on one hand in the way the value of stocks is assessed by the market, and on the other in the way companies present their accounts (creative accounting in the 1980s) and inform the market about their prospects.

2. Price/earnings ratio (Fig. C)

One of the classic ways to put share prices in perspective is to express them in terms of the number of years theoretically needed for the business's operating profits divided by the number of shares to equal the share price. This price/earnings ratio is thus influenced both by how well the company

5.2.B. Changes in various indexes on the US market, as an index, 1973-2001



Primary data: Thomson Financial, Datastream Advance

is performing and by the level of share prices. When the economy is in recession, price/earnings ratios tend to rise sharply. Nevertheless, despite fluctuations, there has been a tendency for the number of years of profit needed in order to reach the share price level to increase throughout the last quarter of a century. This cannot be accounted for in strictly economic terms; it is a passing fashion magnified by operators' herd instincts, rather than the result of the way in which modern businesses are run.

3. Irrational exuberance?

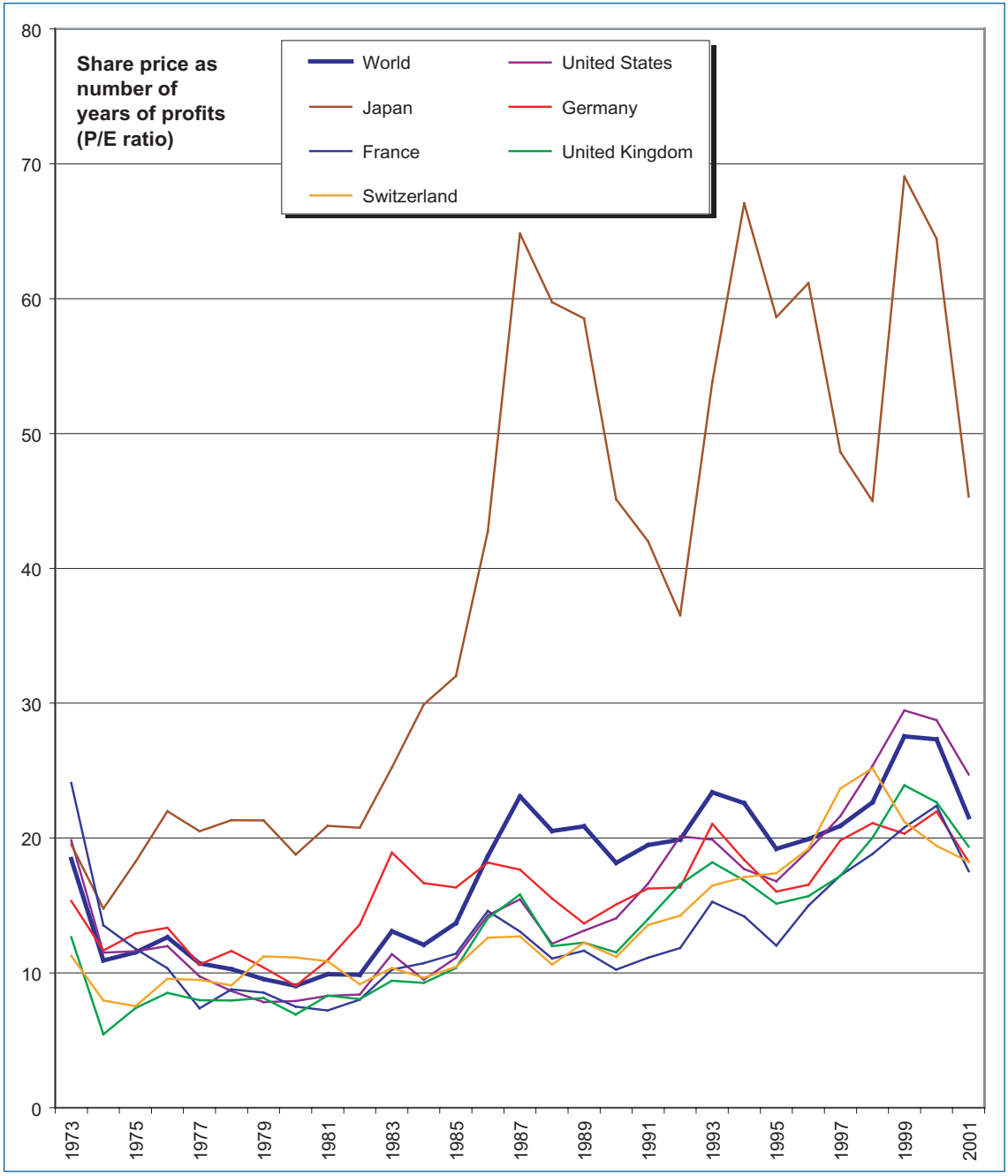
In December 1997, the chairman of the Federal Reserve (the US central bank) referred to the "irrational exuberance" of the stock market. This passing comment in the middle of a speech sent the markets into shock, for it indicated that the monetary authorities were concerned about stock market euphoria and might be about to take corrective action. These fears proved unfounded and prices began rising once again, but the question remains. Stock market indexes can also be seen as indexes of inflation in the prices of financial assets (technically speaking, the two are similar), which would explain why the monetary authorities should be concerned about a sharp increase in stock market prices, just as they would be concerned about a sharp increase in consumer prices.

4. Increasingly correlated markets (Fig. A)

The key phrase in modern finance is diversification of risk. This means spreading assets in a portfolios not only on the basis of each security's risk-to-yield ratio, but also so as to ensure that the risks to which the various securities are exposed are not correlated. When they are not correlated, the prices of the various stocks change independently of one another, and if one of them falls it will only have a minor impact on the portfolio as a whole. If, on the other hand, the portfolio contains highly correlated securities, there is a considerable likelihood that all the stocks in the portfolio will move upwards or downwards at once.

Seeking to diversify their investments, operators are on the lookout for assets which are not highly correlated. However, globalization of the economy - and especially of finance - has made stock markets increasingly interdependent and has thus reduced opportunities for diversification. This is even true of emerging markets which, except in times of local crisis, are increasingly aligned with OECD markets.

5.2.C. Long-term changes in price/earnings ratio (ratio of share price to profits per share), 1973-2001



Primary data: Thomson Financial, Datastream Advance

5.3 Capital raised on the stock market

CONCEPTS AND DEFINITIONS

In order to understand the part the stock market plays in the economy, one must look at it in the wider context of the financial system, of which it is a key component. According to one standard definition, the financial system (be it local or global) performs a number of essential functions in a modern-day economy: (a) procuring payment services; (b) mobilizing savings; (c) allocating financial resources; and (d) managing, pricing, structuring, grouping and negotiating risk. Looking back at the history of the OECD countries, one can identify two kinds of financial system: one in which the key role is played by banks, and one in which it is played by financial markets, particularly stock markets.

- When it is banks that bear primary responsibility for financing the economy, they collect households' savings, grant loans to government and businesses, assess the risks involved in projects and take on those risks in return for appropriate rates of interest. Such banks are referred to as "universal", in the sense of "multi-purpose". They provide all the financing services the players require, and remain in permanent, long-term contact with the depositors and the users of the funds. This type of system has traditionally developed in mainland Europe and Japan.
- When it is financial markets that are responsible for converting savings into investment and for managing risks, transferable, negotiable stocks become the key instrument in the financial system. In order to obtain finance, business and government bodies issue negotiable securities. Savers buy them, and hence have most of their assets in this form. Once issued, the securities are constantly traded on organized markets. Risk is thus managed in real time by continual reallocation in response to changes in price. This type of system has traditionally developed in the English-speaking countries, particularly the United States and the United Kingdom.

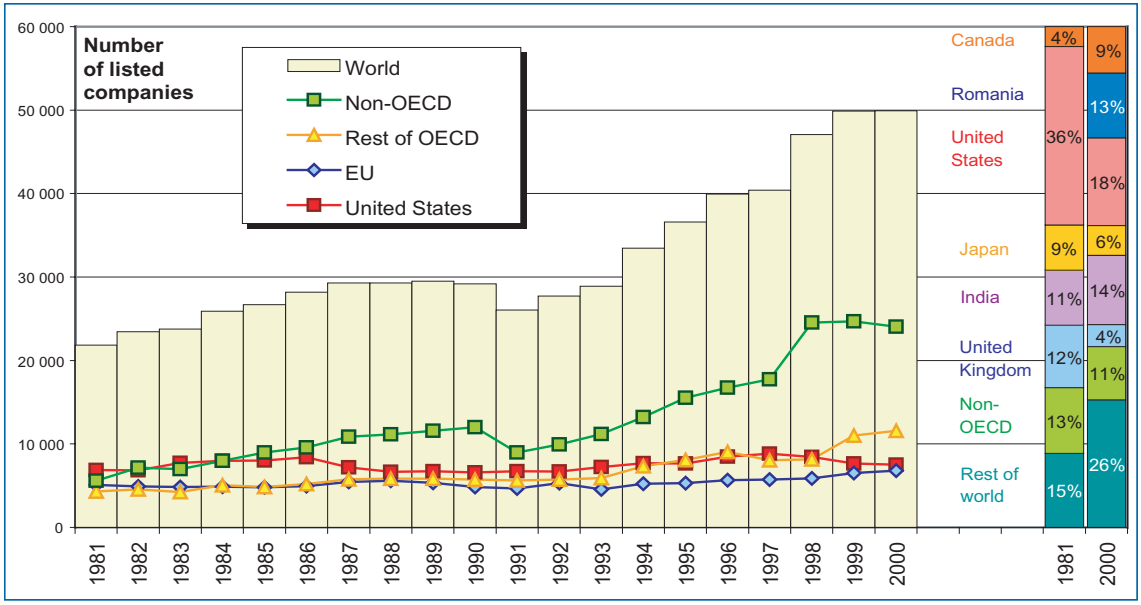
Since the early 1980s, the rapid expansion of the financial sector has been accompanied at global level by a phenomenon known as "securitization", i.e. the replacement of non-negotiable debts and receivables (typical of a bank-centred system) by negotiable securities. Large-scale recourse to securitization has enabled international banks to improve their risk management strategies, but at the same time it has increased the influence of financial markets at global level. This trend has led to the gradual emergence of a global financial system based on markets rather than banking institutions. Banks are increasingly confining themselves to the role of intermediaries and service providers, and at the same time they are less and less involved in collecting savings and above all in granting loans (and taking on the associated risk). Given the profound changes taking place in financial systems, it must be wondered to what extent stock markets are still an accessible source of funding for companies.

METHODS AND PROBLEMS OF MEASUREMENT

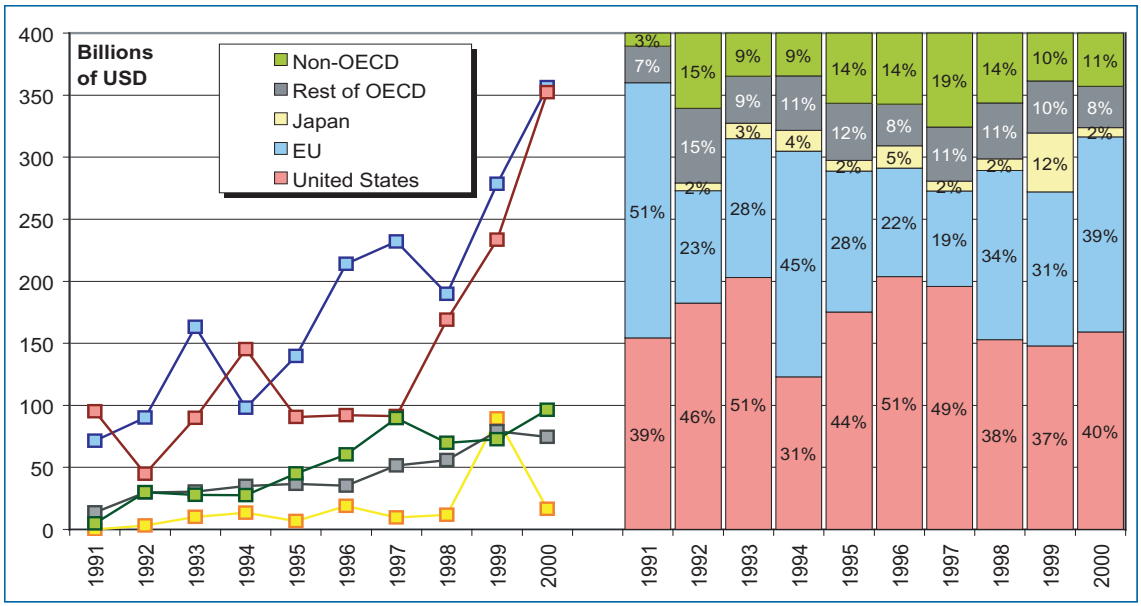
Not all stock markets publish data on the amount of capital raised by businesses. The information gathered by the International Federation of Stock Exchanges (FIBV) is therefore very fragmentary, and in any case does not go back beyond the early 1990s.

Statistically, the amount of capital that businesses raise on a given stock market can be measured

5.3.A. Changes in the number of listed companies by major region, in units and in per cent, 1981-2000



5.3.B. Capital raised on world stock markets, in billions of USD and by region in per cent, 1991-2000



Primary data: STANDARD & POOR'S, Emerging Stock Market Factbook; FIBV, Annual Report

either in net or in gross terms. In net terms, any shares bought back by businesses are deducted from the amount of capital raised, whereas in gross terms they are not. Capital is raised in two different contexts: when a company is first quoted on the stock market, and when an already quoted company issues additional shares in order to increase its own capital.

RECENT TRENDS

1. The number of quoted businesses is increasing (Fig. A)

The number of businesses quoted on stock markets around the world has risen from 22,000 to 50,000 in the space of nineteen years. In the United States, on the other hand, the number has remained more or less unchanged. Although some of the increase (9,000) has been in other OECD countries, the bulk of it has come from non-OECD countries. This suggests that access by businesses to stock market finance has particularly improved in developing countries.

2. The influence of developed countries (Fig. B)

A regional breakdown of capital raised on stock markets clearly shows that developed countries claim the lion's share, accounting for 70% to 90% of the total volume in any given year. Even though the percentage of new financing in their stock market turnover is tending to decline, their sheer size is such that the amounts they raise are still considerable in comparison with the rest of the world. Following a series of financial crises, the development of stock markets in certain emerging markets has ground to a halt.

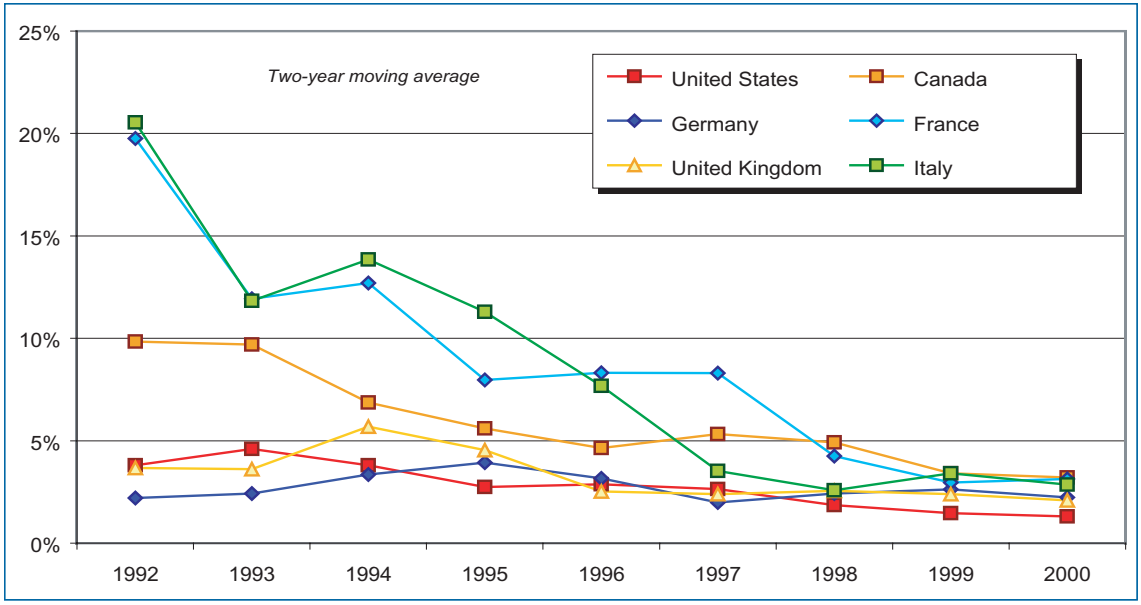
3. The share of new financing is declining (Fig. C and D)

On OECD stock markets, new capital raised by businesses seldom accounts for more than 10% of stock market transactions, and averages between 3% and 5%. The peaks recorded by some markets in developed countries in the 1990s were associated with major privatization schemes, particularly in France and Italy. Despite temporary enthusiasm for the "new economy", stock markets are now generally reluctant to give businesses additional capital and prefer to concentrate on risk management, performing endless changes on the makeup of individual portfolios.

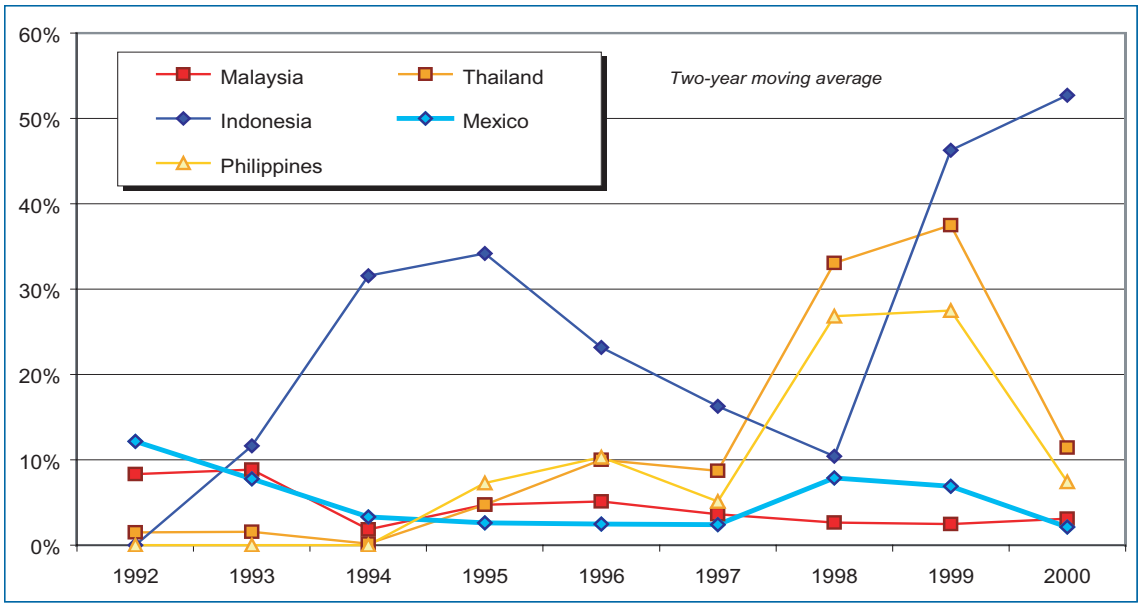
4. New issues by existing businesses are preferred

Globally, over the past ten years, stock markets have given more capital to existing businesses than to newly created ones. This is particularly true of markets in developing countries. Those in developed countries, on the other hand, seem more prepared to take risks: there the share of new issues by existing companies never exceeds 70% of total financing.

5.3.C. Capital raised in OECD countries, as a percentage of stock market turnover, 1992-2000



5.3.D. Capital raised in some developing countries, as a percentage of stock market turnover, 1992-2000



Primary data: STANDARD & POOR'S, Emerging Stock Market Factbook; FIBV, Annual Report

5.4 The bond and credit market

CONCEPTS AND DEFINITIONS

A bond is a certificate of indebtedness which represents a fraction of a loan by a private or public debtor. Like a bank loan, a bond stipulates the amount of the debt, the date on which it will fall due, and the terms on which the creditor will be rewarded. Unlike bank loans, bonds are bearer certificates, which means that they are negotiable and can be continuously quoted on markets according to the debtor's creditworthiness, the maturity of the bond and the terms of reward. In most countries, public bond issues (like share issues) must be authorized by the supervisory authorities. Only highly reputed debtors - such as government institutions - are allowed to make such use of the general public's savings.

The size of the bond market varies not only from country to country, but also from period to period. It depends on two features of the country's financial system: the degree of securitization, and local habits when it comes to financing government deficits. The greater the degree of securitization, particularly with regard to government deficits, the more likely it is that the bond market will have a major part to play.

Bond issues have traditionally been a favourite way for governments to finance their budgets, but for some time now they have also been used by private issuers such as banks and non-financial businesses. Until the end of the 1960s, international bond issues - such as the famous "Russian loans" at the start of the twentieth century - were single events; there was still no such thing as an international bond market. International bond issues were mainly carried out by governments of countries whose financing needs exceeded their domestic funding capability. The loans were guaranteed by specific earnings such as customs duties or postal revenue. Bonds for German reparations after the First World War are another well-known page in the history of international loans. In fact, the Bank for International Settlements (BIS) was set up to guarantee loans issued after Germany's reparation debts were restructured. From the late 1960s onwards, with the emergence of the Euromarket and, in its wake, Eurobonds, international loans expanded and rapidly became commonplace.

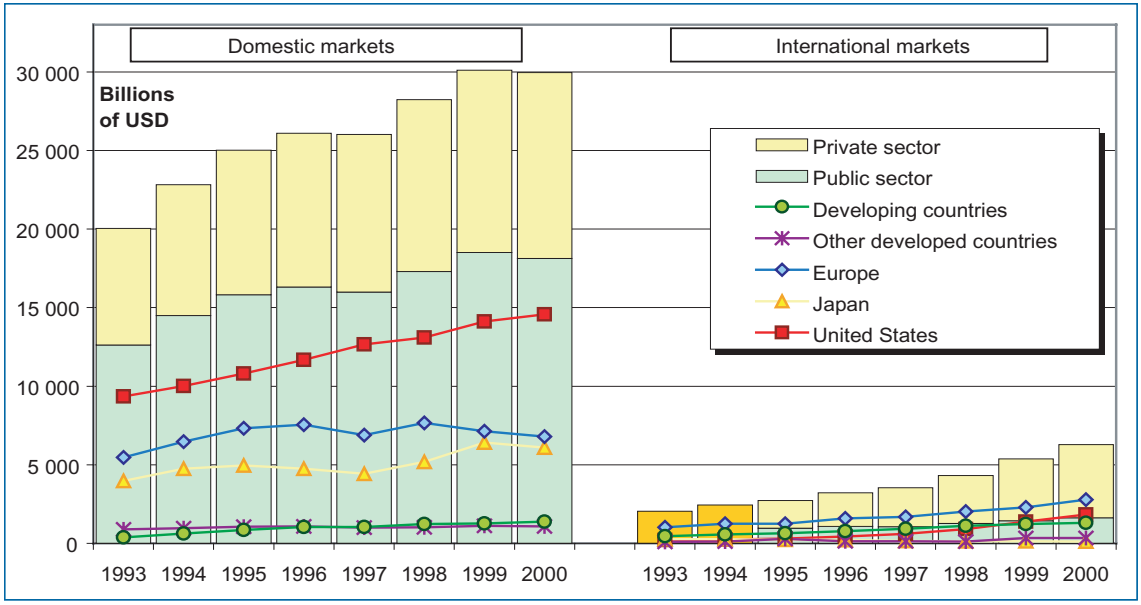
Today the international loan market includes all debt instruments (bank loans and bonds) whereby residents of a country raise funds in foreign currency and foreign borrowers issue securities in domestic currency. Apart from bank loans, the instruments used on this market are:

- money market instruments (12% of the total in 2000) such as repo agreements, Euro-commercial paper and other very short-term Euro-notes;
- classic bond instruments, such as the full range of Eurobonds or even Euro-convertibles.

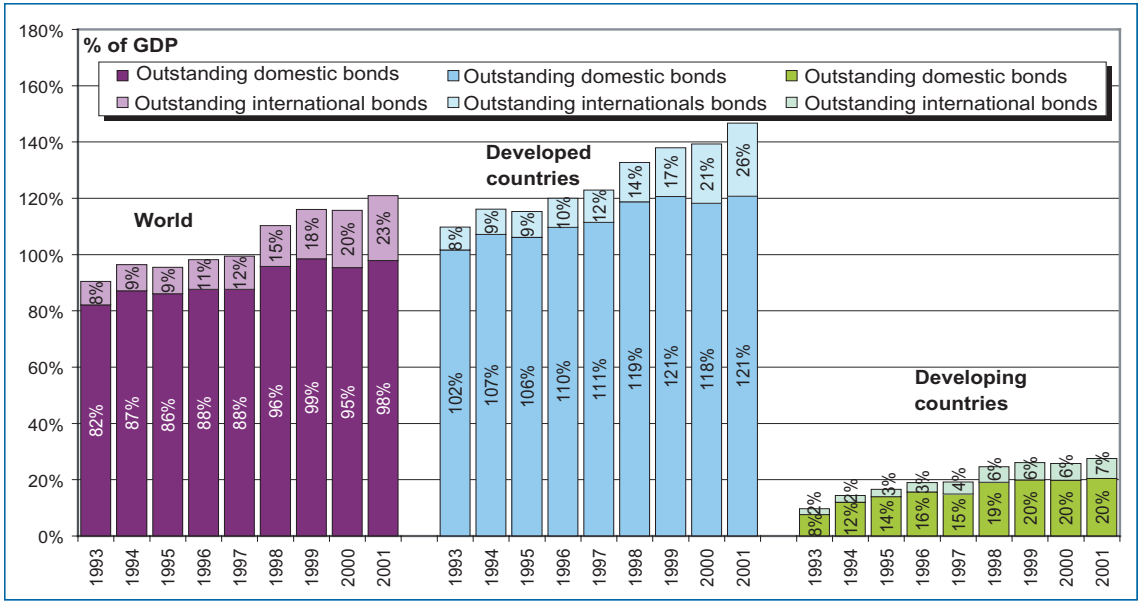
METHODS AND PROBLEMS OF MEASUREMENT

Unlike with the stock market, it is difficult to speak of capitalization of the international bond market, for two reasons: (a) the market is not organized, so transactions take place over the counter; (b) issued bonds vary greatly as regards currency, maturity and terms of repayment and remuneration, which makes continuous assessment of their overall value very difficult. Thus the figures usually produced by national and international monetary and banking authorities measure

5.4.A. Outstanding bonds on national and international markets, by type of debtor, in billions of USD, 1993-2000



5.4.B. Outstanding bonds expressed as a percentage of GDP, by region, 1993-2000



Primary data: BIS, Quarterly Review, International banking and financial market developments; BIS, Annual Report; IMF, World Economic Outlook
Grouping of countries: Fig. A et B cf BIS

the amounts outstanding rather than the total market value of bonds in circulation. Consequently, these figures do not take account of price effects, which may lead to major discrepancies in relation to market value, especially at times when interest rates or returns are highly volatile. Another way to analyse the bond market is to record the flow of new issues. Expressed in net terms - i.e. after subtracting repayments - issues over the period equal the change in total amounts outstanding over the same period.

The BIS produces quarterly statistics on international loan activities by aggregating the information provided by national authorities as well as by private or semi-private bodies such as the International Securities Market Association. In aggregating these figures the BIS faces three major difficulties: gaps and inconsistencies in national statistics, shifts in exchange rates, and the process of financial innovation which means that any classification must be constantly adapted. That is why, in 1999, the BIS ceased producing statistics on international banking commitments, and confined itself to figures on the international bond market. It is therefore not surprising to find that every institution which publishes figures of this kind revises them retrospectively at frequent intervals.

RECENT TRENDS

1. Rapid growth in private international bonds (Fig. A, D and E)

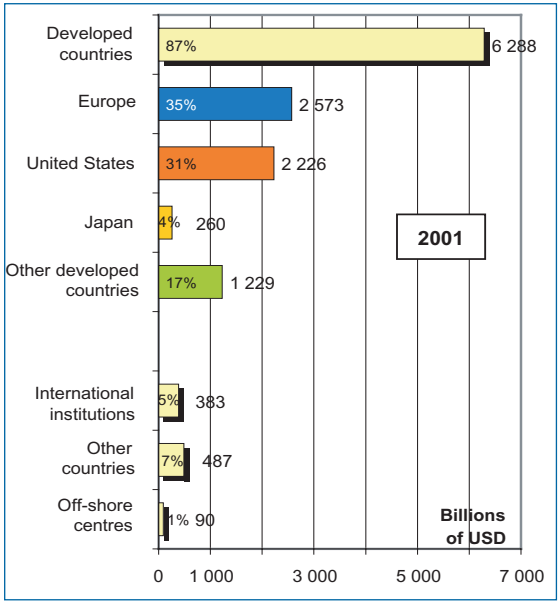
The bond market is still mainly a domestic phenomenon, although the international market has increased from 10% of the total in 1993 to just over 20% in 2000. Between 1993 and 2000 the outstanding amounts of domestic bonds rose by less than 50% (an average of about 6% a year), while those of international bonds increased by 213% (18% a year). In terms of issues, this represented an average growth rate of 36%. Almost two thirds of this growth (62%) is accounted for by banks and financial institutions, which have turned to the international bond market as their usual sources of deposits have stagnated. Non-financial corporations have also resorted to the international bond market on a large scale, especially since 1996, to finance what are in many cases mammoth projects, such as the purchase of UMTS (Universal Mobile Telecommunications System) licences. Meanwhile, international public issues have remained relatively stable.

2. Bonds: a source of funding confined to developed countries (Fig. B, C and F)

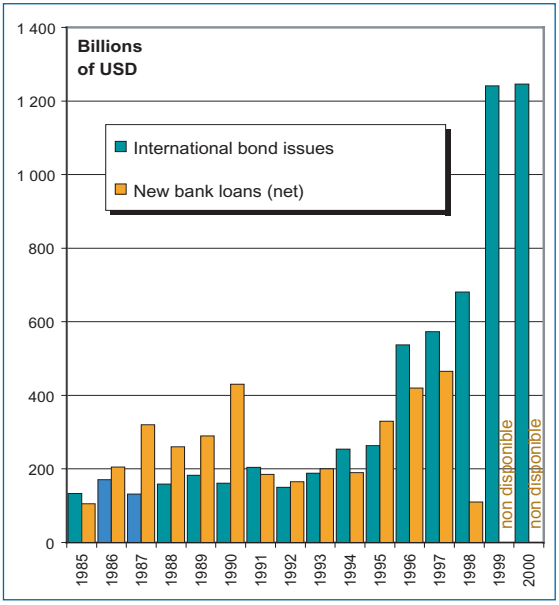
Bonds are still the classic source of public sector funding (over 60% of amounts outstanding), whereas the corresponding figure on the international market is only 25%. This difference is due to the fact that, in countries where financial markets are liquid, the government mainly turns to the domestic market. This is not the case in other countries, particularly developing ones, which have no option but to issue their bonds on the international market. Despite this, issues by emerging countries are still only a marginal feature of international markets.

Expressed as a share of GDP, the total value of outstanding amounts of bonds increased considerably between 1993 and 2001, especially in developed countries where it rose from 110% to 147% of GDP. In developing countries the rate of growth was only half as great. This shows that bonds are mainly a source of funding in countries where financial markets are sufficiently well developed for borrowers to approach them directly, without going through banks. There has also been some growth in issues by institutions which are domiciled in off-shore centres but do not have their head offices there: 8% of amounts outstanding on the international market are accounted for

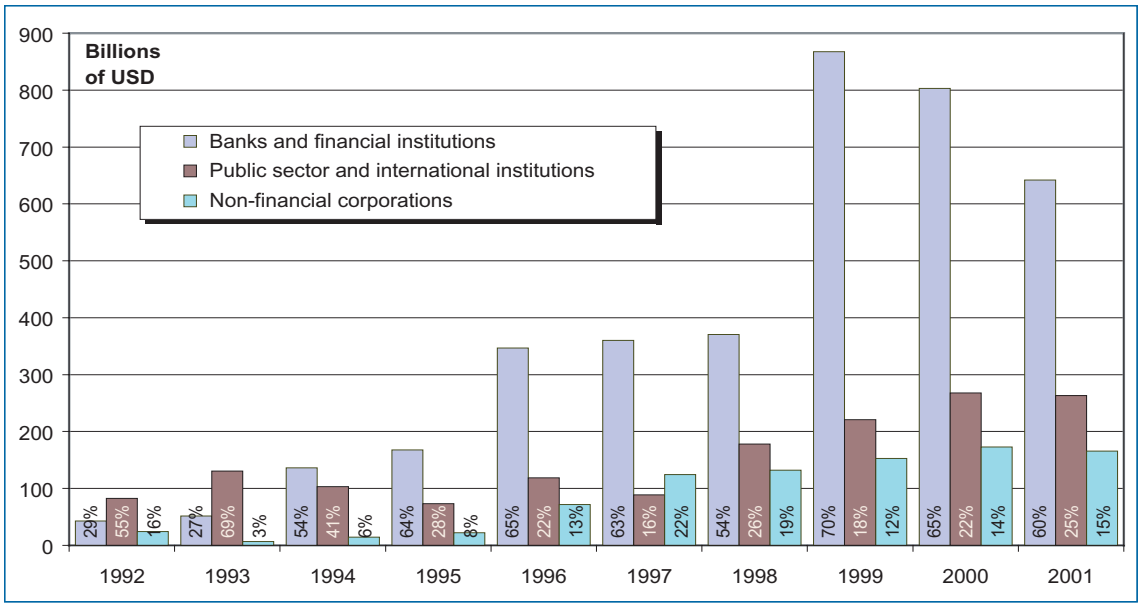
5.4.C. Outstanding international bonds, by issuer's nationality, 2001



5.4.D. New bank loans and international bond issues, 1985-2000



5.4.E. Net bond issues on the international market, by type of issuer, in billions of USD, 1992-2001



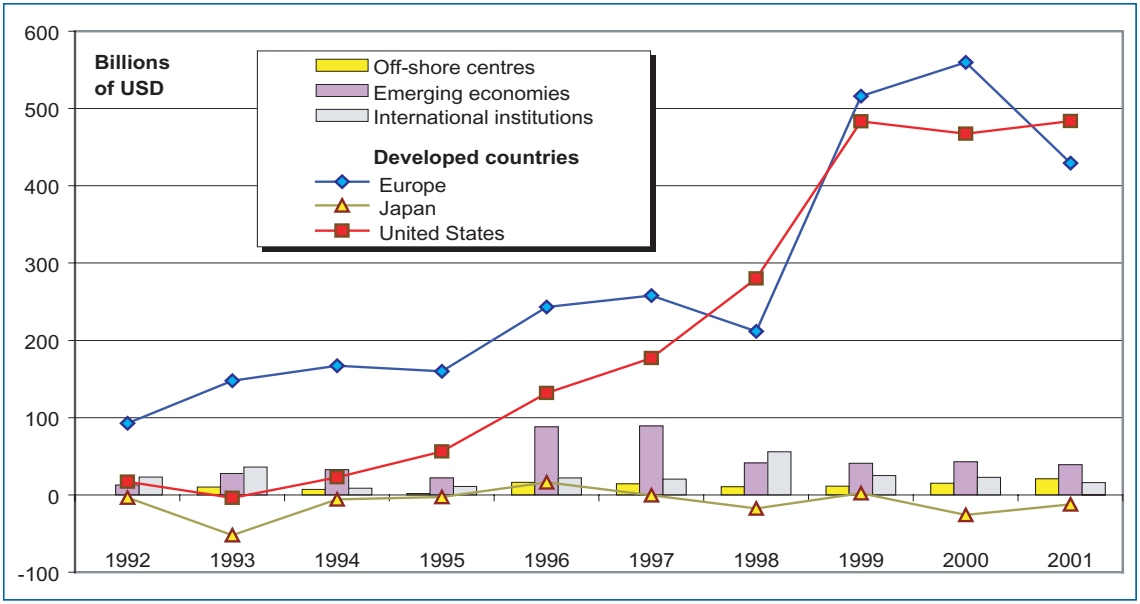
Primary data: BIS, Quarterly Review, International banking and financial market developments; BIS, Annual Report; IMF, World Economic Outlook

by off-shore centres, but only 1.5% by institutions with head offices there.

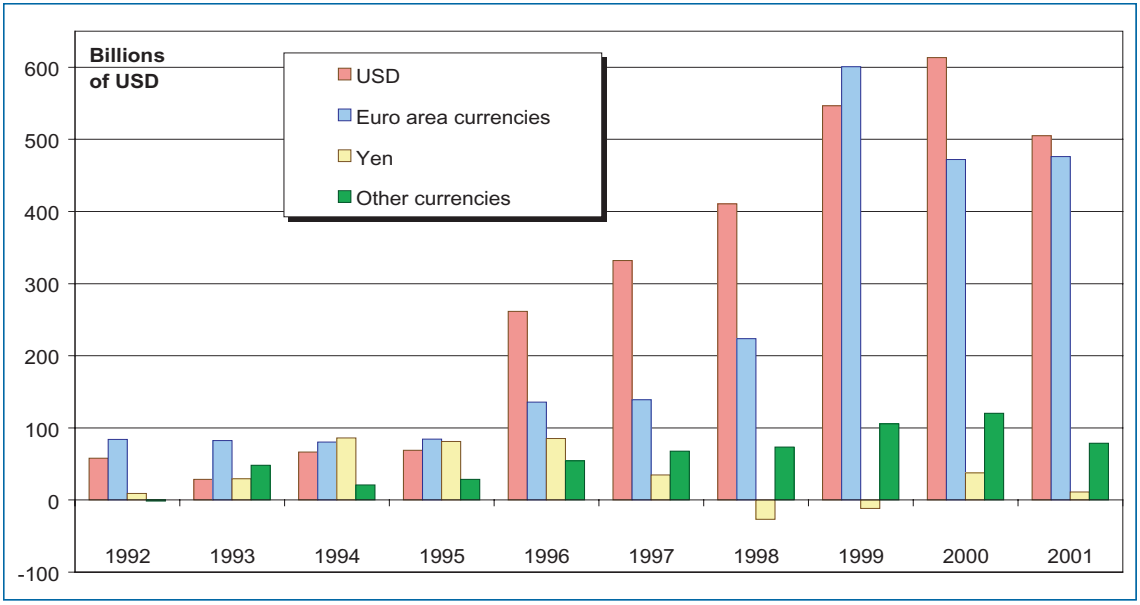
3. The euro is catching up with the dollar (Fig. G)

The US dollar is still the key currency, with 49% of amounts outstanding quoted in dollars in 2000 - an increase of 23 percentage points since 1994. However, the euro has made great strides since 1999, and by 2000 it was already the second most important currency on these markets, well ahead of the yen and the pound sterling.

5.4.F. Net bond issues on the international market, by region, in billions of USD, 1992-2001



5.4.G. Net bond issues on the international market, by currency, in billions of USD, 1992-2001



Primary data: BIS, Quarterly Review, International banking and financial market developments; BIS, Annual Report; IMF, World Economic Outlook

Grouping of countries: Fig. F cf BIS

5.5 Derivatives

CONCEPTS AND DEFINITIONS

The broad definition of a derivative is a contract specifying the parties' rights and obligations in respect of an "underlying" asset (which is usually financial). The derivative is based on the difference between the time when the contract is entered into and the time when the specific rights and obligations take effect. Thus, in the interval, the derivative itself becomes a financial asset whose value depends on the financial performance of the underlying asset, which may be of various kinds: shares, raw materials, currencies, stock market indexes or interest rates.

Above all, derivatives are risk management instruments, for they enable operators to transfer certain kinds of financial risk to other operators who are better equipped to handle it. The most commonly used derivatives concern risks, i.e. changes associated with the underlying assets (rates of interest, exchange rates, prices of raw materials or shares). Derivatives can be classified in various ways, particularly by type of risk or category of underlying asset and by type of instrument. In the latter case, the two main categories of derivatives are forward contracts and options:

- The parties to a forward contract agree to exchange a predetermined quantity of assets or goods on a given date, at a predetermined price. The value of such a derivative thus changes according to the difference between the price of the underlying asset as specified in the contract and its market price. A forward contract may involve a large number of underlying assets such as currencies or interest rates. Standardized forward contracts traded on organized markets are known as "futures". Another type of forward contract is the "swap". Here the parties agree to exchange, over a given period, flows of interest payments at predetermined rates, each calculated on a different basis (at the fixed or the variable rate, for instance) but in relation to the same "notional" sum, which is never exchanged. Here again, the commercial value of the swap depends on the difference between the interest rates specified in the contract and those prevailing on the market. At the end of a forward contract, each party - depending on how the market has moved - may be both a winner and a loser, which gives the contract a certain symmetry.
- An option is a contract whereby, in return for a premium, the buyer becomes entitled, but not obliged - this is the difference between an option and a forward contract - to buy (a "call" option) or sell (a "put" option) the underlying asset at a contractually specified price, on or before a predetermined date. Here again, the value of the contract fluctuates between the time it is entered into and the time it expires, according to the difference between the market price of the asset and price specified in the contract. However, unlike forward contracts, options are asymmetrical, for the seller incurs an obligation, whereas the buyer only acquires an entitlement which he can exercise or not as he sees fit. This entitlement is thus an asset.

From the point of view of financial technique, derivatives expose the parties to the risk of gains or losses several times greater than the value of the actual contract. The leverage associated with derivatives can only be mastered by highly skilled operators - especially as it is quite normal on financial markets for intermediaries to devise even more complicated instruments on the option and forward contract principle, sometimes combining a large number of underlying assets in order to meet a client's need to cover or transfer risks. Standardized instruments which are traded on organized markets and are thus continuously quoted are known in the profession as "plain vanilla" derivatives, unlike more sophisticated instruments which are traded over-the-counter (OTC).

The history of derivatives - particularly forward contracts - goes back many centuries. According

5.5.A. Over-the-counter and organized market turnover in derivatives, 1989-2001

Average total daily turnover notional value, in billions of USD

	April 89	April 92	April 95	April 98	April 01
Number of countries covered by the BIS survey	*21*	*26*	*26*	*48*	*48*
Total turnover on OTC	na	na	**880**	**1263**	**1387**
Foreign exchange derivatives	na	na	689	959	853
Outright forwards and forex swaps	na	na	643	862	786
Currency swaps	na	na	4	10	7
Options	na	na	41	87	60
Other	na	na	1	0	0
Interest rate derivatives	na	na	151	265	489
Forward Rate Agreements (FRA)	na	na	66	74	129
Swaps	na	na	63	155	331
Options	na	na	21	36	29
Other	na	na	2	0	0
Estimated gaps in reporting	*na*	*na*	*4*	*13*	*19*
Total turnover on organized markets	na	na	**1222**	**1373**	**2179**
Currency contracts	na	na	17	12	10
Interest rate contracts	na	na	1205	1361	2169

For information,

Total turnover on traditional exchange rate instruments	**590**	**820**	**1190**	**1490**	**1200**
Spot transactions	317	394	494	568	387
Foreign exchange swaps	190	324	546	734	656
Outrignts forwards	27	58	97	128	131
Estimated gaps in reporting	*56*	*44*	*53*	*60*	*26*

Data adjusted for local and cross-border double counting

Primary data: BIS, Triennial central bank survey of foreign exchange and derivatives market activity in 2001; BIS, Annual Report; IMF, International capital market

to experts they were already used in Mesopotamia, and then more widely during the Middle Ages and the Renaissance. Until the 1960s, derivatives were essentially limited to forward contracts on commodities, and were only used by those with expertise in the relevant markets. However, in the 1970s, in response to the liberalization of exchange rates and financial innovation, a wide variety of new instruments came into being and the volume of dealings in derivatives grew explosively. Deregulation and internationalization of the financial sector and the development of information technology fed a wave of financial innovation which has persisted since the 1970s. As a result, numerous derivatives have been standardized for trading on organized markets such as the Chicago Board of Options Exchange (the first market on which options are continuously quoted), which was opened in 1973.

METHODS AND PROBLEMS OF MEASUREMENT

It was only in the mid-1980s that monetary and financial supervisory authorities turned their attention to derivatives. In a report published in 1986, the Bank for International Settlements (BIS) expressed concern about the structural changes occurring in global finance. The report stressed that "disintermediation", coupled with financial innovation (particularly with regard to derivatives), had transferred a considerable amount of financial activity off banks' balance sheets, thereby extending the notion of risk beyond operators' balance-sheet commitments. It was at this point that banking supervisory authorities began to take a closer look at derivatives at international level and to measure them as exhaustively and coherently as possible.

Since 1986 the BIS and the IMF have drawn up statistical series which allow the impact of derivatives to be monitored. However, three major difficulties remain:

- How to draw up an accurate classification of derivatives, given their great variety. Only a small proportion of derivatives are standardized ("plain vanilla"); most transactions involve extremely sophisticated products. In order to be properly analysed, these derivatives must therefore be broken down into their primary components – a complex process.
- The prevalence of OTC transactions (ones that do not take place on organized markets). This means that the supervisory authorities must now look beyond at the institutions (banks and markets) that they are traditionally required to monitor. To cope with this problem, the BIS has held three-yearly surveys among all operators since 1986, most recently in 2001.
- How to assess the importance of a given derivative. There are two alternative methods, although as things stand it is not possible to gauge the coherence of the resulting information. The BIS publishes data on the turnover realized on derivatives in a single day (in terms of the notional value of the underlying assets, the prices of contracts and the number of contracts), whereas the IMF focuses on the number of outstanding commitments (in terms of notional value) on a given date. Each of these methods is based on a different approach, and may result in different assessments.

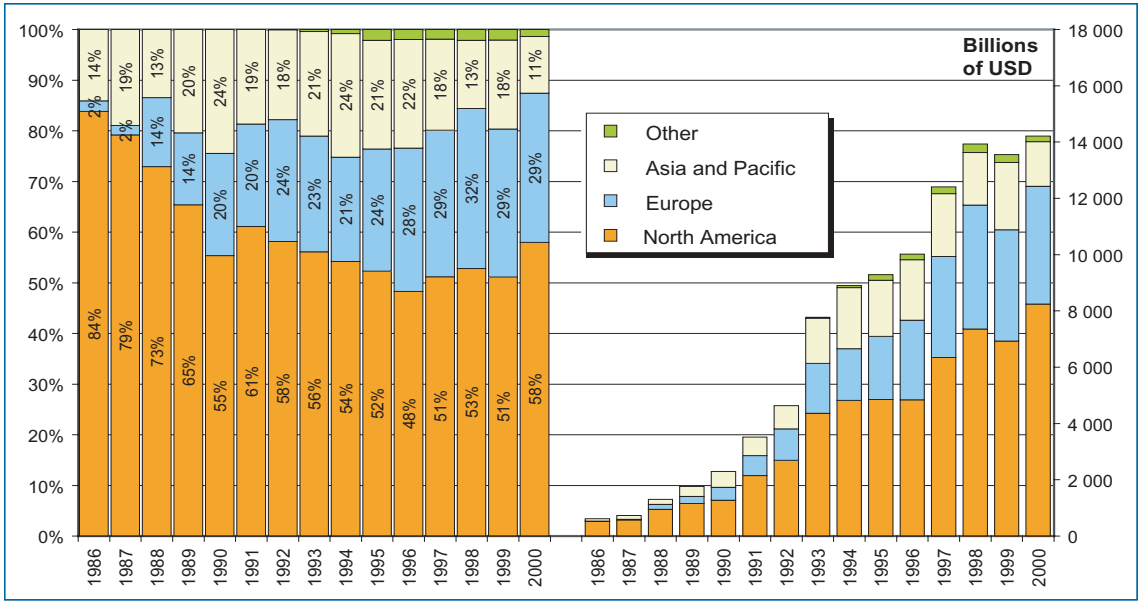
RECENT TRENDS

As we have seen, systematic use of derivatives is a recent phenomenon. The available statistical series are therefore short, and the trends they reveal can be no more than medium-term.

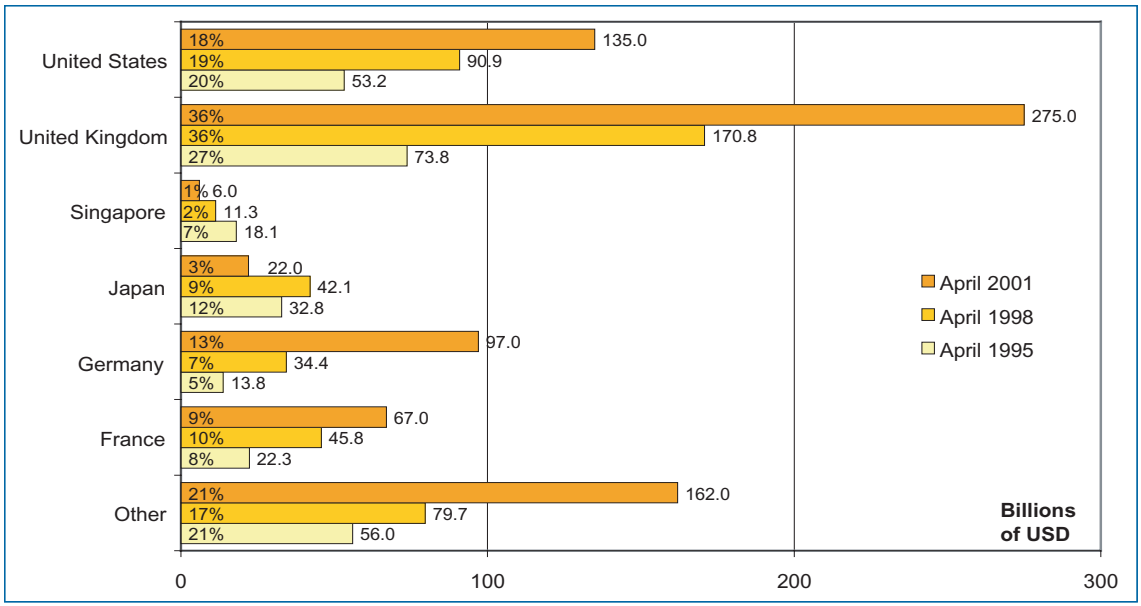
1. OTC transactions are taking over (Fig. A and E)

In terms of the total value of notional commitments, OTC derivatives have taken over from ones traded on organized markets. Between 1987

5.5.B. Organized markets, notional value of commitments, by operator's location, in billions of USD, 1986-2000



5.5.C. Total daily value of over-the-counter transactions, by operator's location, in billions of USD, 1995-2001



Primary data: BIS, Triennial central bank survey of foreign exchange and derivatives market activity in 2001; BIS, Annual Report; IMF, International capital market
Grouping of countries: Fig. B cf BIS

and 2001 the share of derivatives traded on organized markets fell from 45% to 13% of the total. This has caused serious problems for regulators; whereas risk exposure on organized markets is reduced by insistence on guarantees (margin calls), this is less common in the case of OTC transactions. However, when the daily turnover on OTC derivatives and those traded on organized markets are compared, the figures are reversed (only 39% for the former and 61% for the latter). This is because the two types of transaction do not involve the same instruments.

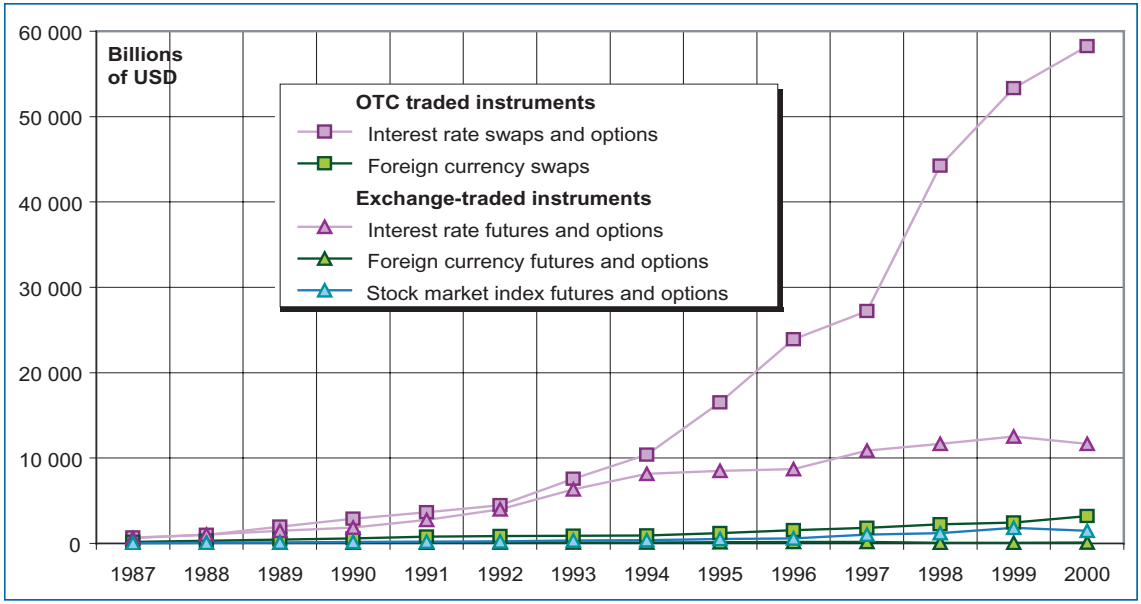
2. Dealings involving interest rates on organized markets (Fig. D)

Again in terms of notional exposure, the share of derivatives relating to interest rates increased slightly over the period, from 83% to 96% of the total amounts exposed to risk through derivatives. This trend reveals the increasing complexity of global finance, particularly through the internationalization of private financial institutions which manage their overall exposure in relation to a considerable number of interest rates. However, comparison of the volume of commitments and daily turnover on derivatives relating to interest rates and foreign exchange transactions suggest that dealings involving foreign exchange transactions are almost 18 times more volatile than ones involving interest rates.

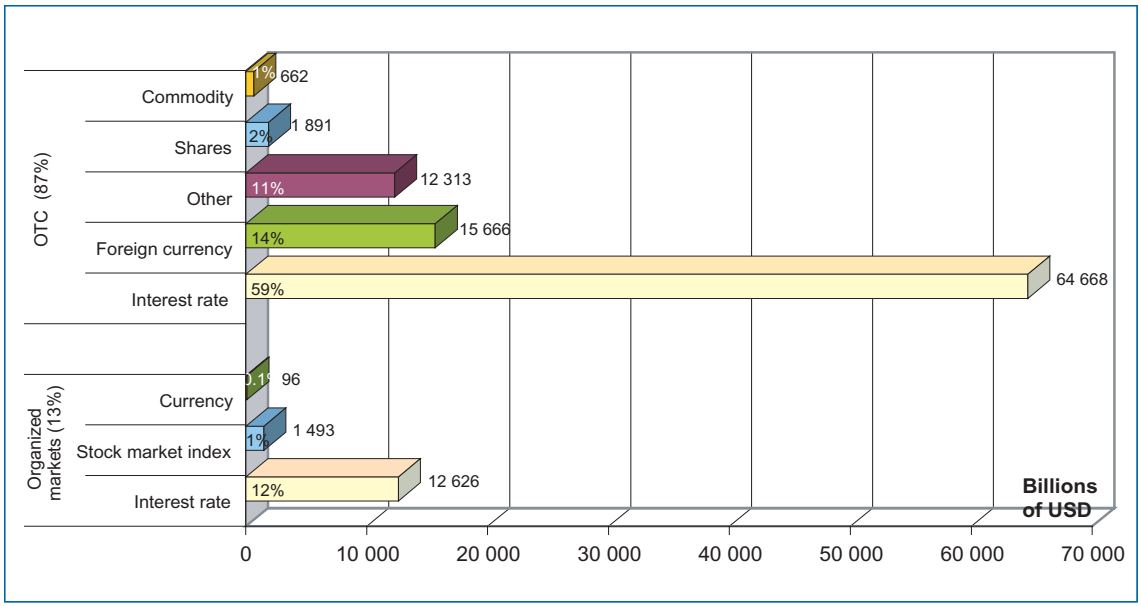
3. Competition between financial centres (Fig. B and C)

Because they are so numerous and so short-lived, derivatives are major sources of income for the intermediaries who earn commissions on them, and such dealings are therefore the subject of fierce competition between financial centres. Since the mid-1980s, European centres – with London leading the way - have greatly increased their share of both OTC and organized trading, at the expense of the United States and Asia. It should also be noted that other financial centres - particularly off-shore ones - have increased their share of OTC dealings.

5.5.D. Selected derivatives, notional value of commitments, in billions of USD, 1987-2000



5.5.E. Notional value of commitments, by type of derivative instrument, in billions of USD, 2000



Primary data: BIS, Triennial central bank survey of foreign exchange and derivatives market activity in 2001; BIS, Annual Report; IMF, International capital market

5.6 Foreign exchange transactions

CONCEPTS AND DEFINITIONS

A foreign exchange transaction can be defined as the sale of one currency in return for the purchase of another. Traditionally, when foreign currency had to be obtained in order to purchase imports, or when export earnings had to be converted into domestic currency, cross-border movements of capital and foreign trade were accompanied by foreign exchange transactions. During the 1960s the international monetary order set up as a system of fixed exchange rates at the end of the Second World War became noticeably less rigid as purely financial international transactions, epitomized by the emergence of the eurodollar, multiplied. In the early 1960s banks outside the United States began to accumulate large deposits of US dollars, and started to use them for loans - in dollars or other currencies - to non-banking clients outside the USA. The Euro-market was born.

By making it possible to lend and borrow foreign currency, the Euro-market opened up the door to a wide range of arbitrage transactions between countries and currencies. These new opportunities increased the international mobility of financial capital, particularly as the Euro-market operated in a legal vacuum. At the time no national legislation was able to control national banks' transactions in foreign currency or non-resident banks' transactions in domestic currency. The Euro-market based its foreign exchange transactions on a purely financial rationality which had no connection with trading and foreign direct investment needs. Meanwhile, the expansion of international finance and the foreign exchange transactions that this involved helped to bring about the collapse of the Bretton Woods system in summer 1971. Currencies were henceforth fully-fledged financial assets and became part of international asset management strategies. The fundamental question of how foreign exchange transactions have contributed to exchange rate stability (or instability) remains unanswered.

Technically speaking, foreign exchange transactions take a number of forms, which differ according to how the risk is distributed between the parties:

- cash transactions (the most common);
- forward transactions (in which the terms of the transaction are set in advance, even though the actual exchange will only take place at a later date);
- swaps (in which the parties exchange two cash sums in different currencies and agree to make the reverse transaction at a later date).

METHODS AND PROBLEMS OF MEASUREMENT

Strictly speaking there is no such thing as a foreign exchange market. Instead, there are operators - banks, transnational corporations and financial intermediaries - linked by an efficient, though costly, information network which permanently indicates the exchange rates at which currencies are offered or demanded. The volume of foreign exchange transactions within the network is not easy to quantify, owing to its huge size and the over-the-counter nature of its transactions, which also give it considerable flexibility. Thus, within hours of the 11 September tragedy, almost all foreign exchange transactions quit the United States and moved across the Atlantic.

5.6.A. Elimination of double counting in assessing foreign exchange markets' daily turnover, in billions of USD, 1989-2001

Average daily turnover (April) in billions of USD

Number of countries covered by the BIS survey:	*21* April 1989		*26* April 1992		*26* April 1995		*43* April 1998		*48* April 2001	
Total reported gross turnover	**907**	**100%**	**1 293**	**100%**	**1 864**	**100%**	**2 37**	**100%**	**1 863**	**100%**
Adjustment for local double counting	-189	-21%	-217	-17%	-292	-16%	-368	-16%	-245	-13%
"Gross-net" turnover, net of local double counting	718	79%	1 76	83%	1 572	84%	1 969	84%	1 618	87%
Adjustment for cross-border double counting	-184	-20%	-300	-23%	-435	-23%	-540	-23%	-445	-24%
"Net-net" turnover	534	59%	776	60%	1 37	61%	1 429	61%	1 173	63%
of which: cross-border transactions	…		*392*	*30%*	*611*	*33%*	*772*	*33%*	*674*	*36%*
Estimated gaps in reporting	56	+6%	44	+3%	53	+3%	60	+3%	26	+1%
Estimated total turnover	**590**	**65%**	**820**	**63%**	**1 190**	**64%**	**1 490**	**64%**	**1 200**	**64%**

The data include spot transactions, outright forwards and foreign exchange swaps

5.6.B. Distribution of average daily foreign exchange turnover by currency, in per cent, 1989-2001

Total = 200 %

Number of countries covered by the BIS survey:	*21* April 1989	*26* April 1992	*26* April 1995	*45* April 1998	*48* April 2001
USD	90%	82%	83%	87%	90%
Euro	-	-	-	-	38%
ECU and other EMS currencies	4%	12%	16%	17%	-
German mark	27%	40%	36%	30%	-
French franc	2%	4%	8%	5%	-
Pound sterling	15%	14%	9%	11%	13%
Yen	27%	23%	24%	20%	23%
Swiss franc	10%	8%	7%	7%	6%
Other currencies	25%	17%	16%	22%	30%
All currencies	200%	200%	200%	200%	200%

Primary data: BIS, Triennial central bank survey of foreign exchange and derivatives market activity in 2001; BIS, Annual Report

The first international attempt to measure the volumes of currency exchanged was in April 1986, in the form of a survey of daily market turnover carried out simultaneously by several central banks under the auspices of the Bank for International Settlements (BIS). The survey has since been repeated every three years, most recently in April 2001. From just four countries in 1986 (the United States, the United Kingdom, Japan and Canada), the geographical spread of the survey expanded to 48 countries by 2001. Even though leading financial centres were included in these series from the outset, comparisons over time require caution, for the BIS only began to make additional estimates from 1989 onwards.

The major technical difficulty with the survey is how to eliminate double counting. This is done in two stages:

- at national level, transactions in which both parties are included in the survey are identified. In BIS terminology, this yields what are known as "gross-net" values. The difference between "gross-gross" and "gross-net" amounts gives a picture of foreign exchange activities within the country.
- at international level, contracts between parties covered by the survey and residing in countries that are also covered by the survey are identified, yielding what are known as "net-net" figures. The difference between these figures and "gross-net" figures indicates the order of magnitude of each country's cross-border foreign exchange transactions.

RECENT TRENDS

1. Increasingly financial logic (Fig. A, B and C)

According to one American estimate, foreign exchange transactions in the United States totalled USD 18 billion in 1980 and, according to the BIS, had risen to USD 254 billion by 2001 - a fourteenfold increase in the space of twenty years. This gives an idea of the speed of development of foreign exchange markets, which in 2001 accounted for a "net-net" volume of USD 1,200 billion a day, equivalent to 3.8% of global GDP. Even if commissions are calculated in fractions of a per cent, this activity "adds" almost USD 350 billion a year to global GDP (more or less 1%).

Foreign exchange transactions are essentially a financial management instrument, as witness the fact that since the early 1990s more than 80% of them have taken place between financial operators. They go hand in hand with the globalization of finance and are an integral part of every operator's hedging strategies. The increasingly financial logic behind foreign exchange transactions is underscored by the fact that the percentage of cash transactions is declining, while the percentage of derivatives (options and swaps) is increasing.

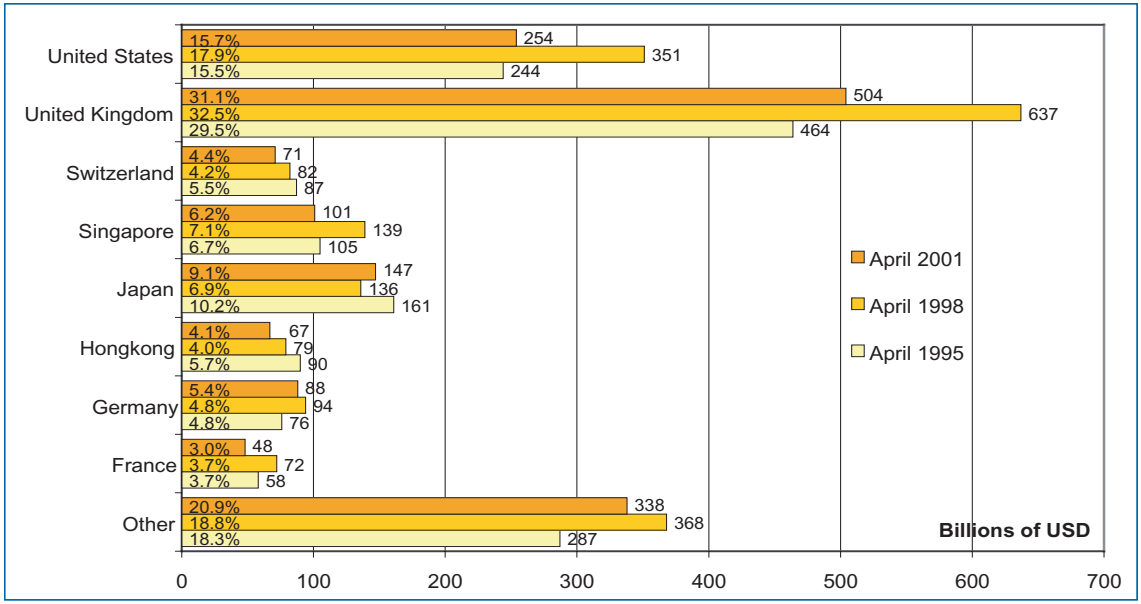
2. No foreign exchange without London and the dollar (Fig. B and C)

The foreign exchange market is dominated by the US dollar, which is involved in 90% of all transactions. This reveals two essential facts: the importance of the US currency in the global economy and global finance, and the fact that the foreign exchange market between certain minor currencies is very illiquid. To overcome this difficulty, operators often resort to the US dollar, which means that there are two transactions instead of one. While the dollar is the key currency, London is the key financial centre: almost one third of all foreign exchange transactions take place in the city on the Thames.

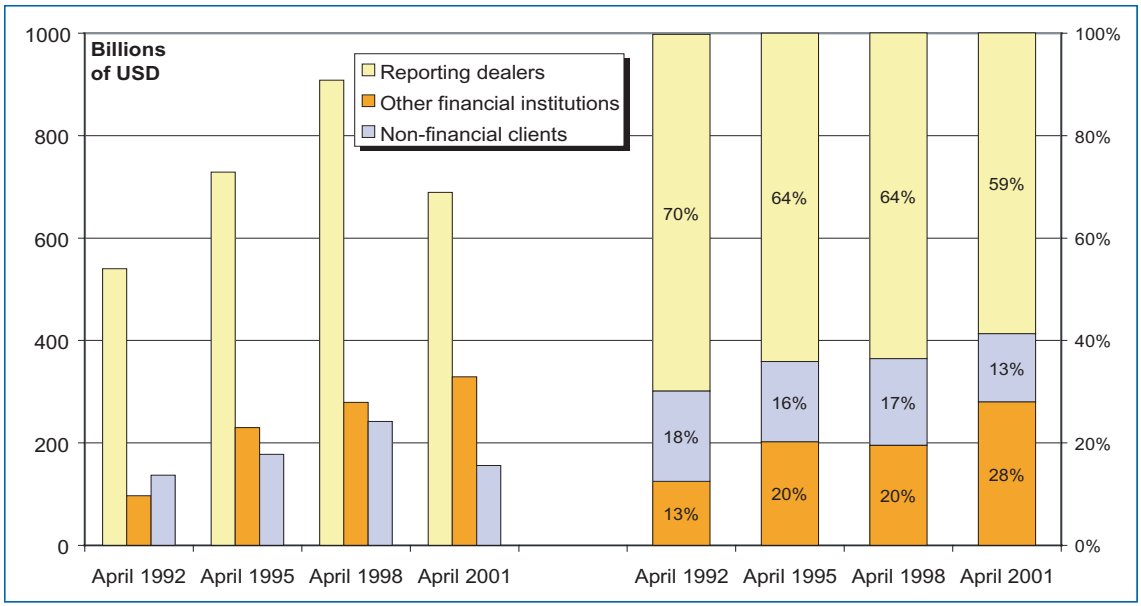
3. The Tobin tax

Since the mid-1980s, when the vast scale of the transactions taking place on foreign exchange

5.6.C. Changes in average volumes of transactions by financial centre, in billions of USD and in per cent, 1995-2001



5.6.D. Daily turnover by type of counterpart, in billions of USD and in per cent, 1992-2001



Primary data: BIS, Triennial central bank survey of foreign exchange and derivatives market activity in 2001; BIS, Annual Report

markets began to be noticed, the idea of taxing them has been voiced repeatedly. The tax (named after late James Tobin, who won the Nobel prize for economics in 1981 and died in March 2002) would be levied at the rate of 0.1% of the value of each transaction. This would reduce the volume of foreign exchange transactions (and, some believe, stabilize exchange rates) and would make considerable sums available to international organizations working in the field of development. Despite strong opposition, civil society has by no means abandoned the idea of the Tobin tax.

USER'S GUIDE

Abbreviations

The following is a list of the abbreviations used, with the English version first and the French version (where it exists) in brackets, followed by the full name in English. In one or two cases the French abbreviation is also used in English, or vice versa.

Abbreviations of organizations

BIS (BRI): Bank for International Settlements

EMS (SME): European Monetary System

EU (UE): European Union

FIBV (FIBV): International Federation of Stock Exchanges

GATT (GATT): General Agreement on Tariffs and Trade

ICAO: International Civil Aviation Organization

IFC (SFI): International Finance Corporation

ILO (OIT): International Labour Organization

IMF (FMI): International Monetary Fund

IRU (IRU): International Road Transport Union

ITU (UIT): International Telecommunication Union

NAFTA (ALENA): North American Free Trade Agreement

OECD (OCDE): Organization for Economic Cooperation and Development

UIC (UIC): International Railway Union

UNCTAD (CNUCED): United Nations Conference on Trade and Development

UNDP (PNUD): United Nations Development Programme

UNO (ONU): United Nations Organization

UNPD (UNPD): United Nations Population Division

UPU (UPU): Universal Postal Union

WB (BM): World Bank

WTO (OMC): World Trade Organization

Other abbreviations

CIF (Caf): Cost, insurance, freight

FDI (IDE): Foreign direct investment

FOB (Fab): Free on board

GDI (ISDH): Gender-specific development index

GDP (PIB): Gross domestic product

GNP (PNB): Gross national product

HDI (IDH): Human development index

HIPC (PPTE): Highly indebted poor countries

HPI (IPH): Human poverty index

ISIC: International Standard Industrial Classification

LACs (PMA): Least Advanced Countries

LIBOR: London Interbank Offered Rate

OTC: Over-the-counter

PC: Personal computer

PPP (PPA): Purchasing power parity

PQLI (IPQV): Physical quality of life index

PRGF (FRPC): Poverty Reduction and Growth Facility

SAF (FAS): Structural Adjustment Facility

SDR (DTS): Special drawing right

SME (PME): Small or medium-sized enterprise

UMTS: Universal Mobile Telecommunications System

USD: US dollar

Grouping of countries

Most of the statistical data presented in this publication are aggregates of primary data initially produced by national authorities. Two kinds of grouping have been used: (a) groupings made by the Observatoire de la Finance itself, and (b) groupings borrowed from suppliers of data. When groupings have been used in charts, the source is mentioned at the bottom of the page. If no source is mentioned, this automatically means that the grouping was made by the Observatoire de la Finance.

1. Groupings made by the Observatoire de la Finance:

For reasons of coherence and comparability, groupings made by the Observatoire de la Finance are based on the current composition of the various organizations or zones. This even applies to situations that predate the emergence of the organization or zone in question. For example, the "NAFTA" grouping is also used for series dating from before 1992, when the group first came into being.

Grouping by level of development:

- "OECD": the member countries – 30 at the beginning of 2002 – of the Organization for Economic Cooperation and Development, which are divided into three subgroups:
  - "NAFTA" : the three parties to the North American Free Trade Agreement as of 2002: Canada, Mexico, United States;
  - "EU": the 15 member states of the European Union as of 2002: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom;
  - "Rest of OECD": the other 12 member countries of the OECD as of 2002: Australia, Czech Republic, Hungary, Iceland, Japan, New Zealand, Norway, Poland, South Korea, Slovakia, Switzerland, Turkey.
- "Non-OECD": countries that are not members of the OECD, i.e. the rest of the world.

Grouping by geographical position:

- The Americas are divided into "North America" (Canada, United States) and "Latin America". In some cases the "North America" grouping is replaced by "NAFTA", the effect of which is to transfer Mexico - a member of NAFTA - from one group to another;
- "Europe" is sometimes divided into two subgroups: "European Union" and "rest of Europe" (which includes Russia);
- "Africa";
- "Asia", including the Middle East.

2. Groupings made by other organizations:

Most suppliers of statistical data group countries in accordance with their own particular criteria and aims, which are set out in the relevant publications. These groupings vary over time and are updated very regularly. The bases for the groupings used are indicated in the following publications, which interested readers are hereby referred to :

- World Bank, Development Finance 2001; World Development Indicators 2001;
- International Labour Organization, Key Indicators of the Labour Market, 1999;
- International Monetary Fund, International Financial Statistics 2000;
- United Nations Conference on Trade And Development, World Investment Report, 2001;
- World Trade Organization, Annual Report, 2001; International Trade Statistics, 1998;
- Bank for International Settlements, Quarterly Review: International Banking and Financial Market Developments, November 2000; Guide to International Banking Statistics, July 2000;
- Universal Postal Union, Post 2005 – Core Business Scenarios; Postal Statistics, 1996.

3. Missing data and the "World" group

The era of statistics is only just beginning and, despite continuing improvements in coverage, the figures are still far from complete, especially in relation to earlier periods and depending on the nature of the data or the countries concerned. This is particularly true of Asian, African and Latin American countries and micro-states in general.

Owing to these gaps, the statistics presented here may not always entirely match the theoretical composition of the groups they refer to. Even if the number of countries not covered is sometimes quite large, they are mostly micro-states who absence has very little impact on orders of magnitude or long-term trends. Major discrepancies are discussed in the sections of the text dealing with "Methods and problems of measurement".

Gaps in statistical coverage of countries are a problem in the "World" group. This grouping was obtained simply by taking all the available data into account, with minor interpolations to cover individual gaps.

In some cases, world population and global product were used to compare other variables or put them in perspective. In that case use was made of data supplied by the World Bank.

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Bibliography and sources

Bank for International Settlements, *71st Annual Report*: 1 April 2000 - 31 March 2001, Basel: Bank for International Settlements, 2001

Bank for International Settlements, *BIS Quaterly Review*: International banking and financial market developments, March 2002, Basel: Bank for International Settlements, 2002

Bank for International Settlements, *Statistics on payment systems in the Group of Ten countries*: figures for 1999, Basel: Bank for International Settlements, 2001

Bank for International Settlements, *Survey of electronic money developments*, Basel: Bank for International Settlements, 2001

Bank for International Settlements, *Triennal central bank survey of foreign exchange and derivatives market activity in 2001*, Basel: Bank for International Settlements, March 2002

Calvert Group, *Calvert-Henderson Quality of Life Indicators*, Bethesda: Calvert Group, 2000

European Union, *EU Energy and Transport in Figures*: statistical pocketbook 2001, Luxembourg: European Communities, 2001

Fonds monétaire international, *Organisation et opérations financières du FMI*, Washington D.C.: Fonds monétaire international, 1998

Fonds monétaire international, *Statistiques financières internationales*, Washington D.C.: Fonds monétaire international, 1998

Inter-Agency Task Force on Finance Statistics, *Joint BIS-IMF-OECD-World Bank statistics on external debt*, Inter-Agency Task Force on Finance Statistics, May 2002

Inter-Secretariat Working Group on National Accounts, *System of National Accounts 1993*, Brussels, New-York, Paris...: Commission of the European Communities; International Monetary Fund; Organisation for Economic Co-operation and Development..., 1993

International Civil Aviation Organization, *Civil aviation Statistics of the World 1996*, Montreal: International Civil Aviation Organization, 1998

International Federation of Stock Exchanges, *Annual Report 1999*, Paris: International Federation of Stock Exchanges, 2000,

International Labour Office, *Key Indicators of the Labour Market 1999*, Paris: International Labour Office, 1999

International Labour Organisation, *Economically active population 1950-2010*, Geneva: International Labour Organisation, 1996

International Monetary Fund, *Annual Report 2001*, Washington D.C.: International Monetary Fund, 2001

International Monetary Fund, *Government Finance Statistics Manual 2001*, Washington D.C.: International Monetary Fund, 2001

International Monetary Fund, *Government Finance Statistics Yearbook*, Washington D.C.: International Monetary Fund, 2001

International Monetary Fund, ***International Capital Markets***, Developments, Prospects, and Key Policy Issues, Washington D.C.: International Monetary Fund, 1999

International Monetary Fund, ***The Statistical measurement of Financial Derivatives***, Washington D.C.: International Monetary Fund, 1998

International Monetary Fund, ***World Economic Outlook***, Washington D.C.: International Monetary Fund, 2001

International Telecommunications Union, ***Yearbook of Statistics 2001***: Chronological Time Series 1990-1999, Geneva: International Telecommunications Union, 2001

International Transport Union, ***World Telecommunication Indicators Database 2000-2001***, Geneva: International Transport Union, 2000

Money Matters Institute, ***Wealth of Nations Triangle Index***: Statistical GPS for Emerging Economies, Boston: World Times, Inc., 2002

National Bureau of Statistics of China, ***China Statistical Yearbook '99***, Beijing: National Bureau of Statistics of China, 1999

Organisation de Coopération et de Développement économiques, ***Perspectives de l'emploi de l'OCDE***, Paris: Organisation du Commerce et du Développement économiques, 2001

Organisation de Coopération et de Développement économiques, ***Perspectives des communications de l'OCDE***, Paris: Organisation du Commerce et du Développement économiques, 2001

Organisation for Economic Co-operation and Development, ***External Debt Statistics***: Historical data 1988-1999, Paris: Organisation for Economic Co-operation and Development, 2000

Organisation for Economic Co-operation and Development, ***Financial Market Trends***, Paris: Organisation for Economic Co-operation and Development, 2001

Organisation for Economic Co-operation and Development, ***OECD Economic Outlook***, Paris: Organisation for Economic Co-operation and Development, 1998

Organisation for Economic Co-operation and Development, ***Small and Medium Entreprise Outlook***, Paris: Organisation for Economic Co-operation and Development, 2000

Organisation mondiale du commerce, ***Rapport annuel 2001***, Paris: Organisation mondiale du commerce, 2001

Population Division (United Nations), ***World Population prospects***: the 2000 Revision, New York: United Nations, 2001

Programme des Nations Unies pour le développement, ***Rapport mondial sur le développement humain***, Paris: De Boeck & Larcier s.a., 2001

Royal Norwegian Ministry of Foreign Affairs, ***Globalisation and Inequality***: World Income Distribution and Living Standards, 1960-1998, Oslo: Royal Norwegian Ministry of Foreign Affairs, 2000

Standard & Poor's, ***Emerging Stock Markets Factbook***, New York: Standard & Poor's, 2001

Standard & Poor's, ***The S&P Emerging Market Indinces***: Methodology, Definitions, and Practices, New York: Standard and Poor's, 2000

State Commitee of the Russian Federation on Statistics, ***Handbook Russia 2001***, State Commitee of Russian Federation on Statistics, 2001

Telegeography, ***Packet Geography 2002***: Global Internet Statistics and Commentary, Washington D.C.: Telegeography, 2001

Thomson Financial, ***Datastream Advance 3.0***, London: Datastream International Limited, 2000

Union Internationale des Transports Routiers, ***Statistiques mondiales du Transport***, Genève: Union Internationale des Transports Routiers, 1996

Union postale universelle, ***Poste 2005* - Orientations en matière de courrier**, Berne: Union postale universelle, 2001

Union postale universelle, ***Rapport annuel 2000***, Berne: Union postale universelle, 2000

Union postale universelle, ***Statistique des services postaux 2000***, Berne: Union postale universelle, 2001

United Nations Conference on Trade and Development, ***Review of Maritime Transport 2000***, New-York; Geneva: United Nations, 2000

United Nations Conference on Trade and Development, ***Trade and Development Report 2002***, New-York; Geneva: United Nations, 2002

United Nations Conference on Trade and Development, ***World Investment Report 2001***: promoting linkages, Geneva: United Nations , 2001

United Nations Development Programm, ***Globalisation and Poverty***: Potentials and Challenges, New-York: United Nations Development Programme, 2001

United Nations Development Programme, ***The Human Development Report CD-ROM***, New York: United Nations Development Programme, 1999

United States General Accounting Office, ***Financial Derivatives***: Actions Needed to Protect the Financial System, Washington D.C.: United States General Accounting Office, 1994

World Bank, ***Global Development Finance***, Washinton D.C.: World Bank, 2001

World Bank, ***Global Economic Prospects and the Developing Countries 2002***, Washington D.C.: World Bank, 2002

World Bank, ***World Development Indicators 2001***, Washington D.C.: World Bank, 2001

World Trade Organisation, ***International Trade Statistics 2001***, Paris: World Trade Organisation, 2001