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**CAPITAL FLOWS IN THE 1980s:
A SURVEY OF MAJOR TRENDS**

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CAPITAL FLOWS IN THE 1980s: A SURVEY OF MAJOR TRENDS*

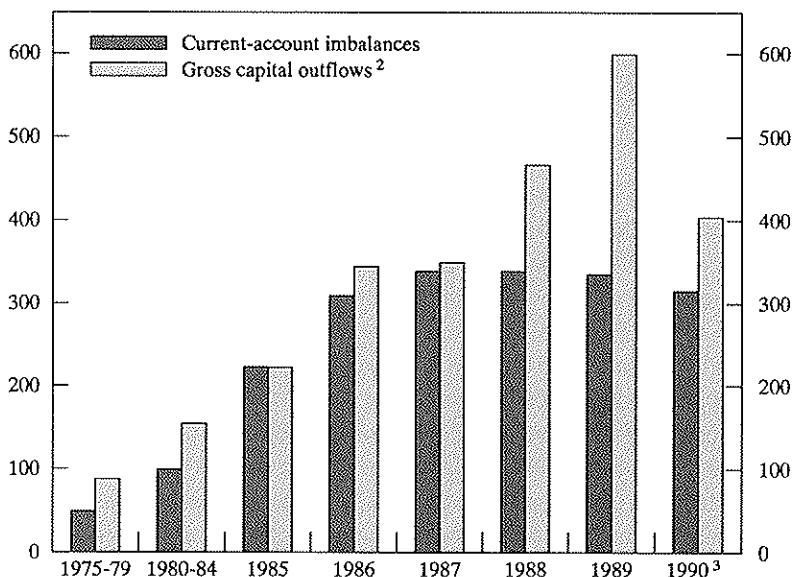
Introduction

The 1980s were marked by the emergence of persistent current-account imbalances on a scale not seen since before the First World War. Up to 1982 the sum of larger industrial countries' imbalances – calculated simply by adding all surpluses and deficits together, ignoring the sign – never went above \$100 billion a year and was normally below \$50 billion. Thereafter this aggregate climbed steeply, exceeding \$300 billion (more than 2% of aggregate GNP) by the second half of the decade. A comparable calculation for gross capital outflows reveals a still steeper progression (Graph 1).

Indeed, gross capital flows continued to expand strongly even after current-account imbalances reached a plateau. By the end of the decade, gross capital flows had risen to about \$600 billion, almost double the size of aggregate current-account imbalances. Although preliminary and incomplete estimates for 1990 suggest a sharp reversal from the previous year, gross capital flows remain large. Another indication of the greater quantitative importance of international capital transactions is the rapid growth in foreign exchange trading – which more than doubled between 1986 and 1989, a rate of expansion much faster than that of international trade in goods and services. By 1989, global foreign exchange trading is

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Graph 1
Aggregate current-account imbalances and gross capital outflows¹
 In billions of US dollars; annual averages



¹ Of fourteen industrial countries, viz. the Group of Ten countries plus Australia, Austria and Spain. ² Sum of direct investment, portfolio investment and long-term bank lending.

³ First three quarters only, at an annual rate; for some countries data are partly estimated.

Sources: IMF Balance of Payments statistics and national sources.

estimated to have amounted to \$650 billion daily, almost forty times the average daily value of world trade.¹ This suggests that most foreign exchange transactions must have been driven by international capital flows in the wake of liberalisation.

Up to the 1970s there were extensive controls on capital movements in most major industrial countries. Indeed, the Bretton

¹ This is based on the survey of foreign exchange activity reported in Bank for International Settlements (1990a). See also the discussion in Bank for International Settlements (1990c), pages 208-211.

Woods Agreement, which enjoined signatories to avoid restrictions on current external payments, specifically allowed controls on international capital movements under Article VI. Although the 1950s saw opinion shift in favour of greater freedom of capital transactions (as witnessed, for example, by the OECD's adoption of a Code of Liberalisation of Capital Movements in 1961), balance-of-payments imbalances in the 1960s led to a retightening of a number of restrictions.² Among the most important were US measures to control capital exports and measures taken by current-account surplus countries to limit capital inflows.

Moreover, the private capital movements that could occur tended to be driven to an important extent by expectations of exchange rate realignments. Because such expectations were in turn driven by current-account developments, deficit countries were usually confronted with capital outflows, and surplus countries with inflows, that compounded the initial external disequilibrium.

As some controls were gradually eased during the 1970s, private capital continued to flow from deficit to surplus countries. Even with the advent of floating exchange rates in 1973, private flows still tended to compound, rather than offset, current-account imbalances: surplus countries typically faced sizable *ex ante* private capital inflows that led to currency appreciation far greater than most observers would have expected before the onset of floating.³ Likewise, downward exchange rate pressure was exacerbated by capital outflows in deficit countries.

Violent swings in exchange rates intensified inflationary pressures in some countries and put an intolerable burden on the traded goods sector in others. It is not surprising that such external pressures often

² For a review of the changing official stance vis-à-vis capital movements since the Second World War see Lamfalussy (1981).

³ Before floating, many, and perhaps most, economists expected adjustment under flexible exchange rates to be a good deal smoother than under the "politically contaminated" fixed rate system as persistent misalignments could be avoided and actual changes in parities small and gradual. On this, see McKinnon (1979), especially Chapter 7.

triggered changes in domestic policies that were not always desirable on domestic grounds – especially, perhaps, in surplus countries. During this decade, then, private capital flows tended to magnify current-account disequilibria, and so intensify the external pressures on economic policy.⁴

The gradual erosion of controls on international capital movements in the 1970s gave way to virtually outright abolition in the 1980s (1979 in the United Kingdom) in those major countries that had not already abolished restrictions. By the end of the decade, private residents of all major and most smaller industrial countries enjoyed almost complete freedom to acquire foreign assets.⁵ At the same time, far-reaching technological innovations dramatically reduced the costs, while increasing the speed, of international communications and financial transactions. These developments paved the way for a growing range of innovative financial instruments. To paraphrase one observer, the world monetary system underwent three revolutions all at once – deregulation, internationalisation and innovation.⁶

With the explosion of flows that resulted, capital movements came more and more to have a life of their own. Certain powerful trends proved capable of sustaining net capital movements in the same direction for many years. Quite unlike the experience of the 1960s and 1970s, countries with large current-account deficits could continue to attract foreign capital, thus weakening external pressures for policy adjustment. This new situation is rather reminiscent of the pre-1914 period when large net capital movements, and thus current-

⁴ One review of international experience of macro-economic policy during this period concluded that it was almost always external pressures (usually in the form of exchange rate pressure) that forced changes in economic policy, and not the perception that domestic policies were inappropriate or unsustainable. See OECD (1988).

⁵ The main exception is that financial institutions' investment abroad remains regulated in a number of countries, a point explored in more detail on pages 65–72 below.

⁶ Lamfalussy (1985), who noted that western financial systems in the 1980s faced four interconnected evolutionary processes – disinflation, as well as internationalisation, innovation and deregulation.

account imbalances, persisted for many years.⁷ In the eyes of some observers, the 1980s have seen this “classical” position restored – with capital movements determining current-account imbalances. The analogy with the pre-1914 period is telling, not least because it helps to bring some key characteristics of the last decade into sharper focus.

After exploring the historical parallels with the gold standard period (Section I), the present survey provides an overview of the major characteristics of capital flows during the 1980s (Section II). Subsequent sections look in greater detail at the main components: foreign direct investment, portfolio investment, short-term bank flows and official intervention. A penultimate section asks some simple questions: which categories of capital flows are more volatile? Are some capital flows more autonomous than others? Not surprisingly, these questions have no unambiguous answers. Some tentative implications for the future are drawn in the final section.

I.

Comparison with the pre-1914 gold standard

Current-account imbalances – and the associated capital flows – in the years before 1914 were actually larger, measured in relation to GNP, than in the 1980s. During the period 1880 to 1913, the United Kingdom’s current-account surplus averaged some 4½% of GNP annually, yielding a stock of net external assets reaching about 130–140% of GNP by the eve of the First World War. The Scandinavian countries ran deficits of around 2½% of GNP, and capital inflows to Australia and Canada were larger still.⁸ Latin

⁷ For a prominent statement of the similarities between the present time and the 1880–1914 period, see Lawson (1989). Going further back, Zevin (1989) suggests there is circumstantial evidence that financial markets in north-west Europe were already integrated by the early eighteenth century.

⁸ Imlah (1958), Mitchell (1988) and Bayoumi (1990).

American countries were also major capital importers. However, three features of the pre-1914 landscape radically distinguish that era from the 1980s.

Gold standard

The first characteristic relates to the international financial and monetary regime.⁹ From about 1880 to the outbreak of war in 1914 most major countries were on the gold standard, implying, of course, that exchange rates were fixed. The currency of denomination of capital flows was relevant only to the extent that there was a risk that events would force a particular country “off gold”. But during this period few developed countries were ever forced off gold.¹⁰ With the exception of two or three isolated episodes, when the markets came to doubt the credibility of a particular country’s gold standard commitment, short-term capital movements were therefore not generally dominated by expectations of exchange rate changes – quite different from experience after the First World War.¹¹

Confidence that this system of fixed exchange rates would be maintained meant that short-term capital flows were highly interest rate elastic: only relatively small interest rate differentials were typically needed to produce the required short-term flows to finance any incipient imbalance. Short-term interest rates usually remained in the 2 to 6% range in major European countries. Although the

⁹ Argy (1981) provides a useful concise summary of the history of exchange rate regimes from the gold standard to the first oil shock.

¹⁰ Italy was forced off gold in 1891. Latin American countries were often forced off gold during the late nineteenth century – but their borrowing was usually denominated in foreign currency.

¹¹ The three main episodes when gold standard currencies came under pressure from speculative short-term capital movements were in 1893–4, when the US dollar came under pressure (worldwide depression, banking crises and bimetallic sentiment); in 1905–6, when Russian inflation after the Russo-Japanese War led to a large-scale flight of capital; and during 1911–14 when Germany faced short-term outflows. Such rather isolated episodes did not shake underlying confidence in the viability of the system. See Bloomfield (1963).

Table 1
UK interest rates and foreign investment under the gold standard

	Rate of inflation ¹	Yield on Consols	Short-term interest rate ²			Average rate of return on external assets ³
			Peak	(Date)	Number of days at peak	
1881-90 . . .	-0.7	2.77	6	(30.1.82) (30.12.89) (7.11.90)	24 52 27	5.0
1891-1900 . .	0.7	2.32	6	(30.11.99)	41	4.5
1901-13 . . .	0.5	2.96	6	(19.10.06)	90	5.0
			7	(7.11.07)	56	

¹ Deflator for GDP at factor cost.

² Bank rate.

³ Defined as net investment income as a percentage of the stock of external assets.

Sources: Imlah (1958) and Mitchell (1988).

Bank of England raised short-term rates readily to limit loss of gold reserves (unlike some other countries¹²), Bank rate rarely reached 6% and even then remained at that level only for a matter of days (Table 1). The high interest rate elasticity of capital flows helped to limit the variability of short-term interest rates.

This was achieved despite the relatively high year-to-year variations in the rate of inflation, the standard deviation of which is shown in the second column of Table 2. Because inflationary periods were followed by deflation, with prices actually falling, the average inflation rate during the period as a whole was negligible – about one-tenth of 1% a year in the United Kingdom, the main financial centre, and only a little higher in the United States. One measure of the variability of short-term interest rates is the standard deviation of changes in annual averages, shown in the final column of Table 2:

¹² Other European countries relied rather less on varying interest rates. France sought to maintain stable short-term interest rates by maintaining large gold reserves; both France and Germany resorted to non-market devices to deflect pressures from their gold reserves. See, e.g., Ford (1989).

Table 2
The variability of inflation and interest rates under different international monetary regimes

	Inflation rate		Long-term interest rate		Short-term interest rate	
	Average	Standard deviation*	Average	Standard deviation*	Average	Standard deviation*
A. United Kingdom						
Gold standard 1881-1913 . . .	0.1	2.2	2.7	0.1	2.8	0.8
Bretton Woods 1950-70	4.0	2.2	5.6	0.5	4.4	1.0
Floating 1973-90	10.2	5.5	12.0	1.5	10.6	2.2
B. United States						
Gold standard 1881-1913 . . .	0.4	3.8	4.4	0.2	4.1	1.4
Bretton Woods 1950-70	2.9	1.4	4.0	0.4	3.2	0.8
Floating 1973-90	5.9	1.6	9.4	1.4	8.0	1.9

Note: This table follows McKinnon (1989).

* The standard deviation of the first differences of annual averages.

The following series were used (all interest rates are annual averages):

	United Kingdom	United States
Inflation rate	GDP price deflator	GNP price deflator from 1950; GDP price deflator from 1889 to 1950; the Federal Reserve Bank of New York cost-of-living index from 1880 to 1889
Long-term interest rate	Yield on Consols up to 1960; yield on 20-year government bonds 1961-90	Yield on American railroad bonds 1881-1913; yield on 10-year Treasury bonds 1950-90
Short-term interest rate	Rate on 3-month bank bills up to 1960; 91-day Treasury bills 1961-90	Stock exchange 90-day loans 1890-1913 [no earlier estimated]; 3-month Treasury bills 1950-90

Sources: UK Central Statistical Office, US Department of Commerce and Mitchell (1988).

in the United Kingdom under the gold standard it was only 0.8 percentage points, as it was in the United States under Bretton Woods, when the dollar had become the key currency.¹³

The fact that short-term capital flows were highly interest rate elastic ensured that short-term interest rates were closely correlated

¹³ The standard deviation of *changes* in the rate of inflation eliminates any trend and is a better measure of volatility than the simple standard deviation.

internationally.¹⁴ Perhaps of greater significance, nominal long-term interest rates in the major international centres (Belgium, France, Germany, the Netherlands, the United Kingdom and the United States) did not diverge from each other by more than one percentage point. Because prices in different countries also tended to move together, there was a marked tendency for real rates of return to be equalised internationally.

Limited range of financial assets

A second, and partly related, feature of capital flows in the late nineteenth century was the extremely limited range of financial assets even in domestic markets. The fact that most trade and capital movements were denominated in sterling (or in another gold standard currency) reduced uncertainty about the future real value of debts and credits. This had important consequences:

- low financial uncertainty limited the need for financial diversification and the hedging of risks, an important motive behind short-term flows today. The relatively high costs of communications in any case served to impede such activity. Accordingly, there were not the huge two-way flows of capital that have marked the 1980s: gross flows appear to have been only little larger than net flows;¹⁵

- the limited range of financial assets may have been one explanation for the remarkable stability of long-term interest rates during the period.¹⁶ The knowledge that short-term interest rates generally remained in the 2 to 6% range may also have contributed to this stability.

¹⁴ This paragraph draws on McKinnon (1989) (especially Figures 1 to 3) and Eichengreen (1990).

¹⁵ Gross UK property income from abroad rose steadily from around £60 million in 1880 to £224 million by 1913; gross property income paid abroad rose from £4 million to only £24 million by 1913. (Source: Mitchell (1988).)

¹⁶ McKinnon (1989) suggests that it was harder for international investors to invest in nonfinancial assets such as real estate: limited possibilities for arbitrage between real and financial assets also enhanced the stability of nominal bond yields.

Just *how* stable long-term interest rates were under the gold standard can be seen from Table 2 above: the standard deviation of annual changes in long-term rates was only around 0.1 to 0.2 percentage points, a stability not achieved even under Bretton Woods despite a comparable stability in the rate of inflation.

Long-term investment in real assets

The third characteristic of the large-scale flow of international capital in the late nineteenth century was that much of it was long-term in nature, going to finance investment in real assets (particularly investment in railway companies). Even when it took the form of investment in financial assets (e.g. the purchase of foreign government securities), the proceeds were used mainly to finance real investment.¹⁷ With the opening-up of new parts of the globe, large-scale population movements, free trade and major improvements in transport, the scope for profitable investment opportunities was very large.

One indication of the scope for profitable foreign investment at that time is that real output was expanding twice as fast in capital-importing countries outside Europe as in capital-exporting countries in Europe (Table 3). This pattern of capital flows to countries with relatively high growth rates weakened appreciably in the inter-war period and broke down entirely after the Second World War, when the most rapidly growing areas were no longer capital importers.

The orientation of capital flows towards real investment had two advantages. First, assets were developed, which helped to finance debt service and repayment. Secondly, the investment demand facilitated by the capital inflow typically led to a counterbalancing deterioration of the current account in the recipient country, where demand and output rose, leading to an increased demand for imports, often of the counterpart capital goods themselves. The

¹⁷ By 1913, about 70% of outstanding UK foreign investment consisted of government or railway bonds. (Source: Bloomfield (1968).)

Table 3
Growth in capital-exporting and capital-importing countries
 (average annual growth rate)

	1870-1913	1913-38	1950-73	1973-87	Memorandum: current-account balance as a percentage of GNP/GDP 1880-1913
19th century capital exporters					
United Kingdom . . .	1.9	1.1	3.0	2.6	4.5
France	1.6	0.8	5.1	2.2	
Germany	2.8	2.1	6.0	1.8	1.8
Italy	1.5	1.6	5.5	2.4	0.6
Belgium	2.0	0.9	4.1	1.8	
Netherlands	2.1	2.2	4.8	1.8	
19th century capital importers in Europe					
Denmark	2.7	2.5	4.0	1.8	-2.6
Norway	2.1	3.0	4.0	4.0	-2.5
Sweden	2.8	2.7	3.8	2.0	-2.7
19th century capital importers, other					
Argentina	6.4*	2.7	3.8	0.8	
Australia	3.2	1.5	4.7	2.9	
Brazil	3.5*	3.9	6.7	4.8	
Canada	4.1	1.8	5.2	3.4	
Asia					
Japan	2.5	4.1	9.7	3.7	
South Korea	2.0*	3.9	7.5	7.9	
Taiwan	1.8*	4.1	9.3	7.8	
United States	4.2	1.7	3.6	2.5	0.7

Note: Estimates adjusted to exclude the effects of frontier changes.

* 1900-13 only.

Sources: Bayoumi (1990), Maddison (1982 and 1989), Mitchell (1980) and US Department of Commerce (1975).

transfer of capital could thus be “requited” without requiring a change in the terms of trade, allowing the exchange rate to remain fixed.

Only a rather modest, and remarkably constant, differential over domestic returns was apparently needed to keep foreign investment

flowing in the late nineteenth century. Some indication of this is provided by statistics on foreign investments by the United Kingdom, which accounted for more than half of total international investment during the period. At that time the average return on the United Kingdom's long-term overseas investment was around 5%, i.e. about 2 percentage points above the yield on domestic gilts (see Table 1 above). Many factors may explain this ready movement of funds abroad. As noted, there was little or no exchange rate risk as most loans were denominated in sterling. Of more importance, perhaps, was the fact that the risk of default was widely discounted, partly no doubt because much of the investment went to British dominions, and partly because of recipient countries' dependence on the UK market for their exports. The surveillance and monitoring role of long-established issuing houses in London did much to ensure the soundness of loans; this mechanism doubtless played a role in keeping risk premia relatively low (on this see Salter (1951)). A final factor may have been that the greater stability in the relative price of exports of primary commodities (*vis-à-vis* manufactured goods) in the period before 1913 than subsequently reduced the risk of investing in raw material development and exploitation.¹⁸ In some cases, of course, confidence in foreign investment turned out to be misplaced: defaults did occur.

¹⁸ For evidence, see Eichengreen (1990), who suggests that the greater volume of lending before 1913 may have reflected the lower incidence of interest rate and commodity-price shocks that disrupt the lending process.

II. Key trends of the 1980s

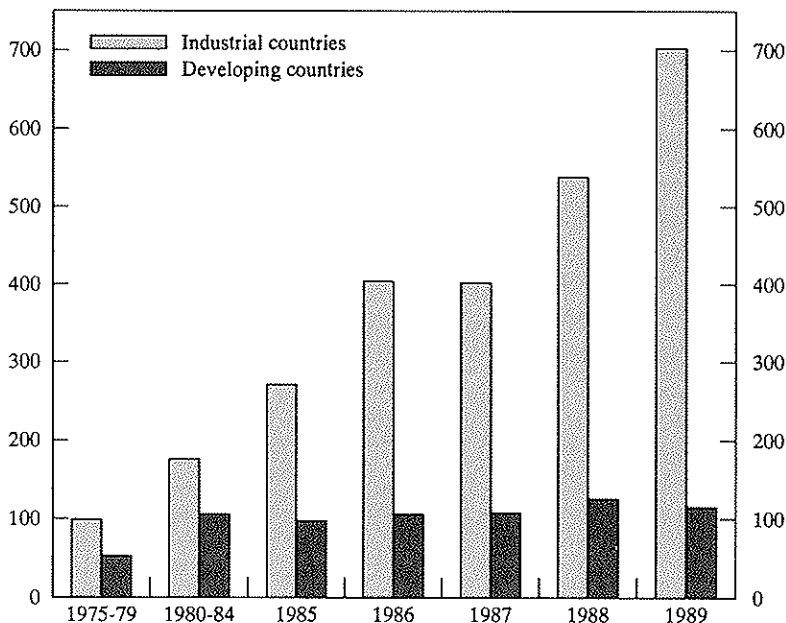
The underlying structure of capital flows in more recent years has been quite different from the pattern set in the 19th century. Unlike the earlier period, the 1980s have seen capital movements take increasingly the form of transactions among industrial countries, with developing countries left largely on the sidelines. A second feature is that capital inflows have substituted for declining domestic savings in capital-importing countries, instead of providing for increased investment. A third characteristic is the marked rise in aggregate "two-way" capital movements, reflecting the much greater liquidity and diversity of international assets than under the gold standard. The fourth trend, most marked in recent years, is the rapid growth in direct investment, particularly among industrial countries. Finally, mention should be made of one other frequently cited, but far from clear-cut, trend: the "securitisation" of capital flows, with bonds replacing bank lending. The following sections consider each feature in turn.

Declining flows to developing countries

Capital inflows to developing countries have remained virtually stagnant in the 1980s, even in nominal dollar terms (Graph 2). Moreover, private sector inflows have been weaker still as the relative importance of public sector inflows (mainly official development finance) has increased somewhat (Table 4). By contrast, gross inflows to industrial countries, mostly in the form of private sector flows, have grown enormously.

In addition, developing countries have suffered a massive reversal in bank flows. The decline in net bank lending to the major groups in the developing world is shown in Table 5. The announcement of the Mexican moratorium on servicing external debt was the turning-point. Total net borrowing from reporting banks, which had been running at an annual rate of some \$28 billion over the period

Graph 2
Capital inflows to the industrial and developing countries*
 In billions of US dollars; annual averages



* Sum of gross inflows, excluding reserve movements.

Source: IMF Balance of Payments statistics.

1979-82, fell to *minus* \$19 billion over the period 1983-90 – a swing of some \$47 billion, almost all in non-OPEC developing countries. However, part of this decline – particularly after 1988 – reflected changes in the value of banks' claims on developing countries due to various debt-conversion schemes, asset sales and write-offs, and not capital reflows.

The reduction in net borrowing also reflected increased bank deposits from developing countries, partly representing the investment of increased reserves in the Euro-market, but also partly an indication of capital flight on the part of private residents in

Table 4
Capital inflows in the industrial and developing countries¹
(in billions of US dollars, annual averages)

	1975-79	1980-84	1985-89
Industrial countries	99.1	175.7	463.3
Public sector	21.0	40.1	63.8
Private sector ²	78.1	135.6	399.5
Developing countries	52.1	105.5	110.0
Public sector	32.1	66.7	74.3
Private sector ²	19.9	38.8	35.8

¹ Sum of gross inflows, excluding reserve movements.

² Direct and portfolio investment (including government bonds) plus long-term bank flows. Short-term bank flows are excluded.

Source: IMF Balance of Payments statistics.

Table 5
Bank flows to developing countries¹
(in billions of US dollars)

	Changes, adjusted for exchange rate variations							Stocks at end-Sept. 1990	
	Annual averages		1985	1986	1987	1988	1989		1990 ³
	1979-82	1983-90 ²							
Total net borrowing ⁴	28	-19	6	16	-38	-28	-59	-54	93
<i>of which:</i>									
OPEC ⁵	-10	0	-6	23	-17	-6	-9	2	-55
Non-OPEC LDCs	26	-19	5	-10	-22	-15	-45	-55	44
Eastern Europe	2	2	3	3	3	4	9	-1	59
Non-reporting developed countries	10	-2	4	0	-2	-11	-14	0	45

¹ Estimated flows between BIS reporting banks and groups of countries outside the reporting area.

² As from 1984 the figures include changes in the positions of banks in Finland, Norway, Spain, Bahrain and the Netherlands Antilles, as well as all banks in the Bahamas, the Cayman Islands, Hong Kong and Singapore.

³ First three quarters of 1990 at actual rate.

⁴ Borrowing *minus* changes in deposits: a minus sign indicates a net addition to deposits.

⁵ Including, in addition, Brunei, Oman and Trinidad and Tobago, but excluding Bahrain as from 1984.

Sources: BIS *International banking and financial market developments* and historical data.

Table 6
Non-bank deposits from LDCs with BIS reporting banks¹
(in billions of US dollars)

	1984	1985	1986	1987	1988	1989	1990 ²	Stocks at end-Sept. 1990
OPEC	1.4	2.9	-2.9	2.1	5.8	10.2	-2.2	76.5
Non-OPEC developing countries	4.7	8.6	2.1	3.4	7.8	10.5	5.1	102.4
<i>of which:</i>								
<i>Latin America</i>	3.7	6.1	1.0	2.5	5.7	5.5	1.2	63.8

Notes: (i) Coverage of non-bank deposits with reporting banks widened significantly from 1983; hence earlier estimates are not reproduced here.

(ii) The country groupings in these tables follow the structure of Euro-currency statistics: in particular, offshore centres are not including under "developing countries".

(iii) For estimates of total deposits (viz. bank and non-bank), see BIS (1989c), page 132.

¹ Flows at constant end-of-quarter exchange rates.

² First three quarters at actual rate.

Source: BIS *International banking and financial market developments*, various issues.

developing countries. Non-bank deposits from non-OPEC developing countries rose by \$10.5 billion in 1989, the largest increase since comprehensive records began.¹⁹ About half of this increase was from Latin America (Table 6). By end-1989, the stock of non-bank deposits of non-OPEC developing countries was only a little short of \$100 billion. Moreover, the scale of capital flight has probably been much greater than this figure would indicate. A recent estimate prepared at the IMF put cumulative capital flight for a group of highly-indebted developing countries at \$184 billion at the end of 1988, about one-half of these countries' external debt.²⁰

The failure of international capital markets to channel savings from developed to developing countries stands in sharp contrast with

¹⁹ Note, however, that BIS statistics on non-banks in some cases include official monetary institutions.

²⁰ See Rojas-Suárez (1990).

the nineteenth century experience, and presents something of a paradox. The classical function of the international capital market is to allocate funds to areas of the highest return. Because industrial countries are well-endowed with capital while developing countries have plenty of labour (and sometimes other natural resources) but are usually short of capital, there are grounds for supposing that, over the long term, the *ex ante* marginal productivity of capital would tend to be higher in developing than in developed countries. Other things being equal, the volume of capital that would have to flow from developed to developing countries to equalise the marginal productivity of capital in the two areas would be very large.²¹ Inappropriate economic policies (lax macro-economic policies and extensive controls) in many developing countries have helped to create an environment inimical to investment in domestic assets (negative real interest rates, chronic inflation, uncertainty, etc.).

It might also be noted that the classical function of international capital markets has been less evident in recent capital flows even among industrial countries.²² In the 1950s, the United States (high capital/labour ratio) exported capital to Europe (lower capital/labour ratio), a process that contributed to faster growth in Europe than in the United States and a narrowing of wage differentials. Within Europe, Switzerland (high capital/labour ratio) was the largest per capita exporter of capital. Viewed in this light, it appears somewhat anomalous that the United States has been the largest importer of capital for much of the 1980s: there is little evidence that the US rate of return on real assets was higher in the 1980s than that in other countries.²³

²¹ For a more formal statement, see Lucas (1990), who also reviews possible explanations – differences in human capital, capital market imperfections and so on.

²² On this, see Gilbert (1974).

²³ On this, see Danker and Hooper (1990). However, Mortensen (1990) suggests that the relation of real rates of return and recent capital flows is rather stronger than suggested above.

One important consideration which may account for this is that capital-rich countries may also be those with the most highly developed markets for financial assets, which naturally attract foreign investors. For most of the 1980s the depth and liquidity of US financial markets acted as a powerful magnet for foreign capital. According to one recent estimate, US assets accounted for almost one-quarter of the rest of the world's private foreign assets towards the end of the decade, compared with little more than one-eighth at the beginning.²⁴ This transformation has been accompanied by an enormous increase in the net dollar position of the non-US private sector.²⁵

Lower saving in capital-importing countries

As noted earlier, the existence of attractive investment opportunities was perhaps the main factor behind the substantial capital flows in the late nineteenth century. In the 1980s, by contrast, it was divergent trends in saving, not investment, that distinguished capital importers from capital exporters.

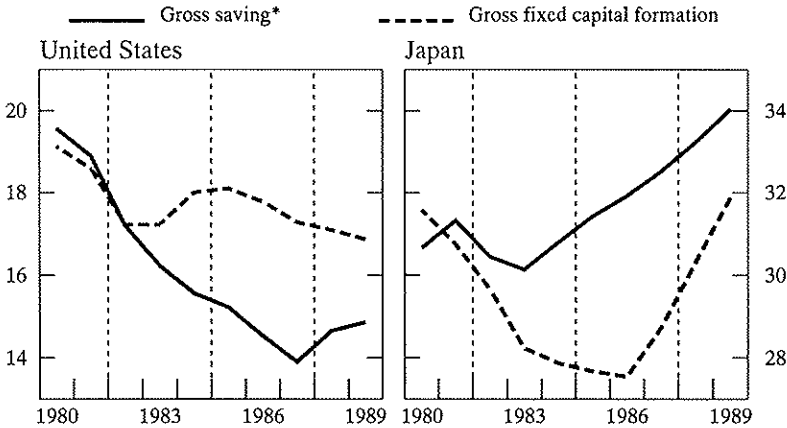
The case of the United States and Japan, the two largest players, is well known. Over the 1980s as a whole the share of gross saving in GNP rose by about 4 percentage points in Japan, but fell steeply in the United States (Graph 3). The US investment share of GNP actually fell.²⁶ Thus the United States in effect imported capital to make up for a decline in domestic saving, and not to sustain higher investment levels. The rise in Japanese saving, on the other hand, was strong enough to support increases in both domestic and foreign investment.

²⁴ End-1988 percentage estimated at 24.5%. See Table 4 of Dealtry and Van 't dack (1989).

²⁵ To around 8% of non-US industrial countries' GNP according to Barenco (1990), who estimates that the net dollar position of the non-US private sector rose from virtually zero in the late 1970s to \$626 billion by the end of 1988.

²⁶ At current prices. At constant prices, the investment share actually rose: the relative price of investment goods fell, mainly because of a decline in the computer prices.

Graph 3
Saving and investment in capital-importing and capital-exporting countries: United States and Japan
 As a percentage of GNP



Note: The area between the two curves represents capital inflows/outflows.

* Excluding inventory investment.

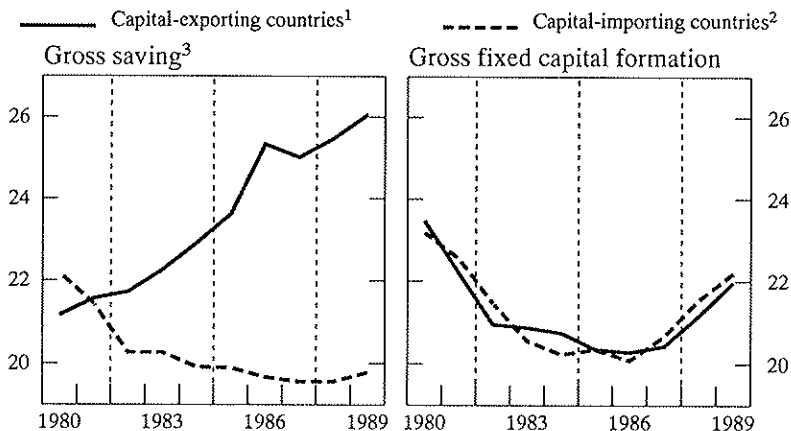
Saving also fell in other capital-importing countries: see Graph 4. At the beginning of the decade, the average saving rate in capital-importing countries was little different from that in capital-exporting countries. By the end of the decade, a gap of over 5 percentage points had emerged. By contrast, the trends in the investment shares of the groups of capital-importing and capital-exporting countries are virtually indistinguishable.

Explosion of aggregate flows

A third, rather obvious, feature about capital flows in the 1980s is the explosion in aggregate capital-account transactions.²⁷ Table 7 provides some orders of magnitude for the United States. By 1989

²⁷ For a full definition of the distinction between “aggregate” and “gross” flows used in this paper, see the “box” on page 31 below.

Graph 4
Saving and investment in other capital-importing and capital-exporting countries
 As a percentage of GNP/GDP



Note: Averages have been calculated using 1987 GDP weights and exchange rates.

¹ Countries in current-account surplus in 1989: Belgium, the Netherlands, South Korea, Switzerland and Taiwan. ² Countries in current-account deficit in 1989: Australia, Canada, France, Italy, Spain, Sweden and the United Kingdom. ³ Excluding inventory investment.

international transactions in securities had reached almost \$5,500 billion, accounted for mainly by transactions in bonds rather than equities. Transactions in equities rose almost sevenfold between 1980 and 1989: even allowing for the rise in equity values everywhere, the “real” increase was still appreciable. By contrast, transactions in bonds rose thirty-fold over the same period. Increased foreign activity in US securities markets was – once allowance is made for the threefold increase in equity prices – therefore mainly concentrated on bonds.

The size of purchases and sales in relation to the net capital movements suggests that many transactions were essentially short-term, with positions being reversed relatively rapidly. Often such short-term international transactions formed part of broader financial packages, contributing to the depth and breadth of

Table 7
US portfolio transactions
(in billions of US dollars)

	1975	1980	1985	1986	1987	1988	1989
Total international transactions	66.3	251.2	1,497.3	3,060.2	3,911.4	4,177.3	5,473.3
<i>of which:</i>							
<i>Bonds</i>	<i>37.0</i>	<i>158.1</i>	<i>1,292.6</i>	<i>2,682.6</i>	<i>3,239.6</i>	<i>3,661.2</i>	<i>4,826.6</i>
<i>Equities</i>	<i>29.3</i>	<i>90.1</i>	<i>204.7</i>	<i>377.6</i>	<i>671.8</i>	<i>517.1</i>	<i>646.7</i>
US transactions in foreign securities							
Bonds							
Purchases	8.7	18.1	85.2	170.7	207.0	226.0	240.0
Sales	2.4	17.1	81.2	167.0	199.1	218.5	234.1
Equities							
Purchases	1.7	10.0	24.8	51.0	94.4	77.3	121.4
Sales	1.6	7.9	20.9	49.1	95.5	75.4	108.9
Foreign transactions in US securities							
Bonds							
Purchases	14.3	66.6	585.2	1,207.5	1,443.3	1,646.8	2,220.7
Sales	11.5	56.3	541.0	1,137.4	1,390.2	1,569.9	2,131.8
Equities							
Purchases	15.4	40.3	82.0	148.1	249.1	181.2	213.0
Sales	10.7	34.9	77.1	129.4	232.8	183.2	203.4

Notes: (i) Data cover transactions between a resident and a non-resident; transactions between two foreign residents in a US security and transactions between two US residents in a foreign security are excluded.

(ii) Under US transactions, purchases refer to purchases by US residents (shown as foreign sales in the *Treasury Bulletin*).

Sources: US *Treasury Bulletin* and US Securities and Exchange Commission (1987).

financial markets developed in this decade. Viewed from this perspective, an important function of international capital markets has been to improve the efficiency of financial intermediation by permitting greater diversification and to help develop financial instruments better tailored to individual investor/borrower needs.

Yet much of the “need” for diversification has arisen from the nature of the international monetary system itself, in particular from floating exchange rates and – related to this – sizable differences among interest rates in different currencies. This need itself became stronger in the 1980s as volatility in most types of financial markets

(bonds, equities and foreign exchange) increased markedly.²⁸ Capital mobility has also allowed some private agents to hedge against the risk of inflation, and others to enjoy the short-term gains of high nominal interest rates in the more inflation-prone countries. The development of new financial instruments has often reduced the resources that need to be committed to take a position in the market – at the price of greater risk.²⁹ In short, the *financial diversification and intermediation* function of international capital markets has come to eclipse the classical allocation of capital function. This of course reverses the position under the classical nineteenth-century financial system, when capital flows did not have to cope with today's inflation risks and financial-market uncertainties because exchange rates then were fixed, interest rates much less dispersed and less variable, and underlying inflation virtually non-existent.³⁰

Increased foreign direct investment (FDI)

The final important trend is the steep rise in direct investment flows, which amounted in aggregate to well over 1% of GNP in the fourteen industrial countries by 1989, compared with about ½% of

²⁸ For evidence, see Kupiec (1990). Note also that, according to some measures, financial market volatility increased *more* than volatility in the real economy: Table 2 above, for instance, demonstrated how the increase in the year-to-year variability in long-term interest rates surpassed that of inflation.

²⁹ Axilrod (1990) notes that the development of derivative instruments, with only low margin requirements, has made it easier for players with limited capital to enter the game and thus, he argues, has exacerbated volatility.

³⁰ For a general discussion of the roots of the internationalisation of financial markets, see Bryant (1987). Akyüz (1990) provides a provocative critique of the liberalisation of financial markets, suggesting that it has “unshackled speculation” to the detriment of the real economy and advocating the reintroduction of fixed exchange rates and measures to restrict international capital movements. Others have put the emphasis on the ultimate deflationary dangers stemming from a correction of asset price inflation: see, for example, Harris (1991), Minsky and Vaughan (1990) and Pepper (1991). Gray (1990) stresses the dangers of a dollar-centric international financial system that arise from the US net debtor position and the “fragile” domestic financial system.

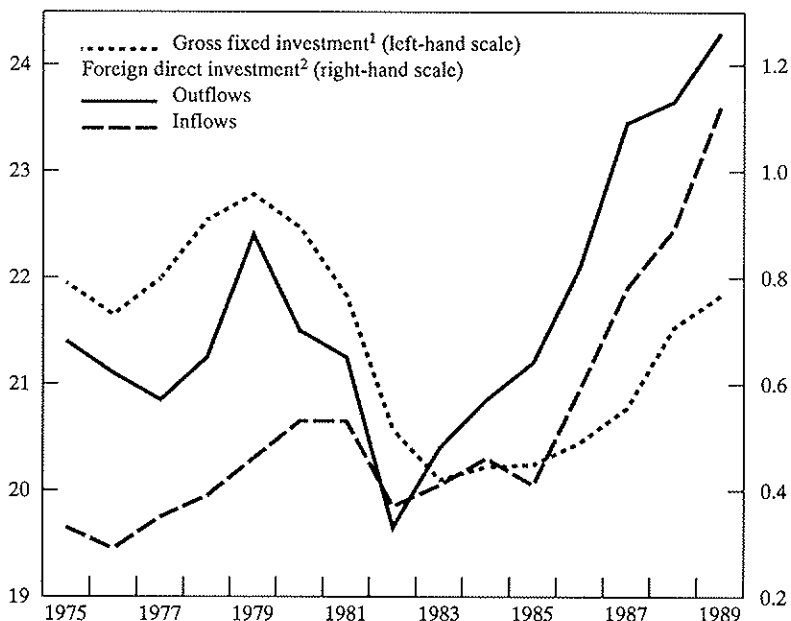
Definitions of capital flows

Terms used for the different measures of international capital transactions are potentially ambiguous. The three main measures used in this paper therefore need to be distinguished:

- *aggregate transactions*. This concept underlies Table 7 and includes *all* transactions between residents and nonresidents; it corresponds to “turnover” in financial assets. In this paper the word “aggregate” is used in order to avoid confusion with “gross”;
- *gross outflows (or inflows)*. Gross outflows (inflows) refers to purchases by residents (non-residents) of foreign (domestic) assets less their sales of such assets. In other words, aggregate transactions are consolidated to a single figure. These consolidated magnitudes are captured by balance-of-payments statistics on capital flows and are used in Table 9;*
- *net outflows (or inflows)*. Gross outflows less gross inflows.

* The IMF *Balance of Payments Manual* lays down the rule that two or more changes in a given asset (or type of asset) should be “consolidated into a single entry that reflects the net effect of all increases and decreases during the recording period”. In practice, complete data on *aggregate* transactions are often not available: for instance, estimates of balance-of-payments flows may in many cases be derived from records showing amounts outstanding at the beginning and at the end of the reporting period. See IMF (1977), pages 125-6.

Graph 5
Gross fixed investment and foreign direct investment
 As a percentage of GNP/GDP

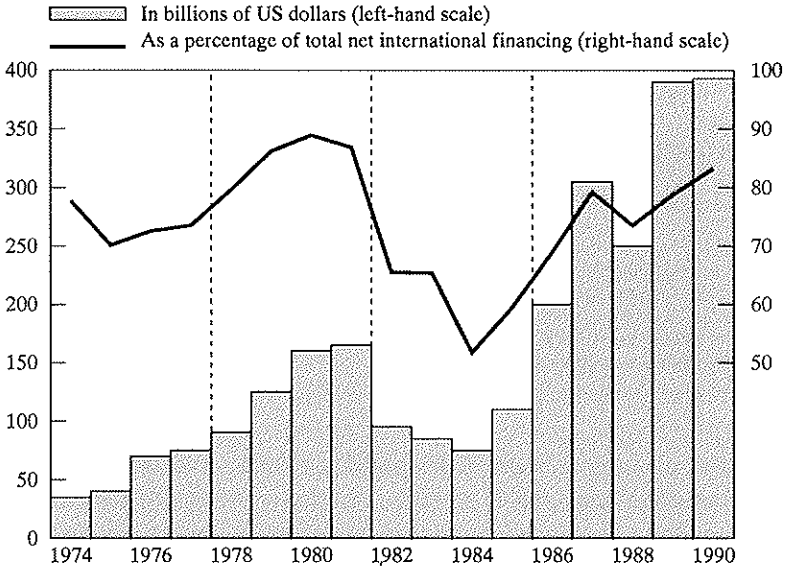


¹ In OECD countries. ² In the Group of Ten countries plus Australia, Austria and Spain.
 Sources: OECD National Accounts, IMF Balance of Payments statistics and national sources.

GNP in the early 1980s. Part of this increase is doubtless cyclical, since direct investment moves pro-cyclically like gross domestic investment.³¹ Nevertheless, the recent rise appears to be too strong to be entirely attributable to cyclical factors. One indication of this is that FDI expressed as a percentage of GNP has risen much more steeply than gross domestic investment in recent years (Graph 5). Several, more structural, factors have been important, and these are considered in Section III below.

³¹ For evidence of the cyclical sensitivity of direct investment flows see pages 48-49 below.

Graph 6
Net international bank lending *



Note: Break in series due to the broadening of the coverage of the BIS international banking statistics from 1984.

* Net of double-counting resulting from redepositing between reporting banks; data for 1990 are for the first three quarters, at an annual rate.

Source: BIS "International banking and financial market developments", various issues.

"Securitisation" of capital flows?

The so-called "securitisation" of capital flows (that is, the replacement of flows through banks by the issue of securities) that occurred in the second half of the 1980s requires careful qualification. The decline in bank financing was in part an inevitable reaction to the abnormally high level of bank lending (mainly to developing countries in Latin America) reached in 1981. From 1974 to 1977, international bank lending amounted to about \$50 billion annually, about two-thirds of the total international financing covered by BIS statistics (all figures net). From 1978, however, it rose

Table 8
Estimated net lending in international markets
(in billions of US dollars)

	Exchange rate adjusted flows (annual averages)									Stocks at end- Sept. 1990
	1975- 79	1980- 84	1985- 90	1985	1986	1987	1988	1989	1990 ¹	
Bank lending ²	77	116	258	110	200	305	250	300	295	3,100
Bond financing ³	28	52	131	123	156	107	137	172	93	1,414
Total financing ⁴	101	155	342	185	290	385	340	495	355	4,145

Note: Euro-note placements included from 1985 only.

¹ First three quarters at actual rate.

² Excludes estimated double-counting due to redepositing among reported banks.

³ Net of redemptions and repurchases.

⁴ Equals international bank lending *plus* international bond financing *plus* net Euro-note placements *less* double-counting.

Sources: BIS *International banking and financial statistics* and historical data.

rapidly, peaking at some \$165 billion in 1981, over 80% of total international financing (Graph 6). At the onset of the debt crisis, bank lending fell steeply so that by mid-decade bond financing was about as important as bank financing.

But since 1985 this process of securitisation appears to have been reversed, as bank lending recovered, mainly among industrial countries. By 1989 the share of bank lending had rebounded to about three-quarters of international financing recorded by the BIS, rather higher than it had been in the second half of the 1970s (Table 8); preliminary and incomplete estimates for 1990 suggest a further rise in the share of bank lending. At the same time, however, there has been a very large increase in foreign holdings of *domestic* bonds, which are not included in BIS statistics on international financing (see below and particularly Table 24).

Statistical caveats

Before the individual capital-account items are examined in more detail, Table 9 summarises balance-of-payments statistics for the larger industrial countries.³²

Table 9
Gross capital flows of fourteen industrial countries
 (as a percentage of GNP¹)

	1975-84	1985	1986	1987	1988	1989
Outflows (Resident ownership)						
Direct investment	0.6	0.7	0.9	1.2	1.1	1.3
Investment in bonds	0.5	1.3	1.5	0.9	1.3	1.3
Investment in equities	0.1	0.2	0.3	0.2	0.2	0.6
Public sector investment	0.5	0.4	0.7	1.2	0.6	0.6
Long-term bank lending	0.8	0.5	0.7	0.8	0.8	1.0
Inflows (Non-resident ownership)						
Direct investment	0.4	0.4	0.6	0.8	0.9	1.1
Investment in bonds ²	0.2	0.9	0.8	0.6	0.8	1.1
Investment in equities	0.1	0.2	0.3	0.0	0.1	0.4
Public sector borrowing ³	0.8	0.9	1.2	0.9	0.9	1.1
Long-term bank lending	0.5	0.5	0.7	0.8	0.9	1.1
Short-term bank lending, net	0.3	0.5	0.8	1.0	0.6	0.4
Other, net	-0.1	-0.1	-0.5	0.2	0.0	0.1
Net capital flow	-0.6	0.3	-0.2	0.1	0.2	0.5
Current account	-0.2	-0.6	-0.1	-0.2	-0.3	-0.5
Errors and omissions ⁴	0.4	0.3	0.3	0.2	0.0	0.1

Notes: (i) An outflow is an acquisition of a foreign asset by a resident; a sale counts as a negative outflow. The figures therefore show the balance of transactions: acquisitions minus sales of foreign assets by residents. Likewise, an inflow is the acquisition (or sale) of a domestic asset by a non-resident. The sign convention in the net line is that a minus sign is used for a capital outflow, i.e. a net acquisition of foreign assets by residents.

(ii) The percentages were calculated by converting GNP figures to dollars and then expressing the sum of capital flows as a percentage of the sum of GNP. This method of calculation does not produce a fixed-weights average of individual countries' flow/GNP ratios.

(iii) Bank lending figures exclude banks' portfolio or direct investments which are included under portfolio or direct investment.

(iv) 0.0 indicates less than 0.05.

¹ GDP was used for France.

² Excludes investment in public sector bonds.

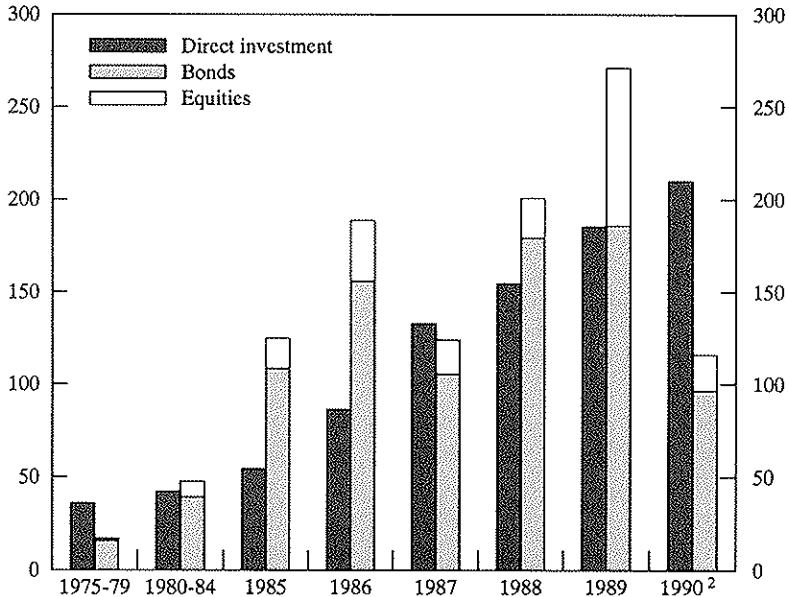
³ Includes investment in public sector bonds.

⁴ Equals current account minus net identified capital flows.

Sources: IMF Balance of Payments statistics and national sources for GNP and exchange rates. The fourteen countries are those of the Group of Ten plus Australia, Austria and Spain.

³² The classification used is based on IMF balance-of-payments statistics: the detailed definitions are given in the statistical appendix. Different classification schemes would of course be possible. A case could be made for including government bonds purchased by foreigners under investment in bonds (as government and corporate bonds are usually close substitutes).

Graph 7
Gross capital outflows¹
 In billions of US dollars; annual averages



¹ From fourteen industrial countries, viz. the Group of Ten countries plus Australia, Austria and Spain. ² First three quarters only, at an annual rate; for some countries, data are partly estimated.

Source: IMF Balance of Payments statistics.

Both gross outflows and inflows are shown for all identified items with the exception of short-term bank flows, which are only shown net. Not all countries publish statistics of the composition of capital flows along these lines (e.g. France does not show investment in bonds and equities separately) and there are a number of other gaps. Moreover, classification criteria differ (e.g. the threshold above which equity investment becomes direct investment). Nevertheless, such aggregate estimates are probably accurate guides to broad orders of magnitude. Excluding short-term bank flows, total

Table 10
Errors and omissions for some countries
(in billions of US dollars)

	Cumulative		1985	1986	1987	1988	1989
	1975-84	1985-89					
United States	166.3	57.3	19.7	15.8	7.6	- 8.4	22.6
Japan	10.2	- 8.5	3.8	2.5	- 3.7	3.1	-14.2
Germany	- 6.9	10.1	3.1	2.0	0.3	2.4	2.3
United Kingdom . .	19.2	80.9	6.9	20.1	12.5	16.9	24.5
Canada	-31.0	-16.1	- 4.5	- 2.6	- 2.4	- 1.7	- 4.9
Switzerland	77.9	6.3	2.5	- 0.4	5.0	2.7	- 3.5

Note: A positive errors and omissions item represents unrecorded exports (or overstated imports) or unrecorded capital inflows (or overstated outflows).

Sources: As for Table 9.

outflows amounted in 1989 to almost 5% of the total GNP of these fourteen countries, compared with only 3% of GNP as recently as 1985.

It is important, however, to bear in mind that statistics on international capital flows have a number of shortcomings. It is clear from Table 9 that two major statistical problems cloud the picture of international capital transactions. One is that identified capital flows do not balance current-account imbalances, implying large errors-and-omissions items. The main culprits are shown in Table 10. The cumulative discrepancy is largest for the United States. This discrepancy implies, if the current account can be taken to be correct, that capital inflows are understated (or outflows overstated) by over \$200 billion over the period 1975-86. However, the discrepancy almost vanished in 1987, was actually reversed in 1988, only to re-emerge in 1989. The Swiss discrepancy has also been large in the past, but not in recent years. By contrast, the UK discrepancy has widened sharply, averaging \$16 billion annually during the five years 1985-89. In 1989, the Japanese statistical discrepancy was large for the first time. The fact that positive errors-and-omissions items arise in the major financial centres, and not elsewhere, suggests that the

Table 11
World statistical discrepancies and other aggregates
(in billions of US dollars)

	1985	1986	1987	1988	1989
A. Current account	- 73.8	- 59.7	- 46.3	- 53.0	- 76.2
B. Capital account					
Direct investment	- 9.2	- 13.9	- 26.0	- 21.7	- 8.6
Portfolio investment	34.3	- 3.3	- 5.1	- 17.8	29.2
Other long-term capital	- 27.0	- 33.4	- 49.8	- 15.5	- 11.9
Other short-term capital	23.4	33.2	121.5	59.9	32.7
C. Errors, omissions and exceptional financing	60.2	81.9	58.4	48.0	38.6
D. Liabilities constituting foreign authorities' reserves	7.3	23.3	98.9	40.8	46.8
Change in reserves*	- 15.2	- 28.0	-151.6	- 40.6	- 50.7

Note: A positive value indicates that aggregate capital inflows (liabilities of residents) exceed outflows (assets).

* Net of counterpart items (valuation changes, etc.). Sum of A, B, C and D with the sign reversed. A negative sign indicates an increase in reserves.

Source: IMF *Balance of Payments Yearbook, Part 2* (1990).

main explanation may lie in the existence of unrecorded capital inflows taking the form of acquisitions of financial assets.³³

The second problem is the sizable discrepancy between total inflows and total outflows for individual capital-account items. Direct investment outflows have persistently exceeded inflows in the fourteen countries studied. IMF estimates of world statistical aggregates (shown in Table 11) show that this discrepancy exists also

³³ Recent official publications suggest that this is indeed the case for the United Kingdom. The 1989 *Pink Book* on the UK balance of payments (page 6) noted that the major problem was thought to be the understatement of net capital inflows. Non-resident acquisitions of UK shares may have been underrecorded; also, capital inflows into private sector bonds were not as well recorded as those into gilts. The decline in the supply of gilts in recent years, offset to some extent by larger private issues of sterling bonds, therefore led to a greater degree of underrecording of capital inflows. A recent share register survey at end-1989 indeed revealed higher levels of overseas ownership of UK ordinary shares than previously estimated; UK balance-of-payments statistics have been revised to reflect this but further revisions are still expected.

on a world level, suggesting that it was not mainly the result of net flows to countries other than the fourteen industrial countries studied. Instead, the discrepancy arises *within* the fourteen industrial countries. The various reasons for this are outlined in the statistical appendix.³⁴

III.

Foreign direct investment

Inflows

Foreign direct investment (FDI) flows have increased sharply in recent years, with the global value of inflows reaching about \$185 billion in 1989, three to four times the average flows in the first half of the decade. At the same time, the global distribution of flows has changed rather radically. During the decade 1975-84, between one-third and one-quarter of direct investment was directed to the developing world. But the enormous increase in flows since the mid-1980s has taken place almost entirely between developed countries - inflows into developing countries have hardly changed even in nominal dollar terms. By the end of the decade aggregate inflows into developing countries were less than one-eighth the flows into developed countries (Table 12). Very recently, however, there have been signs of a revival of FDI flows to at least some developing countries.

The drying-up of flows to some parts of the developing world appears to be not unrelated to local economic performance. One indication of this is that direct investment flows to the dynamic and

³⁴ The increase in reserves between 1985 and 1987 (also shown in Table 11) would, other things equal, tend to be associated with a rise in private inflows relative to outflows. Inflows did indeed exceed outflows under "other short-term capital". But in the case of portfolio investment outflows exceeded inflows - a discrepancy that largely reflects the absence of any identified counterparts to the outflow from the Tokyo equity market in 1987.

Table 12
Global distribution of FDI¹
(in billions of US dollars)

	Annual averages		1985	1986	1987	1988	1989
	1975-79	1980-84					
Global inflows	27.6	53.3	48.2	76.6	112.0	139.9	184.7
Industrial countries . .	21.0	36.9	35.9	64.6	96.0	123.5	161.2
Developing countries . .	6.6	16.4	12.5	12.8	16.6	17.5	18.1
Asian NIEs ²	0.5	1.6	1.6	2.5	4.2	4.6	6.4
ASEAN ³	0.9	1.7	1.2	1.1	1.5	3.3	4.7
Fuel exporters:							
Creditors ⁴	0.4	5.0	0.7	1.1	- 1.1	- 2.6	- 2.6
Debtors ⁵	1.8	2.5	1.8	2.2	4.6	3.9	5.4
Heavily indebted countries	3.6	5.3	4.5	3.7	6.1	8.7	8.1

Note: 1989 figures for some developing countries are unavailable: where necessary, 1988 estimates have been used in computing aggregates.

¹ Direct investment in the reporting economy.

² Excluding Hong Kong, for which data are not available.

³ Indonesia, Malaysia, Singapore and Thailand.

⁴ Kuwait, Oman and Saudi Arabia. Data for Qatar and the United Arab Emirates are not available.

⁵ Algeria, Cameroon, Congo, Ecuador, Gabon, Indonesia, Iraq, Mexico, Nigeria, Trinidad and Tobago and Venezuela.

Source: IMF Balance of Payments statistics.

successful economies in Asia have overtaken the flows to the heavily indebted countries, where economic performance, in general, has been poor. This has occurred even though some debt-equity swap schemes have boosted direct investment in Latin America. A second important factor has been the absence of well-developed equity markets, which limited the takeover of existing companies, the main form of foreign direct investment in developed countries. The decline in inflows may also have reflected a nationalistic resistance to FDI in a number of developing countries. However, some countries have recently taken steps to ease regulations governing inward FDI as part of broader measures of economic reform. There are some very recent

signs that foreign direct investment in developing countries is increasing.³⁵

The pattern of flows to industrial countries has also changed quite radically (Table 13). Perhaps the most striking change is that *inflows into the United States* accounted for around one-half of inflows into industrial countries in the 1980s, compared with about one-third in the 1970s and little more than one-tenth in the 1960s. During the last couple of years US inflows averaged around \$65 billion, well over 1% of GNP.³⁶

While any attempt to briefly summarise the greatly increased foreign direct investment in the United States runs the risk of oversimplification, most was apparently geared to furthering imports, and not exports. During the 1980s foreign affiliates in the United States increased their imports by a very large amount; as their exports actually fell, the trade deficit of foreign affiliates – crudely defined as the difference between direct imports and exports – rose from \$23.6 billion at the beginning of the decade to \$95.4 billion by 1987 (Table 14).³⁷ The import intensity of Japanese and German-owned affiliates was marked, particularly in relation to their total sales. Both German and Japanese foreign direct investment thus furthered these countries' direct exports to the United States. This feature appears to be largely a reflection of investment in the marketing subsidiaries of German and Japanese manufacturing companies. It also meant that greater foreign direct investment during the 1980s did not lead to any increase in the share of US exports accounted for by foreign affiliates – indeed, the share fell from around 23% in 1980 to about 19% in 1987. Such an import-intensive structure of FDI doubtless owed much to the overvaluation of the US dollar during

³⁵ For a further discussion of direct investment in developing countries, see Turner (1991).

³⁶ Recent reviews of foreign direct investment in industrial countries include Julius (1990) and Van 't dack (1989).

³⁷ This does not, of course, suggest that the activities of foreign affiliates *caused* the trade imbalance.

Table 13
FDI in industrial countries
(in billions of US dollars)

	Annual averages		1985	1986	1987	1988	1989	Memo- randum: 1989 as % of GNP
	1975-79	1980-84						
Total outflows*	34.0	42.1	54.2	85.2	130.9	153.1	176.2	1.3
United States	15.9	9.6	13.2	18.7	31.0	16.2	31.7	0.6
Japan	2.1	4.3	6.5	14.5	19.5	34.2	44.2	1.6
Larger EC countries	15.2	22.3	24.0	41.2	64.1	76.9	84.9	1.8
<i>France</i>	<i>1.6</i>	<i>2.9</i>	<i>2.2</i>	<i>5.4</i>	<i>9.2</i>	<i>14.5</i>	<i>19.0</i>	<i>2.0</i>
<i>Germany</i>	<i>3.0</i>	<i>3.6</i>	<i>5.0</i>	<i>10.1</i>	<i>9.2</i>	<i>11.2</i>	<i>13.6</i>	<i>1.1</i>
<i>Italy</i>	<i>0.4</i>	<i>1.4</i>	<i>1.9</i>	<i>2.7</i>	<i>2.3</i>	<i>5.5</i>	<i>2.0</i>	<i>0.2</i>
<i>United Kingdom</i>	<i>6.2</i>	<i>9.3</i>	<i>11.1</i>	<i>16.5</i>	<i>31.1</i>	<i>37.1</i>	<i>32.0</i>	<i>3.8</i>
<i>Belgium-Luxembourg</i>	<i>0.6</i>	<i>0.2</i>	<i>0.3</i>	<i>1.7</i>	<i>2.8</i>	<i>3.8</i>	<i>6.8</i>	<i>4.4</i>
<i>Netherlands</i>	<i>3.4</i>	<i>4.6</i>	<i>3.2</i>	<i>4.4</i>	<i>8.7</i>	<i>3.6</i>	<i>10.0</i>	<i>4.5</i>
<i>Spain</i>	<i>0.1</i>	<i>0.3</i>	<i>0.3</i>	<i>0.4</i>	<i>0.7</i>	<i>1.2</i>	<i>1.5</i>	<i>0.4</i>
Australia	0.3	0.8	1.7	3.0	5.4	5.7	3.8	1.3
Canada	1.8	3.8	3.1	2.9	5.9	7.1	3.7	0.7
Sweden	0.6	0.9	1.3	3.1	3.2	5.3	7.2	3.9
Switzerland	-	-	4.6	1.5	1.3	7.3	7.0	4.0
Total inflows*	18.3	35.3	34.9	61.6	93.8	120.2	156.7	1.1
United States	6.1	18.3	19.0	34.1	46.9	58.5	72.2	1.4
Japan	0.1	0.3	0.6	0.2	1.2	- 0.5	- 1.1	0.0
Larger EC countries	10.5	13.8	13.2	19.6	35.3	49.1	73.2	1.6
<i>France</i>	<i>1.9</i>	<i>2.3</i>	<i>2.6</i>	<i>3.3</i>	<i>5.1</i>	<i>8.5</i>	<i>10.3</i>	<i>1.1</i>
<i>Germany</i>	<i>1.3</i>	<i>0.7</i>	<i>0.5</i>	<i>1.1</i>	<i>1.9</i>	<i>1.3</i>	<i>6.6</i>	<i>0.6</i>
<i>Italy</i>	<i>0.6</i>	<i>1.0</i>	<i>1.0</i>	<i>- 0.1</i>	<i>4.1</i>	<i>6.7</i>	<i>2.5</i>	<i>0.3</i>
<i>United Kingdom</i>	<i>4.2</i>	<i>5.3</i>	<i>4.6</i>	<i>7.1</i>	<i>14.1</i>	<i>16.5</i>	<i>32.2</i>	<i>3.8</i>
<i>Belgium-Luxembourg</i>	<i>1.1</i>	<i>1.2</i>	<i>1.0</i>	<i>0.7</i>	<i>2.4</i>	<i>5.2</i>	<i>7.1</i>	<i>4.6</i>
<i>Netherlands</i>	<i>1.1</i>	<i>1.7</i>	<i>1.5</i>	<i>4.1</i>	<i>3.1</i>	<i>3.9</i>	<i>6.2</i>	<i>2.8</i>
<i>Spain</i>	<i>0.9</i>	<i>1.7</i>	<i>2.0</i>	<i>3.5</i>	<i>4.6</i>	<i>7.0</i>	<i>8.4</i>	<i>2.2</i>
Australia	1.2	2.0	2.0	3.1	3.4	7.3	7.5	2.6
Canada	1.0	0.0	- 1.8	1.3	3.9	4.1	2.8	0.5
Sweden	0.1	0.2	0.3	0.8	0.3	0.9	1.0	0.5
Switzerland	-	-	1.3	2.1	2.3	0.4	2.4	1.3

Note: A minus sign under outflows indicates a net sale of domestically-owned foreign assets; under inflows it indicates a net sale of foreign-owned domestic assets.

* Sum of fourteen countries.

Sources: As for Table 9 and national sources.

much of the period. Already in 1988, the most recent year for which data are available, the effects of a lower dollar were beginning to reverse this structure as the foreign affiliates' trade deficit fell.

A paradox of the extraordinary direct investment boom in the United States is that it occurred when the rate of return on such investment was low and, until very recently, falling. Even in nominal dollar terms, net income actually declined from 1980 to 1987; the return on assets fell from 3% to 0.8% (Table 14). It is not entirely clear why. One possible explanation is that the stock of investment is relatively young, so that substantial depreciation allowances reduce measured net income. New investment may indeed take some years to yield a return. Yet the greater part of foreign direct investment in the United States has taken the form of acquiring established companies that may well have been normally profitable. Another possible explanation is that some investment may have been politically, not economically, inspired – with the aim of resisting protectionist pressure (see pages 49–50 below).³⁸ Whatever caused the rather low rate of return on direct investment in the United States, it has had the important effect of limiting the rise of net US investment income payments abroad in recent years – at least as measured in the official statistics. Japanese investment appears to have had particularly low

³⁸ Most recent direct investment in the United States has taken the form of a transfer of ownership of existing assets, rather than the creation of new assets. In the first half of the 1980s foreign acquisitions averaged \$12.3 billion annually, while new establishments averaged \$3.8 billion. In the second half of the 1980s, by contrast, these averages rose to \$41.2 billion and \$6.7 billion respectively. (Source: US Department of Commerce *Survey of Current Business* (various issues; latest in May 1990).) Even allowing for some statistical understatement, the conclusion that greenfield investment has played only a small role in foreign direct investment in the United States appears to be broadly correct. (The share of greenfield investment in total investment may be understated because any asset sales that may follow an acquisition are not later subtracted and because new establishment data count expenditure only in the first year. See Stekler and Stevens (1990).)

Table 14
Activity of foreign non-bank affiliates in the United States
(in billions of US dollars)

	All affiliates			By country of ownership (1988)			
	1980	1987	1988	Japan	Germany	United Kingdom	Canada
Exports from	52.2	48.1	59.8	24.5	4.8	4.3	6.3
Imports by	75.8	143.5	149.7	75.9	16.2	11.8	9.1
Trade balance	-23.6	-95.4	-89.9	-51.4	-11.4	- 7.5	- 2.8
<i>Memorandum:</i>							
<i>Total assets</i>	<i>291.3</i>	<i>943.7</i>	<i>1,147.2</i>	<i>275.1</i>	<i>67.8</i>	<i>194.1</i>	<i>172.2</i>
<i>Net income</i>	<i>8.8</i>	<i>7.8</i>	<i>11.6</i>	<i>0.6</i>	<i>0.7</i>	<i>3.6</i>	<i>2.6</i>
<i>Net income/sales (%) . .</i>	<i>2.1</i>	<i>1.1</i>	<i>1.4</i>	<i>0.3</i>	<i>1.0</i>	<i>2.6</i>	<i>2.5</i>
<i>Net income/assets (%) . .</i>	<i>3.0</i>	<i>0.8</i>	<i>1.0</i>	<i>0.2</i>	<i>0.9</i>	<i>1.9</i>	<i>1.5</i>

Source: US Department of Commerce *Survey of Current Business* (July 1989 and July 1990).

rates of return, perhaps reflecting the recency of their investment (see the memorandum items in Table 14).³⁹

The second, and more recent, trend is the increased *importance of inflows into the European Community*. Aggregate EC inflows exceeded \$73 billion in 1989, overtaking US inflows for the first time in recent years. A significant portion of this increase reflected greater intra-EC flows. The internationalisation – or rather “Europeanisation” – process is evident from the increasing percentage of mergers and acquisitions between two EC companies.⁴⁰ Non-EC flows to the European Community also appear to have risen sharply. In the space of four years, Japanese and Swedish flows to the Community have risen more than fourfold; US flows – traditionally large – have increased much less. The prospect of a large unified European market was probably the most important factor behind this development. Nevertheless, inflows remained unevenly

³⁹ One factor making for low rates of return on Japanese investment is the dominance of investment by banks and other financial institutions whose total assets are typically very large relative to value added. However, rates of return are also relatively low when only manufacturing is used as the basis of comparison.

distributed among EC countries. Although foreign direct investment in Germany rose sharply in 1989, it still accounted for less than 10% of total EC inflows. The United Kingdom, where inward foreign direct investment amounted to 3.8% of GNP in 1989, remained by far the largest single recipient in the European Community in absolute terms. Measured in relation to GNP, however, foreign direct investment was higher still in Belgium.

A third feature of interest is the decline in investment in certain “new world” countries such as Australia and, especially, Canada. Both countries were relatively heavy importers of direct investment capital in the 1950s and 1960s; in the 1960s they accounted for about one-quarter of industrial countries’ inflows. The development potential of these countries was particularly promising – abundant natural resources combined with rapid growth in skilled labour thanks to immigration – and it is not surprising that direct investment played a part in developing this potential. In the 1980s, however, these two countries received only around 7% of direct investment inflows into industrial countries.⁴¹ As direct investment *outflows* for both countries have risen appreciably, both have on occasions in recent years been net exporters of direct investment capital, in the case of Canada mainly to the United States.

⁴⁰ The percentage breakdown of mergers and acquisitions of majority holdings in the EC by type of operation is as follows (industry only):

	<u>Domestic</u>	<u>Intra-EC</u>	<u>International</u>
1983/84	65	19	16
1984/85	70	21	9
1985/86	64	23	13
1986/87	70	25	4
1987/88	56	29	15
1988/89	47	40	13

Source: EC *European Economy* (November 1989) and European Commission updates.

⁴¹ This in part reflected the Canadian Government’s policy in the early 1980s of promoting national ownership of important raw-material-based industries. However, foreign direct investment in Australia rose substantially in 1988, and remained high in 1989. Australian FDI abroad has also risen sharply in recent years, and has been financed by borrowing.

Finally, the traditionally more closed countries – typically those where hostile takeover bids by foreigners are frowned upon, where corporate charters subject the voting rights of new shareholders to approval and/or where the acquisition of real estate by foreigners is subject to restriction – have remained relatively impervious to the rising tide of foreign direct investment.⁴² Direct investment flows into Italy, Japan, Sweden and Switzerland have remained very small by the standards of other industrial nations. In very recent years, foreign disinvestment in Japan has actually exceeded new investment – hence the negative signs for inflows into Japan in both 1988 and 1989 (Table 13). Given the strong expansion of the Japanese economy during these two years, this is rather curious.

Outflows

Perhaps the salient feature of the country composition of outward FDI during the 1980s is the decline in the importance of the United States as a major provider of direct investment capital. During most of the post-war period the United States was of course the dominant supplier of direct investment – accounting for perhaps two-thirds of outward investment from industrial countries in the 1960s. Even as recently as the second half of the 1970s, US direct investment abroad was almost one-half the industrial countries' total (shown in Table 13). In the first half of the 1980s, however, this share fell precipitously. The combination of a corporate liquidity squeeze during the US recession and of high US interest rates played a part in limiting outward investment. These conditions also led US multinationals to raise funds from their overseas affiliates, particularly from their finance affiliates in the Netherlands Antilles, which could in turn issue securities in international markets to avoid the US withholding tax on interest payments to foreigners. This channelling of borrowing – recorded as a decline in direct investment abroad in

⁴² Limited inflows into Germany also reflect the large bank holdings of shares in local companies, a pattern of ownership rather resistant to the temptations of foreign bidders.

the balance-of-payments statistics – was brought to an abrupt halt after the withholding tax was lifted in 1984.⁴³ Nevertheless, US outflows remained relatively low even thereafter, reaching a low point of only just over 10% of total industrial country outflows in 1988, before recovering in 1989.

With the decline of the United States, the United Kingdom became the largest single provider of direct investment capital towards the end of the 1980s. An important element of this was the active position taken by a number of UK companies in mergers and acquisitions, notably in the United States (see below, especially Table 16). But in 1989 Japan apparently displaced the United Kingdom, providing one-quarter of total outward direct investment, up from only 11% as recently as 1980–84.

The rise of Japanese direct investment abroad constitutes one of the most remarkable features of direct investment flows in the late 1980s. The traditional pattern of Japanese overseas direct investment that prevailed up to the mid-1970s (*viz.* mining ventures to secure raw material supplies, investment in labour-intensive manufacturing – mainly in Asia – and investment in distribution outlets for Japanese exports) came under pressure from three main forces. First, the internationalisation of financial markets worldwide has stimulated direct overseas investment by financial institutions, motivated in part by the need to serve Japanese multinationals. About one-quarter of total foreign direct investment has been in banking and insurance in recent years, compared with around one-tenth previously (Table 15). Secondly, the very size of Japan's capital outflows, combined with lower interest rates, has encouraged some diversification into investment in real assets and away from portfolio investment. By 1989 one-fifth of total foreign direct investment was accounted for by investment in real estate; as recently as 1981 the share of real estate in investment was negligible. Investment in US real estate, in particular, has been a major element. Thirdly, the pressure on Japanese manufacturing companies to shift production overseas may have

⁴³ See Papke (1989).

Table 15
Japanese FDI by sector
 (percentage distribution, by value)

	1975	1981 ¹	1987	1988	1989
Manufacturing	31.3	25.6	23.0	29.4	24.1
<i>of which:</i>					
Materials ²	17.9	10.2	6.7	7.6	7.1
Machinery ³	9.0	11.9	13.8	12.2	12.2
Non-manufacturing . . .		73.2	75.2	69.4	74.8
<i>of which:</i>					
Mining	18.4	28.5	1.5	2.2	1.9
Trade	20.5	13.2	6.8	6.8	7.6
Banking and insurance	9.5	9.5	32.0	27.9	22.8
Real estate	<i>n.a.</i>	1.9	16.3	18.4	20.9

¹ Before 1981 real estate was not shown separately.

² Textiles, lumber and pulp, chemicals, iron and non-ferrous metals.

³ Machinery, electrical appliances and transport equipment.

Source: Japanese Ministry of Finance, *Monthly Finance Review*, various issues.

played some role. However, although much has been made of the appreciation of the yen and the proliferation of formal and informal barriers to direct exports in encouraging such a shift of manufacturing production overseas, the share of direct investment going to the machinery industry has increased only a little: by end-1989 it accounted for only 12% of total foreign direct investment.

Causes

The reasons for the increased pace of direct investment activity in recent years are many and diverse. Foreign direct investment flows appear to be strongly pro-cyclical, varying more than proportionately with economic activity. The decline in foreign direct investment flows relative to GNP in the mid-1970s and again in the early 1980s followed a pattern similar to the share of gross fixed investment in GNP in industrial countries, and was clearly related to cyclical factors (see Graph 5 above). Moreover, the shift of direct investment to the United States (during the mid-1980s) as well as the

shift towards Europe (more recently), and particularly the European Community, were both in line with developments in relative demand.⁴⁴

Secondly, a wave of cross-border mergers and acquisitions has increased foreign direct investment flows: from just under \$40 billion in 1986, mergers and acquisitions amounted to around \$120 billion by the end of the decade⁴⁵ (Table 16). Not all countries have been affected equally by the merger and acquisition boom, and differences have had an important bearing on the overall cross-country pattern of capital flows. Traditionally, US and UK companies have been major players in cross-border takeover activity, and this has kept the direct investment flows of these countries relatively high. More than three-quarters of all mergers and acquisitions in recent years have targeted North America or the United Kingdom: see Table 16. In a number of continental European countries, however, the market for corporate control has traditionally faced a number of sometimes formidable obstacles. The concentration of voting shares with a small restricted group, the practice of cross-shareholding, heavy bank holdings of shares and government regulations all impede inward acquisitions.⁴⁶ Nevertheless, there are very recent indications that these barriers are beginning to crumble – witness the sharp increase in the share of “targets” in continental Europe in 1989 and 1990, as that in the Anglo-Saxon countries declined.

A third influence has been the desire to relocate production abroad because of lower labour costs, exchange rate changes or the fear of protectionism. Large swings in real exchange rates appear to have affected both the timing and the size of direct investment flows

⁴⁴ For statistical evidence of the sensitivity of direct investment flows to relative demand movements, see Goldsbrough (1979).

⁴⁵ However, the boom appears to have come to an end in 1990: cross-border mergers and acquisitions, having run at an annual rate of some \$138 billion in the first half of the year, fell to about \$110 billion in the second.

⁴⁶ For a review of such barriers, see “Rules and procedures governing European mergers and acquisitions”, Chapter 5 in Walter and Smith (1990).

Table 16
Cross-border mergers and acquisitions
 (percentage shares by value)

	1986	1987	1988	1989	1990
Target country/area					
North America	74.0	73.6	62.4	50.8	34.9
Japan	0.0	0.0	0.1	0.1	0.0
United Kingdom	15.1	10.0	14.4	23.9	18.4
Continental Europe	8.0	14.4	13.9	20.9	35.4
Rest of the world	2.9	1.9	9.2	4.6	11.4
Bidder country/area					
North America	12.8	11.1	13.6	24.4	11.7
Japan	3.5	4.7	8.7	8.9	0.0
United Kingdom	42.4	50.6	39.3	19.7	15.3
Continental Europe	29.2	25.9	30.1	33.1	48.7
Rest of the world	12.1	7.7	8.3	14.0	24.3
<i>Memorandum:</i>					
<i>Total value of activity (US\$ billion)</i>	<i>39.2</i>	<i>70.9</i>	<i>109.6</i>	<i>117.5</i>	<i>124.5</i>

Source: Howell and Cozzini (1990) updated.

– a point taken up in more detail on pages 99–100 below. The interactions between protectionism and foreign direct investment are extensive. At its simplest, replacing exports by domestic production in the recipient market removes the pretext for protectionism. More subtly, joint ventures with one domestic producer may undermine protectionist-minded coalitions of domestic producers – a phenomenon Bhagwati has labelled “*quid pro quo*” foreign investment.⁴⁷ In narrow accounting terms, such investment may be unprofitable – perhaps explaining the apparent poor rate of return on such investment in the United States noted above.

⁴⁷ As Bhagwati (1990) put it, “Toyota undertakes a joint venture in the United States with General Motors . . . giving [them] an apparently gratuitous share in profits from Toyota’s superior know-how on small cars. In exchange, however, General Motors breaks ranks on Voluntary Export Restraint renewal. The *quid pro quo* for Toyota from an otherwise uneconomical FDI in the United States is then the reduced threat of protection that follows”.

IV. Portfolio investment

The sharp rise in the volume of portfolio investment in the 1980s has almost entirely reflected increased transactions among the developed economies, as portfolio investment in developing countries has remained rather limited. Although balance-of-payments statistics on portfolio flows into developing countries are incomplete, there are a number of indirect indications of only limited flows. One is that international bond issues by developing countries and by international institutions on their behalf have remained broadly unchanged, while issues by developed countries have increased sharply (Table 17, panel A). The seven dynamic Asian economies have accounted for about one-half of developing countries' issues over the period 1984-90. Bond issues by eastern European countries also increased somewhat in the late-1980s only to drop back in 1990. As for *equity* flows, equity markets in most developing countries are non-existent or under-developed: one estimate puts total market capitalisation of markets in developing economies at only 6% of that of markets in developed countries (Table 17, panel B). Foreign portfolio flows to Third World equity markets have averaged around \$1 billion annually since 1985, with rather larger flows registered in 1989.⁴⁸

A general factor behind rising capital flows in securities was the expansion in foreign portfolio investment by major financial institutions in industrial countries - pension funds, insurance companies and investment trusts. It is perhaps no exaggeration to say that, while banks financed global imbalances in the 1970s, it is non-bank financial intermediaries that have financed the still larger imbalances of the 1980s. The main features of this important trend - the radical diversification from domestic to foreign assets and the huge expansion in institutional assets - are examined more fully on pages 65-72 below.

⁴⁸ Wider (1990), page 12.

Table 17

Indicators of portfolio investment in developing and developed countries (in billions of US dollars)

A. International bond issues¹

	1984	1985	1986	1987	1988	1989	1990
Developed countries ² . . .	96.8	147.2	212.3	166.6	213.4	240.4	207.1
Developing countries . . .	3.8	6.9	4.3	3.1	4.2	2.6	3.6
<i>of which:</i>							
<i>Seven dynamic Asian economies</i> ³	2.7	4.9	1.8	0.8	1.1	1.5	2.4
Eastern Europe	--	0.4	0.3	0.5	1.4	2.2	1.6
International development institutions ⁴	7.9	10.7	9.2	10.3	8.0	10.3	14.6

Sources: BIS *International banking and financial market developments*, various issues, and OECD *Financial Statistics Monthly*, various issues.

B. Stock market capitalisation

	end-1980	end-1984	end-1988	end-1989	end-1990 ^c
Developed countries ⁵	2,592.1	3,293.9	9,402.8	11,005.4	8,985
Developing countries	146.0	129.6	466.9	724.6	544
<i>of which:</i>					
<i>Seven dynamic Asian economies</i> ¹	87.0	73.2	345.1	559.2	410
<i>Latin America</i> ⁶	39.9	37.0	57.8	83.0	74

^c = estimated.

Source: International Finance Corporation *Emerging Stock Markets Factbook*, 1990 updated.

C. Global holdings of bonds and equities

	1983	1985	1988	1989
Global portfolios				
Equities	3,284	4,667	9,297	10,926
Bonds	4,318	6,049	10,067	10,622
Non-resident holdings				
Equities	233	341	619	728
Bonds	345	589	1,148	1,357
Non-resident holdings as a percentage of global portfolios				
Equities	7.1	7.3	6.7	6.7
Bonds	8.0	9.7	11.4	12.8

¹ International bonds and traditional foreign issues of bonds.

² EEC institutions and countries in the OECD.

³ Hong Kong, Singapore, South Korea, Taiwan, Indonesia, Malaysia and Thailand.

⁴ AfDB, AsDB, IBRD, IDB and IFC.

⁵ All OECD countries plus Israel and South Africa.

⁶ Argentina, Brazil, Chile, Colombia, Mexico, Uruguay and Venezuela.

Source: J.P. Morgan *World Financial Markets* (1989, No. 5), updated.

However, before reviewing the role of institutional investors it is useful to summarise the main features of portfolio flows by type of asset – equities and bonds. Transactions in bonds have dominated increased portfolio investment flows. Even excluding public sector bonds, investment in bonds has been many times larger than investment in equities (see the outflows panel in Table 9). Although the global stock of equities has now caught up with that of bonds, foreign holders appear to have a greater propensity to hold bonds than to hold shares (see non-resident holdings as a percentage of global portfolios in panel C of Table 17). Moreover, the non-resident proportion of total equity holdings has shown little tendency to rise, unlike that of bonds. However, the increased importance of equity-related bond issues (discussed more fully below) has to some extent blurred the distinction between bonds and equities.

Equities

By the end of the decade, the value of aggregate international transactions in equities had risen to over \$1,500 billion compared with only \$73 billion at the end of the 1970s; although purely domestic transactions have risen several times over, international transactions have generally risen rather faster (Table 18). Over the decade the volume of transactions (i.e. after allowing for higher equity prices) has increased by a factor of five. However, the October 1987 crash hit international transactions somewhat harder than domestic transactions: the share of international transactions in total world trading declined slightly in 1987 and 1988. But the effects of this appeared to have worn off by 1989, as international transactions again outpaced domestic transactions.⁴⁹

Nonetheless, the explosion in aggregate transactions has led to only small increases in the correlations between returns on different international stock markets, although the different valuations of

⁴⁹ For a comprehensive discussion, see Howell and Cozzini (1990). Cross-exchange trading – foreign share trading on local exchanges – amounted to rather less than \$600 billion in 1989 (not included in the cross-border trading shown in Table 18).

Table 18
Aggregate international transactions in equities¹

	1979	1980-84	1985	1986	1987	1988	1989	1990 ^c
Value (US\$ billion)	73	198	385	801	1,344	1,213	1,598	1,500
Value (as % of world trading ²)	(6.3)	(9.8)	(10.4)	(12.1)	(11.6)	(11.4)	(13.6)	(13.5)
Volume (1979 = 100)	100	209	277	403	591	440	483	583

^c = estimated.

¹ Transactions in domestic shares, conducted in the domestic market, by or on behalf of non-residents.

² Domestic *plus* international.

Sources: Howell and Cozzini (1989 and 1990), updated.

equities between markets makes it difficult to define returns in an internationally comparable way. One feature related to this is that domestic trading of foreign securities amounts to only 5% of total stock-market trading (1989 estimate). However, correlations do appear to have increased for periods of heightened volatility⁵⁰ – a finding that echoes Morgenstern’s (1959) classic conclusion that “financial markets interact more intensely in times of stress than in relatively quiet periods”.⁵¹

Gross capital flows into equities have traditionally been around 20–25% of the size of gross flows into bonds. Although the shadow cast by the stock market break of October 1987 depressed investment in shares for many months, gross flows into equities more than doubled in 1989. Once account is taken also of direct-investment-related purchases of foreign equities and of the increased reliance on equity-related bonds, it is clear that equity flows had, by the end of the decade, become a major component of international capital movements and that the international diversification of equity portfolios had proceeded further.

On balance, the US market attracted a sizable proportion of gross flows for most of the period. In particular, equity flows up to 1987 reflected the strong attraction of the US market. Over the three years

⁵⁰ Except during times of heightened volatility. See Kupiec (1990).

⁵¹ Morgenstern (1959), page 564.

1985–87, inflows into the United States amounted to \$37 billion (Table 19). The United Kingdom also attracted sizable inflows.⁵² The continental members of the European Community, on the other hand, attracted less than \$17 billion over this period. Foreign holdings of Japanese equities actually appear to have declined for most of this period. The \$43 billion exodus from Japan in 1987 was particularly large. It also presents a puzzle: where did the funds go? According to statistics on US outflows, the net sale of US-owned foreign assets amounted to only \$2 billion. Nor is there any sign from statistics on other countries' inflows as to where the funds withdrawn from Japan might have gone. The inconsistency shows up as a discrepancy of around \$22 billion in total outflows and inflows, significantly out of line with earlier years: see memorandum item in Table 19.⁵³

The pattern of flows changed considerably in 1988. Interest in the US stock markets waned somewhat, while investment in continental EC countries and Japan strengthened appreciably. The pattern of equity flows thus appears to have reflected relative economic growth, in that they went to countries where growth was accelerating. Interest in Europe, and in Germany in particular, further strengthened in 1989, with EC countries accounting for one-half of total identified inflows.

Investors in the United Kingdom were the main purchasers of foreign equities during much of this period.⁵⁴ During the last five years of the 1980s UK net purchases amounted to around \$55 billion (about one-third of measured inflows), with over \$32 billion in 1989

⁵² Moreover, as noted above, there are reasons to believe that UK inflows are understated in balance-of-payments statistics. Pain (1990) found evidence that lower transaction costs associated with the "Big Bang" reforms in 1986 increased inflows into the United Kingdom.

⁵³ Aderhold et al. (1988) suggest that the bulk of net sales presumably came from outside the Group of Ten – from Asia and certain offshore financial centres.

⁵⁴ Largely a reflection of institutional investment, discussed more fully on pages 66–69 below.

Table 19
Equities investment flows
(in billions of US dollars)

	Annual averages		1985	1986	1987	1988	1989	Memo- randum: 1989 as % of GNP
	1975-79	1980-84						
Outflows								
United States	0.2	1.7	3.7	1.2	- 2.1	0.9	16.7	0.3
Japan	0.1	0.2	1.0	7.1	16.9	3.0	17.9	0.6
Larger EC countries ¹ of which:	0.8	5.9	12.7	22.8	- 0.5	20.7	43.3	0.9
Germany	0.1	0.4	1.6	2.2	0.1	10.3	5.0	0.4
United Kingdom . .	0.8	5.4	7.4	12.4	- 2.5	5.6	32.7	3.9
Switzerland	-	-	1.4	2.1	2.0	- 4.0	- 1.1	0.6
Inflows								
United States	1.5	3.4	4.3	17.2	15.6	- 0.5	6.6	0.1
Japan	0.6	3.5	- 0.7	-15.8	-42.8	6.8	7.0	0.2
Larger EC countries ¹ of which:	1.5	2.0	5.6	13.7	12.0	11.0	24.5	0.5
Germany	0.9	0.8	2.1	6.8	- 1.2	3.0	12.6	1.0
United Kingdom . .	0.4	0.8	1.8	3.7	9.4	4.6	2.8	0.3
Switzerland	-	-	5.0	8.4	3.5	3.9	6.2	3.5
<i>Memorandum:</i>								
Total outflows ² . . .	1.2	8.7	20.2	36.7	18.0	23.6	84.3	0.6
Total inflows ²	2.6	10.8	16.9	26.1	3.9	19.4	49.0	0.4
Discrepancy	1.4	2.1	3.4	10.5	21.9	4.2	35.4	

Notes: (i) A minus sign under outflows indicates a net sale of domestically-owned foreign assets; under inflows it indicates a net sale of foreign-owned domestic assets.

(ii) A number of countries publish figures for portfolio investment only (i.e. for bonds and equities only): these flows are shown under bond flows (by far the largest component) in this paper.

¹ Belgium-Luxembourg, France, Germany, Italy, the Netherlands, Spain and the United Kingdom.

² Sum of fourteen countries.

Sources: As for Table 9.

alone. Only in 1989 did US investment in foreign equities reach sizable proportions. However, there was again a large statistical discrepancy, with measured aggregate outflows exceeding inflows by some \$35 billion (shown in the final line of Table 19).⁵⁵

⁵⁵ Note again that foreign purchases of UK equities may be understated.

Table 20
Global bond markets
 (percentage shares, end of period)

	1980	1985	1988	1989
Total nominal outstanding: (as % of annual GNP)	46	66	74	75
Currency of denomination:				
US dollar	44	52	46	48
Japanese yen	17	18	22	19
Deutsche Mark	10	7	8	8
Other	29	23	24	25
Markets:				
International	4	7	10	10
Domestic	96	93	90	90

Sources: Benavides (1990) and Benzie (1991).

Bonds

The total stock of outstanding bonds exceeded \$10,000 billion by the late 1980s, compared with about \$3,300 billion at the beginning of the decade. Measured in relation to GNP, the greater part of this increase occurred in the first half of the decade (Table 20), and was mainly a reflection of larger government deficits in the first than in the second half of the decade; about one-half of bonds outstanding are denominated in US dollars – a proportion that remained surprisingly stable during a decade of such wide swings in the US dollar. Finally, there has been some tendency for the share of international, rather than domestic, issues to increase.⁵⁶

The huge Japanese demand for foreign bonds has dominated bond investment flows. In the space of only five years (1985–89), the cumulative net acquisition of foreign bonds amounted to just under \$220 billion, dwarfing demand from the rest of the world (shown in the next-to-last line in Table 21). Japanese demand for foreign bonds was remarkably resilient (not falling below \$30 billion until 1989) considering the wide swings in exchange rate and interest rate

⁵⁶ For a review of the international bond market, see Benzie (1991).

expectations during this period. Nevertheless, the net outflow – which had risen appreciably each year from 1980 – has declined since 1986, perhaps because institutional investors were less actively diversifying their portfolios into foreign assets (see page 72 below). Net outward investment of less than \$22 billion in 1989 was the lowest since 1983. One significant characteristic of outward Japanese investment has been the concentration on dollar instruments: according to a recent estimate, the dollar share of Japanese holdings of foreign securities is around 80%.⁵⁷ Liquidity, the wide variety of investment instruments and extensive hedging opportunities are the main attractions of dollar securities.⁵⁸ The converse of this is that Japanese holdings of European securities are relatively small – although there have been some recent, rather ambiguous, signs of increased investment in continental Europe, and disinvestment in the United States.⁵⁹

German demand, by contrast, was much more volatile. Outflows into bonds were relatively modest up to 1986, and became really strong only in 1988, stimulated by the prospect of the introduction of a withholding tax on interest earned in Germany. Even after the abolition of this tax, German outflows remained relatively high in 1989 – both by past historical standards and in relation to GNP.

A second significant feature is that private capital inflows have increasingly taken the form of the issue of overseas bonds by domestic enterprises rather than of non-resident purchases of domestically issued bonds. External bond issues by Japanese enterprises, the largest players, were less than \$8 billion annually

⁵⁷ Sargen (1990) notes that about one-half of Japan's holdings of overseas securities was purchased in the United States, with another one-quarter to one-third believed to be in Eurodollar bonds.

⁵⁸ For a major participant's view on this, see Ueyama (1998).

⁵⁹ According to Japanese Ministry of Finance data on portfolio investment, disinvestments in the United States amounted to almost \$9 billion in the first half of 1990. However, further interpretation of the new ultimate destination of Japanese investment is frustrated by the fact that statistics reveal only that the bulk went to Luxembourg.

Table 21
Bond investment flows
(in billions of US dollars)

	Annual averages		1985	1986	1987	1988	1989	Memo- randum: 1989 as % of GNP
	1975-79	1980-84						
Total outflows¹	16.7	40.1	107.7	156.9	107.2	178.8	186.1	1.3
United States	5.6	4.0	3.8	3.2	7.4	7.0	5.3	0.1
Japan	2.5	13.7	58.8	94.7	71.2	84.1	95.4	3.4
Larger EC countries ² of which:	3.2	14.3	38.4	51.9	23.5	70.2	72.9	1.6
<i>France</i> ³	0.9	1.2	5.6	10.8	4.6	7.5	5.8	0.6
<i>Germany</i>	1.4	3.8	9.5	7.5	13.6	31.3	21.5	1.8
<i>Italy</i>	- 0.2	0.3	0.8	2.2	3.6	5.5	9.1	1.1
<i>United Kingdom</i> . .	-	5.4	17.5	25.3	- 4.2	12.2	27.5	3.3
<i>Belgium-Luxembourg</i>	0.9	2.6	6.2	6.4	4.5	12.0	10.8	7.0
<i>Switzerland</i>	5.4	7.4	5.1	5.4	4.4	16.2	9.8	5.6
Total inflows¹	8.8	17.1	76.5	87.2	78.8	110.5	158.8	1.1
United States	0.6	4.1	42.0	45.6	23.1	21.4	19.3	0.4
Japan	2.3	4.2	15.2	16.5	30.7	49.9	73.5	2.6
Larger EC countries ² of which:	3.9	5.9	16.5	19.3	20.4	28.4	56.6	1.2
<i>France</i> ³	1.3	5.2	8.9	7.8	8.7	11.9	28.8	3.0
<i>Germany</i>	1.6	0.2	3.1	6.5	0.7	- 7.8	0.6	0.1
<i>United Kingdom</i> . .	-	0.1	3.4	3.3	2.8	6.0	15.0	1.8
<i>Belgium-Luxembourg</i>	0.1	0.1	0.2	0.4	1.5	7.4	10.9	7.0
<i>Switzerland</i>	-	-	0.4	0.5	1.0	2.3	1.2	0.7
<i>Memorandum:</i> <i>Net outflows</i>								
<i>Japan</i>	0.2	9.5	43.6	78.2	40.6	34.2	21.9	0.8
<i>Germany</i>	- 0.2	3.6	6.4	1.0	12.9	39.1	21.1	1.7

Notes: (i) A minus sign under outflows indicates a net sale of domestically-owned foreign assets; under inflows it indicates a net sale of foreign-owned domestic assets.

(ii) Excludes public sector bonds.

¹ Sum of fourteen countries.

² Belgium-Luxembourg, France, Germany, Italy, the Netherlands, Spain and the United Kingdom.

³ Portfolio flows (equities plus bonds).

Sources: As for Table 9.

before 1985, but have risen steeply, to more than \$35 billion by 1988⁶⁰ and \$75 billion in 1989. The substantial rise in bond inflows to Japan largely reflects increased foreign bond issues (including bonds with equity warrants) by Japanese firms.⁶¹

The main attraction of such paper for investors lay in expectations of further rises in the Tokyo equity market. In general, periods of weakness have tended to lead to sharp declines in issues of equity-related bonds: the decline in 1990 was particularly steep.⁶² The need to issue such instruments abroad, rather than in the domestic market, reflected the continuation of some residual restrictions in domestic capital markets. One notable example was that foreign currency denominated equity-related bonds could not as readily be issued in Tokyo as in the Euromarkets. At the same time, there was a demand on the part of Japanese investors for these assets. This demand could be met by detaching the equity warrants soon after issue, and then selling both warrants and the “stripped” bonds separately to Japanese residents. This gave rise to a capital outflow (resident purchase of a foreign-owned asset). Hence, in this case, restrictions in domestic capital markets provided the motivation for “two-way” capital flows.

More generally, the increased prominence of equity-related bonds in international markets has perhaps blurred the distinction between equity and bond flows. As recently as 1985, external equity-related bonds amounted to around \$11 billion; by 1989 this had risen to more than \$80 billion, about one-third of total external bond issues (Table 22). By contrast, the share of “classical” fixed-interest

⁶⁰ Bank of Japan, *Balance of Payments Monthly*. Three-quarters of the 1988 issues took the form of bonds with equity warrants; straight bonds amounted to less than 13% of the total flows. (See Nakao (1990)).

⁶¹ Capital inflows into Australia have also taken the form of the issue of securities in offshore markets, particularly the Euro-A\$ bond market. Tease (1990) points out that flows through this market were enough to finance the whole current-account deficit in the second half of the 1980s.

⁶² See Bank for International Settlements (1990d), especially the chart on page 13.

Table 22
External bond issues, by type
(in billions of US dollars)

	1985	1986	1987	1988	1989	1990
Total external bond issues	167.8	227.1	180.8	227.1	255.7	228.8
Fixed rate	94.8	141.5	121.3	160.2	154.6	160.2
Floating rate	58.7	51.2	13.0	22.3	17.8	36.8
Convertible	7.0	7.8	18.2	11.3	14.1	9.5
Equity warrants	4.3	19.1	24.8	29.7	66.2	21.1
<i>Memorandum:</i>						
<i>Equity warrants in US dollars . . .</i>	<i>n.a.</i>	<i>n.a.</i>	<i>20.3</i>	<i>27.0</i>	<i>61.5</i>	<i>17.4</i>
<i>Ordinary shares issued in international markets</i>	<i>2.7</i>	<i>11.6</i>	<i>20.3</i>	<i>9.1</i>	<i>16.7</i>	<i>14.9</i>

Sources: OECD *Financial Market Trends* and Howell and Cozzini (1989 and 1990).

securities declined.⁶³ Because the retirement of fixed-interest debt exceeded by far that of equity-related paper, the decline in the share of “classical” fixed-interest securities was even more marked on a net basis. It is of interest to note that issues of bonds with equity warrants have in recent years by far exceeded ordinary share issues in international markets. However, large declines in equity prices, doubts about future prospects, and measures to curtail new issues by Japanese entities⁶⁴ led to a steep fall in equity-related issues in 1990.

A third notable feature is the size of Belgian and Swiss outflows into foreign bonds, which are proportionally larger (averaging 3.5% and a little less than 4.5% of GNP respectively during the period 1985–89) than even Japanese outflows. Capital outflows from these countries reflect the pressure to diversify away from domestic

⁶³ For a discussion of the rise and fall of the importance of floating rate issues, see Bingham and Mayer (1988).

⁶⁴ An announcement (towards the end of 1989) by the Japanese Ministry of Finance that it might require the registration of all new equity warrant issues and their listing on the Tokyo stock exchange unsettled the market. By February 1990 a registration requirement had been introduced, followed by a suspension of new issues of shares and equity-related bonds by Japanese entities. See Bank for International Settlements (1990c), pages 142–3.

currency denominated assets, an important motivation in relatively small, open economies. By the end of the 1980s, foreign currency bonds amounted to over one-fifth of the total bond holdings of Belgian residents – up from less than one-tenth at the start of the decade (see Dombrecht et al. (1990)). An additional attraction of foreign investment for Belgian investors was the development of Belgian/Luxembourg franc issues by non-residents in Luxembourg, which enabled Belgian investors to avoid both the 25% withholding tax in Belgium and the exchange rate risk. As a result, Belgian borrowers were induced to raise long-term funds abroad so that capital *inflows*, small before 1987, rose appreciably by the late 1980s: in some cases, Belgian residents acquired Belgian debt issued abroad. The withholding tax and high transaction costs in the (small) Belgian market, combined with the development of liquid markets abroad, thus served to generate “two-way” capital flows.⁶⁵ In 1989, for instance, gross Belgian inflows and outflows into bonds were around 7% of GNP.

The enormous rise in international bond investment appears to have increased the correlation between returns on bonds in different currencies.⁶⁶ Allowing for inflation differentials, Fukao and Hanazaki (1987) were able to uncover some evidence of greater convergence of real interest rates internationally in the first half of the 1980s than in the late 1970s. Furthermore, there appears to be some evidence that bond yields of currencies in the exchange rate mechanism of the EMS have tended to converge further in the second half of the 1980s. Nonetheless, apparent (and recent) convergence in real long-term interest rates has fallen well short of that seen under the gold standard in the late nineteenth century.

⁶⁵ However, the withholding tax was sharply reduced in 1990. Taxation and regulatory arrangements in Australia also imply that Australian issuers face lower borrowing costs offshore, and this has contributed to substantial “two-way” capital flows in Australia. See Tease (1990).

⁶⁶ On the other hand, Kupiec (1990) found that international correlations of *nominal* bond yields were actually lower in the period 1974–89 than in the 1960s, the opposite of what might be expected.

Table 23
Public sector investment flows
(in billions of US dollars)

	Annual averages		1985	1986	1987	1988	1989	Memo- randum: 1989 as % of GNP
	1975-79	1980-84						
Total outflows¹	29.7	36.6	37.0	79.6	149.5	86.8	83.7	0.6
United States	7.8	13.4	11.9	9.1	0.1	10.9	28.6	0.6
Japan	3.7	6.3	3.3	20.6	46.1	26.3	- 1.7	0.1
Larger EC countries ²	14.4	7.2	15.4	39.7	88.5	27.2	37.5	0.8
<i>of which:</i>								
<i>France</i>	2.0	3.3	9.5	9.0	4.7	1.3	5.3	0.6
<i>Germany</i>	4.8	0.8	6.4	11.6	28.2	- 9.3	11.8	1.0
<i>Italy</i>	2.5	2.4	- 4.7	6.4	10.9	14.1	18.6	2.1
<i>United Kingdom</i>	3.1	- 0.4	2.1	2.8	22.3	6.6	- 7.0	0.8
<i>Netherlands</i>	0.1	0.5	1.0	0.6	3.6	3.1	1.2	0.6
<i>Spain</i>	1.8	0.8	0.4	6.3	14.4	10.0	7.1	1.9
Australia	0.2	2.3	- 0.9	3.1	2.6	11.5	9.0	3.1
Canada	1.2	2.8	2.1	3.1	5.0	9.9	3.2	0.6
Total inflows¹	37.7	64.6	77.3	123.1	111.6	124.5	147.0	1.1
United States	19.4	21.3	26.6	51.7	43.8	76.6	52.6	1.0
Japan	2.3	6.0	6.5	2.8	9.3	-17.7	6.4	0.2
Larger EC countries ²	7.0	22.3	28.1	44.1	45.1	37.1	63.8	1.4
<i>of which:</i>								
<i>France</i>	0.5	2.3	3.1	0.8	7.9	- 2.8	5.4	0.6
<i>Germany</i>	3.0	9.6	10.2	25.3	14.0	10.4	25.5	2.1
<i>Italy</i>	0.1	4.4	6.2	7.1	5.9	13.9	20.8	2.4
<i>United Kingdom</i>	1.9	1.3	4.5	5.4	9.0	4.5	- 0.3	0.1
<i>Netherlands</i>	0.2	0.9	0.8	0.4	4.4	6.5	4.6	2.1
<i>Spain</i>	0.9	1.8	2.4	1.5	2.5	1.6	5.4	1.4
Australia	1.1	1.9	4.3	5.7	5.2	11.3	7.4	2.6
Canada	5.6	7.7	8.3	17.4	6.3	15.8	13.1	2.5

Notes: (i) A minus sign under outflows indicates a net sale of domestically-owned foreign assets; under inflows it indicates a net sale of foreign-owned domestic assets.

(ii) Reserve movements constitute the principal component under outflows, foreign purchases of public sector bonds the principal component under inflows.

¹ Sum of fourteen countries.

² Belgium-Luxembourg, France, Germany, Italy, the Netherlands, Spain and the United Kingdom.

Sources: As for Table 9.

Table 24
Foreign penetration of national government bond markets¹

	1983	1985	1988	1989
Australia ²	20	33	55	54
Belgium	4	10	13	14
Canada	16	21	31	37
France	4	2	6	15
Germany ²	9	17	31	34
Italy	3	4	4	6
Japan	6	6	4	4
Netherlands	33	28	35	37
Spain ³	0	0	2	5
United Kingdom	9	11	15	15
United States	13	14	17	19
Average	10	13	13	15

¹ Non-resident holdings as a percentage of outstanding domestic and Euro-bonds. Central government unless otherwise indicated.

² Central and local government.

³ Excluding Euro-bonds.

Source: J.P. Morgan *World Financial Markets* (1989, No. 5), updated.

Public sector

While investment flows in public sector instruments do not appear to have risen as much as private flows, the pattern of flows has changed appreciably. There has been a marked increase in foreign purchases of government bonds issued in the United States, Canada, Italy and Australia (see the inflow section in Table 23). In the case of the last three, where inflows amounted to around 2½% of GNP in 1989, high nominal interest rates on long-term government paper have been the main attraction for foreigners. This has often been associated with (partly unwanted) upward pressure on the exchange rate, sometimes countered by heavy official intervention in the foreign exchange market. When this has happened, the authorities in these countries have, in effect, been engaged in two-way capital flows - inflows into long-term government bonds offset by short-term outflows in the form of intervention.

In a number of government bond markets, foreign investors have come to play a major, indeed dominant, role (Table 24). Foreigners hold more than one-half of outstanding government bonds in Australia – with high interest rates viewed as compensating for the exchange rate risk and so providing an attractive diversification instrument, particularly for investors from low-inflation and low-interest-rate countries.⁶⁷ Conversely, Dutch guilder and Deutsche Mark bonds are an attractive form of diversification for those in inflation-prone countries, and the foreign share of these markets had risen to about one-third by 1988.

Another factor is the withholding taxes applied to non-resident investors: it appears that foreign holdings of government bonds are encouraged by either the absence of a withholding tax for foreign investors (United States, Canada, Germany and the Netherlands) or the existence of relatively simple exemption procedures (United Kingdom and Australia).⁶⁸ Conversely, foreign holdings are rather low in countries applying a withholding tax (Italy, Japan and Spain).

Role of financial institutions

While in some countries the direct acquisition by households of foreign securities has been important (for example in Belgium), increased investment in foreign assets has generally been intermediated by the financial institutions. Except in 1987 (when official intervention financed the imbalances), it was non-bank financial intermediaries, not banks or governments, which financed global imbalances during the 1980s. Three main factors were important:

⁶⁷ König and Ledig (1990) contains an annex which suggests that efficient portfolios consist of only two, and at most three, currencies. On the basis of interest and exchange rates prevailing in the 1980s, the three currencies for a German investor were the Dutch guilder, the Danish krone and the Australian dollar.

⁶⁸ Note also how the elimination of a withholding tax in France has led to a marked increase in foreign participation. For further details, see Morgan Guaranty Trust Company of New York (1990), especially Chart 8.

households moved savings from banks to non-banks; there was a huge expansion in private sector wealth; and, most important, a massive diversification into foreign assets took place.

The first element was the channelling of household savings to institutional investors (as the demand for insurance and pension schemes rose) and away from ordinary bank accounts. Since non-bank financial institutions in general hold a much higher proportion of their assets in foreign currency than do banks, this increased investment abroad.⁶⁹

Secondly, the ratio of private sector wealth to GNP has risen sharply almost everywhere during the 1980s as equity, real estate and other asset prices rose. The combined effect of this and the switch into institutional investment led to an enormous increase in institutions' investment funds. The assets of insurance companies and pension funds in both Japan and the United Kingdom rose by a factor of four during the decade. Indeed, during the second half of the 1980s it was such increased wealth – rather than a higher propensity to invest abroad – that underlay the strong growth of capital flows.⁷⁰

The proportion of pension funds', insurance companies' and other financial institutions' assets in foreign securities rose steeply in a number of countries. In the wake of liberalisation, there were particularly sharp rises in the share of foreign securities in the portfolios of Japanese and UK pension fund and insurance company portfolios, which played a major part in the increase in portfolio flows in the first half of the 1980s (Table 25). But since 1985 flows have been sustained more by increases in institutional investors' total assets than by diversification into foreign assets. Even so, the ratio of foreign to domestic securities continued to rise longer in Japan than

⁶⁹ See Davis (1988), p. 20, for a graph.

⁷⁰ In an econometric analysis of Japanese capital flows, Ueda (1990) estimates that increased wealth explains about one-third of the increase in capital flows during the 1980s. He calculates that the ratio of private sector wealth to GNP more than doubled from 1980 to 1988 – largely because of the stock market boom.

Table 25

Institutional investors' holdings of foreign securities as a percentage of their total securities holdings

	1980	1985	1986	1987	1988	1989	1990 ¹
United States							
Private pension funds ²	1.0	3.0	4.0	4.0	4.0	4.1	
Japan							
Life assurance companies . .	9.0	26.4	28.9	31.4	31.1	33.9	32.2
Non-life insurance companies	7.4	19.4	21.5	21.5	22.3	26.1	28.2
Trust accounts of banks . . .	2.2	14.0	17.1	16.7	15.3	17.0	18.6
Postal life insurance	0.0	6.7	9.2	11.2	11.3	11.2	11.2
<i>Memorandum:</i>							
<i>Total insurance company assets³ (Yen 000 bn)</i>	<i>48.2</i>	<i>94.1</i>	<i>111.7</i>	<i>132.4</i>	<i>157.7</i>	<i>172.9</i>	<i>192.2</i>
Canada							
Life insurance companies . .	2.1	2.2	2.8	3.4	3.5	3.6	3.6
Pension funds	6.1	6.6	7.0	6.6	6.7		
Germany							
Investment companies	10.8	40.4	34.9	39.3	57.8	59.9	58.9
Italy							
Insurance companies	11.7	10.1	8.1	8.4	10.4		
United Kingdom⁴							
Insurance companies	6.9	17.3	19.7	15.7	17.7	22.3	
Pension funds	10.3	17.8	20.1	16.3	17.8	22.2	
<i>Memorandum:</i>							
<i>Total net assets of insurance companies and pension funds (£bn)</i>	<i>109.5</i>	<i>287.8</i>	<i>350.7</i>	<i>371.7</i>	<i>408.4</i>	<i>465.1</i>	
Belgium							
Insurance companies and pension funds	1.7	3.3	3.8	3.3	2.8		
Netherlands							
Insurance companies	5.2 ⁵	10.3	11.0	11.0	11.4	10.1	9.8
Private pension funds	10.6 ⁵	13.8	17.6	18.0	20.2	21.3	20.8
Public pension funds	1.7 ⁵	2.8	3.0	3.3	3.5	4.2	4.6
Sweden							
Insurance companies				1.5	1.6	4.0	10.1

¹ Position at mid-year, except Sweden (end-September).

² Tax-exempt funded schemes (excludes IRAs).

³ Sum of life, non-life and postal life insurance.

⁴ Pension funds exclude central government sector but include other public sector. Unit trust investment allocated as follows: 50% foreign and 50% domestic at end-1989 (following partial survey results), and other years calculated in proportion to changes in the measured share of foreign assets.

⁵ 1983.

Sources: Bank of Italy; Bank of Japan *Economic Statistics Annual* and *Economic Statistics Monthly*; Sveriges Riksbank *Quarterly Review*; De Nederlandsche Bank *Annual Report* and *Quarterly Bulletins*; Deutsche Bundesbank Statistical Supplement to the *Monthly Report, Series 2*; Intersec Research Corporation; National Bank of Belgium; Statistics Canada; UK Central Statistical Office *Annual Abstract of Statistics and Financial Statistics*.

in the United Kingdom owing to the progressive raising of ceilings on the proportion of financial institutions' assets that could be held in foreign currency.⁷¹

It might also be noted that the actual foreign currency exposure of Japanese financial institutions is much greater than suggested by data on holdings of foreign securities.⁷² Life assurance companies, for instance, have large foreign currency deposits as well as holdings of "sushi" bonds (foreign currency bonds issued by Japanese firms). Although there are no official data on the size of either amounts, one estimate suggests that these assets represent almost 10% of total assets.⁷³

While Japanese institutions displayed an almost exclusive preference for bonds, UK institutions generally preferred equities and avoided bonds.⁷⁴ One reason for this preference is that UK pension liabilities are largely final-salary-related: only the equity market is regarded as providing the real rate of return this requires. This difference in institutional preferences is part of the explanation why the United Kingdom has been well ahead of Japan as a purchaser of foreign equities despite very much smaller aggregate saving. Another reason is that the role of London as a major centre for

⁷¹ Before 1986, Japanese insurance companies and pension trust accounts at Trust Banks could hold foreign currency assets only up to 10% of total assets. These ratios were raised to 25% and then to 30%. Similar restrictions on the Postal Life Insurance Fund were also relaxed in 1987. The Annex to Fukao (1988) [or Fukao and Okina (1989)] gives a useful summary of regulations and deregulations.

⁷² One factor working in the opposite direction is that these institutions have, to some extent, borrowed short-term in foreign currencies to limit their exchange rate risk. This is considered more fully on pages 78-79 below.

⁷³ End-1986 figure from Deguchi (1987), cited by Fukao and Okina (1989).

⁷⁴ By end-1988 UK holdings of foreign securities were split as follows (in £ bn):

	Overseas ordinary shares	Government securities
Insurance companies	25.9	3.2
Pension funds	33.4	2.1

Source: Central Statistical Office *Financial Statistics*.

foreign equity transactions increases both inflows and outflows of equities.⁷⁵

Among the smaller European countries, financial institutions in the Netherlands have also increased the share of foreign investments in their portfolios. The main exception to this is the important public pensions fund, which, largely because of regulations, holds only 4.5% of its financial investments in foreign securities, compared with an average of about 20% for the private pension funds.

German insurance companies, by contrast, tended to limit their investment in foreign assets, holding instead domestic DM bonds. The main reason for this is that they are permitted to acquire foreign currency assets only to cover foreign business undertaken.⁷⁶ By contrast, investment companies in Germany – which are not subject to this regulation and whose funds are relatively small but growing rapidly – have shown a marked predilection for foreign investment. One implication of the existing restrictions is that German capital outflows are not “stabilised” by institutional investors seeking long-term investments in the same way as Japanese outflows have been – perhaps explaining the greater apparent volatility noted above.

Until recently, Sweden imposed tight restrictions on foreign investment by domestic institutions. Insurance companies were able to invest in external assets only from mid-1989: they lost little time in starting to diversify, with new foreign investment accounting for about 75% of the increase in investment during the first three quarters of 1990.⁷⁷

⁷⁵ Although London ranks only fourth in the world by domestic equity capitalisation (behind Tokyo, Osaka and New York), its turnover (£40 billion in 1988) represents nearly half of measured global foreign equity turnover. Non-residents account for about one-half of this turnover (see Bank of England (1989) and Davis (1990)).

⁷⁶ For further details, see Bishop (1989). Although comprehensive statistics are not available, Allianz Leben – Germany’s biggest life insurer – held 97% of its equity portfolio in German equities. (Source: *Wall Street Journal*, 10th July 1990.)

⁷⁷ Pension funds were allowed to invest in foreign securities from 1990. Lindenius (1990) discusses the likely implications.

In a number of other countries restrictions on financial institutions' holdings of foreign assets presumably continued to limit the increase in capital flows.⁷⁸ Such restrictions seem likely to come under closer examination by the EC Commission as the integration of financial markets proceeds. As those countries that now maintain restrictions also liberalise financial institutions' portfolio choices, and as the earlier liberalisers broadly attain their desired foreign exposures, the impact on portfolio flows would – judging by UK and Japanese experience – be appreciable.

But perhaps the most striking exception to the trend towards the internationalisation of institutional portfolios is the United States. By mid-June 1990 US tax-exempt institutions (pension funds, foundations and endowments) had \$98 billion invested abroad, only 4% of their assets, but still \$35 billion more than eighteen months earlier.⁷⁹ Despite the recent increase, not only is this foreign share low by the standards of other countries, but it may well also imply sub-optimal diversification. Other things being equal, the more dependent a country is on imports, the greater should be the proportion of foreign investment – because of the greater need to

⁷⁸ Up to 1990, Canadian pension funds could not invest more than 10% of their assets in foreign securities: this ceiling was raised to 12% in 1990, 14% in 1991 and will be 20% from 1993. Similar rules also apply to mutual funds if they are to be eligible for tax-exempt registered retirement savings plans. Private pension funds in France and Switzerland also hold relatively little in foreign assets. Fukao and Okina (1988) cite the following international comparisons of foreign investment as a percentage of the total assets of some private pension funds:

United Kingdom 20%;	Canada 9%;
Australia 15%;	Switzerland 5%;
Japan 10%;	Germany 4%;
the Netherlands 10%;	France 2%.

⁷⁹ An estimate by Intersec Research Corp. cited by the *Financial Times*, 5th January 1991. In 1980, only 2% of US pension funds were invested abroad. US life insurance companies held only 4% of their assets in foreign securities, and even then mostly in Canadian bonds. [Ehrlich (1981) cited by Davis (1988), pages 47 and 55.]

hedge against external shocks.⁸⁰ Although the United States is a relatively closed economy, imports of goods and services are still almost 13% of GNP (1989 estimate) and are rising. The increased volatility of the dollar would seem to provide an additional motive for diversification into non-dollar assets. The fact that Japanese institutional investors diversified their portfolios abroad so substantially in the 1980s, while US institutional investors (until very recently) did not, does much to explain the pattern of capital flows observed.⁸¹

As noted, there are recent signs that US investors are increasing their holdings of foreign assets. Should this reorientation continue, the consequences for the exchange rate of the dollar would be significant.⁸² One factor likely to sustain this trend is that liberalisation and innovation outside the United States have made financial markets overseas deeper and more liquid – and so more attractive for US investors – than they once were.

The role of greater diversification in portfolio flows in the 1980s suggests that much investment has been autonomous. But there are good reasons for not pushing this hypothesis too far. For one thing, the turnover in long-term assets has risen sharply, pointing to the importance of short-term considerations in the *timing* of the implementation of long-run investment decisions (such as interest

⁸⁰ But note that other factors could be important, including the correlation between returns on domestic and foreign assets. For instance, the return on Dutch guilder bonds is closely correlated with the return on German bonds, reducing the attractiveness of German bonds as a diversification instrument for Dutch investors even though trade links between the two countries are extensive.

⁸¹ Barenco (1990) estimated that the US position in foreign currencies hardly changes in the 1980s, remaining at around 1% of GNP.

⁸² Some recent surveys suggest that US fund managers will seek to invest a greater proportion of their portfolios overseas in the years ahead. See Janet Bush, "Global caution persists", *Financial Times*, 26th October 1989. Howell and Cozzini (1990) suggest that optimal diversification would lead US investors to have 8–10% of their assets in foreign paper, as against only 4% now.

and exchange rate expectations).⁸³ Secondly, the acquisition of long-term assets is often financed by short-term borrowing in the same currency (see below). Thirdly, the diversification phase may be almost over – at least for Japan, the United Kingdom and some smaller countries.⁸⁴ As the share of foreign assets, long constrained by official restrictions, reaches a more “normal” level, expectations of returns are likely to become more important. At any event, the foreign securities’ share has fallen on occasion in recent years (for example, life assurance companies in Japan in 1988 and UK institutional investors in 1987 – see Table 25). A number of Japanese economists have indeed concluded that the huge portfolio shift of Japanese institutional investors had, by 1988, run its course.⁸⁵ One implication of this is that such investment has now become more sensitive to exchange rate and other risks.⁸⁶

⁸³ The annual turnover of securities divided by year-end holdings has risen sharply in the last decade (turnover of foreign holdings of securities in these markets):

	1983	1989
United States	1.8	5.7
Germany	1.1	2.7
Japan	1.5	2.6

Source: J.P. Morgan *World Financial Markets* (1989 Issue No. 5), updated.

⁸⁴ Golub (1990) suggests that investor preferences constitute the main remaining factor limiting capital mobility, as the willingness of domestic residents to invest in foreign currency denominated assets is limited.

⁸⁵ See, for example, Fukao and Okina (1989) and Ueda (1990).

⁸⁶ See Okumura (1988).

V. Short-term bank flows

Banks act as agents (but not principals or even intermediaries) in virtually all capital-account transactions. Wherever possible, balance-of-payments statistics classify such transactions under other headings – direct investment, portfolio investment or official reserves. The IMF's category of "other short-term capital of deposit money banks" is therefore almost a residual category, covering capital flows through banks that are not included elsewhere in the balance-of-payments statistics.

While reliable estimates of total capital-account transactions of banks do not exist, the volume of flows is huge. The recent BIS survey cited at the beginning of this paper estimated that aggregate daily foreign exchange transactions conducted by banks amounted to around \$650 billion in 1989. Most transactions are extremely short-term (with open positions usually closed within the same trading day) and do not usually give rise to measurable capital flows.

Whether it can be said that the banks' role is simply to "take up" the counterpart foreign exchange exposure desired by non-banks (so that bank capital flows are in this sense purely a residual) is debatable. It is, perhaps, true that banks are more responsive to small changes in exchange rates or interest rates. For this reason, McKinnon (1979) thought that banks – were it not for official and other pressures to avoid open foreign exchange positions – would be natural candidates for the role of stabilising speculators under floating exchange rates, a view apparently supported by Goodhart's discussions with London bankers on foreign exchange operations.⁸⁷ Unlike McKinnon, however, Goodhart found that official guidelines

⁸⁷ Reported in the appendix to Goodhart (1988). He found that foreign exchange traders with London banks were given a free hand in speculating in foreign exchange subject only to prudential limits on the close-of-business exposure, with wider limits on the intra-day position. The view "firmly maintained" within the commercial banks was that such speculation was profitable.

on open positions in foreign exchange did not unduly restrict such speculative activity by bankers, and he felt that the cumulative weight of all banks' aggregate positions could be extremely large. The following paragraphs review the main features of net short-term capital flows through banks: the issue whether such flows can be regarded as purely "accommodating" flows is discussed a little further below (on pages 91-94).

Aggregate net short-term bank flows for the fourteen larger industrial countries averaged almost \$80 billion annually over the period 1985-89 and, measured in relation to GNP, have increased compared with the 1975-84 period (Table 9 on page 35). The recent pattern of flows among the major players (the United States, Japan, Germany and the United Kingdom) is summarised in Table 26. Of the two major countries facing sizable current-account deficits, the United Kingdom has relied most heavily on short-term bank flows in recent years – as progressively higher short-term interest rates have attracted large inflows of funds into sterling deposits.⁸⁸ This form of balance-of-payments financing is, of course, inherently fragile: indeed, with a weakening of confidence in sterling in the fourth quarter of 1989, such inflows virtually dried up, leading to a significant loss of reserves and a drop in sterling.

But it is perhaps the position of the surplus countries that is the most interesting – especially the contrast between Japan and Germany. Both countries have large current-account surpluses that have to be recycled through capital outflows. While Germany does record a short-term outflow (of some \$84 billion over the five-year period), Japan has an *inflow* amounting to little short of \$200 billion. Why are these countries so different?

One important difference is that German banks are subject to more extensive rules governing their permitted exposure in foreign currency. In Germany, such rules apply across particular maturities (e.g. one-month *and* six-month exposures must be balanced), while Japanese banks are subject to only an overall limit on foreign

⁸⁸ This was particularly true during late 1988 and the first three quarters of 1989.

Table 26
Net short-term banking flows
(in billions of US dollars)

	Annual averages		1985	1986	1987	1988	1989	Memorandum: 1989 as % of GNP
	1975-79	1980-84						
Total¹	11.5	28.1	39.5	84.1	118.3	87.3	61.5	0.4
United States	- 1.9	- 3.6	26.1	31.4	49.2	3.9	12.0	0.2
Japan	1.4	6.7	10.9	58.5	71.8	44.5	8.6	0.3
Larger EC countries ²	9.3	19.4	0.6	2.5	- 3.5	26.1	6.1	0.1
<i>of which:</i>								
France	- 0.1	6.8	- 3.2	2.3	- 9.7	2.4	7.6	0.8
Germany	2.6	- 0.1	-10.1	-28.5	- 5.1	-10.3	-30.3	2.8
Italy	1.3	2.2	- 3.1	4.0	4.4	8.0	11.1	1.3
United Kingdom	2.0	7.5	13.0	15.0	0.8	24.9	27.6	3.3
Belgium-Luxembourg	0.9	2.1	4.8	3.2	0.4	- 1.8	1.8	1.2
Netherlands	1.9	1.3	1.0	6.6	2.7	- 1.5	-10.4	4.7
Banking flows in domestic currency³								
United States	- 4.5	-14.6	32.1	19.9	48.3	11.3	19.2	
Japan	- 1.5	- 1.8	- 4.2	-14.5	- 2.6	-15.5	-16.9	
Larger EC countries ²	3.0	- 3.9	- 7.5	-24.9	11.5	19.3	- 2.4	
France	- 1.6	- 1.8	- 2.4	- 2.0	1.5	6.6	11.6	
Germany	2.3	- 3.0	-12.5	-24.1	0.4	- 5.3	-22.1	
Italy	0.2	-	3.0	- 0.8	- 0.8	0.8	- 1.1	
United Kingdom	1.7	1.4	3.3	0.6	7.4	17.9	12.6	
Belgium-Luxembourg	0.3	0.3	0.2	- 0.2	0.6	1.2	1.3	
Netherlands	0.1	- 0.8	0.9	1.6	2.4	- 1.9	- 4.7	

¹ Sum of fourteen countries.

² Belgium-Luxembourg, France, Germany, Italy, the Netherlands, Spain and the United Kingdom.

³ Exchange rate adjusted changes in banks' net external position. This includes banks' purchases of foreign securities and is not strictly comparable to the balance-of-payments estimates shown in the top of the panel: the discrepancy is large only in the case of Japan. The balance-of-payments convention is used: an increase in assets enters as a negative number (i.e. a capital outflow). In the absence of data for the whole period, Spain is excluded.

Sources: As for Table 9, *UK Balance of Payments 1989* and *BIS International Banking and Financial Market Developments*, various issues.

exchange exposure regardless of maturity. As a result, the bulk of German bank outflows are denominated in local currency; in the main, such flows take place in the interbank market. Also, the depth of the Euro-Deutsche Mark market naturally makes it easier for

German banks to lend Deutsche Mark abroad (the Euro-yen market, by contrast, is much smaller). Current-account surpluses and intervention purchases of Deutsche Mark in the foreign exchange market both served (at least initially) to increase domestic banks' DM claims on foreign banks: in this sense, banking flows appear to have acted as a passive financing item (a point developed further below). One consequence of this trend has been a sharp increase in German banks' foreign lending to banks from 13% of their total lending to banks at end-1980 to more than 25% by end-1989 (Table 27). By contrast, the share of foreign lending to non-banks remained virtually constant. Nor have German banks much increased the share of foreign securities in their investment portfolios. The significance of these features is, as a recent IMF study concluded, that the recycling of current-account surpluses by German banks took place in a way that expatriated both foreign currency and maturity transformation activity.⁸⁹

Japanese banks, allowed under foreign exchange exposure rules to borrow short and lend long, have been much more active. Banks' holdings of foreign securities rose to over 14% of their total securities holdings by end-1986, from less than 3% at end-1980. However, this percentage appears to have stabilised in recent years, declining in 1988 before rebounding in 1989 (Table 28).⁹⁰ While borrowing short and lending long can be considered to be a natural banking function – indeed, many have interpreted this trend as evidence of Japan's emergence as a major international banker – there are dangers when short-term interest rates rise substantially or unexpectedly.⁹¹ Also,

⁸⁹ See "Capital Account Development in Japan and the Federal Republic of Germany: Institutional Influences and Structural Changes" in IMF *World Economic Outlook*, April 1989.

⁹⁰ By end-1988, Japanese bank's holdings of foreign securities amounted to over \$87 billion (using the basic rate Yen 127 to \$1).

⁹¹ For a benign interpretation, see Shinkai (1990). For warnings about the dangers, see Richebächer (1990) and Pepper (1991). Note that Japan's stock of foreign assets and liabilities has ballooned in recent years: gross external liabilities increased from \$547 billion at the end of 1986 to \$1,478 billion by the end of 1989.

Table 27
Banks' foreign and domestic assets
 (at year-end)

	1980	1985	1986	1987	1988	1989	1990 ¹
Japan							
Banks' holdings of foreign securities as a percentage of their total securities holdings (banking accounts)	2.7	12.7	14.2	14.0	12.6	13.5	14.7
Germany							
Banks' foreign lending as a percentage of total lending to:							
Banks	13.0	17.0	20.9	20.5	21.9	25.4	26.1
Non-banks	5.2	5.2	5.0	5.0	5.1	5.3	5.7
Banks' holdings of foreign securities as a percentage of their total securities holdings ²	4.7	3.4	4.3	3.9	4.5	5.4	6.4

¹ Mid-year position.

² Including bank securities.

Sources: Bank of Japan *Economic Statistics Monthly* and *Monthly Report of the Deutsche Bundesbank*.

Table 28
Changes in foreign currency bank loans to non-bank residents¹
 (in billions of US dollars)

	1984	1985	1986	1987	1988	1989	1990 ²
Japan ³	9.7	4.6	47.6	56.7	31.6	11.4	10.6
European countries ⁴	7.6	1.5	4.7	19.3	23.4	26.6	13.4
<i>of which:</i>							
<i>United Kingdom</i>	3.0	5.4	1.0	3.4	7.2	16.9	-16.9
<i>Italy</i>	3.8	- 4.6	2.9	6.9	5.6	5.8	6.8
<i>Sweden</i>	1.0	1.6	0.6	4.4	6.1	16.1	18.7

¹ Assets *minus* liabilities: a positive value indicates an increase in loans to (net of an increase in deposits by) non-banks. Adjusted for exchange rate changes. No figures available for US banks.

² First three quarters at actual rate.

³ Assets only, as liabilities are not published: in general, year-to-year movements in net positions are dominated by changes in assets.

⁴ Austria, Belgium-Luxembourg, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom. The actual figures show a large "swing" between 1987 and 1988 reflecting a rise in French loans to residents of \$6.6 billion (net) in 1987 Q4, followed by net repayments of \$8.4 billion in 1988 Q1: the figures shown above exclude these transactions.

Sources: BIS *International banking and financial market developments* and historical data.

huge rises in the value of Japanese equities contributed to the capital base for much-expanded international lending. A steep and sustained fall in equity prices would have the opposite effect: indeed, such a reversal was beginning to occur in the first half of 1990.

Heavy foreign currency denominated borrowing abroad by Japanese banks also served to cover foreign currency loans to residents. Changes in banks' foreign currency position with residents are shown in Table 28. Such loans are larger, and have risen faster, than in any other country: they increased by \$56 billion in 1987, compared with less than \$20 billion for fourteen European countries taken together.

The scale of such loans was also large relative to Japanese residents' purchases of foreign bonds. Subtracting changes in foreign currency loans (Table 28) from net bond investment flows (Table 21) gives some, albeit approximate, idea of the magnitudes involved (in billions of US dollars):

	1985	1986	1987	1988	1989
Net bond outflow	43.6	78.2	40.6	34.2	21.9
<i>less</i> Foreign currency loans to non-bank residents	4.6	47.6	56.7	31.6	11.4
<i>equals</i>	39.0	30.6	-16.1	2.6	10.5

To some extent, therefore, foreign investment in bonds by non-banks was in effect financed by short-term borrowing in foreign currencies.⁹² In this way, non-banks could hedge against a fall in the dollar: note that foreign currency borrowing reached a maximum in

⁹² Until the tightening of monetary policy in 1985, such an investment strategy was presumably motivated by differences between long and short-term interest rates abroad, expectations that bond prices would rise or desires to conform to the letter, if not to the spirit, of official "guidance" to buy US government bonds. Ueda (1990) found some evidence that the long/short-term interest differential has some, if limited, effect on Japanese bond outflows. After 1988, when short-term interest rates rose, the flat or inverted yield curve may have reduced the attractiveness of bonds for Japanese banks. See J.P. Morgan *World Financial Markets* (1989).

1987 when confidence in the dollar was at its weakest. This Japanese demand for long-term dollar assets and short-term dollar liabilities probably served to hold down long-term dollar interest rates relative to short-term rates. Moreover, the willingness of Japanese banks to assume the maturity risk may have allowed Japanese capital to “flow more easily” abroad.

But precise estimates are not possible because the degree to which transactions are covered in the forward market is unknown. In general, long-term flows tend to be covered by forward exchange contracts to a much smaller extent than short-term flows. One reason for this may be the absence of long-term forward markets – although the typically short average holding period for bonds reduces the importance of this consideration. A more important reason may be that regulations limit the degree of forward cover allowed to institutional investors in foreign-currency bonds.⁹³ One implication of a relatively low degree of forward cover for long-term investments in bonds, and a relatively high degree of cover for short-term borrowing, is that the overall foreign currency exposure from Japanese institutional investment in dollar bonds was greater than the above subtraction would appear to indicate.

The development of other financial instruments (options and swaps) will also presumably imply that exchange rate risk can be hedged off balance sheet and thus escape capital flow data.

In Europe, foreign currency loans to non-bank residents rose only modestly until 1987; after rising by less than \$5 billion in 1985 and 1986, such loans increased by around \$20 billion annually in the

⁹³ For example, regulations limit Japanese life assurance companies’ foreign currency denominated borrowings to a maximum of 5% of foreign bond investments (Reuters, 8th November 1989). In any event, it does appear that foreign currency bank loans to Japanese residents (so-called “impact loans”) did not generally go to life assurance companies. Instead, they took the form of short-term untied loans *either* to securities companies for use in arbitrage with domestic call loans *or* to companies using foreign currency loans to acquire yen while avoiding borrowing at the (regulated) prime rate for yen loans. Such loans are virtually always covered by forward transactions. See Bank of Japan (1984).

following three years (Table 28). The bulk of these loans have taken place in Italy and the United Kingdom: in other European countries foreign currency denominated loans to residents have remained small. Most of such activity in the United Kingdom reflects the operations of foreign banks in London, particularly Japanese banks.⁹⁴ In Italy, high interest rates in lire have diverted some loan demand into ecus. High and rising Swedish interest rates also encouraged residents to take foreign-currency bank loans.

VI. Official intervention

One indication of how well private capital flows can cope with external imbalances and progressive liberalisation is the extent of official intervention.⁹⁵ The 1980s can be divided into two distinct epochs of intervention practices.⁹⁶ During the five-year period 1981–85, the balance on net official monetary movements for the three largest economies was negligible, averaging less than one-tenth of 1% of GNP, and with relatively little year-to-year variation (Table 29). Indeed, for most countries, intervention was a good deal less important than it had been in the 1975–80 period: this is true both

⁹⁴ For a discussion of this see Terrell et al. (1990). They suggest that a significant portion of Japanese banks' activities in London and in New York was driven by attempts to avoid domestic Japanese banking restrictions.

⁹⁵ Not, perhaps, a very good indication: the high elasticity of private capital flows with respect to interest rate and exchange rate expectations may well reduce that impact of intervention on interest/exchange rate patterns.

⁹⁶ The BIS *Annual Report's* chapter on the international monetary system provides an overview of exchange market developments and intervention policy during the previous year. Frankel (1990) analyses the political and international background to intervention policy during the 1980s.

Table 29
Net official monetary movements
 (annual averages, percentages of GNP)

	Mean			Standard deviation		
	1975-80	1981-85	1986-89	1975-80	1981-85	1986-89
United States . . .	0.62	-0.02	0.62	0.85	0.10	0.67
Japan	-0.23	-0.02	-0.53	0.82	0.32	1.09
Germany	-0.16	0.02	0.00	1.21	0.19	1.60
Canada	0.60	0.23	-0.81	0.98	0.48	0.93
France	-0.39	-0.07	0.34	0.71	0.92	0.51
Italy	-0.87	0.18	-0.85	1.37	1.28	0.39
United Kingdom .	-0.66	0.25	-0.80	2.62	0.50	1.63
Australia	0.43	-0.17	-0.72	0.49	1.60	0.92
Belgium	-0.18	-0.56	0.57	0.80	1.49	0.64
Netherlands	-0.13	0.25	-0.51	0.52	0.70	0.68
Sweden	0.45	0.51	0.40	1.07	0.68	0.22
Simple average* .	0.43	0.21	0.56	1.04	0.75	0.84

Note: A minus sign indicates a net official acquisition of foreign assets.

* Average of absolute numbers.

Sources: BIS and national sources.

of the average size and of the variability of official monetary movements: see Table 29.⁹⁷ In this period, then, private capital flows and current-account positions were allowed to determine exchange rates with relatively little official interference. There was, of course, a big rise in the dollar.

Policies changed in mid-decade. Substantial intervention was again undertaken to keep exchange rates within officially desired ranges. Net official monetary movements of around ½% of GNP became the norm once more, with substantial shifts between years, especially in recent years. The standard deviation of net official monetary movements of the three major economies increased

⁹⁷ The main exceptions to this are Australia and Belgium.

Table 30
Official financing of major current-account imbalances
(in billions of US dollars)

	1985	1986	1987	1988	1989	1990*
United States						
Current account . .	-122.1	-145.3	-162.1	-129.0	-110.1	-99
Capital account . .	127.9	111.5	105.2	92.7	126.8	72
Official financing	- 5.8	33.8	56.9	36.3	- 16.8	27
Japan						
Current account . .	49.2	85.8	87.0	79.6	57.2	36
Capital account . .	- 50.7	- 72.1	- 44.7	- 64.1	- 81.9	-57
Official financing	1.5	- 13.7	- 42.3	- 15.5	24.7	21
Germany						
Current account . .	17.0	40.1	46.1	50.5	55.5	44
Capital account . .	- 15.9	- 37.0	- 22.7	- 69.7	- 65.5	-37
Official financing	- 1.1	- 3.1	- 23.4	19.2	10.0	- 7

Notes: (i) The capital account includes the statistical discrepancy and excludes official financing. A positive value indicates a capital inflow.

(ii) Official financing is defined as changes in net official monetary position: it is equal, but opposite in sign, to the sum of the current and capital accounts.

* Preliminary, rounded to nearest billion dollars. In the absence of full-year data, the figure shown refers to the first three quarters at an annual rate.

Sources: As for Table 9 and BIS.

significantly: for Japan and Germany it was even higher than in the 1975-80 period.⁹⁸

One notable and paradoxical feature of recent intervention has been that countries in large current-account surplus have, on

⁹⁸ It should be noted that, in the United States, changes in the net official monetary position do not include indirect flows of official funds via the Euro-market. Such official purchases of dollars, which are not counted as official monetary transactions in Table 29, were substantial in 1987, and were partly reversed in 1988. Annual changes in BIS reporting banks' external liabilities in dollars vis-à-vis official monetary institutions were as follows (\$ billion):

1986	- 0.4
1987	21.7
1988	-11.3
1989	5.8

Source: *BIS International Banking and Financial Market Developments*.

The variability of US net official monetary movements is therefore effectively understated in Table 29.

occasions, intervened to support their currencies while those in deficit have done the opposite. In 1989, in particular, there was a marked tendency for non-official flows to more than finance large current-account imbalances. The net official reserve position of the United States improved by almost \$17 billion, despite a current-account deficit of some \$110 billion (Table 30). Conversely, non-official capital outflows more than recycled the surpluses of Japan and Germany so that net official monetary assets fell substantially in both countries. This was the opposite of the situation in 1987, when private capital flows fell well short of what was needed to finance the major imbalances. A similar pattern was evident in other European currencies: capital inflows into countries with higher-than-average inflation and interest rates led to upward pressure of the exchange rate despite significant current-account deficits: Italy and Spain were the most striking examples.⁹⁹

VII.

Approaches to capital-account analysis in the 1980s

Meade's two distinctions

It is clear from the above review that capital flows in the 1980s have taken many more diversified forms than in pre-1914 days or indeed in any earlier period, a fact that inevitably complicates the task of summarising the structure of capital transactions in the balance of payments. Indeed, there is no simple organising principle in approaching the structure of the capital account, and little or no agreement among economists about the economic or analytical significance of different elements of the capital account.

⁹⁹ For a discussion of the wisdom of currency co-ordination and of the policy requirements of maintaining free capital movements, see de Vries (1990).

For many years, Meade's distinction between "autonomous" and "accommodating" capital flows provided, if not a basis for definitive analysis, at least a plausible point of departure. According to Meade, "[accommodating capital flows] take place only because the other items in the balance of payments are such as to leave a gap of this size to be filled ... [while] autonomous payments ... take place regardless of the size of the other items in the balance of payments".¹⁰⁰

On his reckoning, investment in securities and direct investment would both be counted as autonomous flows. Reserve movements and short-term capital movements were "accommodating".

The second distinction he drew was between "temporary" and "continuing" capital movements, identifying the former with short-term funds attracted by interest rate differentials.¹⁰¹ The underlying notion behind this distinction was that of "reversibility" – that capital pulled in by certain temporary factors would soon flow out once the attractions waned.

Arising from these considerations was the idea of the "basic" balance (the balance on current account plus long-term capital account) which would give some indication of external financing pressures, to be met by attracting (mobile) short-term capital with higher short-term interest rates or with a "low" exchange rate, or by intervention.

However, a number of developments since the early 1970s have tended to blur these distinctions:

¹⁰⁰ Meade (1951), page 11. The distinction was used earlier by Machlup [see Machlup (1983)] and Kindleberger (in his 1937 Ph. D. dissertation, cited in Kindleberger (1987)).

¹⁰¹ But he was careful to point out that a given interest rate differential does not lead to a permanent capital flow, the key insight of the modern portfolio approach to capital movements: "Even if the new relationship between rates of interest on short-term funds in two countries is likely to be permanent, the movement of short-term funds is not likely to continue at its present rate; for when once the available corpus of short-term capital has moved from one centre to the other, the flow is likely to cease or at least to slacken". Meade, *op.cit.*, page 15.

- the increased liquidity of nominally long-term investment instruments (equities as well as bonds) means that temporary capital movements can take the form of transactions in nominally long-term assets. Indeed, the usefulness of the distinction between short and long-term capital flows is brought into serious doubt;

- the advent of floating exchange rates meant that official settlements flows could not necessarily be taken as a measure of official accommodation of balance-of-payments imbalances: indeed, in a strictly floating world, official settlements flows would in principle be zero;

- the increased importance of “autonomous” short-term capital flows that have little or no relation to balance-of-payments financing requirements. Examples include OPEC’s holdings of US Treasury bills or short-term deposits with US banks, capital flight from Latin America and so on.

In short, Meade’s distinction really applied to a fixed rate world where stable flows of long-term capital were the rule rather than the exception. Nowadays, the current account, capital flows and the exchange rate are all determined simultaneously.

Nevertheless, because the short-term responsiveness of different capital-account items does differ, the notions of “autonomous” and “accommodating” are not quite dead. Indeed, the greater importance of capital flows in recent years has prompted some observers to resurrect these notions, and in particular to look again at the basic balance.¹⁰²

The following paragraphs look at recent capital flows in the light of Meade’s distinctions, examining the volatility of different capital-account items (to make the distinction between permanent and temporary flows more concrete) and considering what meaning, if any, can be given to the distinction between autonomous and accommodating capital flows. Finally, the applicability of the notion

¹⁰² See *National Institute Economic Review*, November 1989, pages 21–22, pointing to a basic balance deficit of £27 billion in the United Kingdom and the comment by Brittan (1989).

Table 31
Variability of net capital flows
(in billions of US dollars)

	United States	Japan	Germany	Canada	United Kingdom	Simple average
1975-82						
Direct investment	11.0	1.1	1.0	2.8	2.6	3.7
Investment in bonds . . .	2.3	3.3	2.9	0.9	2.1	2.3
Investment in equities . .	1.4	3.0	0.6	0.5	3.5	1.8
Public sector	15.9	6.7	11.2	1.6	4.8	8.0
Bank flows, long-term . .	6.2	2.2	2.5	-	-	3.6
Bank flows, short-term . .	17.6	4.7	3.9	5.7	4.7	7.3
<i>Memorandum:</i>						
<i>Current account</i>	<i>10.6</i>	<i>9.3</i>	<i>7.5</i>	<i>1.9</i>	<i>6.2</i>	<i>7.1</i>
1983-89						
Direct investment	15.3	16.1	3.0	1.5	7.4	8.7
Investment in bonds . . .	15.8	22.0	13.6	1.8	11.3	12.9
Investment in equities . .	10.1	22.8	4.7	2.3	12.8	10.5
Public sector	20.2	20.5	11.2	4.2	6.4	12.5
Bank flows, long-term . .	8.8	2.0	3.6	-	-	4.8
Bank flows, short-term . .	14.6	28.5	12.8	2.1	9.4	13.5
<i>Memorandum:</i>						
<i>Current account</i>	<i>41.1</i>	<i>26.0</i>	<i>20.8</i>	<i>6.0</i>	<i>15.4</i>	<i>21.9</i>

Note: Variability is measured by the standard deviation of annual flows (in billions of US dollars). (The coefficient of variation was not calculated because the sign of net flows changes and average net flows can be very small.)

Sources: As for Table 9.

of the basic balance – in particular with direct investment set apart from other capital-account transactions – is reviewed.

Temporary versus permanent flows: volatility

To examine whether capital flows have become more volatile over time, the period used in this study was divided into two sub-periods: 1975-82 and 1983-89. The standard deviation of each broad component of capital flows is shown in Table 31. The simpler question is whether variability has increased. A more interesting question is whether the volatility of some components of the capital account has increased relative to the current account.

In the period 1975–82, the elements of the capital account that displayed the greatest variability were the classic accommodating flows: public sector and short-term banking flows. Portfolio investment was less variable. But in the period 1983–89 the variability of the dollar value of bond and equity investment flows was much higher – by a factor of five to six. By contrast, the variability of direct investment flows (outside Japan) has changed much less despite the sizable increase in the average volume of direct investment flows. The variability of public sector and short-term banking flows, on the other hand, had increased only a little between the two periods.

Japan has seen the most marked increase in the variability of capital flows, due in part to the trend increase in total flows. The variability of both bond and equity investment flows was not much less than the variability seen in the current account over the period 1982–89, whereas it was only one-third as large in the period 1975–82.

Consideration of Meade's second distinction ("temporary" versus "continuing" capital movements) raises the question of which flows have been more volatile. The "hierarchy of volatility" of different categories of capital flows can be seen by comparing the coefficients of variation calculated for outflows and inflows separately (Table 32). It is perhaps not surprising that direct investment flows are among the least volatile. Long-term bank outflows also appear to be relatively stable, although total flows are too small for any firm conclusions to be drawn. Net short-term bank flows, by contrast, appear to be the most volatile. The volatility of portfolio investment appears to lie between these extremes, with equity flows being particularly volatile.

One notable feature is that private capital inflows are more volatile than outflows: this is the case for direct investment, bond, equity and long-term bank flows: see the "simple average" column in Table 32.¹⁰³ This observation holds for flows of individual countries, the only exceptions being German and UK equity flows. One

¹⁰³ For long-term bank flows, the generalisation holds for Japan and Germany, the only two countries for which a coefficient of variation could be usefully calculated.

Table 32
Standardised variability of gross capital flows
(1975-89)

		United States	Japan	Germany	Canada	United Kingdom	Simple average
Direct investment,	outflow	0.5	1.3	0.7	0.6	0.8	0.7 ¹
	inflow	0.9	..	1.1	2.0	1.0	1.3
Investment in bonds,	outflow	0.4	1.2	1.3	..	1.4	1.1
	inflow	0.8	1.5	4.0	0.7	1.8	2.0 ²
Investment in equities,	outflow	2.2	1.7	1.9	..	1.5	1.8
	inflow	1.2	6.7	1.6	..	1.3	2.7
Public sector,	outflow	0.6	1.4	1.8	0.8	2.8	1.5
	inflow	0.7	2.0	0.8	0.5	1.0	1.0
Bank flows, long-term,	outflow	2.2	1.1	0.4	0.7 ³
	inflow	..	1.4	0.5	0.9
Bank flows, short-term,	net	3.9	1.5	2.2	2.9	1.0	2.9
<i>Memorandum:</i>							
<i>Current account</i>		1.2	1.2	1.4	1.1	..	1.2

Note: Standardised variability is measured by the coefficient of variation (standard deviation divided by the mean). When the mean flow is too small (viz. less than \$1 billion) for this calculation to be meaningful, no figure is calculated - shown by .. in the table.

¹ For comparability, average excludes Japan.

² For comparability, average excludes Canada.

³ For comparability, average of Japan and Germany only.

Sources: As for Table 9.

explanation of this may be that international funds to be exported may be relatively "footloose" with regard to destination, and can be switched readily from one country to another: inflows are thus highly volatile. On the other hand, there are limits to the degree to which domestic funds can switch between domestic and foreign uses. Financial institutions, for instance, will be constrained by the need to balance to some extent the currency exposure of assets and liabilities. (One exception to this pattern is public sector outflows, which are more volatile than inflows because they largely reflect intervention which is relatively volatile.) One possible consequence of the greater volatility of capital inflows may be that future disturbances will originate from instability in capital inflows, rather than marked changes in residents' capital outflows.

*Autonomous versus accommodating flows:
a simple statistical test*

Although developments since the early 1970s have blurred the earlier simple categorisation of capital flows into autonomous versus accommodating flows, it is still of some interest to ask which elements of the capital account have tended to vary most with external "financing requirements". But it is far from easy to answer this question empirically. One possibility is to estimate the determinants of each category of capital transaction: those flows that are highly sensitive to exchange rate expectations or to interest rate differentials could, perhaps, be regarded as accommodating flows. For instance, a current-account deficit exceeding *ex ante* capital inflows would (in the absence of official intervention) tend to put downward pressure on the exchange rate or upward pressure on domestic interest rates. Those flows most responsive to exchange rates or interest rates would rise and, *ex post*, would finance the current-account deficit. However, attempts to estimate stable capital flow equations have not, in general, proved successful. Indeed, what evidence there is suggests that the relative explanatory power of key determinants (notably interest rates and exchange rates) tends to change over time.

Another possibility is to make some additional assumptions and examine some reduced-form relations. This is the approach tried tentatively here. The starting point is the identity that capital flows finance current-account imbalances not covered by intervention, which, for want of a better term, can be called the Financing Requirement (KFR) viz.

$$(1) \quad -KFR = CA - dRESERVE = KF_1 + \dots + KF_n$$

where CA = current-account balance

dRESERVE = balance on official monetary movements

KF₁ ... KF_n = capital-account flows (sign reversed)

Over time, “shocks” can affect CA or the KF_i . In response to these shocks, RESERVES or KF_i can adjust.¹⁰⁴ If changes in reserves constitute the principal vehicle for adjustment, then a series of “shocks” to a KF_i would produce a correlation between CA – dRESERVE and the “shocked” KF_i ; in this case, correlations would shed no light on the nature of the capital flow. If, however, developments are dominated by a series of “shocks” to the current account and the burden of financing these falls on capital flows, not reserves, then one would obtain close correlations between CA – dRESERVE and “accommodating” KFs (i.e. those highly responsive to short-run factors such as exchange rates and interest rate differentials) and little correlation between CA – dRESERVE and more “autonomous” KFs.

In what follows it is assumed that the second pattern corresponds more closely to the period under study (1975–89). This assumption can be defended by pointing to the large swings in current-account positions (oil price shocks, fiscal expansion in the United States at a time of contraction elsewhere, etc.): the variability of current-account positions has generally been large compared even with capital flows (Table 31). And, for much of the period, official intervention has not been the main financing channel. Yet it is still a rather sweeping assumption; and the results that follow are thereby qualified.

To compute the correlations between changes in external financing and individual capital-account items, regressions of the following form were used:

$$(2) \quad dKF_i = a_0 + a_1 dKFR$$

¹⁰⁴ The possibility that the current account can adjust is implicitly excluded here. The regressions presented below relate capital flows to the current account (less changes in reserves) *for the same period*. While changes in capital flows certainly affect the current account, the usual channel (the exchange rate) would imply rather long lags so that the current account is unlikely to adjust in the same period to “shocks” to capital flows. To the extent that this assumption does not hold, the coefficients given below would have an upward bias.

where dKF_i = year-on-year change in the capital flow item (as percentage of GNP/GDP)

$dKFR$ = year-on-year change in the current account minus balance of official monetary movements (as percentage of GNP/GDP)

There was no evidence of a simple trend in any capital-account item except Japanese direct investment, for which the constant term was significant.

The correlations between each capital flow item and external financing requirements (the coefficient a_1) are shown in Table 33: only estimates of a_1 that yielded t-statistics greater than 1.5 are shown.¹⁰⁵ The broad conclusions are:

- that changes in *short-term bank flows* are more closely correlated with external financing requirements than any other item of the private capital account for all countries except Japan.¹⁰⁶ The coefficient on changes in short-term bank flows ranges between 0.3 and almost 1, and is typically far greater than the *average* share of short-term bank flows in balance-of-payments financing. A coefficient of 0.5, for instance, suggests that about half of the year-to-year changes in "financing requirements" are met by short-term bank flows.

- *Bond* flows are the next most closely correlated with external financing requirements, with a significant correlation with private or public sector bonds (the largest item shown under public sector inflows in Table 33) for seven of the eleven countries. Japanese bond investment appeared more closely correlated with the overall financing requirements than that of any other country. This is consistent with some findings that Japanese capital flows seem to

¹⁰⁵ This table includes all countries referred to in Table 9 except those for which data on changes in the net official monetary position were not available.

¹⁰⁶ For Japan, the series adopted in the BIS *Annual Report* is used for changes in the net official monetary position. This series covers gold and foreign exchange reserves plus other monetary movements excluding authorised foreign exchange banks.

Table 33

Sensitivity of individual capital-account¹ items to financing requirements

	Direct investment	Investment in bonds	Investment in equities	Public sector inflows	Long-term bank flows	Short-term bank flows
United States				2		0.55 (2.8)
Japan		0.51 (2.7)		0.20 (2.4)		
Germany						0.30 (2.0)
Canada		0.11 (1.6)				0.88 (3.1)
France	0.13 (2.7)					0.32 (1.6)
Italy				0.23 (2.2)		0.38 (2.7)
United Kingdom . . .	0.10 (I) (1.8)			0.25 (3.9)		0.27 (2.3)
Australia				0.36 (3.1)		
Belgium-Luxembourg				0.22 (1.6)		
Netherlands		0.18 (1.6)				0.47 (2.1)

Note: t-statistics shown in parentheses.

¹ Net unless otherwise indicated; I = inflow. Period of observation 1975-89.

² Not applicable for the United States: significant part of government inflows included in net official monetary position (i.e. liabilities constituting foreign authorities' official reserves). For other countries, this represents mainly foreign purchases of public sector bonds.

respond more to changes in long-term interest differentials (relevant for investment in bonds) than to short-term interest differentials, as is the case with most other countries.¹⁰⁷ The general importance of bond flows reflects the widespread development of deeper, and more liquid, markets for long-term bonds.

¹⁰⁷ This is suggested by the Bank of Japan (1984). But note that bond flows in any case account for a large proportion of total private capital flows.

- There is no evidence that changes in either *long-term bank lending* or *investment in equities* are correlated with dKFR.

- Finally, there is some evidence of correlation between changes in *direct investment flows* and dKFR for two countries, although the degree of association (measured by the size of the coefficient) is relatively small.

Although there is also a good deal of “noise” in capital flow data (all equations have very low R^2), and the estimated coefficients of individual country equations are only poorly determined, the pattern observed across the different countries is of interest.

The evidence that short-term bank flows appear to be “accommodating” elements in the capital account even for annual data is of particular interest and needs some explanation. König and Ledig (1990), examining German capital flows, suggest that non-residents acquire the Deutsche Mark needed for current-account transactions with, and portfolio investment in, Germany through short-term DM borrowing in the Euro-market from German banks.¹⁰⁸ Presumably this explanation rests on the assumption that non-bank non-residents do not seek to convert their DM liabilities into debt in their own domestic currency – perhaps because of lower DM interest rates.

This hypothesis, however, would apply only to *domestic currency* denominated bank flows. *Foreign currency* denominated flows would clearly be driven by factors other than short-term interest differentials or the need to finance trade. To test this, equation (2) above was re-run with bank flows broken down into domestic currency denominated and foreign currency denominated flows – for those countries where the data permit. The results are given in Table 34. They show that *domestic currency* denominated flows are correlated with financing requirements for five of the countries considered, while *foreign currency* flows are not. The only exception is Canada which may serve to prove the rule. In the case of Canada, it

¹⁰⁸ They write that these “movements, disregarding certain autonomous components, are thus not an element in their own right but adapt themselves to other sub-accounts of the balance of payments”.

Table 34
**Banking flows and financing requirements:
 local currency versus foreign currency denomination**

	Domestic currency denominated	Foreign currency denominated	Total
Japan	0.29 (2.4)	0.13 (0.5)	0.42 (1.9)
Germany	0.47 (2.2)	0.01 (0.2)	0.49 (2.0)
United Kingdom . . .	0.26 (14.3)	0.07 (0.5)	0.33 (2.4)
Canada	0.03 (0.9)	0.96 (3.4)	1.00 (3.3)
France	0.23 (2.0)	-0.02 (0.1)	0.22 (1.0)
Italy	-0.09 (1.5)	0.08 (0.4)	-0.02 (0.1)
Belgium-Luxembourg	-0.37 (2.0)	0.14 (0.4)	-0.23 (0.7)
Netherlands	0.32 (2.0)	0.27 (1.0)	0.59 (2.1)
Sweden	-0.05 (0.5)	0.08 (0.5)	0.03 (0.2)

Note: t-statistics are shown in parentheses.

Sources: As for Table 9. Banking flows from *BIS International banking and financial market developments* and historical statistics. Note that these differ from the IMF balance-of-payments data, largely because of the exclusion of banks' securities transactions.

is foreign currency flows that are more closely correlated with financing requirements – perhaps a reflection of the fact that the bulk of Canadian trade is denominated in US dollars.

Categorising capital flows

The above correlations throw some light on the question of how capital flows in the 1980s fit in with Meade's two criteria: autonomous versus accommodating and temporary versus continued. To rank capital flows by the first criterion, those capital

Table 35
Capital flows and Meade's criteria

	Autonomous or accommodating?	Stable or volatile?
Direct investment	2	2
Investment in bonds	4	3
Investment in equities	3	4
Long-term bank flows	1	1
Short-term bank lending	5	5

Note: "1" indicates most "autonomous" or most stable and "5" most "accommodating" or most volatile.

Sources: Derived from Tables 32 and 33 as described in the text.

flows that are most highly correlated with financing requirements (as estimated by the coefficients shown in Table 33) are classified as "most accommodating". On this measure, short-term bank flows are most, and long-term bank flows least, accommodating: they are assigned "5" and "1" respectively in Table 35. A simple proxy for the second criterion is the standardised variability of capital flows over the period 1975-88: see Table 32. The ranking by volatility (with "5" being the most volatile and "1" the least volatile) is also shown in Table 35. Ranking by the second criterion is inevitably more subjective.

The correspondence between these two criteria is rather good: accommodating flows also appear to be relatively volatile and vice versa. The ordering of capital flows along these lines, that is:

- Long-term bank lending
- Direct investment
- Portfolio investment
- Short-term bank flows

is indeed reminiscent of the old idea of the basic balance, oddly so, perhaps, since the structure of capital flows has changed so much.

Direct investment and the sustainability of imbalances

Where one draws the line between long-term autonomous flows and short-term accommodating flows is of course arbitrary. The case

for drawing the line under direct investment flows appears at least defensible. Direct investment decisions are probably motivated by long-term investment considerations and do not fluctuate closely with financing requirements. They also appear to be among the more stable capital flows. Although much less important quantitatively, long-term bank flows also appear to be rather stable and independent of balance-of-payments financing requirements.¹⁰⁹

There are a number of additional reasons for treating direct investment flows rather differently from other capital-account items:

- the direct investment decision is likely to be more long-term in nature than portfolio investment: generating returns is likely to take time, and withdrawal is likely to be harder and more costly;

- because of the long-term nature of the investment and because a claim on real assets is acquired, providing a hedge against inflation, the exchange rate risk for foreign direct investment is lower than for portfolio investment;¹¹⁰

- the “servicing” of direct investment liabilities depends on the generation of returns in the recipient country, and does not constitute a fixed burden in the same way as fixed interest debt does.

Moreover, there does appear to have been a significant rise in direct investment flows in recent years, the most important feature being the shift in US inflows and Japanese outflows. Does this suggest that increased FDI has been an important factor making current-account imbalances more sustainable in the second half of the 1980s?

Some observers have hinted that this might be so. Barrell and Wren-Lewis (1989) attempted to divide capital flows into “structural/non-speculative” and speculative flows by identifying “structural” with direct investment flows. Yet they recognised that much portfolio

¹⁰⁹ In what follows long-term bank flows are not discussed further because of their small size and the different statistical definitions used in various countries.

¹¹⁰ See Fukao (1990). However, large changes in exchange rates can affect the profitability of foreign direct investment – as some investors in the United States discovered in the early 1980s.

Table 36
Direct investment flows and major current-account imbalances
(in billions of US dollars)

	1986	1987	1988	1989	1990 ¹
United States					
Current-account balance	-145.3	-162.1	-129.0	-110.1	- 99
Net direct investment ²	15.4	15.9	42.2	40.5	- 11
Japan					
Current-account balance	85.8	87.0	79.6	57.2	36
Net direct investment ²	- 14.3	- 18.4	- 34.7	- 45.2	- 46
Germany					
Current-account balance	40.1	46.1	50.5	55.5	44
Net direct investment ²	- 9.0	- 7.3	- 9.9	- 7.0	- 19
Spain					
Current-account balance	4.0	- 0.2	- 3.8	- 10.9	- 16
Net direct investment ²	3.1	3.8	5.8	7.0	8
United Kingdom					
Current-account balance	0.2	- 7.4	- 26.6	- 31.2	- 22
Net direct investment ²	- 9.4	- 17.0	- 20.6	0.2	14

¹ Preliminary; in the absence of full-year data, the figure shown refers to first three quarters, at an annual rate rounded to the nearest billion.

² A positive value indicates a net inflow of direct investment from abroad; a negative, an outflow.

Sources: National sources and as for Table 9.

investment could equally be structural (citing in particular changed portfolio preferences in Japan) – a recognition they found impossible to give any empirical content. The International Monetary Fund, in its annual analysis of capital-account developments, defines the “financing needs” of the major economies as current account less net direct investment.¹¹¹

To help assess this view, a comparison of the current account with direct investment lending is shown in Table 36.

The country where the financing role of direct investment has been most marked has been Japan. Japanese outward investment has increased steadily in recent years (with inward investment but a trickle): in 1989 about 80% of Japan’s surplus was “covered” by net direct investment overseas (Table 36). Furthermore, data for the first

¹¹¹ IMF (1990), page 3.

three quarters of 1990 suggest that net direct investment outflows actually exceeded the current-account surplus. Yet this heightened financing role for direct investment is quite new: in 1986 and 1987 – when the current-account surplus was larger – direct investment flows played a relatively minor part in financing the imbalances. The very recency of the direct investment boom, then, argues for caution in drawing conclusions about its effect on the sustainability of the Japanese surplus.

By interesting contrast with Japan, direct investment flows have not been the main financing vehicle for widening European imbalances. Outward direct investment has, for instance, recycled little of Germany's surplus. For most of the period, direct investment flows actually went the "wrong" way for the United Kingdom, which remained a significant net exporter of direct investment capital up to 1988, despite the emergence of a sizable external deficit. Direct investment inflows became large only in 1990. However, Spain is one European country where heavy direct investment inflows appear to have made a large and growing current-account deficit more sustainable, although portfolio inflows attracted by high nominal interest rates may have been more important.¹¹²

Finally, direct investment has financed a significant portion of the US current-account deficit only in recent years. Net direct investment inflows were relatively small in the mid-1980s when the US deficit was widening and the dollar strengthening. Only when the deficit fell did direct investment flows assume a significant, if not major, financing role. In 1990, moreover, net inflows appear to have declined more sharply than the current-account deficit.

In short, this brief review suggests that a certain amount of scepticism is warranted about the view that increased FDI has been a major factor making current-account imbalances more sustainable in the second half of the 1980s, with the possible exception of Japan.

¹¹² Ortega, Salavería and Viñals (1990) have computed similar balances (see Table 6 of their paper).

A somewhat more sophisticated argument is that the greater prominence of FDI has increased the sensitivity of overall balance-of-payments flows (capital and current) to exchange rate changes. Because a sustained lower real exchange rate (caused, for example, by a current-account deficit) leads to direct investment capital inflows, it prolongs the period during which a deficit can be financed.

There are a number of channels through which an exchange rate depreciation can induce direct investment inflows.¹¹³ An exchange rate depreciation would reduce the price of non-tradables relative to tradables: to the extent that the local subsidiary's output contains a larger proportion of tradables than its inputs (including labour), the level of profitable local production will rise and thus encourage capital inflows.¹¹⁴ A second possible channel is that, compared with local firms, foreign multinationals may have a relatively larger share of business in tradable goods than in non-tradable goods. As the economy shifts from the production of non-tradables to tradables following a depreciation, the output of foreign multinationals will tend to rise. Finally, a depreciation lowers the foreign currency cost of acquiring domestic assets: as Froot and Stein (1989) suggest, this may lead to increased investment by foreign firms which previously faced some form of capital constraint.

There is indeed some evidence that FDI flows are sensitive to changes in the real exchange rate. An early study by Goldsbrough (1979) of FDI flows in the 1960s and 1970s found that the real exchange rate affected the capital flows of all the countries studied

¹¹³ In addition to the prospects of capital gains that arise from the acquisition of any asset in a currency thought to be undervalued.

¹¹⁴ Graham and Krugman (1989) point out that this argument implicitly assumes that the foreign company has some intrinsic advantage over a domestic company and so exploits the possibility of gain opened up by an exchange rate change. "The FDI decision always depends on a comparative assessment: is this factory worth more to a foreign firm than to a domestic one? A fall in the dollar that raises the expected returns to a US owner by the same amount . . . [as] to a foreign owner should not lead to net purchases by foreigners."

(Germany, Japan, the United Kingdom and the United States), with particularly large effects in the case of Japanese and US outflows.¹¹⁵

The fact that FDI outflows from Japan and inflows into the United States rose so sharply *after* the steep drop in the dollar (i.e. from 1986) does suggest that the real exchange rate has remained important. If so, this implies that the decline in the US dollar served not only to reduce the US current-account deficit but also encouraged foreign direct investment flows, and so contributed to the apparent smoothness of international adjustment seen to date.

Other capital-account items

The treatment of portfolio investment flows is more difficult. It is true that, with the development of highly liquid markets for bonds, the short-term/long-term distinction for capital flows has lost much of its point. Yet actual flows during the 1980s have been dominated by major structural changes – in particular financial market liberalisation and the rise of non-bank financial intermediaries. Such shifts can take years to work through – witness the movements in Japanese portfolio flows this decade. These changes have worked heavily in favour of US capital imports, not only because capital flows were already liberalised in the United States at the start of the decade but also because US institutions have not diversified into foreign assets to any significant extent. UK institutions, by contrast, have diversified to a large extent into foreign assets.¹¹⁶

At the other end of the spectrum, there is evidence that short-term bank flows can be regarded as “accommodating” flows – but only domestic currency denominated bank flows. Most countries’ balance-of-payments capital-account statistics do not make such a

¹¹⁵ However, he found no significant effect on FDI inflows to Germany.

¹¹⁶ The UK National Institute’s view that the UK basic balance is a relevant measure of external imbalance rests on a view that continued flows of funds into financial institutions (notably pension funds) will sustain large net portfolio capital outflows. See *National Institute Economic Review* (November 1989) and Letters, *Financial Times*, 23rd February 1989.

distinction. As foreign currency flows have grown rapidly in significance in recent years, this is a shortcoming of present balance-of-payments statistics. Failure to distinguish currency of denomination makes it hard to assess the sensitivity of capital flows to interest rate differentials between different currencies.

In short, the *structure* of capital-account transactions in the balance of payments does have considerable economic significance even though the greater liquidity in financial markets has blurred traditional distinctions. The line dividing “autonomous” from “accommodating” flows has, in particular, become much fuzzier; but the idea remains useful as a first approach to the structure of capital flows.

Conclusions

This survey has uncovered no single thread running through international capital flows during the last decade – apart from their vastly increased scale. Indeed, it is the very diversity of both the influences shaping the pattern of flows and their macro-economic roles that is perhaps the outstanding feature of capital movements in the 1980s. Any conclusions about the significance of the extraordinary surge in capital flows seen in recent years are therefore inevitably highly tentative.

It is clear, first of all, that the explosion of capital flows in the second half of the 1980s has marked a quantum leap in the scale and apparent efficiency of international financial intermediation. New financial instruments have been created, asset diversification has gone much further and competition among financial institutions has been strengthened. But it is less clear how far the much-increased volume of flows has enhanced the *stability* of financial markets. On the contrary, prices in virtually all financial markets – equities, bonds and foreign exchange – have become much more volatile. And disturbances in one market have been more quickly transmitted to other markets, often irrespective of the underlying fundamentals. The root causes of such volatility may well lie in the real economy. The deep international recession in the early 1980s, extraordinarily wide swings in real commodity prices, and large and persistent US deficits have all created fertile ground for instability. It could even be argued that improved financial intermediation helped the world economy deal with underlying real instability and so achieve high rates of growth. Yet it is impossible to dismiss entirely the suspicion that greater capital mobility has contributed to herd behaviour and has itself made volatility worse.

Secondly, there is only limited evidence that greater foreign direct investment has been a major factor in making current-account imbalances more sustainable. Admittedly, the recent boom in foreign direct investment may have allowed the current-account imbalances of one or two countries to be “covered” without the usual pressures

on exchange or interest rates. This has been most evident in the case of Japan, where direct investment outflows have, since 1988, recycled the greater part of the current-account surplus. Also, the prospect of a single European market appears to have boosted foreign direct investment in some European countries. But a number of major imbalances have had no such direct-investment counterpart.

Thirdly, and perhaps more fundamentally, there is little doubt that the greater ease of movement of financial capital has allowed current-account deficits (and surpluses) to persist for longer than in previous decades. Indeed, capital movements may in some cases have led to rather durable current-account imbalances. But while financial markets have become more tolerant of those developed countries building up external debt – at least for a time – the real-economy ramifications of unbalanced current-account positions have remained much the same. Capital importers have frequently suffered a marked loss of competitiveness in goods markets – a loss that may be costly to reverse.¹¹⁷ More than one observer has noted that greater financial integration globally in the 1980s has been accompanied by more and more signs of disintegration in trade in goods and services as protectionist measures have proliferated.¹¹⁸ In short, the greater mobility of international capital may have weakened the international adjustment mechanism and distorted the allocation of resources.

Related to the greater tolerance of external deficits is the ease with which inflation-prone countries have been able to use high nominal interest rates to attract foreign capital. The short-term gains from investing in such countries can be considerable, but they cannot last. Satisfaction with the much-improved scope for financial hedging and intermediation, the development of many new, imaginative financial

¹¹⁷ Bockelmann (1990) raises the possibility that it is countries with the most sophisticated financial markets that attract foreign capital, and thus face real exchange rate appreciation.

¹¹⁸ Kindleberger (1987), for instance, concluded his review of international capital movements with a warning about this danger.

instruments and the more competitive environment in the financial services industry is inevitably tempered by the fact that increased liquidity has bred greater tolerance of current-account deficits in those countries prone to inflation. The danger is that domestic inflationary pressures may have been partly concealed by a strong exchange rate, putting off necessary anti-inflationary policies.

These features are quite unlike the pre-1914 period, the previous “golden age” of international capital mobility when capital flowed for many years from capital-rich/slowly growing to capital-poor/rapidly growing countries, and when the international financial system provided rigorous anti-inflation discipline. They are perhaps more reminiscent of the early 1920s, when the large US current-account surplus (and concomitant European deficit) could find no durable counterpart in long-term US investment in Europe because of the lack of attractive real investment opportunities. International portfolio capital flows then served only to delay adjustment to the new post-war conditions. Keynes at that time noted that while capital flows in the nineteenth century had fostered growth and developed international trade,

“... the practice of foreign investment, as we know it now, is a very modern contrivance, a very unstable one, and only suited to peculiar circumstances ... If European bonds are issued in America on the analogy of the American bonds issued in Europe during the nineteenth century, the analogy will be a false one; because, taken in the aggregate, there is no natural increase, no *real* sinking fund, out of which they can be repaid. The interest will be furnished out of new loans, so long as these are obtainable, and the financial structure will mount always higher, until it is not worth while to maintain any longer the illusion that it has foundations”.¹¹⁹

Keynes’s warning engenders some caution in assessing prospects for the 1990s. So too does the more recent experience with developing countries’ debt, as does the fact that expectations of short-term gains

¹¹⁹ Keynes (1921), page 111.

have apparently weighed so heavily on capital movements in recent years.

While views inevitably differ about the size of the net benefits of increased international financial integration and liberalisation, there is probably a consensus that the development of liberalised international financial markets in recent years is in practice irreversible, and that much of it is desirable. Financial institutions will continue to have to manage huge portfolios that have become internationalised on a scale few imagined even a decade ago. Continued progress in communications technology will doubtless reinforce globalisation. For these reasons, the volume of *aggregate* transactions seems likely to remain large. There are, however, several reasons for doubting that *net* capital flows will prove quite such strong pillars of international current-account imbalances in the 1990s as in the 1980s.

One is that the process of financial market liberalisation and the associated diversification of assets – which primed capital flows for much of the decade – is virtually complete, at least in the main financial centres. It may well be that one important legacy of financial liberalisation in the 1980s will be that a number of financial markets develop the liquidity and depth that was primarily associated with Anglo-Saxon markets at the beginning of the decade. If the pre-eminence of US and UK financial centres is indeed gradually eroded, one of the supports for international current-account disequilibria would be weakened. Indeed, there have been recent signs that foreigners have become more hesitant investors in the United States, and that US investors are beginning to invest more heavily in foreign securities than they have traditionally.

Another ground for scepticism is that rapid economic growth, after an unusually severe recession, itself stimulated capital flows by creating profitable direct investment opportunities and sustaining the international merger-and-acquisition boom, by driving up equity prices and so facilitating further corporate borrowing, and, in some countries, by keeping long-term interest rates high. The recessions that began in a number of countries in late-1990 already appear to

have led to some contraction or deceleration in some capital flows – the pace of mergers and acquisitions has slowed; equity and equity-related fund-raising in international markets has declined; and bank lending has weakened.

Thirdly, a number of financial institutions may have become over-exposed internationally, making some retrenchment almost inevitable. The onset of recession, declines in asset prices, the domestic difficulties of banks in some major centres, combined with the need to meet more stringent capital requirements, are likely to accelerate this process.

But perhaps the most compelling reason for doubting the ultimate sustainability of the pattern, if not the scale, of capital flows seen in the second half of the 1980s is that capital imports have been used to substitute for, rather than to supplement, domestic saving. Among industrial countries, there is no evidence that capital-importing countries as a whole have increased domestic investment in real assets more than capital-exporting countries. If anything, the opposite appears to have happened: indeed, capital imports have generally been used to sustain private consumption or public sector deficits or sometimes both. The aggregate ratio of saving and investment to income in the industrial world as a whole was much lower during the 1980s than it had been in previous decades, raising for many observers the spectre of a latent shortage of capital.

For all these reasons, international capital markets – while remaining as innovative as in the 1980s, with heavy two-way flows of gross capital continuing – may be becoming less permissive of imbalances than before. Indeed, 1990 saw signs that such a shift was under way: not only were there substantial reductions in the major international imbalances, but there was also evidence that some forms of international financial activity were beginning to decline. There was a significant fall in aggregate gross capital flows from industrial countries. In these circumstances, avoiding the too abrupt reversal of earlier capital flows – and ensuring that the world economy copes smoothly with the transition – is the delicate task of economic policy.

Statistical appendix

Statistical discrepancy of direct investment flows

It was noted in the text that, according to balance-of-payments statistics, measured direct investment outflows persistently exceed inflows on a world level: national differences in the statistical treatment of direct investment flows appear to be the main explanation.* Four significant factors are:

(i) The treatment of direct investment inflows in offshore centres

Japanese and US statistics, for instance, suggest that a significant and increasing proportion of direct investment flows to South and Central America went to offshore centres – the Bahamas, Bermuda, the Cayman Islands, the Netherlands Antilles and Panama. Yet IMF statistics on foreign direct investment inflows into these countries, where available (*viz.* the Bahamas, the Netherlands Antilles and Panama), suggest inflows of negligible proportions, presumably because the authorities in offshore centres do not regard foreign holding companies or financing affiliates as residents. There are no IMF statistics on Bermuda or the Cayman Islands.

(ii) The treatment of trade between subsidiaries

Flows between a subsidiary and its foreign parent, or between subsidiaries with a foreign parent in a third country, are treated differently by different countries. For instance, a loan from a Dutch subsidiary of a UK parent is recorded as an outward disinvestment by

* Up to June 1990, one reason for the discrepancy was the inclusion in US balance-of-payments statistics of exchange rate related capital gains/losses on direct investment. In contravention of the guidelines laid down in the IMF *Balance of Payments Manual*, such gains (or losses) were counted as direct investment income and their reinvestment abroad counted as outward direct investment. As no other major country followed the US practice, a discrepancy was inevitable. With effect from June 1990, however, US balance-of-payments reports excluded such capital gains/losses, thus removing one important source of the discrepancy.

the United Kingdom in the UK statistics, but is recorded as outward investment by the Netherlands in the Dutch statistics.

(iii) Differences in the treatment of reinvested earnings

According to the IMF *Balance of Payments Manual*, such non-repatriated profits should be included in direct investment flows. While the United States, the United Kingdom, Germany and the Netherlands include reinvested earnings, most other countries do not. Even where earnings are in principle recorded, gaps may still in practice exist as statistical reporting systems in a number of countries may not fully capture the activities of “their” companies abroad or of foreign companies within their jurisdiction. In many cases international companies minimise tax payments by manipulating the earnings of their various subsidiaries, and this may well impinge on the meaningfulness of statistical reports.

(iv) The distinction between portfolio and direct investment

This is often essentially arbitrary because of the difficulty of defining the point at which share ownership gives an “effective voice in the management of an enterprise”, the criterion laid down by the IMF. For some countries acquisition of less than 10% of the shares of a given company counts as direct investment, while other countries set a much higher threshold.

Table A1
Classification of capital-account items

Classified as	Outfl. = O Inflow = I	IMF definition and item number
Direct investment	O	Direct investment abroad (Items 45-48)
Direct investment	I	Direct investment in reporting economy (Items 49-52)
		Portfolio investment
		Public sector bonds
Investment in bonds	O	53. Assets
Public sector	I	54. Liabilities constituting foreign authorities' reserves
Public sector	I	55. Other liabilities
		Other bonds
Investment in bonds	O	56. Assets
Investment in bonds	I	57. Liabilities constituting foreign authorities' reserves
Investment in bonds	I	58. Other liabilities
		Corporate equities
Investment in equities	O	59. Assets
Investment in equities	I	60. Liabilities constituting foreign authorities' reserves
Investment in equities	I	61. Other liabilities
		Other long-term capital of resident official sector
Public sector	O	62. Drawings on loans extended
Public sector	I	63. Repayments on loans extended
Public sector	O	64. Other assets
Public sector	I	65. Liabilities constituting foreign authorities' reserves
Public sector	I	66. Drawings on other loans received
Public sector	O	67. Repayments on other loans received
Public sector	I	68. Other liabilities
		Other long-term capital of deposit money banks
Long-term bank lending	O	69. Drawings on loans extended
Long-term bank lending	I	70. Repayments on loans extended
Long-term bank lending	O	71. Other assets
Long-term bank lending	I	72. Liabilities constituting foreign authorities' reserves denominated in national currency
Long-term bank lending	I	73. Liabilities constituting foreign authorities' reserves denominated in foreign currency
Long-term bank lending	I	74. Drawings on other loans received
Long-term bank lending	O	75. Repayments on other loans received
Long-term bank lending	I	76. Other liabilities
Other	Net	Other long-term capital of other sectors (Items 77-83)
		Other short-term capital of resident official sector
Public sector	O	84. Loans extended
Public sector	O	85. Other assets
Public sector	I	86. Liabilities constituting foreign authorities' reserves
Public sector	I	87. Other loans received
Public sector	I	88. Other liabilities
Short-term bank lending	Net	Other short-term capital of deposit money banks (Items 89-92)
Other	Net	Other short-term capital of other sectors (Items 93-97)
Public sector	O	RESERVES (Items 98-110)
Errors and omissions	Net	NET ERRORS AND OMISSIONS (Item 112)

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