

Economic trends

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Introduction

Economic trends brings together all the main economic indicators. It contains three regular sections of tables and charts illustrating trends in the UK economy.

'Economic Update' is a feature giving an overview of the latest economic statistics. The content and presentation will vary from month to month depending on topicality and coverage of the published statistics. The accompanying table on main economic indicators is wider in coverage than the table on selected monthly indicators appearing in previous editions of *Economic trends*. Data included in this section may not be wholly consistent with other sections which will have gone to press earlier.

Articles on international economic indicators and the final expenditure prices index appear monthly and an article on regional economic indicators appears every January, April, July and October. Occasional articles comment on and analyse economic statistics and introduce new series, new analyses and new methodology.

Quarterly information on the national accounts and the balance of payments appears in *UK Economic Accounts* which is published every January, April, July and October by The Stationery Office.

The main section is based on information available to the ONS on the date printed in note 1 below and shows the movements of the key economic indicators. The indicators appear in tabular form on left hand pages with corresponding charts on facing right hand pages. Colour has been used to aid interpretation in some of the charts, for example by creating a background grid on those charts drawn to a logarithmic scale. Index numbers in some tables and charts are given on a common base year for convenience of comparison.

Economic trends is prepared monthly by the Office for National Statistics in collaboration with the statistics divisions of Government Departments and the Bank of England.

Notes on the tables

1. All data in the tables and accompanying charts is current, as far as possible, to 26 November 1998.
2. The four letter identification code at the top of each column of data (eg, DJDD) is ONS's own reference to this series of data on our database. Please quote the relevant code if you contact us requiring any further information about the data.

3. Some data, particularly for the latest time period, is provisional and may be subject to revisions in later issues.

4. The statistics relate mainly to the United Kingdom; where figures are for Great Britain only, this is shown on the table.

5. Almost all quarterly data are seasonally adjusted; those not seasonally adjusted are indicated by NSA.

6. Rounding may lead to inconsistencies between the sum of constituent parts and the total in some tables.

7. A line drawn across a column between two consecutive figures indicates that the figures above and below the line have been compiled on different bases and are not strictly comparable. In each case a footnote explains the difference.

8. 'Billion' denotes one thousand million.

9. There is no single correct definition of *money*. The most widely used aggregates are:

M0, the narrowest measure, consists of notes and coin in circulation outside the Bank of England and bankers' operational deposits at the Bank.

M4 comprises notes and coin in circulation with the public, together with all sterling deposits (including *certificates of deposit*) held with UK banks and building societies by the rest of the private sector.

The Bank of England also publish data for liquid assets outside M4.

10. Symbols used:
- .. not available
 - nil or less than half the final digit shown
 - + alongside a heading indicates a series for which measures of variability are given in the table on page T77
 - † indicates that the data has been revised since the last edition; the period marked is the earliest in the table to have been revised
 - * average (or total) of five weeks.

If you have any comments or suggestions about *Economic trends*, please write to Uzair Rizki, ONS, Zone D4/19, 1 Drummond Gate, London, SW1V 2QQ or e-mail uzair.rizki@ons.gov.uk

Office for National Statistics
December 1998

Articles published in *Economic trends*

Regular articles

International economic indicators. Commentary, figures and charts are published monthly.

Final expenditure prices index. Commentary and figures are published monthly.

Regional economic indicators. Commentary, figures and charts are published every January, April, July and October.

United Kingdom national accounts and balance of payments quarterly figures are published in *UK Economic Accounts* every January, April, July and October.

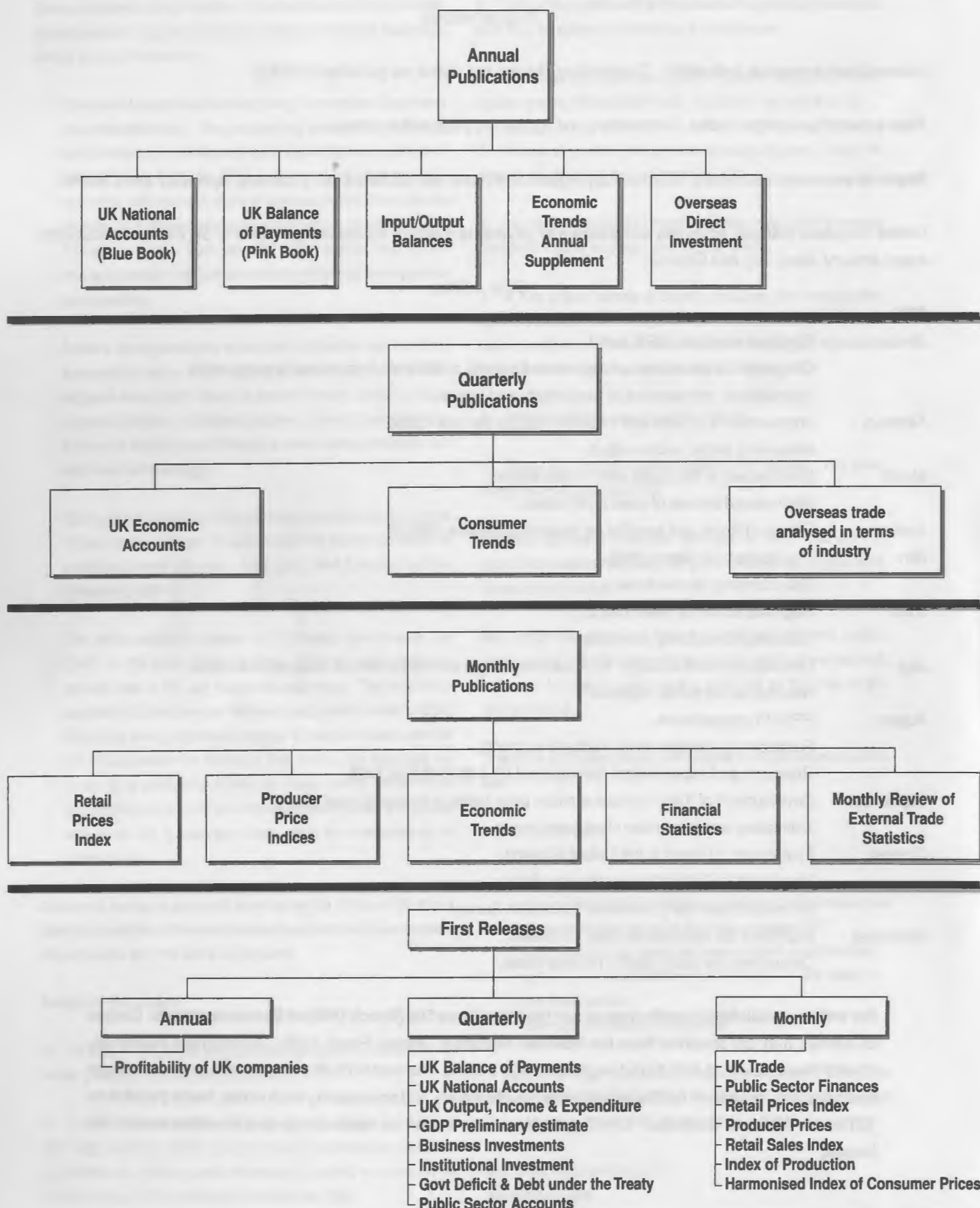
Other Articles

1998

<i>January</i>	Regional accounts 1996: part 1. Geographical breakdown of exports and imports of UK trade in services by component. International comparisons of productivity and wages.
<i>February</i>	Improvements to business inquiries through the new IDBR. Measuring public sector output.
<i>March</i>	Employment in the public and private sectors. Harmonised indices of consumer prices.
<i>April</i>	Effects of taxes and benefits on household income 1996-97.
<i>May</i>	The Budget: 17 March 1998. The economy; an overview.
<i>June</i>	Regional accounts 1996: part 2. Rebasing the national accounts.
<i>July</i>	Developing a methodology for measuring illegal activity for the UK National Accounts. New format for public finances.
<i>August</i>	PPI/RPI comparisons. Forthcoming changes to the national accounts. Research and experimental development (R & D) statistics 1996.
<i>September</i>	Development of the corporate services price index: a review of progress. Estimating and presenting short-term trends.
<i>October</i>	Environmental taxes in the United Kingdom. Measuring the output of non-market services. UK results from the Community Innovation Survey.
<i>November</i>	Improving the non-finance balance sheets. Developing the public sector balance sheet.

For articles published in earlier issues see the list in issue 509 (March 1996) of *Economic trends*. Copies of articles may be obtained from the National Statistics Library, Room 1.001, Government Buildings, Cardiff Road, Newport, NP9 1XG, telephone 01633 812973. The cost is £5.00 per copy inclusive of postage and handling. A cheque for the appropriate remittance should accompany each order, made payable to 'Office for National Statistics'. Credit card transactions can be made by phone; invoices cannot be issued.

United Kingdom Macro-Economic Statistics Publications



Other publications: - Retail Prices 1914-1990 - Input/Output Tables - Labour Market Statistics - Family Spending - Sector Classification Guide - Share Ownership - Financial Statistics Explanatory Handbook

Tables

Table 4.6: Average earnings

Table 4.7: Productivity and Unit Wage Costs

Average earnings data will not be published until further notice, hence Table 4.6 has been withdrawn, together with the Unit Wage Costs data in Table 4.7. Publication has been suspended pending the investigations detailed in the News Release ONS (98) 360 issued on 2nd November 1998. Contact the ONS Press Office on 0171 533 5725 for further details.

Table 5.1: Output of production industries

Pre-1994 data for the analysis by market sector has been corrected in this edition.

Articles

This month we feature four articles.

Will Kerry of the ONS discusses the Geographical breakdown of the Balance of Payments current account, which has been presented annually in *Economic Trends* for the past two years. This, however, is the first time that a geographical breakdown consistent with the fifth edition of the International Monetary Fund's Balance of Payments Manual has been published. The article explains the methodology behind the estimates and describes the coverage of the data. A section on current and future plans for a geographical breakdown of the balance of payments is also included (*page 23*).

Jim O'Donoghue of the ONS outlines the Harmonised Index of Consumer Prices. The published HICP series began in 1996. The ONS has now produced historical estimates for 1988-1995 and an indicative series for 1975-1987. This article explains how the estimates were produced and provides a longer-term view on how the HICP compares with other inflation measures, in particular RPI excluding mortgage interest payments (RPIX) (*page 49*).

David Wall of the ONS discusses the possible development of a Land Registry-based national house price index. The ONS and H.M. Land Registry are investigating the possibility of constructing a house price index for England and Wales based upon all domestic property transactions as notified to the Land Registry. The article looks at existing house price indices and discusses their merits and deficiencies. It describes the comprehensive coverage of the Land Registry database, but points out that the range of characteristics held for each property is more limited than for the DETR, Halifax and Nationwide datasets (*page 57*).

Ian Cope and David Freeman of the ONS explain the work being done to improve the quality of the Producer Price Index (PPI). The article explains the current methodology behind the PPI, the areas for improvement, the work which is being carried out at the moment and proposed future developments. Work to update the PPI to a random sample started in June 1998 and is due to finish early in 2000. The methodology used to calculate the new sample is explained, along with an explanation of some of the operational procedures developed to allow for an increased level of recruitment to the PPI sample (*page 63*).

Recent National Statistics economic publications

Financial Statistics, November 1998. The Stationery Office, ISBN 0 11 621014 1, price £22.50.

Monthly Review of External Trade Statistics (Business Monitor MM24), August 1998. The Stationery Office, ISBN 0 11 537922 3, price £180 p.a.

Retail Prices Index (Business Monitor MM23), September 1998. The Stationery Office, ISBN 0 11 537921 5, price £180 p.a.

All of these publications are available from The Stationery Office Publications Centre, telephone 0171 873 9090 (orders), 0171 873 8499 (subscriptions) or fax 0171 873 8200.

ECONOMIC UPDATE - DECEMBER 1998

By Geoff Tily, Macro-Economic Analysis - Office for National Statistics

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Overview

With a background of rate cuts and a revision to growth forecasts in 1999, GDP is now estimated to have grown by 0.4 per cent into the third quarter of 1998. Manufacturing output remains flat and services growth has slowed past its peak. Retail sales, consumers' expenditure and vehicle registration data back up some reduction in domestic demand. Trade data, in particular exports to non-EU countries show the impact of the deterioration in the world economy. The labour market continues to tighten, but there is evidence of a slowdown. Goods price inflation is now at historically low levels.

Indicators included	
UK Output, Income and Expenditure – Q3	UK external trade – /September/October
Industrial Production – September	Money supply – October
CBI monthly trends enquiry – November	Public sector net borrowing – October
Retail sales – October	Labour market statistics – July-September
New car registrations – October	Retail prices – October
EC/GFK index of consumer confidence – November	Producer prices – October

GDP Activity

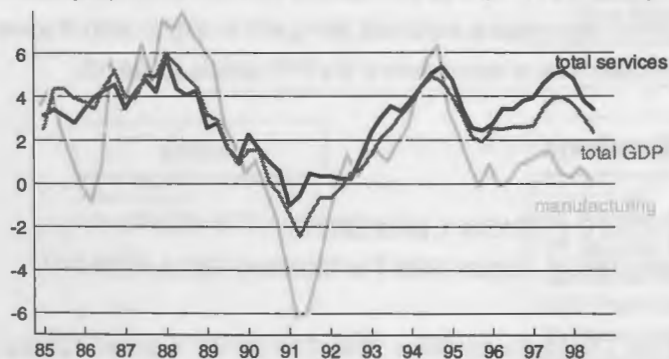
The second estimate of GDP growth into the third quarter of 1998 was revised downwards to 0.4 per cent from 0.5 per cent, mainly due to weak manufacturing data for September. Chart 1 shows annual rates of activity for output, manufacturing and services all below peaks seen at the end of 1997.

Chart 1

GDP

seasonally adjusted

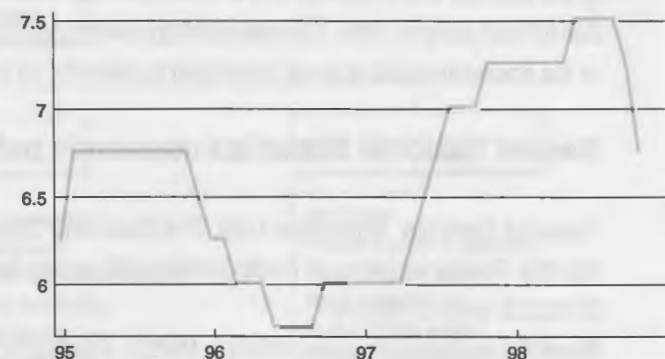
year on year change



The slowdown in activity comes with a background of cuts to the base rate and a downward revision to the Chancellor's forecast of growth. Base rates were cut in October and November and are now ¾ per cent below the recent peak of 7 ½ per cent (see chart 2). The Chancellor revised his forecast for 1999 GDP growth to 1 - 1 ½ per cent from 1 ¾ - 2 ¼ per cent as part of his November 1998 pre-Budget report.

Chart 2

Base rates



Output breakdown

Output of the manufacturing industries fell by 0.1 per cent between the second and third quarters of 1998, with year on year growth rising by only 0.1 per cent.

Data from the November Confederation of British Industry monthly trends enquiry continues to show weak order books and optimism, although the November results are little changed from the October position. The November balance of firms reporting an above average compared with below average order book is -47 per cent, the same as in October.

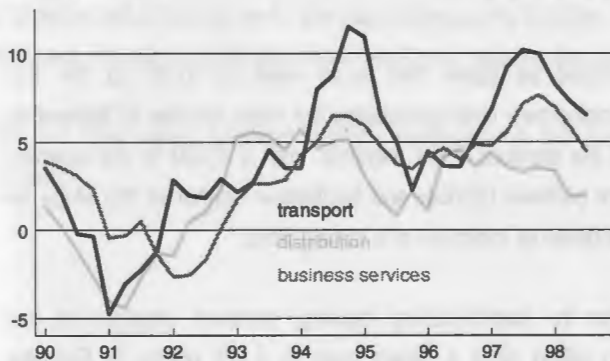
In the service sector, growth between the second and third quarters is estimated as 0.6 per cent, the same as the growth recorded between the first and second quarters. Most elements of the service sector output breakdown are now growing below peak rates. Chart 3 shows the annual rates of growth for "distribution, hotels and catering, repairs", "transport, storage, and communication", and "business services and finance".

Chart 3

Service sector growth

seasonally adjusted

year on year change



Domestic demand

Strong evidence of a fall in demand is seen in the retail sales figures. Retail sales volumes slowed sharply from an annual rate of 3.6 per cent in September, to an annual rate of 1.0 in October, falls on the month being seen across all categories of retailers. Monthly movements have been erratic however; comparing the three months to October with the same three months a year ago the annual rate of 2.5 per cent is now well below the peak of 5.9 per cent seen in August 1997.

The annual rate of growth of new car registrations also slowed sharply, from 5.1 per cent in the three months to September to 1.6 per cent in the three months to October, well below peak annual growth figures of over 10 per cent seen at the end of 1997

and into 1998. Care should be taken when interpreting these seasonally adjusted figures; following the new registration arrangements a more even monthly spread of registrations is now expected and this will not yet be reflected in seasonal factors.

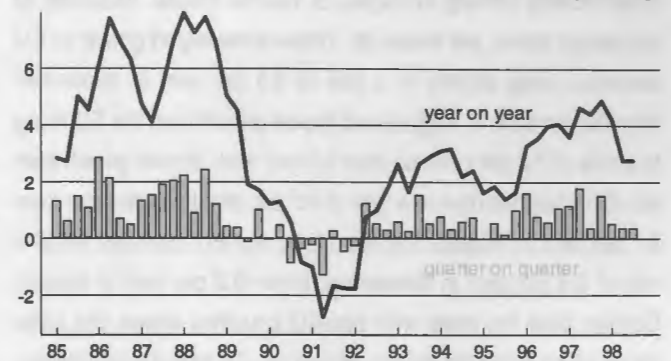
There is some evidence of a small revival in confidence, perhaps following base rate cuts, is seen in the EC/GFK measure of consumer confidence for November 1998. This shows a balance of -7 per cent, up from -9 per cent in October. The attitude to major purchases balance was -2 per cent in November, up from -3 per cent in October.

Chart 4

Household final consumption expenditure

seasonally adjusted

percentage change



The first estimate of household final consumption expenditure for the third quarter of 1998 shows an increase of 0.4 per cent over the previous quarter, the same as the rise between the first and second quarters. Chart 4 plots these figures alongside annual rates, providing further evidence of a reduction in demand.

On the other hand, investment data showed strong growth into the third quarter, with gross fixed capital formation increasing by 2.5 per cent over the second quarter, and 6.9 per cent compared with the same quarter a year ago. Although these figures can be reasonably erratic, recent growth remains strong compared with the rest of the 1990s.

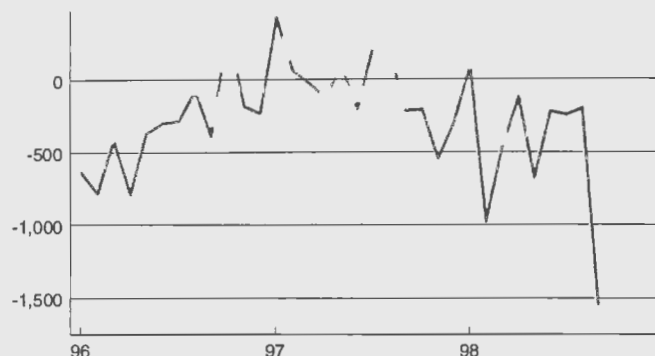
External demand and supply

The September 1998 trade data show the UK's overall balance with the rest of the world in deficit by £1.5bn, substantially worse than the deficit of £0.2bn in August. These figures reflect a worsening of the trade position with both EU and non-EU countries. Chart 5 shows movements in the balance of payments since 1996, recent figures clearly show the UK trade balance with the rest of the world widening.

Chart 5**Monthly balance of payments**

seasonally adjusted

£ million



To get the best idea of trends, annual rates of growth (comparing three monthly moving averages) of volume indices, excluding oil and erratic items, are looked at. These show export growth to EU countries rising slightly to a rate of 6.8 per cent in September from 6.6 per cent in August, and import growth from the EU rising to a rate of 7.8 per cent, up from 6.9 per cent. Import growth from non-EU countries rose to a rate of 9.5 per cent in September from 8.1 per cent in August, and exports to non-EU countries fell at a rate of 5.4 per cent in September, from -3.2 per cent in August. October data for trade with non-EU countries shows the latter figure falling further to an annual rate of -7.5 per cent in October, clearly showing the impact of the global slowdown.

Monetary indicators and government finances

The annual rate of growth of narrow money (M0) slowed between October and September, from 5.9 per cent to 5.5 per cent. Broad money (M4) annual growth at 9.1 per cent in October was the same as in September. The recent peak growth of M4 at 11.8 per cent was in July 1997. M0 has been more erratic but the annual rate is now well below the most recent peak of 7.1 per cent in February 1998 despite a recent bounce back from a low of 5.4 per cent in June.

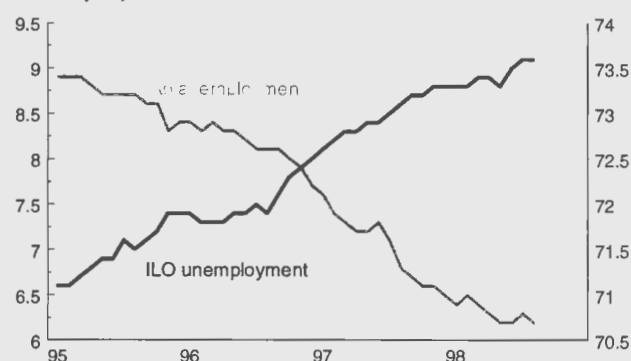
Following a record repayment of £6.2 billion in October 1998 public sector net borrowing has now moved into surplus in the current financial year. Between April and October, public sector net borrowing was a repayment of £1.8 billion compared with borrowing of £9.3 billion in the same period last year. This follows the Chancellor's revised forecast of a repayment of £2.9 billion for the financial year 1998/99 as a whole (compared with his last forecast for a repayment of £0.2 billion).

Labour Market

Despite slower growth for most of 1998, the labour market continues to tighten. The Labour Force Survey employment rate, in the three months to September, was 73.6 per cent, up from 73.3 per cent in the three months to June. The ILO unemployment rate in the three months to September was 6.2 per cent, the same as in the three months to June. Chart 6 shows evidence of a recent slowdown in both unemployment and employment rates over the past three years.

Chart 6**Employment and unemployment monthly**

seasonally adjusted



It should be noted that small rises of 3,000 to the ILO unemployment level (comparing the three months to September with the previous three months), and of 6,800 to the claimant count between October and September cannot at this stage be considered as indicative of a turning point.

Within the manufacturing industry, however, employment has been falling since a recent peak of 4.125 million in February 1998. The average employment level for the three months to September of 4.058 million was 0.9 per cent below the previous three months and 1.0 per cent below the same three months a year ago.

Prices

The underlying rate of inflation as measured by the annual growth of the Retail prices index, excluding mortgage interest payments (RPIX), in September 1998 was on the government's target of 2.5 per cent, for the third month in a row. Looking at the goods component of the RPI, inflation, at an annual rate of 1.1 per cent, is growing at the lowest rate since the series started in 1987.

Chart 7
Producer prices

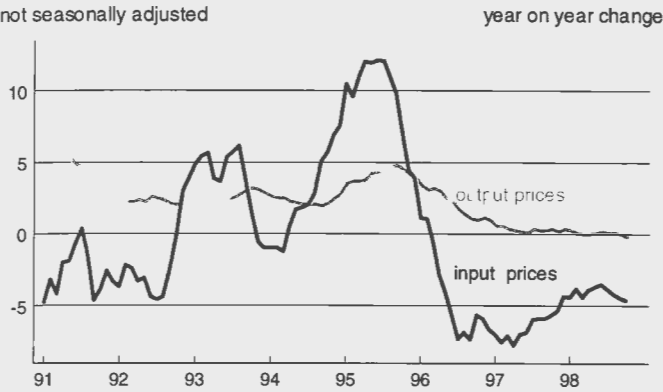


Chart 7 shows output and input producer price annual rates; excluding food, beverages, tobacco and petroleum. The annual rate of growth of output prices in October 1998, at -0.3 per cent, was the lowest rate since records began in 1958. Looking at disaggregated data, falls across the year are seen for several sectors with the sharpest in electrical and optical equipment (-7.7%), chemicals, chemical products and manmade fibres (-4%) and rubber and plastic products (-2.3%).

Input prices; excluding the food, beverages, tobacco and petroleum industries fell by 4.7 per cent in the year to October. In this case, disaggregated data show falls for all sectors, bar one.

We are thus seeing subdued inflation, particularly in the goods market.

Forecasts for the UK Economy

A comparison of independent forecasts, November 1998

The tables below are extracted from HM Treasury's "FORECASTS FOR THE UK ECONOMY" and summarise the average and range of independent forecasts for 1998 and 1999, updated monthly.

	Independent Forecasts for 1998		
	Average	Lowest	Highest
GDP growth (per cent)	2.6	2.0	2.8
Inflation rate (Q4: per cent)			
- RPI	3.0	2.4	3.4
- RPI excl MIPs	2.5	2.2	2.9
Unemployment (Q4, mn)	1.35	1.30	1.50
Current Account (£ bn)	-2.4	-10.5	3.0
PSNCR *(1998-99, £ bn)	-0.6	-9.0	10.0

	Independent Forecasts for 1999		
	Average	Lowest	Highest
GDP growth (per cent)	0.9	-0.5	2.0
Inflation rate (Q4: per cent)			
- RPI	1.9	0.7	3.6
- RPI excl MIPs	2.4	1.8	3.4
Unemployment (Q4, mn)	1.57	1.20	1.80
Current Account (£ bn)	-5.9	-13.0	0.2
PSNCR* (1999-00, £ bn)	4.9	-10.0	22.0

NOTE: "FORECASTS FOR THE UK ECONOMY" gives more detailed forecasts, covering 32 variables and is published monthly by HM Treasury, available on annual subscription, price £75. Subscription enquiries should be addressed to Miss C T Coast-Smith, Public Enquiry Unit, HM Treasury, Room 110/2, Parliament Street, London SW1P 3AG (Tel: 0171-270 4558). It is also available at the Treasury's internet site: <http://www.hm-treasury.gov.uk>.

* PSNCR: Public Sector Net Cash Requirement, was previously called PSBR.

International Economic Indicators - December 1998

by Dermot Rhatigan, Macro-Economic Assessment - Office for National Statistics

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Overview

In Europe, domestic demand slowed in the second quarter of 1998, but remained buoyant. Economic growth in the USA continues to outpace that in Europe, while Japan falls deeper into recession. Despite growth in last few years, unemployment remains stubbornly high in the European Union. Consumer price inflation is falling across the board.

EU15

The pace of economic growth in the European Union slowed in the second quarter of 1998 compared with both the previous quarter and the identical quarter of 1997. Domestic demand continued to grow steadily despite a fall in expenditure on capital formation – although these numbers were heavily influenced by erratic movements in Germany's investment series. As Chart 1 shows, net trade had little effect on quarter on quarter GDP growth, as imports and exports expanded at similar rates.

Consumers' expenditure growth weakened, for the second successive quarter, in quarter two, but still expanded by 2.2 per cent compared with the same period of 1997 – slightly above the average annual rate in the 1990's.

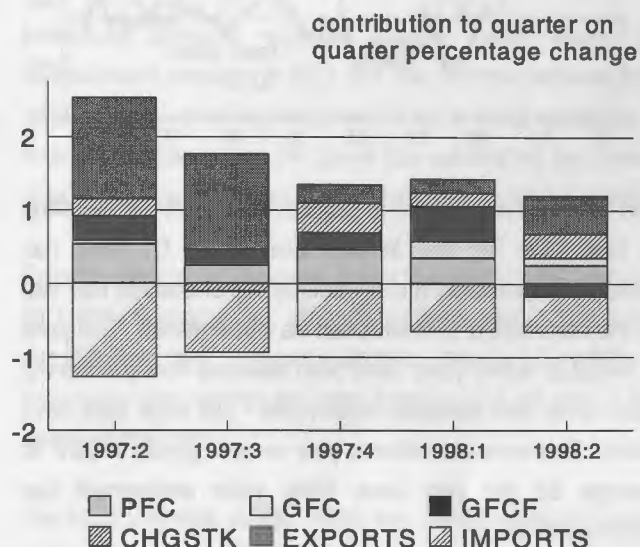
Europe's production industries responded to the easing in demand pressure with slower output growth. The recent peak in annual production growth, around the turn of the year, matches the trend in consumption. Nevertheless, year on year growth of 3.3 per cent in August remains well above the average rate of 1.4 per cent in the 1990's.

Annual consumer price inflation fell by 0.3 percentage points to 1.7 per cent in the third quarter of 1998. Over the same period, the rate of decline in the producer price index accelerated from – 0.2 per cent in the year to quarter two, to – 1.0 in the year to quarter three. The downward trend in European inflation, which has characterised the 1990's, has been influenced by a number of factors including; the convergence criteria for entry to the single currency and weakness in commodities prices, particularly oil prices.

The EU15 unemployment rate edged downward to 10 per cent in July and remained there in August. The rate has been at or above 10 per cent since December 1992.

Chart 1

EU15 - contribution to GDP growth



Germany

Following exceptionally strong growth in the preceding quarter, Germany's GDP rose only slightly in the second quarter of 1998. Domestic demand was dented by lower investment and consumption spending and only a surge in stockbuilding prevented a fall. External demand had little bearing on the quarter's change in GDP - exports and imports expanded at similar rates, leaving Germany's trade surplus intact.

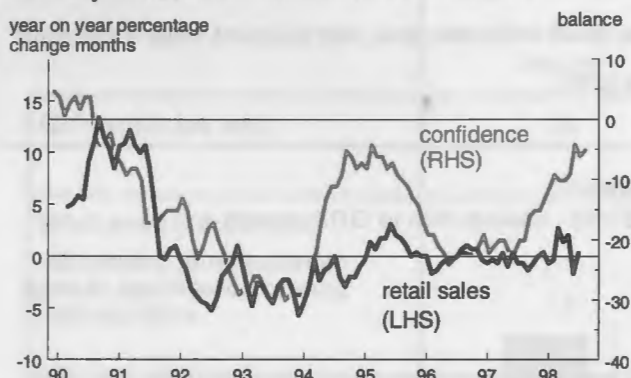
Relatively modest growth in domestic demand has been a feature of the German economy since 1995: consumer spending and capital formation have underperformed in comparison with the rest of the Europe Union. To some extent, the scale of stock building in the last two years has offset this weakness. Such large additions to stocks are likely to influence production growth in later periods.

As Chart 2 shows, the improvement in consumer sentiment since the middle of 1997 has made little impact on purchases - it is usually the case that confidence leads changes in volumes.

Movements in retail sales in the latest two quarters were exaggerated by tax changes in quarter one and two; particularly, April's VAT increase, which boosted sales in quarter one at the expense of those in the second quarter.

Chart 2

Germany - Retail sales and consumer confidence



The fact that the expansion in German GDP, since the beginning of 1996 (GDP has risen in each quarter since Q1 1996), has been slow to translate into significantly higher demand may rest on the interaction of producers and the labour market. The gains in output in recent years have been delivered from productivity gains rather than increased employment - unit wage costs have fallen. This trend has allowed year on year growth in GDP to average 2.0 per cent since 1994, while employment has continued to fall.

Slackness in the labour market and the emergence, in August, of year on year producer price deflation have helped to lower the annual rate of consumer price inflation below 1.0 per cent. The rate fell by 0.2 percentage points between July and August, to 0.8 per cent, where it remained in September. This is well below the EU15 inflation rate in August of 1.7 per cent.

France

The output of the French economy increased by 0.6 per cent between the first and second quarters of 1998, down from 0.7 per cent in the preceding quarter. Domestic demand growth eased during the quarter but remained buoyant. Private consumption was the largest contributor to second quarter growth, while changes in net trade reduced growth, although the drag was less than in quarter one - as imports slowed more sharply than exports.

Annual growth in industrial output slowed sharply, to 2.7 per cent, in the first two months of the third quarter, down from 5.5 per cent in June.

Retail sales volumes were flat in the third quarter after rapid growth in quarter two - this growth may be related to France's hosting of the World Cup in the summer.

As in the rest of Europe, inflation in French consumer prices remains firmly on a downward trend, helped by modest earnings growth and producer prices deflation. The latest prices data also show lower inflation in health spending, possibly reflecting the French government's pressure on drug prices.

The unemployment rate in France, at 11.9 per cent, remained almost 2 per cent above the EU15 average rate in August. The rate dipped in June, reflecting temporary employment connected with the World Cup.

Italy

Increased export volumes in the second quarter of 1998 helped to reverse the slight fall in Italy's GDP recorded in the first quarter of 1998. The increase in Italy's trade surplus helped to mask weakness in the home market, as domestic demand growth fell for the second quarter in succession.

Italy's economic recovery has yet to gather much momentum; following strong growth in 1995, growth in 1996, 1997 and the first half of 1998 was modest - GDP expanded by only 2.1 per cent in the ten quarters to quarter two 1998.

Industrial production fell in quarter two and was down by 2.2 per cent in the year to August. The fact that production has fallen while stocks levels continue to rise, although at a slightly slower rate, underlines the weakness in demand. As in Germany, the rapid build-up in stocks, which began in the first quarter of 1997, should have implications for production in future periods.

The annual rate of inflation fell from 1.9 per cent to 1.8 per cent between August and September - close to the average for the European Union. Unemployment, however, continues on an upward trend, the rate settling at 12.3 per cent in July - over two percent above the EU15 average.

USA

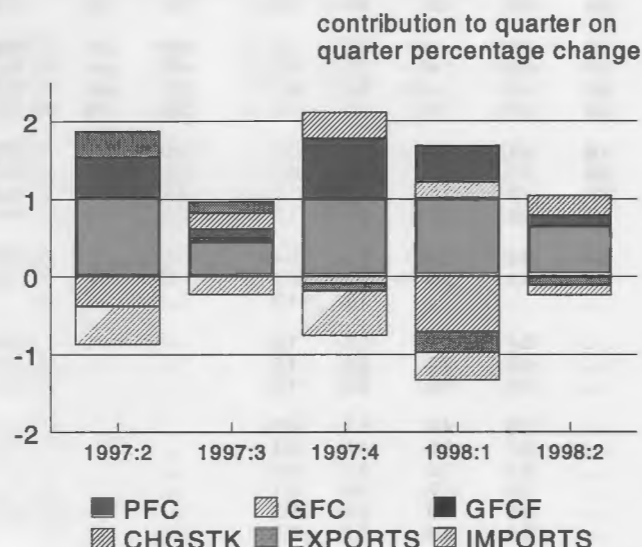
Despite a strong expansion of economic activity in the third quarter of 1998, year on year US GDP growth fell 0.2 percentage points to 3.4 per cent in quarter three - the lowest figure since the start of 1996. The underlying pattern in the latest three quarters' GDP is obscured by erratic movements in the inventories series (reflecting the effects of strike action at

General Motors in June and July), but it appears that growth is now past its cyclical peak.

Putting the change in stocks series to one side, net trade produced the most significant turnaround in contributions to the quarterly rate of GDP. Although the US trade deficit continued to widen in quarter three, the rate of change eased greatly as imports expanded less quickly and exports fell less steeply.

Chart 3

USA - contribution to GDP growth



As Chart 3 shows, consumer spending growth eased slightly in quarter three but continued to rise rapidly, up 1.0 per cent in quarter three and up 4.7 per cent on the same quarter of 1997. Recent turmoil in the financial markets appears to have done little to unsettle consumer confidence and spending. Consumer confidence peaked in the first quarter, but remains extremely buoyant.

Gross capital formation growth slowed, from 2.4 per cent to 0.7 per cent, between the second and third quarters, but still increased by over 8 per cent on the year before.

Industrial production was flat between the second and third quarters of 1998, after seven years of uninterrupted growth. Although the underlying trend between the latest two quarters was disturbed as a result of the industrial action at General Motors, the trend has been downward since the final quarter of 1997.

US inflation edged lower, to 1.5 per cent, in the year to August. Producer price deflation and modest earnings growth may have

tempered upward pressure on prices created by strong growth in demand and tightness in the labour market in the last year.

Japan

Weakening demand in home and overseas markets caused the Japanese economy to contract for the third successive quarter, in quarter two 1998. By the end of the second quarter, GDP was 4.5 per cent below its recent peak in the first quarter of 1997. All the components of domestic demand contributing to the latest fall, with investment expenditure being the most significant factor.

Investment spending emerged as the major source of contractionary pressure in 1997 and this pattern continued into 1998. Capital spending has been hit by a sharp downturn in business confidence and this factor has outweighed the benefit of extremely low financing costs, as interest rates have tumbled.

External demand for Japanese products remains weak, exports fell slightly in quarter two, although the trade surplus increased, due to a more rapid decrease in imports. Imports fell by 6.8 per cent in the latest quarter and were down by 10.0 per cent in the year to quarter two.

The fragility in retail activity, which has characterised the period since 1992, worsened further in quarter three. Attempts made by Japan's monetary and fiscal authorities to arrest the decline - interest rate cuts and announcements of tax rebates - appear to have had little effect. The Bank of Japan has slashed interest rates to extremely low levels (in the range 0.5 to 1.1 per cent between Oct 1995 and Aug 1998); however, this has not led to higher consumption. Also, the income tax cut that came into effect in August (announced in the April stimulus package) has made no discernible difference.

Notes

The series presented here are taken from the OECD's Main Economic Indicators and are shown for each of the G7 (except the UK) economies and for the European Union (EU15) countries in aggregate.

Comparisons of indicators over the same period should be treated with caution, as the length and timing of the economic cycles varies across countries.

1 European Union 15

Contribution to change in GDP

	GDP	PFC	GFC	GFCF	ChgStk	Exports	Imports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl	Unempl
Percentage change on a year earlier															
	ILGB	HUDS	HUDT	HUDU	HUDV	HUDW	HUDX	ILGV	ILHP	HYAB	ILAI	ILAR	ILIJ	GADR	
1990	3.0	1.7	0.4	0.8	-0.1	1.8	1.6	1.9	0.9	5.7	2.5	7.0	1.6	8.1	
1991	3.1	2.7	1.0	0.7	-0.3	-	1.0	-0.2	1.5	5.2	2.2	6.8	0.1	8.4	
1992	1.0	0.9	0.4	-0.2	-0.1	0.9	1.0	-1.4	-	4.4	1.3	5.8	-1.7	9.1	
1993	-0.5	-0.1	0.2	-1.3	-0.5	0.4	-0.8	-3.2	-1.3	3.6	1.4	4.7	-2.0	10.8	
1994	3.0	1.1	0.2	0.5	0.9	2.5	2.1	4.9	-0.5	3.0	2.2	3.8	-	11.1	
1995	2.4	1.1	0.2	0.7	-	2.5	2.1	3.5	-0.1	3.2	4.5	3.7	0.5	10.7	
1996	1.8	1.2	0.3	0.3	-0.4	1.7	1.3	0.2	0.5	2.5	0.7	3.7	0.5	10.8	
1997	2.7	1.3	-	0.6	0.4	3.1	2.8	3.7	3.0	2.0	0.9	3.4	0.6	10.7	
1996 Q1	1.7	1.4	0.3	0.1	0.1	1.3	1.6	-0.1	-	2.8	1.9	4.0	0.4	10.9	
Q2	1.6	0.9	0.4	0.4	-0.4	1.1	0.7	-0.2	0.4	2.6	0.6	4.0	0.4	10.9	
Q3	1.9	1.2	0.4	0.4	-0.8	1.8	1.1	0.1	-	2.3	-0.1	3.1	0.6	10.8	
Q4	2.0	1.3	0.2	0.5	-0.5	2.4	1.8	0.7	1.6	2.3	0.2	3.8	0.5	10.8	
1997 Q1	1.8	0.9	0.1	0.5	-0.2	2.0	1.6	2.1	1.7	2.1	0.3	3.8	0.5	10.8	
Q2	2.8	1.4	0.1	0.5	0.5	3.3	3.0	3.3	3.0	1.7	0.7	3.1	0.6	10.7	
Q3	3.0	1.2	-	0.6	0.7	3.9	3.3	4.4	3.7	2.0	1.4	3.8	0.6	10.6	
Q4	3.3	1.6	-	0.8	0.7	3.4	3.1	5.0	3.7	2.1	1.3	3.0	0.7	10.5	
1998 Q1	3.5	1.6	0.2	1.3	0.7	3.2	3.4	5.0	3.3	1.8	0.4	..	1.1	10.3	
Q2	2.8	1.3	0.2	0.7	0.8	2.3	2.6	4.1	2.5	2.0	-0.2	..	1.1	10.2	
Q3	..	..	..	..	..	..	..	..	..	1.7	-1.0	..	..	..
1997 Oct	..	..	..	..	..	..	..	5.4	5.1	2.0	1.3	..	..	10.6	
Nov	..	..	..	..	..	..	..	4.2	2.0	2.2	1.3	..	..	10.5	
Dec	..	..	..	..	..	..	..	5.4	4.0	2.0	1.2	..	..	10.4	
1998 Jan	..	..	..	..	..	..	..	5.3	4.0	1.7	0.5	..	..	10.3	
Feb	..	..	..	..	..	..	..	5.1	3.0	1.8	0.4	..	..	10.3	
Mar	..	..	..	..	..	..	..	4.7	3.0	1.8	0.4	..	..	10.2	
Apr	..	..	..	..	..	..	..	3.8	1.9	2.0	0.1	..	..	10.2	
May	..	..	..	..	..	..	..	5.0	2.9	2.0	-0.3	..	..	10.2	
Jun	..	..	..	..	..	..	..	3.4	2.9	1.9	-0.4	..	..	10.1	
Jul	..	..	..	..	..	..	..	3.2	3.9	1.8	-0.6	..	..	10.0	
Aug	..	..	..	..	..	..	..	3.3	..	1.7	-1.1	..	..	10.0	
Sep	..	..	..	..	..	..	..	..	..	1.6	-1.2	..	..	..
Oct	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter															
	ILGL	HUDY	HUDZ	HUEA	HUEB	HUEC	HUED	ILHF	ILHZ				ILIT		
1996 Q1	0.8	0.7	0.1	-0.1	-0.2	0.8	0.6	-0.7	1.6				-0.9		
Q2	0.3	-	0.1	0.3	-0.4	0.1	-0.1	0.5	0.4				0.8		
Q3	0.6	0.5	0.1	0.1	-0.3	0.7	0.5	0.6	-0.4				0.7		
Q4	0.3	0.1	-0.1	-	0.4	0.7	0.8	0.3	-				-0.1		
1997 Q1	0.5	0.3	-	-	0.2	0.4	0.4	0.8	1.7				-0.9		
Q2	1.3	0.5	-	0.3	0.2	1.4	1.3	1.6	1.7				0.9		
Q3	0.8	0.2	-	0.2	-0.1	1.3	0.8	1.7	0.3				0.7		
Q4	0.6	0.5	-0.1	0.2	0.4	0.2	0.6	0.8	-				-		
1998 Q1	0.8	0.3	0.2	0.5	0.2	0.2	0.7	0.8	1.3				-0.5		
Q2	0.5	0.2	0.1	-0.2	0.3	0.5	0.5	0.7	1.0				0.9		
Q3	..	..	..	..	..	..	..	..	..				..
Percentage change on previous month															
								ILKF	ILKP						
1997 Oct								1.4	1.0						
Nov								-0.4	-1.9						
Dec								1.1	1.0						
1998 Jan								-0.2	1.9						
Feb								0.4	-1.0						
Mar								0.4	-						
Apr								0.1	1.0						
May								0.5	-						
Jun								-0.4	1.0						
Jul								1.7	0.9						
Aug								-0.9	..						
Sep								..	..				
Oct								..	..				

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
Imports = Imports of goods and services
IoP = Industrial Production

Sales = Retail Sales volume
CPI = Consumer Prices, components and coverage not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Wage Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total labour force
Source: OECD

Contribution to change in GDP

	GDP ¹	PFC	GFC	GFCF	ChgStk	Exports	Imports ^{less}	IoP ¹	Sales	CPI ¹	PPI ¹	Earnings ²	Empl ^{1,3}	Unempl ⁴
Percentage change on a year earlier														
	ILFY	HUBW	HUBX	HUBY	HUBZ	HUCA	HUCB	ILGS	ILHM	HVLL	ILAF	ILAO	ILIG	GABD
1990	..	..	..	..	..	..	..	5.3	8.0	2.7	1.4	4.2	2.8	-
1991	..	..	..	..	..	..	..	3.2	5.8	3.7	2.2	6.6	1.9	-
1992	1.8	1.4	0.8	0.6	-0.4	-0.3	0.3	-2.6	-2.3	5.0	1.6	7.1	-1.3	-
1993	-1.2	0.2	-0.1	-1.3	-0.2	-1.2	-1.5	-7.6	-4.2	4.4	0.1	5.4	-1.1	7.9
1994	2.8	0.7	0.4	0.8	0.8	1.9	1.9	3.6	-1.3	2.7	0.8	2.9	-0.4	8.4
1995	1.3	1.1	0.4	-	-0.1	1.7	1.9	1.0	1.1	1.9	2.2	3.4	-0.1	8.2
1996	1.3	0.8	0.5	-0.2	-0.4	1.4	0.8	0.4	-0.2	1.5	0.1	5.2	-0.4	8.9
1997	2.3	0.3	-0.1	-	1.3	3.1	2.3	3.6	-0.4	1.7	0.7	..	-0.6	10.0
1996 Q1	0.4	1.2	0.7	-1.5	0.1	1.2	1.2	-1.0	-1.4	1.5	0.8	7.1	-0.7	8.7
Q2	1.0	0.4	0.7	-0.1	-0.4	0.6	0.1	-0.8	-0.3	1.5	0.1	6.7	-0.3	8.8
Q3	1.7	1.0	0.7	0.2	-1.1	1.6	0.6	1.0	1.0	1.5	-0.2	4.3	-0.3	8.9
Q4	2.1	0.8	0.2	0.5	-0.2	2.2	1.4	2.6	-0.3	1.4	0.2	2.9	-0.6	9.2
1997 Q1	2.5	0.1	0.2	0.9	1.0	2.2	2.0	2.7	-0.6	1.7	0.3	0.8	-0.6	9.7
Q2	2.2	0.7	0.1	-0.3	0.6	3.1	2.1	3.2	0.3	1.6	0.7	1.5	-0.5	9.9
Q3	2.4	-0.2	-0.3	-0.2	1.9	3.9	2.7	4.0	-1.3	1.9	1.0	1.6	-0.6	10.1
Q4	2.3	0.6	-0.6	-0.2	1.7	3.1	2.3	4.6	0.3	1.8	0.9	..	-0.5	10.3
1998 Q1	3.4	1.1	-	0.9	0.5	2.5	1.7	6.4	2.7	1.1	0.6	..	-0.3	10.0
Q2	2.5	0.1	0.1	-0.1	2.2	2.3	2.3	5.0	-1.6	1.3	0.2	..	-0.2	9.8
Q3	..	..	..	..	..	..	..	..	..	0.8	..	..	..	..
1997 Oct	..	..	..	..	..	..	..	4.8	2.0	1.8	0.9	..	..	10.3
Nov	..	..	..	..	..	..	..	3.9	-1.0	1.9	1.0	..	..	10.3
Dec	..	..	..	..	..	..	..	4.9	-	1.7	0.8	..	..	10.3
1998 Jan	..	..	..	..	..	..	..	7.0	-1.0	1.2	0.6	..	..	10.0
Feb	..	..	..	..	..	..	..	6.0	-	1.1	0.6	..	..	10.0
Mar	..	..	..	..	..	..	..	6.2	9.5	1.1	0.6	..	..	10.0
Apr	..	..	..	..	..	..	..	4.8	-4.8	1.3	0.4	..	..	10.0
May	..	..	..	..	..	..	..	6.8	2.1	1.3	0.3	..	..	9.8
Jun	..	..	..	..	..	..	..	3.2	-2.0	1.2	-	..	..	9.7
Jul	..	..	..	..	..	..	..	4.1	1.0	1.0	-	..	..	9.6
Aug	..	..	..	..	..	..	..	7.0	..	0.8	-0.5	..	..	9.6
Sep	..	..	..	..	..	..	..	..	..	0.8	..	..	..	..
Oct	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter														
	ILGI	HUCC	HUCD	HUCE	HUCF	HUCG	HUCH	ILHC	ILHW				ILIQ	
1996 Q1	-	0.6	0.1	-0.9	-0.3	0.7	0.3	0.5	1.0				-1.9	
Q2	1.3	-	0.2	1.3	-0.1	0.1	0.1	1.0	1.7				0.8	
Q3	0.4	0.6	0.2	0.1	-1.1	0.8	0.2	0.9	-0.7				0.5	
Q4	0.4	-0.4	-0.3	-	1.2	0.7	0.8	0.1	-2.3				-	
1997 Q1	0.4	-	0.1	-0.4	0.9	0.6	0.9	0.6	0.7				-1.9	
Q2	1.0	0.5	0.1	0.1	-0.5	1.0	0.2	1.5	2.7				0.9	
Q3	0.6	-0.3	-0.3	0.2	0.2	1.6	0.8	1.7	-2.3				0.4	
Q4	0.3	0.3	-0.6	-	1.0	-0.1	0.4	0.7	-0.7				0.1	
1998 Q1	1.4	0.5	0.7	0.7	-0.2	0.1	0.3	2.3	3.1				-1.7	
Q2	0.1	-0.4	0.2	-0.9	1.2	0.7	0.7	0.2	-1.6				1.0	
Q3	..	..	..	..	..	..	..	..	..				..
Percentage change on previous month														
								ILKC	ILKM					
1997 Oct								1.7	2.0					
Nov								-	-3.0					
Dec								1.1	-2.1					
1998 Jan								1.3	3.2					
Feb								-0.1	1.0					
Mar								1.3	5.1					
Apr								-1.0	-4.8					
May								1.0	-1.0					
Jun								-1.0	1.0					
Jul								3.6	2.0					
Aug								-0.6	..					
Sep								..	..			
Oct								..	..			

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
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Sales = Retail Sales volume
CPI = Consumer Prices, components and coverage not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce

Source: OECD

1 Data available for unified Germany from 1991
2 Western Germany (Federal Republic of Germany before unification)
3 Excludes members of armed forces
4 Data available for unified Germany from January 1993

3 France

Contribution to change in GDP

	GDP	PFC	GFC	GFCF	ChgStk	Exports	Imports	less Imports	IoP	Sales	CPI	PPI ¹	Earnings	Empl ²	Unempl
Percentage change on a year earlier															
	ILFZ	HUBK	HUBL	HUBM	HUBN	HUBO	HUBP	ILGT	ILHN	HXAA	ILAG	ILAP	ILIH	GABC	
1990	2.5	1.6	0.4	0.6	0.2	1.3	1.6	1.5	0.7	3.5	-0.9	4.9	0.8	8.9	
1991	0.8	0.8	0.5	-	-0.8	1.0	0.8	-1.2	-0.2	3.2	-1.2	4.7	0.1	9.5	
1992	1.2	0.8	0.6	-0.6	-0.6	1.3	0.3	-1.2	0.3	2.4	-1.1	4.0	-0.7	10.4	
1993	-1.3	0.1	0.6	-1.4	-1.5	-0.1	-1.0	-3.8	0.2	2.1	-2.1	2.5	-1.2	11.7	
1994	2.8	0.8	0.2	0.3	1.7	1.6	1.8	3.9	-0.2	1.7	1.2	1.9	0.1	12.3	
1995	2.1	1.0	-	0.5	0.3	1.8	1.4	2.0	0.1	1.7	5.2	2.4	0.9	11.7	
1996	1.6	1.2	0.5	-0.1	-0.7	1.5	0.9	0.2	-0.4	2.1	-2.7	2.4	0.1	12.4	
1997	2.3	0.5	0.2	-	-	3.8	2.3	4.0	1.1	1.1	-0.5	2.8	0.5	12.4	
1996 Q1	1.3	2.1	0.4	-0.3	-1.0	0.8	0.7	-1.2	0.7	2.1	-0.8	2.3	0.4	12.3	
Q2	1.0	0.5	0.5	-	-0.1	0.2	0.2	-0.3	-0.8	2.4	-2.7	2.3	0.2	12.3	
Q3	1.5	1.1	0.6	-0.1	-1.4	2.1	0.7	0.4	-2.3	1.8	-3.8	2.6	-0.1	12.4	
Q4	2.4	1.1	0.5	-	-0.3	3.0	1.9	2.0	1.1	1.7	-3.1	2.6	-0.1	12.5	
1997 Q1	1.2	-0.3	0.3	-0.2	0.3	2.0	0.9	0.7	-1.4	1.5	-2.3	3.0	-	12.4	
Q2	2.5	0.4	0.2	-	-0.1	4.5	2.5	3.6	0.8	0.9	-0.9	2.7	0.4	12.4	
Q3	2.6	0.6	0.2	0.1	0.3	4.5	3.0	5.1	1.7	1.3	0.3	2.8	0.7	12.4	
Q4	3.0	1.5	0.2	0.2	-0.3	4.1	2.7	6.4	3.0	1.1	0.7	2.8	0.9	12.3	
1998 Q1	3.6	1.9	0.2	0.8	0.5	3.8	3.6	7.2	2.3	0.6	0.6	2.6	1.2	12.1	
Q2	3.1	2.5	0.3	0.7	0.3	1.7	2.4	5.1	3.4	1.0	-0.3	2.4	1.3	11.9	
Q3	..	..	..	..	..	..	..	..	2.5	0.6	-1.3	2.0	..	..
1997 Oct	..	..	..	..	..	..	..	6.8	4.4	1.0	0.7	2.8	..	12.4	
Nov	..	..	..	..	..	..	..	5.1	-0.5	1.3	0.7	..	..	12.4	
Dec	..	..	..	..	..	..	..	7.3	5.3	1.1	0.7	..	..	12.2	
1998 Jan	..	..	..	..	..	..	..	6.6	5.8	0.5	0.6	2.6	..	12.1	
Feb	..	..	..	..	..	..	..	6.7	2.0	0.7	0.5	..	..	12.1	
Mar	..	..	..	..	..	..	..	8.5	-0.8	0.8	0.6	..	..	12.0	
Apr	..	..	..	..	..	..	..	4.0	4.0	1.0	-	2.4	..	11.9	
May	..	..	..	..	..	..	..	5.8	1.2	1.0	-0.3	..	..	11.9	
Jun	..	..	..	..	..	..	..	5.5	4.9	1.0	-0.7	..	..	11.8	
Jul	..	..	..	..	..	..	..	2.7	2.9	0.8	-1.0	2.0	..	11.9	
Aug	..	..	..	..	..	..	..	2.7	2.0	0.7	-1.3	..	..	11.9	
Sep	..	..	..	..	..	..	..	..	2.5	0.5	-1.5	..	..	..
Oct	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter															
	ILGJ	HUBQ	HUBR	HUBS	HUBT	HUBU	HUBV	ILHD	ILHX					ILIR	
1996 Q1	1.4	1.5	0.2	-	-0.9	1.6	0.9	1.3	2.5					0.1	
Q2	-0.1	-0.7	0.1	-	0.6	-0.6	-0.3	0.2	-1.7					-0.2	
Q3	0.8	0.6	0.1	-	-0.5	1.1	0.5	0.7	0.1					-0.1	
Q4	0.3	-0.4	0.1	-	0.6	0.9	0.8	-0.2	0.2					0.1	
1997 Q1	0.2	0.1	-	-0.2	-0.4	0.6	-0.1	-	-					0.2	
Q2	1.1	-	-	0.2	0.2	2.0	1.3	3.1	0.5					0.2	
Q3	0.9	0.8	-	0.1	-0.1	1.0	1.0	2.1	1.0					0.2	
Q4	0.8	0.6	0.1	-	-	0.5	0.4	1.0	1.5					0.3	
1998 Q1	0.7	0.4	0.1	0.4	0.4	0.3	0.8	0.8	-0.7					0.5	
Q2	0.6	0.6	0.1	0.2	-	-0.1	0.2	1.1	1.6					0.3	
Q3	..	..	..	..	..	..	..	..	0.1					..	
Percentage change on previous month															
								ILKD	ILKN						
1997 Oct								1.9	3.6						
Nov								-1.7	-3.5						
Dec								1.9	2.8						
1998 Jan								-0.8	2.8						
Feb								0.8	-4.8						
Mar								1.4	-2.7						
Apr								-0.6	5.9						
May								0.7	-1.6						
Jun								-0.1	1.2						
Jul								-0.3	1.1						
Aug								-	-1.6						
Sep								..	-0.1						
Oct													

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GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
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IoP = Industrial Production

Sales = Retail Sales volume
CPI = Consumer Prices, components and coverage not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Wage Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce
Source: OECD

1 Producer prices in intermediate goods
2 Excludes members of armed forces

Contribution to change in GDP

	GDP	PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl	Unempl
Percentage change on a year earlier														
	ILGA	HUCI	HUCJ	HUCK	HUCL	HUCM	HUCN	ILGU	ILHO	HYAA	ILAH	ILAQ	ILII	GABE
1990	2.2	1.5	0.2	0.7	0.1	1.2	1.6	-0.5	-2.2	6.0	4.2	7.3	1.4	9.1
1991	1.1	1.7	0.3	0.2	-0.3	-0.1	0.5	-0.9	0.3	6.5	3.3	9.8	1.3	8.8
1992	0.6	0.7	0.2	-0.4	0.1	1.1	1.1	-1.3	1.8	5.3	1.9	5.4	-1.1	9.0
1993	-1.2	-1.5	0.1	-2.5	-0.6	1.7	-1.7	-2.1	-3.0	4.2	3.7	3.7	-4.1	10.3
1994	2.2	0.9	-0.1	0.1	0.6	2.3	1.6	6.3	-5.9	3.9	3.8	3.3	-1.8	11.4
1995	2.9	1.2	-0.2	1.2	-	2.7	1.9	6.1	-5.1	5.4	7.9	3.1	-0.5	11.9
1996	0.7	0.5	-	0.1	-0.3	-0.1	-0.4	-2.9	-2.4	3.8	1.9	1.8	0.4	12.0
1997	1.5	1.4	-0.1	0.1	1.0	1.6	2.5	2.8	6.9	1.8	1.3	3.6	-	12.1
1996 Q1	1.7	0.8	0.1	0.7	0.8	-0.1	0.5	-	-3.9	5.0	4.8	1.9	0.8	12.0
Q2	0.7	0.4	0.1	0.3	-0.2	-1.2	-1.2	-1.2	-3.4	4.2	1.6	2.1	0.3	12.0
Q3	0.5	0.2	0.1	-0.2	-0.9	0.1	-1.1	-4.6	-4.9	3.5	0.4	1.7	0.3	12.0
Q4	-0.2	0.6	-0.1	-0.5	-1.1	0.9	0.1	-5.5	3.3	2.7	0.8	1.6	0.2	12.0
1997 Q1	-0.8	1.2	-0.2	-0.3	-1.4	-0.7	-0.6	0.1	3.8	2.4	0.9	4.0	-0.1	12.2
Q2	2.0	1.6	-0.2	-	2.2	1.7	3.3	2.4	6.6	1.6	1.2	3.8	0.1	12.1
Q3	2.1	1.7	-0.1	0.2	1.2	3.1	4.0	3.2	9.0	1.5	1.7	3.4	-	12.1
Q4	2.8	1.3	-	0.5	1.9	2.2	3.1	5.3	8.2	1.6	1.5	3.3	-	12.1
1998 Q1	2.5	0.7	0.2	0.6	2.6	2.9	4.5	3.3	3.0	1.7	1.1	2.0	0.6	12.1
Q2	1.2	0.5	0.2	0.4	0.6	1.7	2.3	1.3	4.4	1.8	0.6	-	0.1	12.3
Q3	..	..	..	..	..	..	..	..	..	1.8	-0.2	..	0.6	..
1997 Oct	..	..	..	..	..	..	..	4.8	8.2	1.6	1.5	3.4	..	12.1
Nov	..	..	..	..	..	..	..	4.7	8.2	1.6	1.6	3.4	..	12.1
Dec	..	..	..	..	..	..	..	6.5	8.2	1.6	1.4	3.2	..	12.0
1998 Jan	..	..	..	..	..	..	..	6.5	2.2	1.6	1.3	1.6	..	12.0
Feb	..	..	..	..	..	..	..	2.4	4.4	1.8	1.3	1.7	..	12.1
Mar	..	..	..	..	..	..	..	1.3	2.2	1.7	0.9	2.8	..	12.2
Apr	..	..	..	..	..	..	..	0.7	3.3	1.8	0.9	3.1	..	12.2
May	..	..	..	..	..	..	..	2.9	4.4	1.7	0.6	3.0	..	12.3
Jun	..	..	..	..	..	..	..	0.3	5.3	1.9	0.4	..	..	12.3
Jul	..	..	..	..	..	..	..	1.5	4.3	1.9	0.2	..	..	12.3
Aug	..	..	..	..	..	..	..	-2.2	3.2	1.9	-0.2	..	..	..
Sep	..	..	..	..	..	..	..	..	..	1.8	-0.5	..	..	..
Oct	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter														
	ILGK	HUCO	HUCP	HUCQ	HUCR	HUCS	HUCT	ILHE	ILHY				ILIS	
1996 Q1	0.8	0.1	-	-0.2	0.2	0.6	-0.1	-3.7	6.6				-1.3	
Q2	-1.0	-	-	-0.1	-1.8	-0.5	-1.4	-0.5	-1.9				1.2	
Q3	0.4	0.1	-	-0.1	0.3	0.4	0.3	-0.3	-0.8				1.2	
Q4	-0.4	0.4	-0.1	-0.1	0.3	0.4	1.3	-1.0	-0.4				-0.8	
1997 Q1	0.2	0.7	-0.1	-	-0.2	-1.1	-0.8	1.9	7.1				-1.6	
Q2	1.8	0.4	-	0.2	1.8	1.9	2.6	1.8	0.8				1.4	
Q3	0.6	0.2	-	0.1	-0.6	1.8	1.0	0.6	1.4				1.1	
Q4	0.3	-	-	0.2	0.9	-0.4	0.4	0.9	-1.1				-0.8	
1998 Q1	-0.1	0.1	0.1	0.1	0.5	-0.4	0.5	-	1.8				-1.0	
Q2	0.4	0.2	0.1	-	-0.1	0.6	0.4	-0.2	2.1				0.9	
Q3	..	..	..	..	..	..	..	..	..				1.6	
Percentage change on previous month														
								ILKE	ILKO					
1997 Oct								1.2	-2.1					
Nov								0.4	-					
Dec								-0.1	-					
1998 Jan								0.9	1.1					
Feb								-1.0	2.2					
Mar								-0.9	-2.1					
Apr								-0.2	-					
May								2.5	1.1					
Jun								-2.2	6.4					
Jul								0.8	-4.0					
Aug								-2.1	-					
Sep								..	..			
Oct								..	..			

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
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Exports = Exports of goods and services
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Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment not seasonally adjusted

Source: OECD

Contribution to change in GDP

	GDP	PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl ¹	Unempl
Percentage change on a year earlier														
	ILGC	HUDG	HUDH	HUDI	HUDJ	HUDK	HUDL	ILGW	ILHQ	ILAA	ILAJ	ILAS	ILIK	GADO
1990	1.2	1.1	0.4	-0.2	-0.4	0.7	0.4	-0.2	0.6	5.4	4.9	3.2	0.5	5.6
1991	-0.9	-0.4	0.2	-1.1	-0.2	0.6	-0.1	-2.0	-2.5	4.2	2.1	3.3	-0.9	6.8
1992	2.7	1.9	-	0.8	0.2	0.6	0.8	3.2	3.2	3.1	1.3	2.4	0.6	7.5
1993	2.3	2.0	-	0.8	0.2	0.3	1.0	3.6	4.5	3.0	1.3	2.4	1.5	6.9
1994	3.5	2.2	0.1	1.1	0.6	0.8	1.4	5.3	5.7	2.6	0.6	2.8	3.2	6.1
1995	2.3	1.8	-0.1	0.8	-0.5	1.2	1.1	5.0	3.1	2.7	2.0	2.7	1.4	5.6
1996	3.4	2.2	0.1	1.4	-	1.0	1.2	3.5	4.5	3.0	2.6	3.1	1.5	5.4
1997	3.9	2.3	0.2	1.3	0.5	1.6	1.9	5.0	4.2	2.3	0.4	3.1	2.2	5.0
1996 Q1	2.4	2.0	-0.1	0.9	-0.6	1.0	0.8	2.3	4.4	2.8	2.2	2.9	0.6	5.6
Q2	3.9	2.3	0.1	1.4	0.1	1.1	1.0	3.7	5.0	2.8	2.4	3.2	1.3	5.4
Q3	3.5	2.1	0.1	1.6	0.5	0.6	1.4	3.4	4.3	3.0	2.8	3.1	1.7	5.3
Q4	3.9	2.2	0.3	1.5	0.2	1.2	1.6	4.2	4.4	3.1	3.1	3.5	2.1	5.3
1997 Q1	4.1	2.3	0.3	1.3	0.6	1.4	1.8	5.1	4.8	2.9	2.0	3.4	2.5	5.3
Q2	3.6	1.8	0.2	1.2	0.7	1.7	2.0	4.3	3.0	2.3	0.4	2.8	2.4	4.9
Q3	4.1	2.5	0.2	1.4	-	2.0	2.0	5.0	4.8	2.2	-0.1	2.5	2.1	4.9
Q4	3.8	2.5	0.2	1.3	0.5	1.2	2.0	5.8	4.0	1.9	-0.8	3.4	2.0	4.7
1998 Q1	4.2	2.8	0.1	1.8	0.5	0.9	1.9	4.7	5.1	1.4	-1.5	3.1	1.9	4.7
Q2	3.6	3.6	0.2	1.9	-0.5	0.1	1.7	4.0	7.6	1.6	-0.8	2.5	1.5	4.4
Q3	3.4	3.2	0.1	1.5	0.1	-0.3	1.3	2.5	..	1.6	-0.6	2.2	1.2	4.5
1997 Oct	..	..	..	..	..	..	..	5.8	3.4	2.1	-0.4	4.2	1.7	4.8
Nov	..	..	..	..	..	..	..	5.7	4.2	1.8	-0.7	3.4	2.2	4.6
Dec	..	..	..	..	..	..	..	5.8	4.6	1.7	-1.3	2.5	2.2	4.7
1998 Jan	..	..	..	..	..	..	..	5.4	4.9	1.6	-1.8	3.3	2.0	4.7
Feb	..	..	..	..	..	..	..	4.3	4.9	1.4	-1.4	3.3	2.0	4.6
Mar	..	..	..	..	..	..	..	4.4	5.5	1.3	-1.5	2.5	1.6	4.7
Apr	..	..	..	..	..	..	..	4.3	7.0	1.5	-0.9	2.5	1.6	4.3
May	..	..	..	..	..	..	..	4.5	8.2	1.7	-0.9	2.5	1.5	4.3
Jun	..	..	..	..	..	..	..	3.2	7.6	1.7	-0.7	2.5	1.4	4.5
Jul	..	..	..	..	..	..	..	2.0	5.6	1.7	-0.4	1.7	1.1	4.5
Aug	..	..	..	..	..	..	..	3.0	..	1.6	-0.8	2.5	1.0	4.5
Sep	..	..	..	..	..	..	..	2.4	..	1.5	-0.9	2.5	1.5	4.6
Oct	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter														
	ILGM	HUDM	HUDN	HUDO	HUDP	HUDQ	HUDR	ILHG	ILIA				ILIU	
1996 Q1	0.8	0.6	0.1	0.5	-0.1	0.1	0.4	0.4	1.4				-1.2	
Q2	1.5	0.8	0.3	0.5	0.2	0.2	0.4	1.9	1.5				2.0	
Q3	0.5	0.3	-	0.3	0.3	0.1	0.4	0.8	0.4				1.2	
Q4	1.0	0.5	-	0.2	-0.2	0.9	0.2	1.0	1.1				0.1	
1997 Q1	1.0	0.7	-	0.3	0.3	0.3	0.6	1.3	1.8				-0.8	
Q2	1.0	0.3	0.1	0.4	0.3	0.5	0.6	1.1	-0.2				1.9	
Q3	1.0	1.0	-	0.5	-0.4	0.3	0.5	1.5	2.1				0.9	
Q4	0.7	0.5	-	0.1	0.2	0.1	0.2	1.7	0.4				-	
1998 Q1	1.4	1.0	-0.1	0.8	0.3	-0.1	0.6	0.3	2.8				-1.0	
Q2	0.5	1.0	0.2	0.5	-0.7	-0.3	0.4	0.4	2.2				1.5	
Q3	0.8	0.7	-	0.1	0.3	-0.1	0.1	-	..				0.6	
Percentage change on previous month														
								ILKG	ILKQ				ILLA	
1997 Oct								0.8	-0.1				0.5	
Nov								0.8	0.5				0.3	
Dec								0.3	0.6				-0.2	
1998 Jan								-0.1	1.3				-1.4	
Feb								-0.4	1.1				0.5	
Mar								0.5	0.4				0.5	
Apr								0.4	0.6				0.5	
May								0.3	1.1				0.5	
Jun								-1.0	0.3				0.6	
Jul								-0.4	-0.6				0.4	
Aug								1.6	..				-0.4	
Sep								-0.3	..				-0.3	
Oct								

GDP = Gross Domestic Product at constant market prices
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GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
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IoP = Industrial Production

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CPI = Consumer Prices, components and coverage not uniform among countries
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Earnings = Average Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce

Source: OECD

¹ Excludes members of armed forces

Contribution to change in GDP

	GDP	PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP ¹	Sales	CPI	PPI	Earnings ²	Empl	Unempl
Percentage change on a year earlier														
	ILGD	HUCU	HUCV	HUCW	HUCX	HUCY	HUCZ	ILGX	ILHR	ILAB	ILAK	ILAT	ILIL	GADP
1990	5.1	2.6	0.1	2.7	-0.2	0.7	0.8	4.3	5.3	3.1	1.6	5.1	1.9	2.1
1991	3.8	1.5	0.2	1.1	0.2	0.6	-0.3	1.9	2.1	3.3	1.1	3.5	1.9	2.1
1992	1.0	1.2	0.2	-0.5	-0.5	0.5	-0.1	-5.7	-1.1	1.6	-0.9	1.3	1.1	2.1
1993	0.3	0.7	0.2	-0.6	-0.1	0.2	-	-4.3	-3.2	1.2	-1.7	0.4	0.2	2.5
1994	0.7	1.1	0.2	-0.2	-0.2	0.5	0.8	1.2	0.3	0.8	-1.7	2.2	-	2.9
1995	1.4	1.2	0.3	0.4	0.2	0.6	1.4	3.3	-	-0.1	-0.7	3.0	0.1	3.1
1996	4.1	1.7	0.1	3.0	0.1	0.4	1.3	2.4	0.7	0.1	-1.8	2.6	0.5	3.4
1997	0.8	0.6	-	-1.2	-	1.3	-	3.5	-2.3	1.8	0.7	2.9	1.1	3.4
1996 Q1	5.7	3.0	0.2	3.5	0.3	0.3	1.7	1.6	2.3	-0.4	-1.7	1.7	0.1	3.3
Q2	4.2	1.5	0.1	4.0	0.2	-	1.5	0.4	0.3	0.1	-1.9	1.7	0.3	3.5
Q3	3.1	1.0	0.1	2.7	-	0.4	1.1	3.6	-0.6	0.2	-1.7	4.9	0.7	3.3
Q4	3.4	1.5	0.2	1.8	-0.2	1.0	0.8	3.9	1.0	0.5	-1.6	2.3	0.9	3.3
1997 Q1	2.8	2.7	-	-	-0.4	1.1	0.6	5.2	3.4	0.6	-0.9	5.1	1.6	3.3
Q2	-0.2	-0.2	-0.1	-1.7	-	1.8	-	5.8	-4.7	2.1	1.3	2.6	1.4	3.5
Q3	1.0	0.7	-	-1.2	0.2	1.3	-0.1	4.0	-3.5	2.1	1.3	2.6	0.7	3.4
Q4	-0.4	-0.5	-	-1.7	0.2	1.1	-0.5	-0.7	-4.7	2.1	1.1	1.6	0.7	3.4
1998 Q1	-3.7	-2.6	-	-2.3	0.2	0.3	-0.7	-3.5	-9.6	2.0	0.4	-0.2	-	3.6
Q2	-1.8	0.1	0.1	-2.5	-0.2	-0.5	-1.3	-8.0	-2.6	0.4	-1.9	-0.2	-0.8	4.2
Q3	..	..	..	..	..	..	..	-8.2	-3.8	-0.2	-1.9	-1.7	-0.9	..
1997 Oct	..	..	..	..	..	..	..	1.4	-3.1	2.5	1.3	1.5	0.9	3.4
Nov	..	..	..	..	..	..	..	-2.5	-6.0	2.1	1.1	1.8	0.5	3.5
Dec	..	..	..	..	..	..	..	-0.9	-5.1	1.8	0.9	1.5	0.8	3.4
1998 Jan	..	..	..	..	..	..	..	-2.3	-5.0	1.8	0.9	-0.5	0.6	3.5
Feb	..	..	..	..	..	..	..	-3.7	-7.9	1.9	0.4	0.2	-0.1	3.6
Mar	..	..	..	..	..	..	..	-4.7	-15.6	2.2	0.1	-0.2	-0.3	3.8
Apr	..	..	..	..	..	..	..	-6.2	-	0.5	-2.0	-0.3	-0.7	4.1
May	..	..	..	..	..	..	..	-10.5	-3.2	0.5	-1.9	-0.1	-0.5	4.3
Jun	..	..	..	..	..	..	..	-7.1	-4.3	0.1	-1.9	-0.3	-1.1	4.3
Jul	..	..	..	..	..	..	..	-8.5	-3.2	-0.1	-1.9	-2.3	-1.1	4.1
Aug	..	..	..	..	..	..	..	-8.3	-4.2	-0.3	-1.9	-2.7	-0.7	4.3
Sep	..	..	..	..	..	..	..	-7.7	-4.3	-0.2	-2.0	-0.3	-1.0	..
Oct	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter														
	ILGN	HUDA	HUDB	HUDC	HUDD	HUDE	HUDD	ILHH	ILIB				ILIV	
1996 Q1	2.7	1.1	0.1	1.5	0.2	-	0.3	0.5	2.3				-1.6	
Q2	0.1	-0.4	-	0.8	-0.1	-	0.3	-0.6	-2.0				3.1	
Q3	-0.4	0.1	-	-0.7	-0.1	0.3	-	1.8	-0.6				0.5	
Q4	1.1	0.6	0.1	0.2	-0.1	0.6	0.2	2.2	1.3				-1.0	
1997 Q1	2.0	2.3	-0.1	-0.3	-	0.2	0.1	1.8	4.7				-0.9	
Q2	-2.8	-3.2	-0.1	-0.8	0.3	0.7	-0.3	-0.1	-9.6				2.9	
Q3	0.8	1.0	0.1	-0.2	-	-0.2	-0.1	-	0.6				-0.3	
Q4	-0.4	-0.6	0.1	-0.3	-0.1	0.4	-0.2	-2.3	-				-1.0	
1998 Q1	-1.3	0.2	-0.1	-1.0	-	-0.6	-0.2	-1.1	-0.6				-1.5	
Q2	-0.8	-0.5	-0.1	-1.0	-0.1	-0.1	-0.8	-4.7	-2.6				2.1	
Q3	..	..	..	..	..	..	..	-0.2	-0.7				-0.5	
Percentage change on previous month														
								ILKH	ILKR				ILLB	
1997 Oct								-0.9	1.1				0.1	
Nov								-4.3	-1.1				-1.0	
Dec								1.9	-				-0.4	
1998 Jan								2.2	2.1				-0.8	
Feb								-3.5	-3.1				-0.7	
Mar								-2.2	-1.1				0.9	
Apr								-1.5	-				1.0	
May								-1.7	-				1.1	
Jun								1.6	-2.2				0.1	
Jul								-0.7	1.1				-0.5	
Aug								-1.2	-				-0.5	
Sep								2.5	-1.1				-0.3	
Oct								

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Unempl = Standardised Unemployment rates: percentage of total workforce

Source: OECD

1 Not adjusted for unequal number of working days in a month
2 Figures monthly and seasonally adjusted

7 World trade in goods¹

	Export of manufactures			Import of manufactures			Export of goods			Import of goods			Total trade	
	Total	OECD	Other	Total	OECD	Other	Total	OECD	Other	Total	OECD	Other	manufactures	goods
Percentage change on a year earlier														
	ILIZ	ILJA	ILJB	ILJC	ILJD	ILJE	ILJF	ILJG	ILJH	ILJI	ILJJ	ILJK	ILJL	ILJM
1990	5.9	5.9	5.5	5.5	5.5	5.4	4.5	5.6	1.6	4.5	5.2	2.8	5.7	4.5
1991	3.8	2.5	9.6	5.2	3.5	10.0	4.0	3.5	5.2	4.5	3.2	8.1	4.5	4.2
1992	4.5	3.7	7.7	5.1	4.5	6.7	4.5	3.8	6.1	5.0	4.3	6.7	4.8	4.7
1993	4.2	1.9	13.1	3.3	1.1	9.3	4.2	2.5	8.5	3.7	1.4	9.6	3.8	3.9
1994	11.2	10.2	14.7	12.3	12.8	11.1	10.1	9.2	12.2	10.6	10.7	10.3	11.7	10.3
1995	9.9	9.8	10.2	9.8	9.3	11.2	8.7	8.7	8.8	8.3	7.3	10.7	9.9	8.5
1996	5.6	6.4	3.0	5.6	7.0	2.2	5.0	6.0	2.7	5.1	6.1	2.6	5.6	5.0
1997	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1995 Q1	13.3	13.5	12.6	13.1	13.6	12.0	11.7	12.1	10.9	11.0	11.0	11.0	13.2	11.4
Q2	10.4	10.1	11.3	11.0	10.4	12.7	9.2	8.9	9.8	9.6	8.5	12.3	10.7	9.4
Q3	9.1	8.9	9.8	9.1	8.0	11.6	7.9	7.7	8.4	7.8	6.4	11.2	9.1	7.8
Q4	7.1	7.1	6.8	6.4	5.6	8.4	6.0	5.9	6.1	5.1	3.8	8.3	6.7	5.6
1996 Q1	5.8	6.2	4.5	6.3	7.4	3.6	4.8	5.3	3.7	5.5	5.9	4.4	6.0	5.2
Q2	5.4	6.3	2.4	4.8	6.7	0.4	4.6	5.7	2.1	4.4	5.8	1.1	5.1	4.5
Q3	6.5	8.0	1.7	7.1	8.9	2.7	5.8	7.5	2.0	6.2	7.7	2.7	6.8	6.0
Q4	7.2	8.4	3.4	6.5	8.2	2.3	6.5	8.0	3.0	6.5	8.3	2.3	6.8	6.5
1997 Q1	7.1	7.8	4.9	7.3	7.5	6.7	6.6	7.1	5.5	6.8	6.8	6.7	7.2	6.7
Q2	10.7	12.2	5.9	10.3	11.6	7.0	9.8	11.4	5.9	9.0	10.0	6.4	10.5	9.4
Q3	12.5	13.4	9.5	10.7	12.4	6.4	10.7	11.8	8.0	9.4	10.5	6.8	11.6	10.1
Q4	9.5	10.8	5.0	..	..	..	..	..	..	..	..	..	..	..
1998 Q1	9.1	8.8	10.0	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter														
	ILJN	ILJO	ILJP	ILJQ	ILJR	ILJS	ILJT	ILJU	ILJV	ILJW	ILJX	ILJY	ILJZ	ILKA
1995 Q1	3.2	3.5	2.2	1.5	0.9	2.8	2.5	2.7	2.1	1.0	0.5	2.3	2.3	1.8
Q2	1.1	0.8	2.1	1.9	1.4	3.0	0.8	0.4	1.7	1.9	1.4	3.3	1.5	1.4
Q3	1.1	0.8	1.9	1.1	0.7	1.9	1.1	0.9	1.7	1.0	0.6	2.0	1.1	1.1
Q4	1.6	1.9	0.5	1.9	2.5	0.5	1.4	1.8	0.5	1.1	1.3	0.6	1.7	1.3
1996 Q1	1.9	2.5	-0.1	1.3	2.6	-1.8	1.4	2.1	-0.3	1.3	2.5	-1.4	1.6	1.4
Q2	0.7	0.9	-	0.5	0.8	-0.2	0.6	0.8	0.1	0.9	1.3	-	0.6	0.8
Q3	2.1	2.4	1.2	3.2	2.8	4.3	2.3	2.6	1.6	2.7	2.4	3.6	2.7	2.5
Q4	2.3	2.2	2.3	1.3	1.8	-	2.0	2.3	1.4	1.4	1.9	0.1	1.8	1.7
1997 Q1	1.8	2.0	1.4	2.1	1.9	2.5	1.6	1.3	2.2	1.6	1.1	2.8	2.0	1.6
Q2	4.1	5.0	0.9	3.3	4.6	0.1	3.6	4.8	0.5	3.0	4.3	-0.2	3.7	3.3
Q3	3.8	3.5	4.7	3.6	3.5	3.7	3.2	2.9	3.7	3.1	2.8	4.0	3.7	3.1
Q4	-0.5	-0.1	-1.9	..	..	..	..	..	..	..	..	..	..	..
1998 Q1	1.5	0.1	6.2	..	..	..	..	..	..	..	..	..	..	..

¹ Data used in the World and OECD aggregates refer to Germany after unification

Source: OECD

Final Expenditure Prices Index (Experimental) - October 1998

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Note that further development work, including the adjustment of the Index of Government Prices for productivity change, is ongoing and the FEPI will be available only as an experimental index until this work has been completed.

Important preface to this month's FEPI report

1. Users of the Final Expenditure Prices Index (FEPI) may already be aware that the Average Earnings Index series was not published this month, pending a review of methodology. Since components of the Average Earnings Index are used in calculating the pay component of the Index of Government Prices (IGP), it has therefore not been possible to calculate an IGP for October. Consequently it has also not been possible to determine an overall value for the FEPI itself. Nevertheless, the ICP and the IIP have been calculated as per normal. As soon as the Average Earnings Index series has been re-instated the missing IGP and FEPI will, of course, be calculated retrospectively.

2. In an article entitled "Development of a Final Expenditure Prices Index", 'Economic Trends', No 526 September 1997, the hope was expressed that further methodological developments would be concluded to enable the FEPI to be re-launched as a more high-profile indicator from January 1999. One such area of development is taking longer than anticipated, namely the construction of a public sector productivity measure. The intention is that such a measure be applied to the FEPI as an adjustment to the Index of Government Prices. Since further work is still needed, the FEPI will not be re-launched in January 1999 and will continue to be published as an experimental index until further notice. We regret any inconvenience this may cause.

Summary

Since it has not been possible to calculate the overall FEPI for October 1998, the chart on the right goes up to September only. The annual percentage change for the Index of Consumer Prices (ICP) fell from 1.9 per cent in September to 1.8 per cent in October. The Index of Investment Prices (IIP) rose from 1.0 per cent to 1.3 per cent.

The FEPI annual percentage change

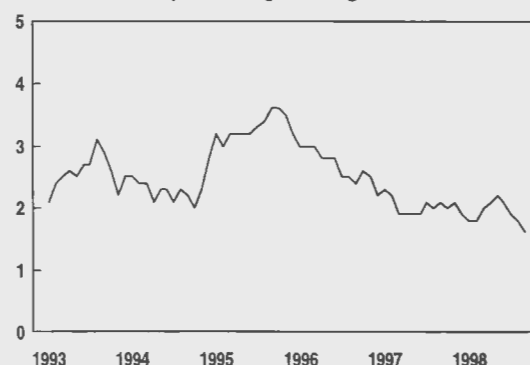


Table A

Final Expenditure Prices Index and components (January 1992=100 and annual percentage change)

		Index of Consumer Prices (ICP)		Index of Investment Prices (IIP)		Index of Government Prices (IGP)		Final Expenditure Prices Index (FEPI)	
		Index	Annual percentage change	Index	Annual percentage change	Index	Annual percentage change	Index	Annual percentage change
1998	May	120.0	2.6	112.4	1.4	116.7	1.7	117.7	2.2
	Jun	119.8	2.2	112.4	1.4	117.1	2.0	117.7	2.1
	Jul	119.2	2.1	112.6r	1.4r	117.0	2.1	117.3	1.9
	Aug	119.6	1.8	112.6	1.3	117.1	2.2	117.6	1.8
	Sep	120.1	1.9	112.5r	1.0r	117.3r	2.1r	117.9r	1.7r
	Oct	120.1	1.8	112.6	1.3	..	..	..	..

The Index of Consumer Prices (ICP)

Consumer price inflation, as measured by the ICP, was 1.8 per cent over the 12 months to October, down from 1.9 per cent in September.

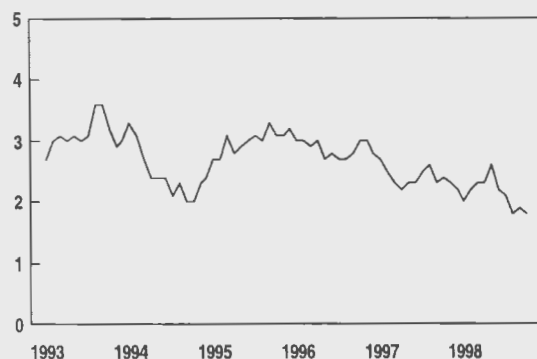
Downward pressure came mainly from prices for :

- Transport and Communication, the 12-month rate fell from 1.2 per cent to 1.0 per cent in October.
- Clothing and footwear, whose 12-month rate fell from -0.5 to -1.2 in October as there were more special offers from a number of large retailers.

Some upward pressure came from:

- Food, whose 12-month rate rose from 1.3 per cent to 1.5 per cent in October, as prices for fresh vegetables increased by more this year than last year.
- Fuel and power, the 12-month rate rose from -2.7 per cent to -2.5 per cent in October.

The ICP annual percentage change



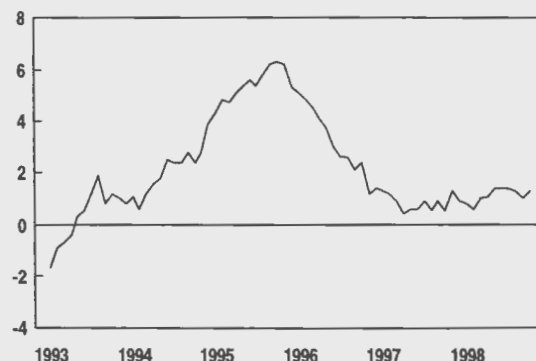
The Index of Investment Prices (IIP)

Investment price inflation, as measured by the IIP, was 1.3 per cent over the 12 months to October, up from 1.0 per cent in September.

Upward pressure on the 12-month rate came mainly from:

- New dwellings, whose 12-month rate rose from 8.6 per cent to 9.3 per cent in October.
- Transfer costs of land and buildings, the 12-month rate rose from 6.6 per cent in September to 8.5 per cent in October.
- Vehicles, whose 12-month rate rose from 1.9 per cent in September to 2.1 per cent in October.

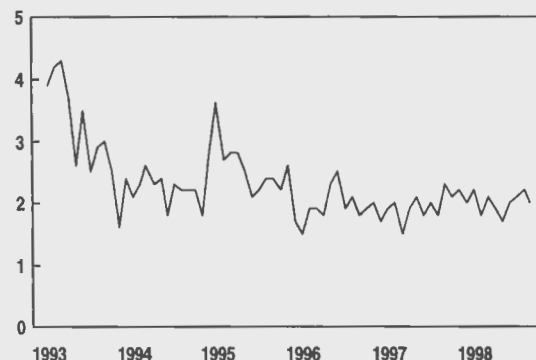
The IIP annual percentage change



The Index of Government Prices (IGP)

It has not been possible to calculate the IGP for October for reasons given above. The chart below shows movement in the IGP annual percentage rate up to September 1998 only.

The IGP annual percentage change



Comparison between the FEPI and other inflation measures

Table B

Measures of Inflation (annual percentage changes)

		FEPI	RPIX	HICP	PPI
1998	May	2.2	3.2	2.0	1.0
	Jun	2.1	2.8	1.7	1.1
	Jul	1.9	2.6	1.5	0.8
	Aug	1.8	2.5	1.3	0.5
	Sep	1.6	2.5	1.5	0.3
	Oct	..	2.5	1.3	0.1

1 Final Expenditure Prices Index (Experimental)

	Index of Consumer Prices ICP	Index of Investment Prices IIP	Index of Government Prices ¹ IGP	Final Expenditure Prices Index ¹ FEPI	Annual percentage changes			
					ICP	IIP	IGP	FEPI
January 1992=100								
Weights								
1996	604	164	232	1000				
1997	605	165	230	1000				
1998	605	169	226	1000				
	CUSE	CUSK	CUSO	CUSP	CGAZ	CGBF	CGBJ	CGBK
1996 Oct	115.2	110.6	112.7	113.6	3.0	2.4	1.9	2.6
Nov	115.3	109.7	113.1	113.6	3.0	1.2	2.0	2.5
Dec	115.6	110.1	113.3	113.9	2.8	1.4	1.7	2.2
1997 Jan	115.3	110.4	113.7	113.9	2.7	1.3	1.9	2.3
Feb	115.7	110.6	113.8	114.2	2.5	1.2	2.0	2.2
Mar	116.0	110.6	113.9	114.4	2.3	0.9	1.5	1.9
Apr	116.6	110.7	114.1	114.8	2.2	0.4	1.9	1.9
May	117.0	110.8	114.7	115.2	2.3	0.6	2.1	1.9
Jun	117.2	110.8	114.8	115.3	2.3	0.6	1.8	1.9
Jul	116.7	111.1	114.6	115.1	2.5	0.9	2.0	2.1
Aug	117.5	111.2	114.6	115.5	2.6	0.5	1.8	2.0
Sep	117.9	111.4	114.9	115.9	2.3	0.9	2.3	2.1
Oct	118.0	111.2	115.1	115.9	2.4	0.5	2.1	2.0
Nov	117.9	111.1	115.6	116.0	2.3	1.3	2.2	2.1
Dec	118.1	111.1	115.6	116.1	2.2	0.9	2.0	1.9
1998 Jan	117.6	111.3	116.2	116.0	2.0	0.8	2.2	1.8
Feb	118.3	111.3	115.9	116.3	2.2	0.6	1.8	1.8
Mar	118.7	111.7	116.3	116.7	2.3	1.0	2.1	2.0
Apr	119.3	111.9	116.3	117.2	2.3	1.1	1.9	2.1
May	120.0	112.4	116.7	117.7	2.6	1.4	1.7	2.2
Jun	119.8	112.4	117.1	117.7	2.2	1.4	2.0	2.1
Jul	119.2	112.6r	117.0	117.3	2.1	1.4r	2.1	1.9
Aug	119.6	112.6	117.1	117.6	1.8	1.3	2.2	1.8
Sep	120.1	112.5r	117.3r	117.9r	1.9	1.0r	2.1r	1.7r
Oct	120.1	112.6	..	..	1.8	1.3	..	..

The symbol r denotes revisions to previous months' data

¹ Please note that, because of the temporary suspension of the Average Earnings Index, it has not been possible to calculate the IGP (or the FEPI) for October 1998.

2 FEPI - Index of Consumer Prices (Experimental)

	Food	Alcoholic Drink	Tobacco	Clothing and Footwear	Housing	Fuel and Power	Household Goods and Services	Transport and Communication	Recreation, Entertainment and Education	Other Goods and Services	Index of Consumer Prices ICP
January 1992=100											
Weights											
1996	128	70	30	67	85	40	72	190	113	205	1000
1997	126	68	30	67	90	39	71	189	119	201	1000
1998	127	68	29	67	87	39	71	188	118	205	1000
	CURU	CURV	CURW	CURX	CURY	CURZ	CUSA	CUSB	CUSC	CUSD	CUSE
1996 Oct	110.1	118.8	140.2	105.5	122.2	105.6	110.4	116.4	109.8	120.3	115.2
Nov	109.7	118.6	140.0	106.6	122.4	105.0	111.4	116.0	110.1	120.4	115.3
Dec	109.7	118.0	142.8	106.6	122.5	104.8	112.3	116.7	110.1	120.7	115.6
1997 Jan	110.6	118.6	145.6	100.5	123.4	104.2	108.8	117.5	109.9	120.7	115.3
Feb	110.3	119.3	146.2	102.0	123.6	104.3	109.7	118.1	110.1	121.2	115.7
Mar	109.8	119.2	146.6	104.0	123.9	104.4	111.7	118.0	109.9	121.6	116.0
Apr	110.2	119.7	148.3	105.5	125.8	104.2	111.1	118.0	110.3	122.4	116.6
May	110.9	120.4	148.9	106.0	126.0	103.7	111.6	118.1	110.5	123.0	117.0
Jun	111.8	120.6	149.2	105.4	126.2	103.3	111.4	118.5	110.5	123.3	117.2
Jul	111.3	121.1	149.3	100.3	126.2	102.8	109.6	119.4	110.3	123.4	116.7
Aug	112.6	121.3	151.2	102.3	126.4	102.8	110.8	120.0	110.2	124.0	117.5
Sep	112.2	121.4	151.5	106.3	126.6	100.0	111.6	120.4	110.7	124.4	117.9
Oct	112.2	121.7	151.7	106.0	126.8	100.0	111.4	120.3	110.8	124.8	118.0
Nov	111.6	121.1	151.8	107.2	126.9	99.6	112.3	120.0	110.7	124.8	117.9
Dec	111.7	120.6	155.1	106.7	127.0	99.1	113.2	120.0	110.7	125.2	118.1
1998 Jan	111.7	122.1	159.3	99.7	127.3	98.4	109.8	120.6	110.3	125.4	117.6
Feb	111.7	123.1	159.5	102.0	127.4	98.7	111.5	120.8	110.5	126.4	118.3
Mar	111.5	123.5	159.5	104.1	127.6	98.9	113.1	120.8	110.4	126.9	118.7
Apr	111.8	123.6	162.1	105.0	129.9	98.9	112.1	122.1	110.8	127.6	119.3
May	113.5	124.5	162.6	106.0	130.1	98.3	113.3	122.3	111.1	128.1	120.0
Jun	113.1	124.4	162.8	105.7	130.2	97.6	112.7	122.2	110.7	128.4	119.8
Jul	112.8	124.9	163.0	99.3	130.4	97.3	111.4	122.0	110.4	128.6	119.2
Aug	114.1	125.2	163.1	101.2	130.6	97.2	112.2	121.9	110.4	128.8	119.6
Sep	113.7	125.3	163.2	105.8	130.8	97.3	112.9	121.9	111.0	128.7	120.1
Oct	113.9	125.6	163.4	104.7	131.1	97.5	112.4	121.5	111.2	129.5	120.1
Annual Percentage Changes											
	CGAP	CGAQ	CGAR	CGAS	CGAT	CGAU	CGAV	CGAW	CGAX	CGAY	CGAZ
1996 Oct	2.6	2.4	7.0	-0.2	3.6	0.2	1.9	5.0	1.8	3.8	3.0
Nov	2.0	2.9	6.9	0.3	3.6	-0.4	1.9	5.2	2.0	3.7	3.0
Dec	1.2	3.3	6.4	0.2	3.7	-0.7	1.7	4.4	1.7	3.5	2.8
1997 Jan	1.5	3.0	6.4	0.2	4.1	-1.3	1.6	4.2	1.6	3.4	2.7
Feb	0.2	2.8	6.4	0.7	4.2	-1.2	0.8	4.5	1.4	3.3	2.5
Mar	-1.2	2.5	6.6	1.3	4.4	-1.2	1.3	4.2	1.0	3.3	2.3
Apr	-0.9	2.5	6.9	1.2	4.1	-1.4	1.3	3.6	0.9	3.4	2.2
May	-1.1	2.7	6.7	1.5	4.1	-1.8	1.0	3.3	1.1	3.6	2.3
Jun	-0.3	2.4	6.7	1.1	4.0	-2.4	0.7	3.6	1.1	3.7	2.3
Jul	0.5	2.3	6.9	1.1	3.5	-2.9	0.7	4.5	1.3	3.8	2.5
Aug	0.7	2.5	8.2	1.8	3.6	-2.7	0.6	4.3	0.9	3.9	2.6
Sep	1.3	2.4	8.1	0.9	3.7	-5.5	0.7	3.5	1.0	3.8	2.3
Oct	1.9	2.4	8.2	0.5	3.8	-5.3	0.9	3.4	0.9	3.7	2.4
Nov	1.7	2.1	8.4	0.6	3.7	-5.1	0.8	3.4	0.5	3.7	2.3
Dec	1.8	2.2	8.6	0.1	3.7	-5.4	0.8	2.8	0.5	3.7	2.2
1998 Jan	1.0	3.0	9.4	-0.8	3.2	-5.6	0.9	2.6	0.4	3.9	2.0
Feb	1.3	3.2	9.1	-	3.1	-5.4	1.6	2.3	0.4	4.3	2.2
Mar	1.5	3.6	8.8	0.1	3.0	-5.3	1.3	2.4	0.5	4.4	2.3
Apr	1.5	3.3	9.3	-0.5	3.3	-5.1	0.9	3.5	0.5	4.2	2.3
May	2.3	3.4	9.2	-	3.3	-5.2	1.5	3.6	0.5	4.1	2.6
Jun	1.2	3.2	9.1	0.3	3.2	-5.5	1.2	3.1	0.2	4.1	2.2
Jul	1.3	3.1	9.2	-1.0	3.3	-5.4	1.6	2.2	0.1	4.2	2.1
Aug	1.3	3.2	7.9	-1.1	3.3	-5.4	1.3	1.6	0.2	3.9	1.8
Sep	1.3	3.2	7.7	-0.5	3.3	-2.7	1.2	1.2	0.3	3.5	1.9
Oct	1.5	3.2	7.7	-1.2	3.4	-2.5	0.9	1.0	0.4	3.8	1.8

The symbol r denotes revisions to previous months' data

3 FEPI - Index of Investment Prices (Experimental)

	Plant and Machinery	Vehicles, etc	New Buildings and Works	Transfer Costs of Land and Buildings	New Dwellings	Index of Investment Prices IIP
January 1992=100						
Weights						
1996	378	108	266	38	209	1000
1997	390	103	267	33	207	1000
1998	387	103	277	37	196	1000
	CUSG	CUSH	CUSF	CUSI	CUSJ	CUSK
1996 Oct	113.0	119.2	107.7	140.9	102.8	110.6
Nov	110.6	117.6	108.1	140.9	103.0	109.7
Dec	111.0	117.5	108.5	141.0	103.8	110.1
1997 Jan	111.1	118.2	108.8	139.3	104.3	110.4
Feb	111.2	118.7	109.1	141.8	104.4	110.6
Mar	110.1	118.9	109.4	142.2	105.6	110.6
Apr	109.8	118.5	109.5	142.8	106.9	110.7
May	109.4	118.5	109.4	144.8	107.6	110.8
Jun	108.8	118.3	109.4	144.9	108.6	110.8
Jul	108.0	118.1	110.2	150.8	109.8	111.1
Aug	107.2	118.4	111.1	151.9	110.5	111.2
Sep	107.1	118.6	111.5	153.4	110.6	111.4
Oct	106.6	118.4	112.0	152.2	110.4	111.2
Nov	105.9	118.1	112.4	153.1	110.5	111.1
Dec	105.8	118.5	112.8	152.2	110.5	111.1
1998 Jan	105.6	119.1	113.3	151.7	110.6	111.3
Feb	105.0	118.8	113.8	153.6	111.2	111.3
Mar	104.5	119.5	114.3	154.9	113.1	111.7
Apr	103.7	119.3	114.6	159.6	115.0	111.9
May	103.8	120.4	115.0r	160.3	115.9	112.4
Jun	102.9	120.1	115.4r	160.6	117.4	112.4
Jul	102.2	120.4	115.9r	162.9	118.6	112.6r
Aug	101.6r	121.2r	116.3r	162.6	119.2	112.6
Sep	100.5r	120.8r	116.8r	163.6r	120.1r	112.5r
Oct	100.0	120.9	117.3	165.1	120.7	112.6
Annual Percentage Changes						
	Plant and Machinery	Vehicles, etc	New Buildings and Works	Transfer Costs of Land and Buildings	New Dwellings	Index of Investment Prices IIP
	CGBB	CGBC	CGBA	CGBD	CGBE	CGBF
1996 Oct	-2.3	1.8	6.0	8.6	5.0	2.4
Nov	-4.8	0.3	5.6	8.4	5.5	1.2
Dec	-4.5	-0.3	5.1	9.6	6.6	1.4
1997 Jan	-4.8	-0.3	4.9	9.6	7.0	1.3
Feb	-4.4	-	4.7	9.2	6.3	1.2
Mar	-5.1	0.1	4.4	9.0	6.3	0.9
Apr	-5.9	-0.6	4.1	5.2	6.8	0.4
May	-5.2	-0.5	3.5	6.6	7.1	0.6
Jun	-5.1	-0.5	3.1	6.9	7.4	0.6
Jul	-4.8	-0.8	3.5	9.2	7.6	0.9
Aug	-6.0	-1.0	3.9	9.1	7.6	0.5
Sep	-5.3	-0.9	3.9	10.1	7.7	0.9
Oct	-5.7	-0.7	4.0	8.0	7.4	0.5
Nov	-4.2	0.4	4.0	8.7	7.3	1.3
Dec	-4.7	0.9	4.0	7.9	6.5	0.9
1998 Jan	-5.0	0.8	4.1	8.9	6.0	0.8
Feb	-5.6	0.1	4.3	8.3	6.5	0.6
Mar	-5.1	0.5	4.5	8.9	7.1	1.0
Apr	-5.6	0.7	4.7	11.8	7.6	1.1
May	-5.1	1.6	5.1r	10.7	7.7	1.4
Jun	-5.4	1.5	5.5r	10.8	8.1	1.4
Jul	-5.4	1.9	5.2r	8.0	8.0	1.4r
Aug	-5.2r	2.4r	4.7r	7.0	7.9	1.3
Sep	-6.2r	1.9r	4.8r	6.6r	8.6r	1.0r
Oct	-6.2	2.1	4.7	8.5	9.3	1.3

The symbol r denotes revisions to previous months' data

4 FEPI - Index of Government Prices (Experimental)

					Annual percentage changes			
	Local Government Total	Central Government Total	Education Grants	Index of Government Prices ¹ IGP	Local Government Total	Central Government Total	Education Grants	Index of Government Prices IGP
January 1992=100								
Weights								
1996	344	597	59	1000				
1997	347	589	64	1000				
1998	342	591	67	1000				
	CUSL	CUSM	CUSN	CUSO	CGBG	CGBH	CGBI	CGBJ
1996 Sep	114.1	110.9	114.6	112.3	2.1	1.6	1.8	1.8
Oct	114.5	111.5	114.6	112.7	2.1	1.7	1.8	1.9
Nov	115.2	111.6	114.8	113.1	2.4	1.7	2.0	2.0
Dec	114.9	112.3	114.9	113.3	2.0	1.6	2.0	1.7
1997 Jan	115.4	112.6	115.5	113.7	2.4	1.6	1.9	1.9
Feb	115.5	112.7	115.5	113.8	2.4	1.7	1.9	2.0
Mar	116.0	112.6	115.5	113.9	2.7	0.9	1.9	1.5
Apr	115.7	112.9	115.5	114.1	2.6	1.3	1.9	1.9
May	117.0	113.2	116.5	114.7	2.4	2.0	1.9	2.1
Jun	117.6	112.9	116.5	114.8	2.4	1.3	1.9	1.8
Jul	117.0	112.7	118.5	114.6	2.4	1.6	3.5	2.0
Aug	117.2	112.7	118.5	114.6	2.7	1.1	3.4	1.8
Sep	117.2	113.2	118.6	114.9	2.7	2.1	3.5	2.3
Oct	117.5	113.4	118.6	115.1	2.6	1.7	3.5	2.1
Nov	118.4	113.6	118.6	115.6	2.8	1.8	3.3	2.2
Dec	117.8	113.9	118.7	115.6	2.5	1.4	3.3	2.0
1998 Jan	118.3	114.6	119.8	116.2	2.5	1.8	3.7	2.2
Feb	118.2	114.1	119.8	115.9	2.3	1.2	3.7	1.8
Mar	118.9	114.4	119.7	116.3	2.5	1.6	3.6	2.1
Apr	118.6	114.7	119.8	116.3	2.5	1.6	3.7	1.9
May	120.1	114.3	120.7	116.7	2.6	1.0	3.6	1.7
Jun	120.7	114.7	120.6	117.1	2.6	1.6	3.5	2.0
Jul	120.4	114.6	121.1r	117.0	2.9	1.7	2.2r	2.1
Aug	119.6	115.2	121.1r	117.1	2.0	2.2	2.2r	2.2
Sep	119.7	115.6r	121.1r	117.3r	2.1	2.1r	2.1r	2.1r

The symbol r denotes revisions to previous months' data

¹ See footnote to Table 1.

Geographical breakdown of the Balance of Payments Current Account



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Introduction

A country breakdown of the balance of payments current account has been presented annually in *Economic Trends* for the past two years. In 1997 a geographical chapter was included in the *Pink Book* for the first time. The dedication of resources required to implement the new international standards for the balance of payments, set out in the International Monetary Fund's (IMF) 5th edition of the *Balance of Payments Manual* (BPM5), meant that we were unable to produce the geographical analysis in time for this year's *Pink Book*. The data presented in this article are consistent with the global estimates which appeared in the 1998 *Pink Book*.

Reliability of the Estimates

At present, the United Kingdom's (UK) balance of payments accounts are primarily on a global basis. Not all of the data sources used in preparing the accounts attempt to distinguish individual countries, although many do. Where enquiries are carried out by the ONS and the Bank of England, the additional cost for respondents of requesting the country breakdown, even when available, is often deemed too expensive to collect at any great level of detail.

Where country data are not reported, estimates are made by using related information. Some data sources (e.g. Film and Television inquiry) only report figures for broad geographical areas and these have been sub-divided by country using the geographical detail for a related category. In cases where geographical data are not reported, such as for some components of investment income, proxy estimates are imputed using a geographical breakdown of the capital assets or liabilities from which such income arises.

In addition to the imputation of geographical detail for some categories where the data are incomplete, there remains a margin of uncertainty about the accuracy of reported data by country.

The finer the level of geographical detail sought, the greater the likelihood of misallocation. When enterprises are asked to report geographical data they are encouraged to make their best estimates, but as country allocation may not be a crucial aspect of the information from which details are extracted, a significant degree of approximation is likely to occur.

Given the conceptual and practical limitations described above, in combination with the difficulties associated in many cases of converting to the new BPM5 structure data originally collected on a pre-BPM5 basis, these estimates should be seen as a very broad indication of the economic relationships between the UK and overseas economies. They will be more reliable and more meaningful in terms of broad geographical areas and major partner countries than for smaller partner countries. They are also more robust for trade in goods and services than for income, the latter being particularly affected by flows through financial intermediaries and therefore harder to correctly allocate to a particular country.

Conceptual Issues

Conceptually, a regional balance of payments account should allocate transactions in a way which reflects flows of economic resources between different economies. In practice, it is often extremely difficult to follow this principle with the information available. Additionally, there are other practical difficulties which stem from the extensive use of global estimates supplied by the transactors who may be unable to provide any subdivision of their transactions by country, or may only be able to provide allocations by country by criteria which are not consistent with the conceptual ideal, e.g. the currency in which a transaction is expressed, the source or destination of the financial flows.

In practice, determining residency is one of the hardest issues to resolve. One area of difficulty is where UK residents act as intermediaries, for a whole range of financial and allied activities, where the principals involved are non-resident, but where the full

payments may be made *via* UK intermediaries. Another difficulty arises where holding companies serve as conduits for channeling funds to or from more than one overseas economy. These transactions are classified as being with the country in which the holding companies are registered; this will not fully reflect the indirect economic relationship. For example, a subsidiary of a UK company in country A may earn part of its profits in countries B and C, but all profits will usually be attributed to country A.

Approach for Country Allocation

The following notes summarise the main criteria of country allocation adopted for the various categories of the current account. In general the figures are not likely to be consistent with those recorded by countries which allocate regional balance of payments estimates on a cash settlements basis.

1. Trade in goods

Exports of goods are allocated to the country of last known destination. Imports of goods are allocated according to the country of consignment.

2. Trade in services

Sea transport

For 1994 and 1996 the estimates relating to ships owned or chartered-in by UK operators are taken from the full inquiries carried out in those years by the Chamber of Shipping. These data are now supplied annually. Estimates for other years are obtained by interpolation and extrapolation taking account of movements in global estimates.

Freight services on exports and cross trades are allocated using the ports of unloading of the goods. For non-resident operators freight on UK imports, the nationality of the exporting country is used as a proxy to allocate the freight payments. The resulting proportions are used to calculate the shares of non-resident operators' disbursements in the UK. Data for UK operators disbursements abroad are supplied annually by the Chamber of Shipping.

Passenger revenue export estimates are derived from information supplied annually by the Chamber of Shipping. Passenger revenue import estimates are based on assumptions about the likely markets for cruises and on other information relating to the movements of UK shipping.

Estimates for charters-in and charters-out by UK operators are supplied annually by the Chamber of Shipping.

Air Transport

Passenger revenue exports and imports estimates are made partly from the International passenger survey, which gives the required country analysis of fares paid. Other transactions with foreign airlines are allocated by nationality of airline. Receipts by UK airlines from foreign passengers are allocated to the countries in which the ticket is purchased. Freight services on UK imports earned by foreign airlines are allocated to the countries of consignment of the imports.

Other Transport

Rail exports are based on assumptions of the likely nationality of channel tunnel users. Rail imports are allocated entirely to France. Estimates for road freight exports and imports are based on information supplied by the Road Haulage Association. This information includes details of the vehicles load and country of destination or country of origin. Pipeline transport is based on assumptions of the likely importers/exporters of North Sea oil and gas.

Travel

The allocation of expenditure of overseas visitors to the UK is by country of residence. UK residents' expenditures abroad are allocated to the country in which most time was spent, or, if this cannot be determined, the furthest country visited. As a result, expenditure in countries with appreciable numbers of transit tourists may be understated.

Communication services

Estimates are based on data supplied to the OTIS inquiry.

Construction services

Estimates are based on data supplied to the OTIS inquiry.

Insurance

Estimates are based on detailed geographical data provided by Lloyds of London, and the OTIS inquiry for insurance imports and exports provided to and from non-insurance institutions.

Financial services

Regular geographical information on net receipts is obtained from the Bank of England for banking services, and the OTIS for banking services exports and imports from non-financial institutions.

Computer and information services

Estimates are based on data supplied to the OTIS inquiry.

Royalties and License Fees

Estimates are based on data supplied to the OTIS and Film and Television inquiries.

Other Business Services

Geographical estimates for merchanting and trade related services are collected in the OTIS inquiry. Operational leasing data are collected from the OTIS inquiry and the Chamber of Shipping inquiry into UK sea transport operators. Legal services estimates are based on broad geographical groupings supplied to the Law Society and data supplied to the OTIS inquiry. All other business services are based on data supplied to the OTIS inquiry.

Personal, cultural and recreational services

Data are based on information supplied to the OTIS and Film and Television inquiries.

Government services

For the major components, detailed geographical information on the location of those receiving or making payments is available from returns provided by the Ministry of Defence, Department of Social Security and the Foreign and Commonwealth Office. The United States Air Force also provide data on expenditure of US Forces in the UK. Expenditure by foreign embassies and consulates in the UK is based on information supplied by certain overseas embassies and statistical institutions, supplemented by information on numbers of accredited diplomats by country.

3. Income

(a) Compensation of employees

Estimates of the geographical breakdown of seasonal and border workers are based on information supplied to the International Passenger Survey. Locally engaged staff figures are based on information supplied by government departments.

(b) Investment income

Direct investment earnings

Figures are based on the annual overseas investment inquiries and include reinvested profits. Geographical information is based on the country of registration of the immediate overseas parent company and the location of the overseas affiliate, except for banks where the information relates to the country of residence of the ultimate owner (for inward investment) or the country of residence in which the direct investment enterprise is located.

Portfolio investment earnings

Estimates of earnings on portfolio investment overseas by UK residents are based on partial information on UK banks' investments (obtained from banking statistics), supplemented by incomplete information for certain financial institutions. These are assumed to be representative of overseas portfolio earnings of all UK residents.

Interest payments on British government stocks are estimated from data on the levels outstanding obtained from official records and from UK banks' returns to the Bank of England using appropriate rates of interest. Interest paid on both HM Government's floating rate notes (and other HMG foreign currency notes and bonds) and overseas residents holdings of UK company bonds have been allocated *pro rata* to the country data for UK banks' foreign currency borrowing from abroad. Interest paid on overseas holdings of UK company shares has been estimated from data obtained from share register surveys.

Other investment earnings

Gross interest flows between UK banks and the rest of the world are estimated by allocating the global interest receipts and payments in proportion to the corresponding levels of assets and liabilities of UK banks. The interest on reserve assets is estimated from official records. Figures for UK banks are used as proxies to estimate a country breakdown for almost all of the remaining components of earnings on other investment.

4. Current transfers

The geographical allocation of current taxes on income and wealth are based on the geographical allocation of inward and outward direct investment as published in Business Monitor MA4. The geographical allocation of insurance premiums are based on information supplied by Lloyds of London. European Union (EU) transfers are provided by the Treasury and the geographical allocation of social security and aid payments are supplied by the Department of Social Security and the Department for International Development, respectively. Other geographical breakdowns are based on proxy data and global transfer estimates.

Coverage

The geographical data published in this article are limited in scope, covering 42 individual countries as well as international organisations. The figures for the EU relate to the current membership i.e. Sweden, Finland and Austria, which joined the EU on 1 January 1995, are included in the EU totals for all years. EU Institutions are also included in the EU totals and are excluded

from the International Organisations' totals. For the purposes of this article Belgium and Luxembourg, which already have an economic union, are treated as one entity - data are not available separately.

The changes to the presentation and scope of current account resulting from the adoption of BPM5 are outlined in the 1998 *Pink Book*. One important change that arose from implementing the new European System of National and Regional Accounts (ESA95) in particular, and BPM5 with which it is consistent, is the exclusion of the Channel Islands and the Isle of Man from the definition of the UK's economic territory. These territories are not members of the EU, and consequently should be excluded in order to comply with ESA95. In order to move the historic data onto the new basis, adjustments were made to the balance of payments items, effectively increasing the gross flows as the offshore islands are now considered as the rest of world. In practice the adjustments reflect a (major) part of the transactions between the UK mainland and its offshore islands: it is thought that some of the transactions were already being allocated to the rest of world. These adjustments, therefore, have been allocated to 'Other Europe' since it has not been possible in the time allowed to separately identify the offshore islands - either individually or as a group. As geographic work in general continues to develop and to expand its coverage of countries, we shall consider whether it is possible to do so in the future.

Current and Future Plans

Whilst the UK compiles its balance of payments primarily using global data, the geographical breakdown remains a secondary, though increasingly important, analysis. The presentation of the annual geographical breakdown of the current account is the first set of geographical data for the balance of payments consistent with BPM5. In future, the annual country breakdown will continue to be published in the *Pink Book*. Another step will be the reinstatement of the EU/non-EU split of the current account which appeared in the quarterly First Release: it is still planned to reintroduce this from March 1999.

However, there are plans to extend the geographical information on the balance of payments. In *Economic Trends*, January 1998 an article presented data on trade in services for the top 13 countries by 11 key product components. A new annual business monitor "UK Trade in Services" is being launched in early 1999. This publication will present separate geographical analyses of; total UK Trade in Services, product (or type of service traded) and trading industries. Data will include the latest figures produced from the 1997 Annual OTIS Inquiry.

The annual Business Monitor for foreign direct investment is well established (and its results feed directly into the analysis shown in this article) but so far there has been no geographical analysis of portfolio investment. During 1998 the ONS and the Bank of England have participated in the IMF Portfolio Investment Coordinated Survey. This was a one-off survey run in order to address the global problem of estimating portfolio investment liabilities. The idea in essence is to establish the levels of liabilities of each participating country by exchanging data on levels of each country's assets broken down by country. The IMF will be the compiler of the exchanged data. The UK will be presenting its data to the IMF at the start of 1999 and a report will be presented in an *Economic Trends* article summarising the results, probably in the early summer. A further *Economic Trends* article can be expected to report on the results of the exchanged data and will discuss how these have been used to improve our geographical estimates. Although the survey only gives data on levels rather than income, it will still be an extremely important source of information to inform the breakdown currently being produced.

Until now the development of the geographical breakdown of balance of payments has largely been driven by UK government policy needs. However, it is also becoming an increasingly important part of the statistical requirements of the European Commission (Eurostat) as well as the European Central Bank (ECB); compilation of the EU and Monetary Union (MU) balance of payments falls under joint responsibility of Eurostat and the ECB. The ONS response to these requirements will mean an increase in the coverage of the balance of payments. In particular, the ONS is developing a geographical breakdown of the financial account and international investment position. Initially this will be restricted to an EU/non-EU (MU/non-MU) split of the global estimates currently published. Depending on the quality of the data produced, it is tentatively planned to commence publication of this breakdown for the UK during 1999.

Notes on the Tables

The data in this article are presented in two ways: Table 1.1 shows the current account in 1997 by geographic location as well as by individual account (trade in goods, trade in services, income and transfers); Tables 2.1 to 2.6 show geographic time series by account. This article provides data reworked onto a BPM5 basis back to 1992, it has not been possible to construct geographical time series for all of the new aggregates prior to this date.

1.1 Current account Continents and countries by transaction

Summary position in 1997

£ million

	Trade in goods	Trade in services	Income	Current transfers	Current account
CREDITS / EXPORTS					
Europe¹					
European Union (EU)					
Austria	1 145	311	585	7	2 048
Belgium and Luxembourg	8 430	1 549	3 676	108	13 763
Denmark	2 093	864	675	61	3 693
Finland	1 569	379	442	38	2 428
France	16 602	2 679	6 106	457	25 844
Germany	20 625	4 526	9 213	545	34 909
Greece	1 046	534	948	72	2 600
Ireland	9 313	2 302	2 225	257	14 097
Italy	8 219	1 690	4 791	220	14 920
Netherlands	13 905	2 235	6 535	1 068	23 743
Portugal	1 755	238	479	24	2 496
Spain	6 742	1 102	1 955	106	9 905
Sweden	4 448	892	1 168	94	6 602
EU Institutions ¹	—	274	92	6 104	6 470
Total European Union (EU)	95 892	19 575	38 890	9 161	163 518
European Free Trade Association (EFTA)					
Iceland	155	53	26	4	238
Liechtenstein ²	10	17	66	2	95
Norway	2 607	1 018	758	33	4 416
Switzerland ²	2 956	2 506	2 898	285	8 645
Total EFTA	5 728	3 594	3 748	324	13 394
Other Europe					
Czech Republic	710	90	126	4	930
Poland	1 354	175	132	12	1 673
Russia	1 134	284	260	25	1 703
Turkey	1 733	281	229	25	2 268
Other	2 136	1 557	6 399	178	10 270
Total Europe	108 687	25 556	49 784	9 729	193 756
America					
Brazil	1 029	246	1 342	14	2 631
Canada	2 144	1 209	1 713	296	5 362
Mexico	427	112	437	24	1 000
United States of America	20 894	13 398	21 933	3 691	59 916
Other	2 557	1 764	4 569	326	9 216
Total America	27 051	16 729	29 994	4 351	78 125
Asia					
China ³	920	197	355	25	1 497
Hong Kong	3 213	909	4 428	149	8 699
India	1 578	498	384	61	2 521
Indonesia	674	198	318	22	1 212
Israel	1 178	279	68	39	1 564
Japan	4 179	2 421	10 340	205	17 145
Malaysia	1 207	454	761	59	2 481
Pakistan	269	172	73	2	516
Philippines	600	124	193	12	929
Saudi Arabia	3 656	1 611	140	33	5 440
Singapore	2 045	529	3 377	33	5 984
South Korea	1 224	429	1 355	17	3 025
Taiwan	1 033	196	232	18	1 479
Thailand	864	260	317	13	1 454
Other	5 790	2 396	2 211	403	10 800
Total Asia	28 430	10 673	24 552	1 091	64 746
Australasia & Oceania					
Australia	2 454	1 285	2 365	438	6 542
New Zealand	408	194	435	126	1 163
Other	77	103	237	7	424
Total Australasia & Oceania	2 939	1 582	3 037	571	8 129
Africa					
South Africa	1 635	732	910	134	3 411
Other	3 056	1 502	970	174	5 702
Total Africa	4 691	2 234	1 880	308	9 113
International Organisations¹					
	—	130	180	—	310
World total	171 798	56 904	109 427	16 050	354 179

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

1.1 Current account

Continents and countries by transaction

continued Summary position in 1997

£ million

	Trade in goods	Trade in services	Income	Current transfers	Current account
DEBITS / IMPORTS					
Europe¹					
European Union (EU)					
Austria	1 379	310	858	35	2 582
Belgium and Luxembourg	9 062	1 481	4 313	128	14 984
Denmark	2 320	501	908	46	3 775
Finland	2 557	130	551	8	3 246
France	17 769	4 142	5 259	389	27 559
Germany	25 655	3 556	8 273	444	37 928
Greece	397	825	870	80	2 172
Ireland	7 378	1 479	1 914	513	11 284
Italy	9 552	1 653	3 602	165	14 972
Netherlands	12 327	1 885	7 251	587	22 050
Portugal	1 766	767	384	47	2 964
Spain	5 088	3 695	1 818	206	10 807
Sweden	4 729	452	980	63	6 224
EU Institutions ¹	—	—	774	8 268	9 042
Total European Union (EU)	99 979	20 876	37 755	10 979	169 589
European Free Trade Association (EFTA)					
Iceland	230	45	2	7	284
Liechtenstein ²	23	—	143	3	169
Norway	4 666	575	332	94	5 667
Switzerland ²	4 642	1 002	8 406	165	14 215
Total EFTA	9 561	1 622	8 883	269	20 335
Other Europe					
Czech Republic	445	74	181	17	717
Poland	593	124	283	33	1 033
Russia	1 323	116	219	46	1 704
Turkey	988	527	207	26	1 748
Other	1 947	1 923	4 727	178	8 775
Total Europe	114 836	25 262	52 255	11 548	203 901
America					
Brazil	910	138	338	22	1 408
Canada	2 473	869	1 070	708	5 120
Mexico	371	104	97	26	598
United States of America	24 230	9 601	20 167	2 349	56 347
Other	2 114	1 530	4 650	648	8 942
Total America	30 098	12 242	26 322	3 753	72 415
Asia					
China ³	2 379	136	195	48	2 758
Hong Kong	4 144	557	1 749	129	6 579
India	1 547	391	457	127	2 522
Indonesia	860	119	128	66	1 173
Israel	840	181	287	49	1 357
Japan	9 004	1 105	5 174	184	15 467
Malaysia	1 926	197	350	43	2 516
Pakistan	363	141	111	64	679
Philippines	726	46	69	32	873
Saudi Arabia	836	375	1 443	38	2 692
Singapore	2 587	273	2 054	38	4 952
South Korea	2 135	112	146	15	2 408
Taiwan	2 234	75	160	11	2 480
Thailand	1 166	180	110	12	1 468
Other	2 392	1 409	2 399	723	6 923
Total Asia	33 139	5 297	14 832	1 579	54 847
Australasia & Oceania					
Australia	1 309	1 011	1 117	759	4 196
New Zealand	551	297	143	143	1 134
Other	158	114	22	85	379
Total Australasia & Oceania	2 018	1 422	1 282	987	5 709
Africa					
South Africa	1 324	507	304	324	2 459
Other	2 175	948	1 796	540	5 459
Total Africa	3 499	1 455	2 100	864	7 918
International Organisations¹					
	—	66	468	849	1 383
World total	183 590	45 744	97 259	19 580	346 173

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

1.1 Current account

Continents and countries by transaction

continued Summary position in 1997

£ million

	Trade in goods	Trade in services	Income	Current transfers	Current account
BALANCES					
Europe¹					
European Union (EU)					
Austria	-234	1	-273	-28	-534
Belgium and Luxembourg	-632	68	-637	-20	-1 221
Denmark	-227	363	-233	15	-82
Finland	-988	249	-109	30	-818
France	-1 167	-1 463	847	68	-1 715
Germany	-5 030	970	940	101	-3 019
Greece	649	-291	78	-8	428
Ireland	1 935	823	311	-256	2 813
Italy	-1 333	37	1 189	55	-52
Netherlands	1 578	350	-716	481	1 693
Portugal	-11	-529	95	-23	-468
Spain	1 654	-2 593	137	-100	-902
Sweden	-281	440	188	31	378
EU Institutions ¹	-	274	-682	-2 164	-2 572
Total European Union (EU)	-4 087	-1 301	1 135	-1 818	-6 071
European Free Trade Association (EFTA)					
Iceland	-75	8	24	-3	-46
Liechtenstein ²	-13	17	-77	-1	-74
Norway	-2 059	443	426	-61	-1 251
Switzerland ²	-1 686	1 504	-5 508	120	-5 570
Total EFTA	-3 833	1 972	-5 135	55	-6 941
Other Europe					
Czech Republic	265	16	-55	-13	213
Poland	761	51	-151	-21	640
Russia	-189	168	41	-21	-1
Turkey	745	-246	22	-1	520
Other	189	-366	1 672	-	1 495
Total Europe	-6 149	294	-2 471	-1 819	-10 145
America					
Brazil	119	108	1 004	-8	1 223
Canada	-329	340	643	-412	242
Mexico	56	8	340	-2	402
United States of America	-3 336	3 797	1 766	1 342	3 569
Other	443	234	-81	-322	274
Total America	-3 047	4 487	3 672	598	5 710
Asia					
China ³	-1 459	61	160	-23	-1 261
Hong Kong	-931	352	2 679	20	2 120
India	31	107	-73	-66	-1
Indonesia	-186	79	190	-44	39
Israel	338	98	-219	-10	207
Japan	-4 825	1 316	5 166	21	1 678
Malaysia	-719	257	411	16	-35
Pakistan	-94	31	-38	-62	-163
Philippines	-126	78	124	-20	56
Saudi Arabia	2 820	1 236	-1 303	-5	2 748
Singapore	-542	256	1 323	-5	1 032
South Korea	-911	317	1 209	2	617
Taiwan	-1 201	121	72	7	-1 001
Thailand	-302	80	207	1	-14
Other	3 398	987	-188	-320	3 877
Total Asia	-4 709	5 376	9 720	-488	9 899
Australasia & Oceania					
Australia	1 145	274	1 248	-321	2 346
New Zealand	-143	-103	292	-17	29
Other	-81	-11	215	-78	45
Total Australasia & Oceania	921	160	1 755	-416	2 420
Africa					
South Africa	311	225	606	-190	952
Other	881	554	-826	-366	243
Total Africa	1 192	779	-220	-556	1 195
International Organisations¹	-	64	-288	-849	-1 073
World total	-11 792	11 160	12 168	-3 530	8 006

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.1 Current account Continents and countries

£ million

		1992	1993	1994	1995	1996	1997
CREDITS							
Europe¹							
European Union (EU)							
Austria	CUGP	1 445	1 539	1 753	2 029	2 214	2 048
Belgium and Luxembourg	CTFH	9 778	11 280	11 702	13 828	14 275	13 763
Denmark	LEQR	2 639	2 798	2 773	3 459	3 728	3 693
Finland	LEUD	1 704	1 827	2 049	2 623	2 860	2 428
France	LEUM	17 847	19 016	21 179	24 627	26 748	25 844
Germany	LEQI	23 379	26 417	28 663	35 121	36 088	34 909
Greece	LEUV	1 463	1 657	1 461	1 888	2 182	2 600
Ireland	BFLV	8 197	9 261	10 254	11 599	13 105	14 097
Italy	BFOD	11 412	11 344	12 312	14 312	14 745	14 920
Netherlands	BFQF	13 096	14 249	17 704	20 501	23 529	23 743
Portugal	BFSH	1 663	1 878	1 911	2 250	2 583	2 496
Spain	LEST	6 086	6 333	7 154	8 771	10 025	9 905
Sweden	BFTI	4 294	4 708	5 248	6 436	7 065	6 602
EU Institutions ¹	CSFH	4 810	5 802	4 792	4 919	6 465	6 470
Total European Union (EU)	LEPZ	107 813	118 109	128 955	152 363	165 612	163 518
European Free Trade Association (EFTA)							
Iceland	BFNH	177	228	186	209	249	238
Liechtenstein ²	BFPE	..	..	..	86	108	95
Norway	BFQO	2 679	2 779	3 554	3 458	3 611	4 416
Switzerland ²	LEOY	5 097	6 040	5 954	7 379	8 498	8 645
Total EFTA	CTFQ	8 018	9 100	9 750	11 132	12 466	13 394
Other Europe							
Czech Republic	LEPQ	..	387	481	727	973	930
Poland	BFRY	788	939	944	1 197	1 640	1 673
Russia	BFSQ	..	790	1 074	1 285	1 517	1 703
Turkey	BFUJ	1 037	1 463	1 208	1 548	2 001	2 268
Other	LEVW	..	4 848	5 255	6 226	7 499	10 270
Total Europe	LERA	124 900	135 636	147 667	174 478	191 708	193 756
America							
Brazil	LENO	..	..	1 595	2 032	2 287	2 631
Canada	LEOP	3 797	4 258	4 550	4 835	5 015	5 362
Mexico	BFPN	1 097	1 099	1 115	982	920	1 000
United States of America	BFVB	36 650	41 324	45 902	50 316	57 168	59 916
Other	LEVE	..	..	7 163	7 665	8 428	9 216
Total America	LESK	49 067	55 216	60 325	65 830	73 818	78 125
Asia							
China ³	LEPH	850	1 222	1 353	1 284	1 246	1 497
Hong Kong	BFJR	5 414	6 333	7 011	7 571	8 321	8 699
India	BPMY	1 519	1 652	2 188	2 525	2 568	2 521
Indonesia	BFKK	..	..	685	1 066	1 306	1 212
Israel	BFMP	838	1 206	1 428	1 501	1 679	1 564
Japan	BFOM	13 748	14 243	14 681	17 082	16 999	17 145
Malaysia	BFFW	1 535	2 038	2 387	2 281	2 478	2 481
Pakistan	BFRP	..	..	624	665	704	516
Philippines	BFRG	..	..	576	699	705	929
Saudi Arabia	BFSZ	3 481	3 382	3 269	3 566	4 409	5 440
Singapore	BFTR	4 116	4 757	4 981	4 903	5 040	5 984
South Korea	BFOV	1 633	2 053	2 216	2 574	2 906	3 025
Taiwan	BFOU	776	1 006	1 099	1 410	1 422	1 479
Thailand	BFOA	782	1 091	1 245	1 434	1 610	1 454
Other	LEWF	..	..	8 278	8 955	9 849	10 800
Total Asia	LETC	43 739	49 655	52 021	57 516	61 242	64 746
Australasia & Oceania							
Australia	CWBG	3 882	4 484	5 542	5 763	6 702	6 542
New Zealand	BFQX	739	994	1 192	1 234	1 351	1 163
Other	LEVN	174	116	134	223	273	424
Total Australasia & Oceania	LETU	4 795	5 594	6 868	7 220	8 326	8 129
Africa							
South Africa	BFWU	2 349	2 718	2 933	3 419	3 560	3 411
Other	LEWO	4 865	5 673	4 836	5 010	5 358	5 702
Total Africa	LERS	7 214	8 391	7 769	8 429	8 918	9 113
International Organisations¹	CTEY	316	270	246	275	257	310
World total	HBOE	230 031	254 762	274 896	313 748	344 269	354 179

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.1 Current account Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
DEBITS							
Europe¹							
European Union (EU)							
Austria	CUGW	1 544	1 913	2 183	2 133	2 337	2 582
Belgium and Luxembourg	CTFI	9 926	12 068	12 796	14 805	14 807	14 984
Denmark	LEQS	3 023	3 202	3 034	3 354	3 790	3 775
Finland	LEUE	2 052	2 353	2 846	3 280	3 476	3 246
France	LEUN	19 775	23 399	24 642	28 249	29 244	27 559
Germany	LEQJ	27 858	30 779	33 100	40 539	41 295	37 928
Greece	LEUW	1 600	1 548	1 714	1 988	2 080	2 172
Ireland	BFLW	6 850	7 719	8 346	10 083	10 893	11 284
Italy	BFOE	9 326	9 740	11 120	12 330	13 795	14 972
Netherlands	BFQG	16 704	15 884	17 598	19 604	21 803	22 050
Portugal	BFSI	2 099	2 174	2 173	2 589	2 819	2 964
Spain	LESU	5 907	7 279	8 142	9 892	10 974	10 807
Sweden	BFTJ	3 832	4 981	5 694	6 172	6 748	6 224
EU Institutions ¹	CSFI	7 588	8 866	8 094	9 877	9 947	9 042
Total European Union (EU)	LEQA	118 084	131 905	141 482	164 895	174 008	169 589
European Free Trade Association (EFTA)							
Iceland	BFNI	271	279	280	281	309	284
Liechtenstein ²	BFPF	..	..	..	174	187	169
Norway	BFQP	4 654	4 944	4 655	5 282	6 080	5 667
Switzerland ²	LEOZ	12 735	13 824	12 459	13 889	14 440	14 215
Total EFTA	CTFR	17 798	19 193	17 554	19 626	21 016	20 335
Other Europe							
Czech Republic	LEPR	..	352	412	505	654	717
Poland	BFRZ	524	649	754	920	901	1 033
Russia	BFSR	..	1 166	1 149	1 330	1 723	1 704
Turkey	BFUK	880	1 094	1 229	1 590	1 767	1 748
Other	LEVX	..	5 914	5 994	6 678	7 554	8 775
Total Europe	LERB	145 099	160 273	168 574	195 544	207 623	203 901
America							
Brazil	LENP	..	..	1 042	1 308	1 516	1 408
Canada	LEOQ	3 407	3 824	4 375	4 609	5 043	5 120
Mexico	BFPO	744	484	489	537	624	598
United States of America	BFVC	31 978	36 957	38 900	44 981	52 495	56 347
Other	LEVJ	..	..	6 031	6 528	7 940	8 942
Total America	LESL	43 357	48 791	50 837	57 963	67 618	72 415
Asia							
China ³	LEPI	1 321	1 649	1 990	2 290	2 508	2 758
Hong Kong	BFJS	5 645	5 680	5 729	6 275	6 738	6 579
India	BFMZ	1 330	1 668	2 023	2 217	2 458	2 522
Indonesia	BFKY	..	..	1 079	1 197	1 288	1 173
Israel	BFMQ	768	872	923	1 090	1 312	1 357
Japan	BFON	13 979	13 861	14 187	16 625	15 865	15 467
Malaysia	BFPX	1 371	1 704	1 639	1 939	2 907	2 516
Pakistan	BFRQ	..	..	656	671	702	679
Philippines	BFRH	..	..	371	465	1 010	873
Saudi Arabia	BFTA	2 646	2 931	2 378	2 506	2 632	2 692
Singapore	BFTS	2 909	3 550	3 866	4 419	4 768	4 952
South Korea	BFOV	1 069	1 239	1 269	1 728	2 230	2 408
Taiwan	BFUT	1 763	1 921	1 843	1 959	2 256	2 480
Thailand	BFUB	902	1 033	1 202	1 404	1 566	1 468
Other	LEWG	..	..	5 790	5 696	6 100	6 923
Total Asia	LETD	40 819	44 402	44 945	50 481	54 340	54 847
Australasia & Oceania							
Australia	CWBO	2 456	3 010	3 132	3 417	4 376	4 196
New Zealand	BFQY	663	798	846	895	1 092	1 134
Other	LEVO	230	259	255	300	349	379
Total Australasia & Oceania	LETV	3 349	4 067	4 233	4 612	5 817	5 709
Africa							
South Africa	BFWV	1 443	1 671	1 608	1 870	2 162	2 459
Other	LEWP	4 502	4 660	4 832	5 303	5 675	5 459
Total Africa	LERT	5 945	6 331	6 440	7 173	7 837	7 918
International Organisations¹	CTEZ	1 544	1 516	1 325	1 720	1 634	1 383
World total	HBOF	240 113	265 380	276 354	317 493	344 869	346 173

¹ For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

² Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

³ Totals for China exclude Hong Kong.

2.1 Current account Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
BALANCES							
Europe¹							
European Union (EU)							
Austria	CUGX	-99	-374	-430	-104	-123	-534
Belgium and Luxembourg	CTFJ	-148	-788	-1 094	-977	-532	-1 221
Denmark	LEQT	-384	-404	-261	105	-62	-82
Finland	LEUF	-348	-526	-797	-657	-616	-818
France	LEUC	-1 928	-4 383	-3 463	-3 622	-2 496	-1 715
Germany	LEQK	-4 479	-4 362	-4 437	-5 418	-5 207	-3 019
Greece	LEUX	-137	109	-253	-100	102	428
Ireland	BFLX	1 347	1 542	1 908	1 516	2 212	2 813
Italy	BFOF	2 086	1 604	1 192	1 982	950	-52
Netherlands	BFQH	-3 608	-1 635	106	897	1 726	1 693
Portugal	BFSJ	-436	-296	-262	-339	-236	-468
Spain	LESV	179	-946	-988	-1 121	-949	-902
Sweden	BFTK	462	-273	-446	264	317	378
EU Institutions ¹	CSFJ	-2 778	-3 064	-3 302	-4 958	-3 482	-2 572
Total European Union (EU)	LEQB	-10 271	-13 796	-12 527	-12 532	-8 396	-6 071
European Free Trade Association (EFTA)							
Iceland	BFNJ	-94	-51	-94	-72	-60	-46
Liechtenstein ²	BFPG	..	..	..	-88	-79	-74
Norway	BFQQ	-1 975	-2 165	-1 101	-1 824	-2 469	-1 251
Switzerland ²	LEPA	-7 638	-7 784	-6 505	-6 510	-5 942	-5 570
Total EFTA	CTFS	-9 780	-10 093	-7 804	-8 494	-8 550	-6 941
Other Europe							
Czech Republic	LEPS	..	35	69	222	319	213
Poland	BFSA	264	290	190	277	739	640
Russia	BFSS	..	-376	-75	-45	-206	-1
Turkey	BFUL	157	369	-21	-42	234	520
Other	LEVY	..	-1 066	-739	-452	-55	1 495
Total Europe	LERC	-20 199	-24 637	-20 907	-21 066	-15 915	-10 145
America							
Brazil	LENQ	..	..	553	724	771	1 223
Canada	LEOR	390	434	175	226	-28	242
Mexico	BFPF	353	615	626	445	296	402
United States of America	BFVD	4 672	4 367	7 002	5 335	4 673	3 569
Other	LEVG	..	..	1 132	1 137	488	274
Total America	LESM	5 710	6 425	9 488	7 867	6 200	5 710
Asia							
China ³	LEPJ	-471	-427	-637	-1 006	-1 262	-1 261
Hong Kong	BFJT	-231	653	1 282	1 296	1 583	2 120
India	BFNA	189	-16	165	308	110	-1
Indonesia	BFKZ	..	..	-394	-131	18	39
Israel	BFMR	70	334	505	411	367	207
Japan	BFOO	-231	382	494	457	1 134	1 678
Malaysia	BFPY	164	334	748	342	-429	-35
Pakistan	BFRR	..	..	-32	-6	2	-163
Philippines	BFRI	..	..	205	234	-305	56
Saudi Arabia	BFTB	835	451	891	1 060	1 777	2 748
Singapore	BFTT	1 207	1 207	1 115	484	272	1 032
South Korea	BFOX	564	814	947	846	676	617
Taiwan	BFUO	-987	-915	-744	-549	-834	-1 001
Thailand	BFUC	-120	58	43	30	44	-14
Other	LEWH	..	..	2 488	3 259	3 749	3 877
Total Asia	LETE	2 920	5 253	7 076	7 035	6 902	9 899
Australasia & Oceania							
Australia	CWJK	1 426	1 474	2 410	2 346	2 326	2 346
New Zealand	BFQZ	76	196	346	339	259	29
Other	LEVY	-56	-143	-121	-77	-76	45
Total Australasia & Oceania	LETW	1 446	1 527	2 635	2 608	2 509	2 420
Africa							
South Africa	BFWW	906	1 047	1 325	1 549	1 398	952
Other	LEWQ	363	1 013	4	-293	-317	243
Total Africa	LERU	1 269	2 060	1 329	1 256	1 081	1 195
International Organisations ¹	CTFA	-1 228	-1 246	-1 079	-1 445	-1 377	-1 073
World total	HBOG	-10 082	-10 618	-1 458	-3 745	-600	8 006

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.2 Trade in goods and services Continents and Countries

£ million

		1992	1993	1994	1995	1996	1997
EXPORTS							
Europe¹							
European Union (EU)							
Austria	LGHT	1 005	1 163	1 327	1 467	1 635	1 456
Belgium and Luxembourg	LGHU	6 580	8 127	8 477	9 752	10 212	9 979
Denmark	LGHV	1 940	2 041	2 274	2 617	2 808	2 957
Finland	LGHW	1 206	1 346	1 554	2 015	2 273	1 948
France	LGHX	13 450	14 395	16 018	17 946	20 022	19 281
Germany	LGHY	18 076	19 335	20 907	24 281	25 159	25 151
Greece	LGHZ	1 123	1 301	1 352	1 538	1 618	1 580
Ireland	LGIA	6 772	7 496	8 654	9 732	10 776	11 615
Italy	LGIB	7 361	7 336	8 189	9 363	9 580	9 909
Netherlands	LGIC	9 730	9 496	11 167	14 137	15 552	16 140
Portugal	LGID	1 397	1 621	1 540	1 776	2 014	1 993
Spain	LGIE	5 340	5 398	6 099	7 197	8 007	7 844
Sweden	LGIF	3 071	3 558	4 112	4 977	5 361	5 340
EU Institutions ¹	LGIG	582	358	313	373	217	274
Total European Union (EU)	LGIH	77 633	82 971	91 983	107 171	115 234	115 467
European Free Trade Association (EFTA)							
Iceland	LGII	127	180	151	177	214	208
Liechtenstein ²	LGIJ	..	..	..	14	20	27
Norway	LGIK	2 048	2 300	2 984	2 924	2 994	3 625
Switzerland ²	LGIL	2 651	3 290	3 414	4 050	5 112	5 462
Total EFTA	LGIM	4 826	5 770	6 550	7 165	8 340	9 322
Other Europe							
Czech Republic	LGIN	..	357	451	670	845	800
Poland	LGIO	688	847	861	1 106	1 547	1 529
Russia	LGIP	..	751	975	1 157	1 356	1 418
Turkey	LGIQ	819	1 198	966	1 348	1 775	2 014
Other	LGIR	..	1 796	2 280	2 800	3 036	3 693
Total Europe	LGIS	86 116	93 690	104 066	121 417	132 133	134 243
America							
Brazil	LGIT	459	634	758	936	1 115	1 275
Canada	LGIU	2 431	2 774	2 864	2 783	2 965	3 353
Mexico	LGIV	414	464	525	418	451	539
United States of America	LGIW	20 704	24 699	27 105	28 673	31 317	34 292
Other	LGIX	2 134	2 575	3 207	3 325	3 235	4 321
Total America	LGIIY	26 142	31 146	34 459	36 135	39 083	43 780
Asia							
China ³	LGIZ	563	919	1 045	1 034	970	1 117
Hong Kong	LGJA	2 232	2 960	3 197	3 454	3 880	4 122
India	LGJB	1 238	1 504	1 742	2 087	2 111	2 076
Indonesia	LGJC	434	469	521	731	1 044	872
Israel	LGJD	768	1 137	1 366	1 430	1 573	1 457
Japan	LGJE	3 713	4 449	5 124	6 204	6 629	6 600
Malaysia	LGJF	948	1 354	1 762	1 664	1 765	1 661
Pakistan	LGJG	460	510	546	565	598	441
Philippines	LGJH	273	392	448	566	540	724
Saudi Arabia	LGJI	3 365	3 257	3 096	3 366	4 223	5 267
Singapore	LGJJ	1 543	1 924	2 337	2 643	2 780	2 574
South Korea	LGJK	935	1 128	1 351	1 580	1 771	1 653
Taiwan	LGJL	655	850	889	1 175	1 148	1 229
Thailand	LGJM	667	909	1 028	1 181	1 317	1 124
Other	LGJN	5 183	6 310	5 791	6 334	6 967	8 186
Total Asia	LGJO	22 977	28 072	30 243	34 014	37 316	39 103
Australasia & Oceania							
Australia	LGJP	2 320	2 701	3 130	3 389	3 915	3 739
New Zealand	LGJQ	449	553	680	716	750	602
Other	LGJR	69	82	70	86	106	180
Total Australasia & Oceania	LGJS	2 838	3 336	3 880	4 191	4 771	4 521
Africa							
South Africa	LGJT	1 592	1 787	2 185	2 546	2 589	2 367
Other	LGJU	3 478	3 929	3 823	3 998	4 302	4 558
Total Africa	LGJV	5 070	5 716	6 008	6 544	6 891	6 925
International Organisations ¹	LGJW	148	118	111	111	109	130
World total	KTMW	143 291	162 078	178 767	202 412	220 303	228 702

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.2 Trade in goods and services

Continents and Countries

continued

£ million

		1992	1993	1994	1995	1996	1997
IMPORTS							
Europe¹							
European Union (EU)							
Austria	LGJY	1 228	1 323	1 396	1 299	1 510	1 689
Belgium and Luxembourg	LGJZ	6 273	7 437	7 769	9 023	9 786	10 543
Denmark	LGKA	2 579	2 409	2 493	2 546	2 805	2 821
Finland	LGKB	1 738	1 997	2 415	2 640	2 815	2 687
France	LGKC	14 860	16 593	18 506	20 133	21 702	21 911
Germany	LGKD	21 438	22 785	25 048	29 514	31 436	29 211
Greece	LGKE	1 232	1 246	1 428	1 455	1 236	1 222
Ireland	LGKF	5 645	6 241	6 806	8 099	8 349	8 857
Italy	LGKG	7 448	7 576	8 620	9 414	10 123	11 205
Netherlands	LGKH	10 877	10 265	11 605	13 143	14 165	14 212
Portugal	LGKI	1 662	1 768	1 840	2 110	2 314	2 533
Spain	LGKJ	5 073	5 842	6 755	7 838	8 481	8 783
Sweden	LGKK	3 510	3 909	4 602	4 994	5 334	5 181
EU Institutions ¹	LGKL	—	—	—	—	—	—
Total European Union (EU)	LGKM	83 563	89 391	99 283	112 208	120 056	120 855
European Free Trade Association (EFTA)							
Iceland	LGKN	252	258	257	267	287	275
Liechtenstein ²	LGKO	..	..	..	5	20	23
Norway	LGKP	4 295	4 557	4 253	4 816	5 462	5 241
Switzerland ²	LGKQ	4 354	5 153	5 507	5 944	6 149	5 644
Total EFTA	LGKR	8 901	9 968	10 017	11 032	11 918	11 183
Other Europe							
Czech Republic	LGKS	..	316	369	400	457	519
Poland	LGKT	422	525	620	730	696	717
Russia	LGKU	..	1 002	993	1 141	1 465	1 439
Turkey	LGKV	625	859	975	1 229	1 428	1 515
Other	LGKW	..	2 547	3 218	3 122	3 635	3 870
Total Europe	LGKX	96 739	104 608	115 475	129 862	139 655	140 098
America							
Brazil	LGKY	875	926	952	1 002	1 012	1 048
Canada	LGKZ	2 468	2 497	2 639	3 067	3 184	3 342
Mexico	LGLA	171	194	274	343	384	475
United States of America	LGLB	19 071	22 740	24 365	27 883	31 487	33 831
Other	LGLC	1 987	2 354	2 424	2 677	3 225	3 644
Total America	LGLD	24 572	28 711	30 654	34 972	39 292	42 340
Asia							
China ³	LGLE	968	1 404	1 737	1 995	2 254	2 515
Hong Kong	LGLF	2 754	3 452	3 645	3 826	4 483	4 701
India	LGLG	1 057	1 372	1 592	1 718	1 960	1 938
Indonesia	LGLH	614	799	880	977	1 031	979
Israel	LGLI	587	690	740	873	1 022	1 021
Japan	LGLJ	7 623	8 801	9 374	10 169	9 656	10 109
Malaysia	LGLK	1 167	1 513	1 353	1 608	2 496	2 123
Pakistan	LGLL	376	448	496	505	548	504
Philippines	LGLM	271	319	295	398	929	772
Saudi Arabia	LGLN	1 207	1 606	1 086	1 013	1 132	1 211
Singapore	LGLO	1 477	1 965	2 284	2 442	2 812	2 860
South Korea	LGLP	931	1 113	1 137	1 577	2 056	2 247
Taiwan	LGLQ	1 366	1 628	1 604	1 723	2 100	2 309
Thailand	LGLR	766	950	1 093	1 252	1 401	1 346
Other	LGLS	2 471	3 125	3 146	2 854	3 245	3 801
Total Asia	LGLT	23 635	29 185	30 462	32 930	37 125	38 436
Australasia & Oceania							
Australia	LGLU	1 498	1 551	1 716	1 766	2 088	2 320
New Zealand	LGLV	547	634	697	746	854	848
Other	LGLW	136	170	169	215	233	272
Total Australasia & Oceania	LGLX	2 181	2 355	2 582	2 727	3 175	3 440
Africa							
South Africa	LGLY	1 040	1 227	1 185	1 405	1 596	1 831
Other	LGLZ	2 402	2 606	2 895	3 241	3 579	3 123
Total Africa	LGMA	3 442	3 833	4 080	4 646	5 175	4 954
International Organisations¹							
	LGMB	98	82	77	84	70	66
World total	KTMX	150 667	168 774	183 330	205 221	224 492	229 334

¹ For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

² Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

³ Totals for China exclude Hong Kong.

2.2 Trade in goods and services Continents and Countries

continued

£ million

		1992	1993	1994	1995	1996	1997
BALANCES							
Europe¹							
European Union (EU)							
Austria	LGMJ	-223	-160	-69	168	125	-233
Belgium and Luxembourg	LGMK	307	690	708	729	426	-564
Denmark	LGMF	-639	-368	-219	71	3	136
Finland	LGMG	-532	-651	-861	-625	-542	-739
France	LGMH	-1 410	-2 198	-2 488	-2 187	-1 680	-2 630
Germany	LGMJ	-3 362	-3 450	-4 141	-5 233	-6 277	-4 060
Greece	LGMJ	-109	55	-76	83	382	358
Ireland	LGMK	1 127	1 255	1 848	1 633	2 427	2 758
Italy	LGMJ	-87	-240	-431	-51	-543	-1 296
Netherlands	LGMK	-1 147	-769	-438	994	1 387	1 928
Portugal	LGMN	-265	-147	-300	-334	-300	-540
Spain	LGMJ	267	-444	-656	-641	-474	-939
Sweden	LGMJ	-439	-351	-490	-17	27	159
EU Institutions ¹	LGMQ	582	358	313	373	217	274
Total European Union (EU)	LGMR	-5 930	-6 420	-7 300	-5 037	-4 822	-5 388
European Free Trade Association (EFTA)							
Iceland	LGMJ	-125	-78	-106	-90	-73	-67
Liechtenstein ²	LGMT	..	..	..	9	-	4
Norway	LGMU	-2 247	-2 257	-1 269	-1 892	-2 468	-1 616
Switzerland ²	LGMV	-1 703	-1 863	-2 093	-1 894	-1 037	-182
Total EFTA	LGMW	-4 075	-4 198	-3 467	-3 867	-3 578	-1 861
Other Europe							
Czech Republic	LGMX	..	41	82	270	388	281
Poland	LGMJ	266	322	241	376	851	812
Russia	LGMZ	..	-251	-18	16	-109	-21
Turkey	LGMN	194	339	-9	119	347	499
Other	LGMN	..	-751	-938	-322	-599	-177
Total Europe	LGMN	-10 623	-10 918	-11 409	-8 445	-7 522	-5 855
America							
Brazil	LGMJ	-416	-292	-194	-66	103	227
Canada	LGMK	-37	277	225	-284	-219	11
Mexico	LGMF	243	270	251	75	67	64
United States of America	LGMG	1 633	1 959	2 740	790	-170	461
Other	LGMH	147	221	783	648	10	677
Total America	LGMJ	1 570	2 435	3 805	1 163	-209	1 440
Asia							
China ³	LGMJ	-405	-485	-692	-961	-1 284	-1 398
Hong Kong	LGMK	-522	-492	-448	-372	-603	-579
India	LGMJ	181	132	150	369	151	138
Indonesia	LGMN	-180	-330	-359	-246	13	-107
Israel	LGMN	181	447	626	557	551	436
Japan	LGMJ	-3 910	-4 352	-4 250	-3 965	-3 027	-3 509
Malaysia	LGMF	-219	-159	409	56	-731	-462
Pakistan	LGMQ	84	62	50	60	50	-63
Philippines	LGMN	2	73	153	168	-389	-48
Saudi Arabia	LGMN	2 158	1 651	2 010	2 353	3 091	4 056
Singapore	LGMT	66	-41	53	201	-32	-286
South Korea	LGMU	4	15	214	3	-285	-594
Taiwan	LGMV	-711	-778	-715	-548	-952	-1 080
Thailand	LGMW	-99	-41	-65	-71	-84	-222
Other	LGMX	2 712	3 185	2 645	3 480	3 722	4 385
Total Asia	LGMJ	-658	-1 113	-219	1 084	191	667
Australasia & Oceania							
Australia	LGMZ	822	1 150	1 414	1 623	1 827	1 419
New Zealand	LGOA	-98	-81	-17	-30	-104	-246
Other	LGOB	-67	-88	-99	-129	-127	-92
Total Australasia & Oceania	LGOJ	657	981	1 298	1 464	1 596	1 081
Africa							
South Africa	LGOJ	552	560	1 000	1 141	993	536
Other	LGOE	1 076	1 323	928	757	723	1 435
Total Africa	LGOJ	1 628	1 883	1 928	1 898	1 716	1 971
International Organisations ¹	LGOJ	50	36	34	27	39	64
World total	KTMJ	-7 376	-6 696	-4 563	-2 809	-4 189	-632

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.3 Trade in goods Continents and Countries

£ million

		1992	1993	1994	1995	1996	1997
EXPORTS							
Europe¹							
European Union (EU)							
Austria	CHMY	794	914	1 051	1 126	1 267	1 145
Belgium and Luxembourg	CHNQ	5 709	7 130	7 376	8 312	8 538	8 430
Denmark	CHNR	1 554	1 605	1 825	2 113	2 216	2 093
Finland	CHMZ	993	1 119	1 317	1 718	1 818	1 569
France	ENYL	11 495	12 183	13 678	15 290	17 132	16 602
Germany	ENYO	15 186	16 053	17 363	20 274	20 761	20 625
Greece	CHNT	779	936	939	1 047	1 141	1 046
Ireland	CHNS	5 723	6 353	7 172	7 806	8 683	9 313
Italy	CHNO	6 139	6 080	6 848	7 895	8 043	8 219
Netherlands	CHNP	8 489	8 095	9 610	12 362	13 516	13 905
Portugal	CHNU	1 164	1 366	1 260	1 471	1 683	1 755
Spain	CHNV	4 516	4 484	5 137	6 110	6 738	6 742
Sweden	CHNA	2 435	2 894	3 417	4 160	4 429	4 448
EU Institutions ¹	EOAY	—	—	—	—	—	—
Total European Union (EU)	ENOF	64 976	69 212	76 993	89 684	95 965	95 892
European Free Trade Association (EFTA)							
Iceland	EPLW	92	147	110	138	154	155
Liechtenstein ²	EPow	..	..	..	12	14	10
Norway	EPLX	1 410	1 495	2 046	1 999	2 052	2 607
Switzerland ²	EPLV	1 838	2 266	2 481	2 730	3 185	2 956
Total EFTA	EPOT	3 340	3 908	4 637	4 879	5 405	5 728
Other Europe							
Czech Republic	FKML	..	290	381	572	721	710
Poland	ERDR	590	733	714	952	1 361	1 354
Russia	ERDQ	..	563	726	874	1 015	1 134
Turkey	EOBA	690	1 041	821	1 150	1 554	1 733
Other	EPMD	..	1 029	1 282	1 698	1 871	2 136
Total Europe	EPLM	70 875	76 776	85 554	99 809	107 892	108 687
America							
Brazil	FKMO	271	424	539	678	850	1 029
Canada	EOBC	1 638	1 850	1 936	1 808	1 968	2 144
Mexico	EPJX	300	337	393	275	316	427
United States of America	EOBB	12 638	15 430	17 079	17 899	19 760	20 894
Other	ERES	1 352	1 671	2 211	2 310	2 155	2 557
Total America	EPLO	16 199	19 712	22 158	22 970	25 049	27 051
Asia							
China ³	ERDN	425	758	865	832	742	920
Hong Kong	ERDG	1 601	2 184	2 356	2 667	2 940	3 213
India	ERDJ	938	1 158	1 344	1 691	1 718	1 578
Indonesia	FKMR	315	332	371	519	813	674
Israel	ERDL	582	897	1 059	1 113	1 275	1 178
Japan	EOBD	2 173	2 678	3 053	3 815	4 299	4 179
Malaysia	ERDK	633	987	1 345	1 193	1 167	1 207
Pakistan	FKMU	309	338	364	342	347	269
Philippines	FKMX	204	314	365	434	397	600
Saudi Arabia	ERDI	1 981	1 832	1 538	1 623	2 433	3 656
Singapore	ERDE	1 139	1 465	1 815	2 076	2 158	2 045
South Korea	ERDM	654	816	995	1 159	1 312	1 224
Taiwan	ERDP	555	685	755	965	949	1 033
Thailand	ERDO	472	680	770	840	980	864
Other	EREQ	3 602	4 406	3 986	4 303	4 897	5 790
Total Asia	EPLP	15 583	19 530	20 981	23 572	26 427	28 430
Australasia & Oceania							
Australia	EPMA	1 339	1 613	1 960	2 139	2 488	2 454
New Zealand	EPMB	256	336	422	440	476	408
Other	EGIZ	48	58	48	58	57	77
Total Australasia & Oceania	EPLQ	1 643	2 007	2 430	2 637	3 021	2 939
Africa							
South Africa	EPME	1 071	1 152	1 451	1 839	1 893	1 635
Other	ERER	2 492	2 862	2 686	2 898	3 121	3 056
Total Africa	EPLN	3 563	4 014	4 137	4 737	5 014	4 691
International Organisations¹							
	EPLR	—	—	—	—	—	—
World total	BOKG	107 863	122 039	135 260	153 725	167 403	171 798

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.3 Trade in goods Continents and Countries

continued

£ million

		1992	1993	1994	1995	1996	1997
IMPORTS							
Europe¹							
European Union (EU)							
Austria	CHNB	919	959	1 027	924	1 153	1 379
Belgium and Luxembourg	CHNY	5 602	6 681	7 092	8 013	8 618	9 062
Denmark	CHNZ	2 323	2 131	2 174	2 201	2 359	2 320
Finland	CHNC	1 634	1 876	2 277	2 501	2 646	2 557
France	ENYP	11 943	13 439	15 027	16 371	17 846	17 769
Germany	ENYS	18 594	19 912	21 904	26 254	27 206	25 655
Greece	CHOB	373	327	354	428	399	397
Ireland	CHOA	4 950	5 456	5 908	7 053	7 247	7 378
Italy	CHNW	6 610	6 665	7 510	8 269	8 819	9 552
Netherlands	CHNX	9 673	8 978	10 081	11 525	12 421	12 327
Portugal	CHOC	1 141	1 235	1 286	1 466	1 661	1 766
Spain	CHOD	2 948	3 269	3 686	4 360	5 048	5 088
Sweden	CHND	3 200	3 569	4 204	4 543	4 776	4 729
EU Institutions ¹	EOBS	—	—	—	—	—	—
Total European Union (EU)	ENOS	69 910	74 497	82 530	93 908	100 199	99 979
European Free Trade Association (EFTA)							
Iceland	EPMW	233	240	232	243	258	230
Liechtenstein ²	EPOX	..	..	..	4	19	23
Norway	EPMX	3 796	4 009	3 711	4 179	4 793	4 666
Switzerland ²	EPMV	3 831	4 569	4 675	4 980	5 206	4 642
Total EFTA	EPOU	7 860	8 818	8 618	9 406	10 276	9 561
Other Europe							
Czech Republic	FKMM	..	235	271	312	357	445
Poland	ERED	338	430	531	615	574	593
Russia	EREC	..	795	780	917	1 217	1 323
Turkey	EOBU	447	512	610	768	897	988
Other	EPND	..	803	1 235	1 491	1 776	1 947
Total Europe	EPMM	79 811	86 090	94 575	107 417	115 296	114 836
America							
Brazil	FKMP	829	873	891	938	941	910
Canada	EOBW	1 824	1 809	1 829	2 303	2 405	2 473
Mexico	EPJY	147	160	233	288	323	371
United States of America	EOBV	13 222	15 916	17 232	19 612	22 072	24 230
Other	EREV	1 362	1 584	1 589	1 835	2 200	2 114
Total America	EPMO	17 384	20 342	21 774	24 976	27 941	30 098
Asia							
China ³	ERDZ	892	1 283	1 591	1 842	2 109	2 379
Hong Kong	ERDS	2 245	2 899	2 986	3 363	3 900	4 144
India	ERDV	806	1 053	1 249	1 364	1 542	1 547
Indonesia	FKMS	496	662	729	813	854	860
Israel	ERDX	455	532	555	657	797	840
Japan	EOBX	7 047	8 130	8 593	9 285	8 592	9 004
Malaysia	ERDW	1 032	1 351	1 167	1 414	2 277	1 926
Pakistan	FKMV	257	313	347	345	374	363
Philippines	FKMY	226	267	236	335	857	726
Saudi Arabia	ERDU	897	1 205	756	648	655	836
Singapore	ERDT	1 113	1 564	1 838	2 100	2 463	2 587
South Korea	ERDY	874	1 040	1 061	1 483	1 952	2 135
Taiwan	EREB	1 305	1 563	1 534	1 640	1 999	2 234
Thailand	EREA	600	746	885	987	1 137	1 166
Other	ERET	1 455	1 945	1 772	1 646	1 968	2 392
Total Asia	EPMP	19 700	24 553	25 299	27 922	31 476	33 139
Australasia & Oceania							
Australia	EPNA	958	952	1 035	1 069	1 238	1 309
New Zealand	EPNB	408	473	525	555	603	551
Other	HPKF	128	144	152	188	207	158
Total Australasia & Oceania	EPMQ	1 494	1 569	1 712	1 812	2 048	2 018
Africa							
South Africa	EPNE	813	966	941	1 059	1 168	1 324
Other	EREU	1 711	1 838	2 050	2 263	2 560	2 175
Total Africa	EPMN	2 524	2 804	2 991	3 322	3 728	3 499
International Organisations¹							
	EFMR	—	—	—	—	—	—
World total	BOKH	120 913	135 358	146 351	165 449	180 489	183 590

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.3 Trade in goods

Continents and Countries

continued

£ million

		1992	1993	1994	1995	1996	1997
BALANCES							
Europe¹							
European Union (EU)							
Austria	CHVG	-125	-45	24	202	114	-234
Belgium and Luxembourg	CHNF	107	449	284	299	-80	-632
Denmark	CHNG	-769	-526	-349	-88	-143	-227
Finland	CHVH	-641	-757	-960	-783	-828	-988
France	ENYT	-448	-1 256	-1 349	-1 081	-714	-1 167
Germany	ENYW	-3 408	-3 859	-4 541	-5 980	-6 445	-5 030
Greece	CHNI	406	609	585	619	742	649
Ireland	CHNH	773	897	1 264	753	1 436	1 935
Italy	CHOE	-471	-585	-662	-374	-776	-1 333
Netherlands	CHNE	-1 184	-883	-471	837	1 095	1 578
Portugal	CHNJ	23	131	-26	5	22	-11
Spain	CHNM	1 568	1 215	1 451	1 750	1 690	1 654
Sweden	CHVI	-765	-675	-787	-383	-347	-281
EU Institutions ¹	EOCM	-	-	-	-	-	-
Total European Union (EU)	ENPF	-4 934	-5 285	-5 537	-4 224	-4 234	-4 087
European Free Trade Association (EFTA)							
Iceland	EPNW	-141	-93	-122	-105	-104	-75
Liechtenstein ²	EPOY	..	..	..	8	-5	-13
Norway	EPNX	-2 386	-2 514	-1 665	-2 180	-2 741	-2 059
Switzerland ²	EPNV	-1 993	-2 303	-2 194	-2 250	-2 021	-1 686
Total EFTA	EPOV	-4 520	-4 910	-3 981	-4 527	-4 871	-3 833
Other Europe							
Czech Republic	FKMN	..	55	110	260	364	265
Poland	EREP	252	303	183	337	787	761
Russia	EREO	..	-232	-54	-43	-202	-189
Turkey	EOCO	243	529	211	382	657	745
Other	EPOD	..	226	47	207	95	189
Total Europe	EPNM	-8 936	-9 314	-9 021	-7 608	-7 404	-6 149
America							
Brazil	FKMQ	-558	-449	-352	-260	-91	119
Canada	EOCQ	-186	41	107	-495	-437	-329
Mexico	EPJZ	153	177	160	-13	-7	56
United States of America	EOCP	-584	-486	-153	-1 713	-2 312	-3 336
Other	EREY	-10	87	622	475	-45	443
Total America	EPNO	-1 185	-630	384	-2 006	-2 892	-3 047
Asia							
China ³	EREL	-467	-525	-726	-1 010	-1 367	-1 459
Hong Kong	EREE	-644	-715	-630	-696	-960	-931
India	EREH	132	105	95	327	176	31
Indonesia	FKMT	-181	-330	-358	-294	-41	-186
Israel	EREJ	127	365	504	456	478	338
Japan	EOCR	-4 874	-5 452	-5 540	-5 470	-4 293	-4 825
Malaysia	EREI	-399	-364	178	-221	-1 110	-719
Pakistan	FKMW	52	25	17	-3	-27	-94
Philippines	FKMZ	-22	47	129	99	-460	-126
Saudi Arabia	EREG	1 084	627	782	975	1 778	2 820
Singapore	EREF	26	-99	-23	-24	-305	-542
South Korea	EREK	-220	-224	-66	-324	-640	-911
Taiwan	EREN	-750	-878	-779	-675	-1 050	-1 201
Thailand	EREM	-128	-66	-115	-147	-157	-302
Other	EREW	2 147	2 461	2 214	2 657	2 929	3 398
Total Asia	EPNP	-4 117	-5 023	-4 318	-4 350	-5 049	-4 709
Australasia & Oceania							
Australia	EPOA	381	661	925	1 070	1 250	1 145
New Zealand	EPOB	-152	-137	-103	-115	-127	-143
Other	BFKK	-80	-86	-104	-130	-150	-81
Total Australasia & Oceania	EPNQ	149	438	718	825	973	921
Africa							
South Africa	EPOE	258	186	510	780	725	311
Other	EREX	781	1 024	636	635	561	881
Total Africa	EPNN	1 039	1 210	1 146	1 415	1 286	1 192
International Organisations¹							
	EPNR	-	-	-	-	-	-
World total	BOKI	-13 050	-13 319	-11 091	-11 724	-13 086	-11 792

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Liechtenstein had a customs union with Switzerland until 1995. Totals for Switzerland before 1995 include Liechtenstein's trade in goods.

3 Totals for China exclude Hong Kong.

2.4 Trade in services Continents and countries

£ million

		1992	1993	1994	1995	1996	1997
EXPORTS							
Europe¹							
European Union (EU)							
Austria	FYVC	211	249	276	341	368	311
Belgium and Luxembourg	FYVD	871	997	1 101	1 440	1 674	1 549
Denmark	FYVE	386	436	449	504	592	864
Finland	FYVF	213	227	237	297	455	379
France	FYVG	1 955	2 212	2 340	2 656	2 890	2 679
Germany	FYVH	2 890	3 282	3 544	4 007	4 398	4 526
Greece	FYVI	344	365	413	491	477	534
Ireland	FYVJ	1 049	1 143	1 482	1 926	2 093	2 302
Italy	FYVK	1 222	1 256	1 341	1 468	1 537	1 690
Netherlands	FYVL	1 241	1 401	1 557	1 775	2 036	2 235
Portugal	FYVM	233	255	280	305	331	238
Spain	FYVN	824	914	962	1 087	1 269	1 102
Sweden	FYVO	636	664	695	817	932	892
EU Institutions ¹	FYVP	582	358	313	373	217	274
Total European Union (EU)	FYVQ	12 657	13 759	14 990	17 487	19 269	19 575
European Free Trade Association (EFTA)							
Iceland	FYVR	35	33	41	39	60	53
Liechtenstein	FYVS	—	—	1	2	6	17
Norway	FYVT	638	805	938	925	942	1 018
Switzerland	FYVU	813	1 024	933	1 320	1 927	2 506
Total EFTA	FYVV	1 486	1 862	1 913	2 286	2 935	3 594
Other Europe							
Czech Republic	FYVW	60	67	70	98	124	90
Poland	FYVX	98	114	147	154	186	175
Russia	FYVY	148	188	249	283	341	284
Turkey	FYVZ	129	157	145	198	221	281
Other	FYWA	663	767	998	1 102	1 165	1 557
Total Europe	FYWB	15 241	16 914	18 512	21 608	24 241	25 556
America							
Brazil	FYWC	188	210	219	258	265	246
Canada	FYWD	793	924	928	975	997	1 209
Mexico	FYWE	114	127	132	143	135	112
United States of America	FYWF	8 066	9 269	10 026	10 774	11 557	13 398
Other	FYWG	782	904	996	1 015	1 080	1 764
Total America	FYWH	9 943	11 434	12 301	13 165	14 034	16 729
Asia							
China ²	FYWI	138	161	180	202	228	197
Hong Kong	FYWJ	631	776	841	787	940	909
India	FYWK	300	346	398	396	393	498
Indonesia	FYWL	119	137	150	212	231	198
Israel	FYWM	186	240	307	317	298	279
Japan	FYWN	1 540	1 771	2 071	2 389	2 330	2 421
Malaysia	FYWO	315	367	417	471	598	454
Pakistan	FYWP	151	172	182	223	251	172
Philippines	FYWQ	69	78	83	132	143	124
Saudi Arabia	FYWR	1 384	1 425	1 558	1 743	1 790	1 611
Singapore	FYWS	404	459	522	567	622	529
South Korea	FYWT	281	312	356	421	459	429
Taiwan	FYWU	100	165	134	210	199	196
Thailand	FYWV	195	229	258	341	337	260
Other	FYWW	1 581	1 904	1 805	2 031	2 070	2 396
Total Asia	FYWX	7 394	8 542	9 262	10 442	10 889	10 673
Australasia & Oceania							
Australia	FYWY	981	1 088	1 170	1 250	1 427	1 285
New Zealand	FYWZ	193	217	258	276	274	194
Other	FYXA	21	24	22	28	49	103
Total Australasia & Oceania	FYXB	1 195	1 329	1 450	1 554	1 750	1 582
Africa							
South Africa	FYXC	521	635	734	707	696	732
Other	FYXD	986	1 067	1 137	1 100	1 181	1 502
Total Africa	FYXE	1 507	1 702	1 871	1 807	1 877	2 234
International Organisations¹	FYXF	148	118	111	111	109	130
World total	KTMQ	35 428	40 039	43 507	48 687	52 900	56 904

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Totals for China exclude Hong Kong.

2.4 Trade in services Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
IMPORTS							
Europe¹							
European Union (EU)							
Austria	GGOR	309	364	369	375	357	310
Belgium and Luxembourg	GGOS	671	756	677	1 010	1 168	1 481
Denmark	GGOT	256	278	319	345	446	501
Finland	GGOU	104	121	138	139	169	130
France	GGOV	2 917	3 154	3 479	3 762	3 856	4 142
Germany	GGOW	2 844	2 873	3 144	3 260	4 230	3 556
Greece	GGOX	859	919	1 074	1 027	837	825
Ireland	GGOY	695	785	898	1 046	1 102	1 479
Italy	GGOZ	838	911	1 110	1 145	1 304	1 653
Netherlands	GGPA	1 204	1 287	1 524	1 618	1 744	1 885
Portugal	GGPB	521	533	554	644	653	767
Spain	GGPC	2 125	2 573	3 069	3 478	3 433	3 695
Sweden	GGPD	310	340	398	451	558	452
EU Institutions ¹	GGPE	—	—	—	—	—	—
Total European Union (EU)	GGPF	13 653	14 894	16 753	18 300	19 857	20 876
European Free Trade Association (EFTA)							
Iceland	GGPG	19	18	25	24	29	45
Liechtenstein	GGPH	—	—	—	1	1	—
Norway	GGPI	499	548	542	637	669	575
Switzerland	GGPJ	523	584	832	964	943	1 002
Total EFTA	GGPK	1 041	1 150	1 399	1 626	1 642	1 622
Other Europe							
Czech Republic	GGPL	66	81	98	88	100	74
Poland	GGPM	84	95	89	115	122	124
Russia	GGPN	196	207	213	224	248	116
Turkey	GGPO	178	347	365	461	531	527
Other	GGPP	1 710	1 744	1 983	1 631	1 859	1 923
Total Europe	GGPQ	16 928	18 518	20 900	22 445	24 359	25 262
America							
Brazil	GGPR	46	53	61	64	71	138
Canada	GGPS	644	688	810	764	779	869
Mexico	GGPT	24	34	41	55	61	104
United States of America	GGPU	5 849	6 824	7 133	8 271	9 415	9 601
Other	GGPV	625	770	835	842	1 025	1 530
Total America	GGPW	7 188	8 369	8 880	9 996	11 351	12 242
Asia							
China ²	GGPX	76	121	146	153	145	136
Hong Kong	GGFY	509	553	659	463	583	557
India	GGPZ	251	319	343	354	418	391
Indonesia	GGQA	118	137	151	164	177	119
Israel	GGQB	132	158	185	216	225	181
Japan	GGQC	576	671	781	884	1 064	1 105
Malaysia	GGQD	135	162	186	194	219	197
Pakistan	GGQE	119	135	149	160	174	141
Philippines	GGQF	45	52	59	63	72	46
Saudi Arabia	GGQG	310	401	330	365	477	375
Singapore	GGQH	364	401	446	342	349	273
South Korea	GGQI	57	73	76	94	104	112
Taiwan	GGQJ	61	65	70	83	101	75
Thailand	GGQK	166	204	208	265	264	180
Other	GGQL	1 016	1 180	1 374	1 208	1 277	1 409
Total Asia	GGQM	3 935	4 632	5 163	5 008	5 649	5 297
Australasia & Oceania							
Australia	GGQN	540	599	681	697	850	1 011
New Zealand	GGQO	139	161	172	191	251	297
Other	GGQP	8	26	17	27	26	114
Total Australasia & Oceania	GGQQ	687	786	870	915	1 127	1 422
Africa							
South Africa	GGQR	227	261	244	346	428	507
Other	GGQS	691	768	845	978	1 019	948
Total Africa	GGQT	918	1 029	1 089	1 324	1 447	1 455
International Organisations ¹	GGQU	98	82	77	84	70	66
World total	KTMR	29 754	33 416	36 979	39 772	44 003	45 744

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Totals for China exclude Hong Kong.

2.4 Trade in services

Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
BALANCES							
Europe¹							
European Union (EU)							
Austria	GGQW	-98	-115	-93	-34	11	1
Belgium and Luxembourg	GGQX	200	241	424	430	506	68
Denmark	GGQY	130	158	130	159	146	363
Finland	GGQZ	109	106	99	158	286	249
France	GGRA	-962	-942	-1 139	-1 106	-966	-1 463
Germany	GGRB	46	409	400	747	168	970
Greece	GGRC	-515	-554	-661	-536	-360	-291
Ireland	GGRD	354	358	584	880	991	823
Italy	GGRE	384	345	231	323	233	37
Netherlands	GGRF	37	114	33	157	292	350
Portugal	GGRG	-288	-278	-274	-339	-322	-529
Spain	GGRH	-1 301	-1 659	-2 107	-2 391	-2 164	-2 593
Sweden	GGRJ	326	324	297	366	374	440
EU Institutions ¹	GGRJ	582	358	313	373	217	274
Total European Union (EU)	GGRK	-996	-1 135	-1 763	-813	-588	-1 301
European Free Trade Association (EFTA)							
Iceland	GGRL	16	15	16	15	31	8
Liechtenstein	GGRM	-	-	1	1	5	17
Norway	GGRN	139	257	396	288	273	443
Switzerland	GGR0	290	440	101	356	984	1 504
Total EFTA	GGRP	445	712	514	660	1 293	1 972
Other Europe							
Czech Republic	GGRQ	-6	-14	-28	10	24	16
Poland	GGRR	14	19	58	39	64	51
Russia	GGRS	-48	-19	36	59	93	168
Turkey	GGRU	-49	-190	-220	-263	-310	-246
Other	GGRU	-1 047	-977	-985	-529	-694	-366
Total Europe	GGRV	-1 687	-1 604	-2 388	-837	-118	294
America							
Brazil	GGRW	142	157	158	194	194	108
Canada	GGRX	149	236	118	211	218	340
Mexico	GGRY	90	93	91	88	74	8
United States of America	GGRZ	2 217	2 445	2 893	2 503	2 142	3 797
Other	GGS A	157	134	161	173	55	234
Total America	GGSB	2 755	3 065	3 421	3 169	2 683	4 487
Asia							
China ²	GGSC	62	40	34	49	83	61
Hong Kong	GGSD	122	223	182	324	357	352
India	GGSE	49	27	55	42	-25	107
Indonesia	GGSF	1	-	-1	48	54	79
Israel	GGSG	54	82	122	101	73	98
Japan	GGSH	964	1 100	1 290	1 505	1 266	1 316
Malaysia	GGSI	180	205	231	277	379	257
Pakistan	GGST	32	37	33	63	77	31
Philippines	GGSK	24	26	24	69	71	78
Saudi Arabia	GGSL	1 074	1 024	1 228	1 378	1 313	1 236
Singapore	GGSM	40	58	76	225	273	256
South Korea	GGSN	224	239	280	327	355	317
Taiwan	GGSO	39	100	64	127	98	121
Thailand	GGSP	29	25	50	76	73	80
Other	GGSQ	565	724	431	823	793	987
Total Asia	GGSR	3 459	3 910	4 099	5 434	5 240	5 376
Australasia & Oceania							
Australia	GGSS	441	489	489	553	577	274
New Zealand	GGST	54	56	86	85	23	-103
Other	GGSU	13	-2	5	1	23	-11
Total Australasia & Oceania	GGSV	508	543	580	639	623	160
Africa							
South Africa	GGSW	294	374	490	361	268	225
Other	GGSX	295	299	292	122	162	554
Total Africa	GGSY	589	673	782	483	430	779
International Organisations ¹	GGSZ	50	36	34	27	39	64
World total	KTMS	5 674	6 623	6 528	8 915	8 897	11 160

¹ For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

² Totals for China exclude Hong Kong.

2.5 Income

Continents and countries

£ million

		1992	1993	1994	1995	1996	1997
CREDITS							
Europe¹							
European Union (EU)							
Austria	CUGY	435	368	418	555	564	585
Belgium and Luxembourg	CTFK	3 145	3 030	3 074	3 943	3 854	3 676
Denmark	LEQU	694	716	475	779	815	675
Finland	LEUG	493	481	481	570	516	442
France	LEUP	4 047	4 211	4 860	6 202	5 866	6 106
Germany	LEQL	4 927	6 588	7 255	10 297	9 915	9 213
Greece	LEUY	306	291	24	285	420	948
Ireland	BFLY	1 248	1 523	1 356	1 602	1 826	2 225
Italy	BFOG	3 946	3 883	3 928	4 768	4 731	4 791
Netherlands	BFQI	2 563	4 171	5 760	5 688	6 174	6 535
Portugal	BFSK	266	224	350	450	520	479
Spain	LESW	675	831	965	1 474	1 811	1 955
Sweden	BFTL	1 223	1 089	1 054	1 371	1 517	1 168
EU Institutions ¹	CSFK	90	108	117	127	93	92
Total European Union (EU)	LEQC	24 058	27 514	30 117	38 111	38 622	38 890
European Free Trade Association (EFTA)							
Iceland	BFNQ	46	45	31	27	27	26
Liechtenstein	BFPH	63	51	53	70	84	66
Norway	BFQR	595	421	515	477	553	758
Switzerland	LEPB	2 011	2 390	2 491	3 078	3 017	2 898
Total EFTA	CTFT	2 715	2 907	3 090	3 652	3 681	3 748
Other Europe							
Czech Republic	LEPT	..	26	26	53	122	126
Poland	BFSB	92	82	72	81	79	132
Russia	BFST	..	15	75	102	122	260
Turkey	BFUM	196	240	216	173	188	229
Other	LEVZ	..	2 881	2 805	3 225	4 233	6 399
Total Europe	LERD	32 057	33 665	36 401	45 397	47 047	49 784
America							
Brazil	LENR	..	..	824	1 079	1 146	1 342
Canada	LEOS	1 143	1 227	1 331	1 785	1 594	1 713
Mexico	BFPQ	658	609	567	537	426	437
United States of America	BFVE	13 231	14 083	15 774	18 590	20 813	21 933
Other	LEVE	..	..	3 654	4 051	4 645	4 569
Total America	LESN	19 628	20 892	22 150	26 042	28 624	29 994
Asia							
China ²	LEPK	263	278	283	222	236	355
Hong Kong	BFJU	3 064	3 251	3 674	3 954	4 249	4 428
India	BFNB	226	85	383	374	372	384
Indonesia	BFLP	..	..	144	312	221	318
Israel	BFMS	31	31	24	31	43	68
Japan	BFOF	9 889	9 629	9 345	10 618	10 069	10 340
Malaysia	BFPZ	533	624	564	556	629	761
Pakistan	BFRS	..	..	76	98	102	73
Philippines	BFRJ	..	..	117	120	142	193
Saudi Arabia	BFTC	86	93	138	163	137	140
Singapore	BFTU	2 539	2 798	2 609	2 224	2 209	3 377
South Korea	BFOY	681	907	848	975	1 106	1 355
Taiwan	BFUV	104	138	193	217	245	232
Thailand	BFUD	103	170	204	241	273	317
Other	LEWI	..	..	2 122	2 217	2 352	2 211
Total Asia	LETF	19 811	20 594	20 724	22 322	22 385	24 552
Australasia & Oceania							
Australia	CXAT	1 215	1 394	2 013	1 952	2 199	2 365
New Zealand	BFRA	192	324	390	402	436	435
Other	LEVQ	99	30	61	132	161	237
Total Australasia & Oceania	LETX	1 506	1 748	2 464	2 486	2 796	3 037
Africa							
South Africa	BFWX	653	807	616	734	769	910
Other	LEWR	1 277	1 562	830	828	811	970
Total Africa	LERV	1 930	2 369	1 446	1 562	1 580	1 880
International Organisations¹	CTFB	168	152	135	164	148	180
World total	HMBQ	75 100	79 420	83 320	97 973	102 580	109 427

¹ For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

² Totals for China exclude Hong Kong.

2.5 Income

Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
DEBITS							
Europe¹							
European Union (EU)							
Austria	CUGZ	287	564	758	802	780	858
Belgium and Luxembourg	CTFL	3 522	4 505	4 905	5 661	4 813	4 313
Denmark	LEQV	409	746	506	750	920	908
Finland	LEUH	300	343	417	625	645	551
France	LEUQ	4 639	6 578	5 824	7 774	6 952	5 259
Germany	LEQM	6 111	7 677	7 662	10 569	9 218	8 273
Greece	LEUZ	309	243	263	492	721	870
Ireland	BFLZ	776	1 014	1 091	1 484	1 726	1 914
Italy	BFOH	1 732	2 024	2 349	2 743	3 372	3 602
Netherlands	BFQJ	5 621	5 178	5 506	5 911	6 812	7 251
Portugal	BFSL	403	377	288	429	438	384
Spain	LESX	703	1 301	1 220	1 858	2 171	1 818
Sweden	BFTM	278	1 040	1 028	1 095	1 306	980
EU Institutions ¹	CSFL	618	606	663	685	670	774
Total European Union (EU)	LEQD	25 708	32 196	32 480	40 878	40 544	37 755
European Free Trade Association (EFTA)							
Iceland	BFNR	12	15	16	6	10	2
Liechtenstein	BFPI	135	143	157	166	162	143
Norway	BFQS	268	325	322	386	448	332
Switzerland	LEPC	8 238	8 527	6 811	7 776	8 048	8 406
Total EFTA	CTFU	8 653	9 010	7 306	8 334	8 668	8 883
Other Europe							
Czech Republic	LEPU	..	21	27	89	173	181
Poland	BFSC	70	92	99	155	160	283
Russia	BFSU	..	116	104	137	188	219
Turkey	BFUN	228	206	230	335	300	207
Other	LEWA	..	3 203	2 601	3 373	3 679	4 727
Total Europe	LERE	39 004	44 844	42 847	53 301	53 712	52 255
America							
Brazil	LENS	..	..	67	281	463	338
Canada	LEOT	428	758	1 138	903	954	1 070
Mexico	BFPR	542	262	186	164	192	97
United States of America	BFVF	11 128	12 624	12 867	15 053	17 340	20 167
Other	LEVI	..	..	3 011	3 184	3 683	4 650
Total America	LESO	15 843	17 329	17 269	19 585	22 632	26 322
Asia							
China ²	LEPL	300	197	202	243	181	195
Hong Kong	BFJV	2 771	2 108	1 971	2 324	2 048	1 749
India	BFNC	132	168	291	360	321	457
Indonesia	BFLQ	..	..	134	151	156	128
Israel	BFMT	137	140	141	172	211	287
Japan	BFOQ	6 179	4 899	4 652	6 281	5 890	5 174
Malaysia	BFQA	164	153	247	290	345	350
Pakistan	BFRT	..	..	88	97	68	111
Philippines	BFRK	..	..	43	33	29	69
Saudi Arabia	BFTD	1 404	1 292	1 257	1 455	1 444	1 443
Singapore	BFTV	1 398	1 553	1 550	1 942	1 898	2 054
South Korea	BFOZ	123	113	119	137	148	146
Taiwan	BFUW	385	282	229	225	136	160
Thailand	BFUE	123	71	96	139	144	110
Other	LEWJ	..	..	1 885	2 253	1 877	2 399
Total Asia	LETG	15 686	13 716	12 905	16 102	14 896	14 832
Australasia & Oceania							
Australia	CXCM	407	869	721	947	1 259	1 117
New Zealand	BFRB	19	46	19	11	47	143
Other	LEVR	23	14	12	6	4	22
Total Australasia & Oceania	LETY	449	929	752	964	1 310	1 282
Africa							
South Africa	BFWY	154	155	143	163	158	304
Other	LEWS	1 501	1 457	1 367	1 494	1 362	1 796
Total Africa	LERW	1 655	1 612	1 510	1 657	1 520	2 100
International Organisations¹	CTFC	348	305	267	388	399	468
World total	HMBR	72 985	78 735	75 550	91 997	94 469	97 259

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Totals for China exclude Hong Kong.

2.5 Income

Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
BALANCES							
Europe¹							
European Union (EU)							
Austria	CUHA	148	-196	-340	-247	-216	-273
Belgium and Luxembourg	CTFM	-377	-1 475	-1 831	-1 718	-959	-637
Denmark	LEQW	285	-30	-31	29	-105	-233
Finland	LEUI	193	138	64	-55	-129	-109
France	LEUR	-592	-2 367	-964	-1 572	-1 086	847
Germany	LEQN	-1 184	-1 089	-407	-272	697	940
Greece	LEVA	-3	48	-239	-207	-301	78
Ireland	BFML	472	509	265	118	100	311
Italy	BFOI	2 214	1 859	1 579	2 025	1 359	1 189
Netherlands	BFQK	-3 058	-1 007	254	-223	-638	-716
Portugal	BFSM	-137	-153	62	21	82	95
Spain	LESY	-28	-470	-255	-384	-360	137
Sweden	BFTN	945	49	26	276	211	188
EU Institutions ¹	CSFM	-528	-498	-546	-558	-577	-682
Total European Union (EU)	LEQE	-1 650	-4 682	-2 363	-2 767	-1 922	1 135
European Free Trade Association (EFTA)							
Iceland	BFNU	34	30	15	21	17	24
Liechtenstein	BFPJ	-72	-92	-104	-96	-78	-77
Norway	BFQT	327	96	193	91	105	426
Switzerland	LEPD	-6 227	-6 137	-4 320	-4 698	-5 031	-5 508
Total EFTA	CTFV	-5 938	-6 103	-4 216	-4 682	-4 987	-5 135
Other Europe							
Czech Republic	LEPV	..	5	-1	-36	-51	-55
Poland	BFSO	22	-10	-27	-74	-81	-151
Russia	BFSV	..	-101	-29	-35	-66	41
Turkey	BFUO	-32	34	-14	-162	-112	22
Other	LEWB	..	-322	204	-148	554	1 672
Total Europe	LERF	-6 947	-11 179	-6 446	-7 904	-6 665	-2 471
America							
Brazil	LENT	..	..	757	798	683	1 004
Canada	LEOU	715	469	193	882	640	643
Mexico	BFPS	116	347	381	373	234	340
United States of America	BFVG	2 103	1 459	2 907	3 537	3 473	1 766
Other	LEVJ	..	..	643	867	962	-81
Total America	LESP	3 785	3 563	4 881	6 457	5 992	3 672
Asia							
China ²	LEPM	-37	81	81	-21	55	160
Hong Kong	BFJW	293	1 143	1 703	1 630	2 201	2 679
India	BFND	94	-83	92	14	51	-73
Indonesia	BFLR	..	..	10	161	65	190
Israel	BFMU	-106	-109	-117	-141	-168	-219
Japan	BFOR	3 710	4 730	4 693	4 337	4 179	5 166
Malaysia	BFQB	369	471	317	266	284	411
Pakistan	BFRU	..	..	-12	1	34	-38
Philippines	BFRL	..	..	74	87	113	124
Saudi Arabia	BFTS	-1 318	-1 199	-1 119	-1 292	-1 307	-1 303
Singapore	BFTW	1 141	1 245	1 059	282	311	1 323
South Korea	BFPA	558	794	729	838	958	1 209
Taiwan	BFUX	-281	-144	-36	-8	109	72
Thailand	BFUF	-20	99	108	102	129	207
Other	LEWK	..	..	237	-36	475	-188
Total Asia	LETH	4 125	6 878	7 819	6 220	7 489	9 720
Australasia & Oceania							
Australia	CYAA	808	525	1 292	1 005	940	1 248
New Zealand	BFRG	173	278	371	391	389	292
Other	LEVS	76	16	49	126	157	215
Total Australasia & Oceania	LETZ	1 057	819	1 712	1 522	1 486	1 755
Africa							
South Africa	BFWZ	499	652	473	571	611	606
Other	LEWT	-224	105	-537	-666	-551	-826
Total Africa	LERX	275	757	-64	-95	60	-220
International Organisations¹	CTFD	-180	-153	-132	-224	-251	-288
World total	HMBP	2 115	685	7 770	5 976	8 111	12 168

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Totals for China exclude Hong Kong.

2.6 Current transfers

Continents and countries

£ million

		1992	1993	1994	1995	1996	1997
CREDITS							
Europe¹							
European Union (EU)							
Austria	GXVQ	5	8	8	7	15	7
Belgium and Luxembourg	GXVR	53	123	151	133	209	108
Denmark	GXVS	5	41	24	63	105	61
Finland	GXVT	5	—	14	38	71	38
France	GXVU	350	410	301	479	860	457
Germany	GXVV	376	494	501	543	1 014	545
Greece	GXVW	34	65	85	65	144	72
Ireland	GXVX	177	242	244	265	503	257
Italy	GXVY	105	125	195	181	434	220
Netherlands	GXVZ	803	582	777	676	1 803	1 068
Portugal	GXWA	—	33	21	24	49	24
Spain	GXWB	71	104	90	100	207	106
Sweden	GXWC	—	61	82	88	187	94
EU Institutions ¹	GXWD	4 138	5 336	4 362	4 419	6 155	6 104
Total European Union (EU)	GXWE	6 122	7 624	6 855	7 081	11 756	9 161
European Free Trade Association (EFTA)							
Iceland	GXWF	4	3	4	5	8	4
Liechtenstein	GXWG	2	2	2	2	4	2
Norway	GXWH	36	58	55	57	64	33
Switzerland	GXWI	435	360	49	251	369	285
Total EFTA	GXWJ	477	423	110	315	445	324
Other Europe							
Czech Republic	GXWK	4	4	4	4	6	4
Poland	GXWL	8	10	11	10	14	12
Russia	GXWM	25	24	24	26	39	25
Turkey	GXWN	22	25	26	27	38	25
Other	GXWO	69	171	170	201	230	178
Total Europe	GXWP	6 727	8 281	7 200	7 664	12 528	9 729
America							
Brazil	GXWQ	15	13	13	17	26	14
Canada	GXWR	223	257	355	267	456	296
Mexico	GXWS	25	26	23	27	43	24
United States of America	GXWT	2 715	2 542	3 023	3 053	5 038	3 691
Other	GXWU	319	340	302	289	548	326
Total America	GXWV	3 297	3 178	3 716	3 653	6 111	4 351
Asia							
China ²	GXWW	24	25	25	28	40	25
Hong Kong	GXWX	118	122	140	163	192	149
India	GXWY	55	63	63	64	85	61
Indonesia	GXWZ	23	22	20	23	41	22
Israel	GXOA	39	38	38	40	63	39
Japan	GXOB	146	165	212	260	301	205
Malaysia	GXOC	54	60	61	61	84	59
Pakistan	GXOD	2	2	2	2	4	2
Philippines	GXOE	14	12	11	13	23	12
Saudi Arabia	GXOF	30	32	35	37	49	33
Singapore	GXOG	34	35	35	36	51	33
South Korea	GXOH	17	18	17	19	29	17
Taiwan	GXOI	17	18	17	18	29	18
Thailand	GXOJ	12	12	13	12	20	13
Other	GXOK	366	365	365	404	530	403
Total Asia	GXOL	951	989	1 054	1 180	1 541	1 091
Australasia & Oceania							
Australia	GXOM	347	389	399	422	588	438
New Zealand	GXON	98	117	122	116	165	126
Other	GXOO	6	4	3	5	6	7
Total Australasia & Oceania	GXOP	451	510	524	543	759	571
Africa							
South Africa	GXOQ	104	124	132	139	202	134
Other	GXOR	110	182	183	184	245	174
Total Africa	GXOS	214	306	315	323	447	308
International Organisations¹							
	GXOT	—	—	—	—	—	—
World total	KTND	11 640	13 264	12 809	13 363	21 386	16 050

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Totals for China exclude Hong Kong.

2.6 Current transfers

Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
DEBITS							
Europe¹							
European Union (EU)							
Austria	GXXV	29	26	29	32	47	35
Belgium and Luxembourg	GXXW	131	126	122	121	208	128
Denmark	GXXX	35	47	35	58	65	46
Finland	GXXY	14	13	14	15	16	8
France	GXXZ	276	228	312	342	590	389
Germany	GXYA	309	317	390	456	641	444
Greece	GXYB	59	59	23	41	123	80
Ireland	GXYC	429	464	449	500	818	513
Italy	GXYD	146	140	151	173	300	165
Netherlands	GXYE	206	441	487	550	826	587
Portugal	GXYF	34	29	45	50	67	47
Spain	GXYG	131	136	167	196	322	206
Sweden	GXYH	44	32	64	83	108	63
EU Institutions ¹	GXYI	6 970	8 260	7 431	9 192	9 277	8 268
Total European Union (EU)	GXYJ	8 813	10 318	9 719	11 809	13 408	10 979
European Free Trade Association (EFTA)							
Iceland	GXYK	7	6	7	8	12	7
Liechtenstein	GXYL	3	3	3	3	5	3
Norway	GXYM	91	62	80	80	170	94
Switzerland	GXYN	143	144	141	169	243	165
Total EFTA	GXYO	244	215	231	260	430	269
Other Europe							
Czech Republic	GXYP	14	15	16	16	24	17
Poland	GXYQ	32	32	35	35	45	33
Russia	GXYR	51	48	52	52	70	46
Turkey	GXYs	27	29	24	26	39	26
Other	GXYT	175	164	175	183	240	178
Total Europe	GXYU	9 356	10 821	10 252	12 381	14 256	11 548
America							
Brazil	GXYV	24	21	23	25	41	22
Canada	GXYW	511	569	598	639	905	708
Mexico	GXYX	31	28	29	30	48	26
United States of America	GXYy	1 779	1 593	1 668	2 045	3 668	2 349
Other	GXYZ	597	540	596	667	1 032	648
Total America	GXZA	2 942	2 751	2 914	3 406	5 694	3 753
Asia							
China ²	GXZB	53	48	51	52	73	48
Hong Kong	GXZC	120	120	113	125	207	129
India	GXZD	141	128	140	139	177	127
Indonesia	GXZE	70	64	65	69	101	66
Israel	GXZF	44	42	42	45	79	49
Japan	GXZG	177	161	161	175	319	184
Malaysia	GXZH	40	38	39	41	66	43
Pakistan	GXZI	70	63	72	69	86	64
Philippines	GXZJ	35	31	33	34	52	32
Saudi Arabia	GXZK	35	33	35	38	56	38
Singapore	GXZL	34	32	32	35	58	38
South Korea	GXZM	15	13	13	14	26	15
Taiwan	GXZN	12	11	10	11	20	11
Thailand	GXZO	13	12	13	13	21	12
Other	GXZP	639	705	759	589	978	723
Total Asia	GXZQ	1 498	1 501	1 578	1 449	2 319	1 579
Australasia & Oceania							
Australia	GXZR	551	590	695	704	1 029	759
New Zealand	GXZS	97	118	130	138	191	143
Other	GXZT	71	75	74	79	112	85
Total Australasia & Oceania	GXZU	719	783	899	921	1 332	987
Africa							
South Africa	GXZV	249	289	280	302	408	324
Other	GXZW	599	597	570	568	734	540
Total Africa	GXZX	848	886	850	870	1 142	864
International Organisations ¹	GXZY	1 098	1 129	981	1 248	1 165	849
World total	KTNE	16 461	17 871	17 474	20 275	25 908	19 580

1 For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

2 Totals for China exclude Hong Kong.

2.6 Current transfers

Continents and countries

continued

£ million

		1992	1993	1994	1995	1996	1997
BALANCES							
Europe¹							
European Union (EU)							
Austria	GZDU	-24	-18	-21	-25	-32	-28
Belgium and Luxembourg	GZDV	-78	-3	29	12	1	-20
Denmark	GZDW	-30	-6	-11	5	40	15
Finland	GZDX	-9	-13	-	23	55	30
France	GZDY	74	182	-11	137	270	68
Germany	GZDZ	67	177	111	87	373	101
Greece	GZEA	-25	6	62	24	21	-8
Ireland	GZEB	-252	-222	-205	-235	-315	-256
Italy	GZEC	-41	-15	44	8	134	55
Netherlands	GZED	597	141	290	126	977	481
Portugal	GZEE	-34	4	-24	-26	-18	-23
Spain	GZEF	-60	-32	-77	-96	-115	-100
Sweden	GYRO	-44	29	18	5	79	31
EU Institutions ¹	GYRP	-2 832	-2 924	-3 069	-4 773	-3 122	-2 164
Total European Union (EU)	GXUU	-2 691	-2 694	-2 864	-4 728	-1 652	-1 818
European Free Trade Association (EFTA)							
Iceland	GXEL	-3	-3	-3	-3	-4	-3
Liechtenstein	GXEM	-1	-1	-1	-1	-1	-1
Norway	GXEN	-55	-4	-25	-23	-106	-61
Switzerland	GZCH	292	216	-92	82	126	120
Total EFTA	GZCI	233	208	-121	55	15	55
Other Europe							
Czech Republic	GZCJ	-10	-11	-12	-12	-18	-13
Poland	GZCK	-24	-22	-24	-25	-31	-21
Russia	GZCL	-26	-24	-28	-26	-31	-21
Turkey	GZCM	-5	-4	2	1	-1	-1
Other	GZCN	-106	7	-5	18	-10	-
Total Europe	GZCO	-2 629	-2 540	-3 052	-4 717	-1 728	-1 819
America							
Brazil	GZCP	-9	-8	-10	-8	-15	-8
Canada	GZCQ	-288	-312	-243	-372	-449	-412
Mexico	GZCR	-6	-2	-6	-3	-5	-2
United States of America	GZCS	936	949	1 355	1 008	1 370	1 342
Other	GZCT	-278	-200	-294	-378	-484	-322
Total America	GZCU	355	427	802	247	417	598
Asia							
China ²	GZCV	-29	-23	-26	-24	-33	-23
Hong Kong	GZCW	-2	2	27	38	-15	20
India	GZCX	-86	-65	-77	-75	-92	-66
Indonesia	GZCY	-47	-42	-45	-46	-60	-44
Israel	GZCZ	-5	-4	-4	-5	-16	-10
Japan	GZDA	-31	4	51	85	-18	21
Malaysia	GZDB	14	22	22	20	18	16
Pakistan	GZDC	-68	-61	-70	-67	-82	-62
Philippines	GZDD	-21	-19	-22	-21	-29	-20
Saudi Arabia	GZDE	-5	-1	-	-1	-7	-5
Singapore	GZDF	-	3	3	1	-7	-5
South Korea	GZDG	2	5	4	5	3	2
Taiwan	GZDH	5	7	7	7	9	7
Thailand	GZDI	-1	-	-	-1	-1	1
Other	GZDJ	-273	-340	-394	-185	-448	-320
Total Asia	GZDK	-547	-512	-524	-269	-778	-488
Australasia & Oceania							
Australia	GZDL	-204	-201	-296	-282	-441	-321
New Zealand	GZDM	1	-1	-8	-22	-26	-17
Other	GZDN	-65	-71	-71	-74	-106	-78
Total Australasia & Oceania	GZDO	-268	-273	-375	-378	-573	-416
Africa							
South Africa	GZDP	-145	-165	-148	-163	-206	-190
Other	GZDQ	-489	-415	-387	-384	-489	-366
Total Africa	GZDR	-634	-580	-535	-547	-695	-556
International Organisations ¹	GZDS	-1 098	-1 129	-981	-1 248	-1 165	-849
World total	KTNF	-4 821	-4 607	-4 665	-6 912	-4 522	-3 530

¹ For the purpose of this table EU Institutions are included in Europe and are excluded from International Organisations.

² Totals for China exclude Hong Kong.

Harmonised Index of Consumer Prices: Historical Estimates



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Summary

The Harmonised Index of Consumer Prices (HICP) has been developed as a comparable measure of inflation for Member States of the European Union. It was used to monitor performance against the convergence criterion for price stability in the Maastricht Treaty. From January 1999, it will be used by the European Central Bank as the target measure of inflation for the European Monetary Union area.

The UK HICP was first published in February 1997: the index started in January 1996 and the first 12-month inflation figures were for January 1997. An earlier article in *Economic Trends*⁽¹⁾ gave the background to the HICP and its uses, described how it is constructed and how it compares with the domestic measure of inflation, the UK Retail Prices Index (RPI).

The ONS has now constructed estimates of the UK HICP back to 1988 and indicative figures for 1975-1987. This article presents these new estimates and explains how they have been derived. A comparison is also presented of the historical HICP series against RPI excluding mortgage interest payments (RPIX), which starts in 1975. RPIX is preferred to RPI for this comparison because the inclusion of mortgage interest payment in the latter can obscure the picture.

Differences in definition and coverage between HICP and RPI

The official HICP series starts in January 1996 and is constructed according to rules specified in European legislation agreed after discussion between Eurostat (the statistical office of the European Union), the European Central Bank and Member States. These rules cover a range of aspects relating to the construction of price indices, including the basic formula used to combine raw prices together; the population and item coverage of the index; the basis for constructing weights; and procedures for the introduction of new items into the index.

In the UK, the HICP is constructed from the same basic price data which is collected for the RPI but with some important differences in coverage and methodology, the main ones being:

- the HICP uses the international classification system COICOP (classification of individual consumption by purpose) whereas the RPI has its own unique classification, defined by the RPI Advisory Committee
- differences in the coverage of goods and services:
 - the HICP excludes several series which are covered by the RPI, namely mortgage interest payments, Council Tax, house depreciation, road tax, buildings insurance and various health series
 - the HICP includes a series for air fares which is not included in the RPI; it also includes a series for personal computers which was not introduced into the RPI until 1998
 - the RPI series for new cars is based on movements in second hand car prices; the HICP series is based on list prices, quality adjusted for changes in specification.
- differences in the basis for construction of weights:
 - the HICP population covers all private households while the RPI excludes the top four per cent of households by income and pensioner households who are dependent on state pensions and benefits for at least three quarters of their income
 - for the RPI weights, gross expenditure on insurance is assigned to the relevant insurance heading (ie buildings, contents or motor insurance). In the HICP, the weight given to insurance is the net expenditure on insurance (ie the cost of insurance premiums less the amount paid out in claims). The weight for the claims expenditure is distributed across COICOP headings according to the type of claim. For instance, the weight for motor insurance claims expenditure is distributed between car repairs, spare parts and second hand cars.

- the HICP uses the geometric mean rather than arithmetic mean to aggregate prices into elementary aggregates ^a.

Construction of an HICP back series: methodology and caveats

Long-run estimates of HICP have been constructed back to 1975 to enable comparisons with RPIX back to when it first started. In principle, to construct historical estimates of the HICP, the index should be calculated from the individual price quotes, otherwise the effect of using the geometric mean cannot be reliably estimated. This was the approach adopted in constructing historical estimates of the HICP back to 1988. However, for earlier periods, back to 1975, the raw price data are not available and the HICP estimates were derived from RPI indices and weights, with a constant factor applied to adjust for the effect of using the geometric mean in the HICP.

More details about the methodology used to construct back series for the HICP in each of the two time periods, 1988–1995 and 1975–1987, are given below, together with an assessment of the quality of the resultant estimates.

Calculation of the historical series for 1988 to 1995

The estimated HICP for 1988 to 1995 was calculated from archived RPI price quotes and historical weights data. The main features of this calculation, together with the main approximations, are given below:

The official HICP excludes several series which are included in RPI. They have also been excluded from the historical series. The main categories of goods and services excluded are:

- mortgage interest payments, and council tax and its predecessors, the community charge and rates
- house depreciation (excluded from 1995 only, when it was first introduced into the RPI)
- a The HICP uses the geometric mean because it produces comparable results between countries and helps to ensure that differences in inflation rates are not due to differences in the formulae used to create price indices at the most basic level. One of the two types of arithmetic mean used in the RPI (the “ratio of averages”) also has this property and can be used in the HICP. However, this is not true of the other type of arithmetic mean used in the RPI (the “average of relatives”) and this is, effectively, banned from being used in the HICP. That is not to say that the use of this formula in the RPI is wrong (because there are good reasons for using it^{(1),(2),(3)}); rather it does not give results which are “comparable” across countries.

- road tax and buildings insurance (excluded for entire period)
- various health goods and services, including NHS prescription charges (excluded from various dates, depending on when they were introduced into the RPI)

In the official HICP series, COICOP weights are derived from the expenditure patterns of all private households and item weights are constrained to these totals. For the historical series, HICP item weights were derived from RPI item weights and aggregated up to the published COICOP weights: they are therefore based on the RPI household population and not all private households. Based on the results for the official HICP series, the effect of this assumption is likely to be very small. In other respects (such as the treatment of insurance), the method of construction for the HICP weights was the same as for the official series.

According to the rules used to construct the official HICP, new items have to be included when they reach an expenditure share of one part per thousand. When the HICP was launched, this meant that it had to include indices for air fares and personal computers, neither of which was included in the RPI at the time. No attempt has been made to include estimates for these series in the historical HICP figures or to identify items which might have been brought into the RPI earlier under the one part per thousand threshold.

The rules used to construct the HICP also require the prices used to be those which are directly measured; in effect, imputed estimates are not permitted. That means the official HICP series for new cars is constructed in a different way to that used for the RPI. However, the historical HICP series uses the RPI series.

There are four months during this period where the archived price data was incomplete or missing: February, April and December 1989, and August 1991. The COICOP indices for these months have been calculated by applying an average of the effect of using the geometric mean in the months preceding and following the missing month to indices calculated using the same basic formulae as in the RPI. Some estimation was also required for some of the detailed weights below item level, particularly in the earlier years. The net effect of these assumptions is small with the recalculated RPI index generally being within 0.01 of its true value.

The estimated HICP for 1988–1995 is shown in Table 1, together with the official series from 1996. Despite the approximations described above, the estimated HICP can be considered a good proxy to what the series would have been if constructed from scratch according to the rules of the official HICP series. Inflation rates and indices have also been calculated for the main

Table 1 Estimated HICP 1988–1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual average
<i>Index (average 1996=100) ^{1,2}</i>													
1988	70.3	70.5	70.8	71.6	71.9	72.2	72.2	72.4	72.8	73.1	73.4	73.5	72.1
1989	73.7	74.0	74.3	75.3	75.8	76.0	75.9	76.1	76.6	77.1	77.4	77.5	75.8
1990	77.9	78.4	78.7	80.2	81.0	81.2	81.1	81.9	82.8	83.4	83.5	83.5	81.1
1991	83.4	83.9	84.2	87.0	87.6	88.1	87.8	88.2	88.7	89.1	89.4	89.5	87.2
1992	89.2	89.6	90.1	91.1	91.4	91.4	91.0	91.0	91.3	91.6	91.7	91.8	90.9
1993	91.2	91.8	92.3	93.3	93.7	93.6	93.3	93.7	94.1	94.0	93.8	94.0	93.2
1994	93.6	94.1	94.4	95.2	95.5	95.5	94.9	95.4	95.5	95.4	95.5	95.9	95.1
1995	95.9	96.3	96.8	97.4	97.9	97.9	97.4	97.9	98.4	98.2	98.2	98.8	97.6
1996	98.5	98.9	99.4	99.9	100.2	100.3	99.6	100.2	100.7	100.6	100.7	101.0	100.0
1997	100.6	100.9	101.1	101.4	101.8	102.0	101.6	102.2	102.5	102.6	102.6	102.8	101.8
1998	102.1	102.4	102.7	103.3	103.8	103.7	103.1	103.5	104.0				
<i>Percentage change over 12 months ²</i>													
1989	4.8	5.0	4.9	5.2	5.4	5.3	5.1	5.1	5.2	5.5	5.4	5.4	5.1
1990	5.7	5.9	5.9	6.5	6.9	6.8	6.9	7.6	8.1	8.2	7.9	7.7	7.0
1991	7.1	7.0	7.0	8.5	8.1	8.5	8.3	7.7	7.1	6.8	7.1	7.2	7.5
1992	7.0	6.8	7.0	4.7	4.3	3.7	3.6	3.2	2.9	2.8	2.6	2.6	4.2
1993	2.2	2.5	2.4	2.4	2.5	2.4	2.5	3.0	3.1	2.6	2.3	2.4	2.5
1994	2.6	2.5	2.3	2.0	1.9	2.0	1.7	1.8	1.5	1.5	1.8	2.0	2.0
1995	2.5	2.3	2.5	2.3	2.5	2.5	2.6	2.6	3.0	2.9	2.8	3.0	2.6
1996	2.7	2.7	2.7	2.6	2.3	2.5	2.3	2.3	2.3	2.4	2.5	2.2	2.5
1997	2.1	2.0	1.7	1.5	1.6	1.7	2.0	2.0	1.8	2.0	1.9	1.8	1.8
1998	1.5	1.5	1.6	1.9	2.0	1.7	1.5	1.3	1.5				

¹ Partially estimated for February, April & December 1989, and August 1991

² The identifiers for these series are: BGEV for the index and BGFI for the 12-month percentage change.

sub-divisions of the HICP and these, together with their weights, are shown in Table 2. More detailed breakdowns have not been constructed because they would not be sufficiently reliable.

Calculation of the historical series from 1975 to 1987

The starting point for the calculation of the historical series for 1975 to 1987 was published RPI section indices and weights, and unpublished item indices and weights for items excluded from the HICP. These were used to calculate an RPI series with coverage of goods and services consistent with the HICP. The items excluded were mortgage interest payments, rates, buildings insurance, road tax and NHS prescription charges. There were no other items included in the RPI during this period which would have been outside the scope of the HICP.

Two more adjustments were then made to this series to arrive at an indicative HICP. First, the weights relating to insurance were adjusted, with some approximations, to be consistent with the approach used in the HICP. Secondly, an estimate of the formula

effect (the difference in inflation rates arising from the HICP using the geometric mean as opposed to the arithmetic means used in the RPI) was made. Since this could not be calculated directly, the latter was assumed to have a constant effect on the inflation rate of -0.25 per cent, and the index was adjusted accordingly. The size of this estimated effect is broadly consistent with that recorded for the estimated HICP during 1989 and 1990.

Because of the approximations involved in calculating the series for this period, and in particular the formula effect, the final estimates shown in Table 3 should be considered as no more than a broadly indicative series for the HICP. It is not possible to produce estimates for sub-divisions of the HICP for this period.

The results and how HICP and RPIX inflation rates compare

Chart 1 illustrates how the estimated HICP compares with RPIX during the period 1989–1998. As noted earlier, RPIX is preferred to RPI for this comparison because the inclusion of mortgage interest payments in the latter can obscure the picture. The chart

Table 2 Major divisions of HICP: 1988–1998

	Food and non-alcoholic beverages	Alcoholic beverages & tobacco	Clothing and footwear	Housing, water, electricity gas and other fuels	Household furnishings, equipment and maintenance	Health	Transport	Communi- cations	Recreation and culture	Education	Hotels, cafes and restaurants	Miscell- aneous goods and services
<i>Index (average 1996=100)¹</i>												
	BGEW	BGEX	BGEY	BGEZ	BGFA	BGFB	BGFC	BGFD	BGFE	BGFF	BGFG	BGFH
1988	74.2	60.4	100.6	64.4	82.9	68.6	69.7	91.7	78.0	51.4	61.9	72.7
1989	78.4	62.5	105.0	68.8	85.8	74.1	73.5	93.0	80.8	55.0	65.7	77.7
1990	84.8	67.0	108.9	75.3	89.8	80.5	78.2	98.2	85.1	60.2	71.8	81.9
1991	89.2	75.8	110.7	83.0	94.9	88.5	83.9	106.5	90.3	67.8	79.9	87.3
1992	91.1	82.4	109.3	87.4	97.1	94.6	88.2	109.5	93.5	76.8	85.1	91.6
1993	92.2	87.5	107.5	89.2	97.0	95.8	90.8	110.2	95.0	84.5	89.4	94.8
1994	93.4	91.2	105.5	93.4	96.3	97.1	93.7	105.2	96.5	91.4	92.7	96.8
1995	97.0	95.6	103.3	96.9	98.1	97.9	96.3	102.1	98.1	95.9	96.7	98.3
1996	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1997	99.9	104.0	97.5	101.7	100.4	103.0	104.9	97.2	101.1	105.1	103.6	102.9
<i>Percentage change over 12 months</i>												
	BGFJ	BGFK	BGFL	BGFM	BGFN	BGFO	BGFP	BGFQ	BGFR	BGFS	BGFT	BGFU
1989	5.7	3.5	4.4	6.8	3.5	8.0	5.5	1.4	3.6	7.0	6.1	6.9
1990	8.2	7.2	3.7	9.4	4.7	8.6	6.4	5.6	5.3	9.5	9.3	5.4
1991	5.2	13.1	1.7	10.2	5.7	9.9	7.3	8.5	6.1	12.6	11.3	6.6
1992	2.1	8.7	-1.3	5.3	2.3	6.9	5.1	2.8	3.5	13.3	6.5	4.9
1993	1.2	6.2	-1.6	2.1	-0.1	1.3	2.9	0.6	1.6	10.0	5.1	3.5
1994	1.3	4.2	-1.9	4.7	-0.7	1.4	3.2	-4.5	1.6	8.2	3.7	2.1
1995	3.9	4.8	-2.1	3.7	1.9	0.8	2.8	-2.9	1.7	4.9	4.3	1.5
1996	3.1	4.6	-3.2	3.2	1.9	2.1	3.8	-2.1	1.9	4.3	3.4	1.7
1997	-0.1	4.0	-2.5	1.7	0.4	3.0	4.9	-2.8	1.1	5.1	3.6	2.9
<i>Weights (parts per 1000)</i>												
	BGFW	BGFX	BGFY	BGFZ	BGGA	BGGB	BGGC	BGGD	BGGE	BGGF	BGGG	BGGH
1988	184	67	84	134	76	5	159	20	94	9	118	50
1989	177	70	89	133	75	7	157	20	91	9	123	49
1990	185	66	85	128	76	6	159	22	94	10	118	51
1991	177	65	78	125	76	7	173	21	98	9	118	53
1992	172	72	71	128	80	8	171	22	96	9	114	57
1993	159	69	68	135	83	8	157	21	127	9	107	57
1994	157	69	69	131	78	9	161	21	135	10	104	56
1995	158	70	64	137	81	7	151	22	137	8	107	58
1996	156	70	67	134	90	7	154	21	131	11	111	48
1997	152	71	68	133	91	7	155	21	130	11	112	49
1998	144	68	68	136	92	8	164	22	132	14	106	46

¹ Partially estimated for February, April and December 1989, and August 1991

Table 3 Indicative HICP¹: 1975–1988

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual average
<i>Indicative HICP index (Jan 1975=100)^{1,2}</i>													
1975	100.0	101.8	103.8	107.0	111.4	113.5	114.7	115.4	116.4	118.2	119.6	121.2	111.9
1976	122.7	124.4	125.0	127.1	128.8	129.4	129.7	131.6	133.4	136.0	137.9	139.3	130.4
1977	143.2	144.6	146.1	149.1	150.6	152.3	152.6	153.3	154.1	155.1	155.9	156.7	151.1
1978	157.6	158.9	160.0	161.7	162.7	163.9	164.5	165.2	165.9	166.5	167.7	168.8	163.6
1979	170.9	172.3	173.6	175.6	177.0	179.9	188.3	189.6	191.5	193.5	195.3	196.7	183.7
1980	200.1	202.7	205.5	211.1	213.0	215.0	216.8	217.1	218.4	219.7	221.4	222.6	213.6
1981	224.3	226.6	229.9	236.1	237.6	239.0	239.9	241.7	243.0	244.6	246.2	247.2	238.0
1982	248.9	249.7	251.7	256.0	258.1	258.7	258.7	258.7	259.5	260.8	262.1	262.9	257.2
1983	263.3	264.4	264.8	267.8	269.0	269.5	270.1	271.0	272.2	273.1	274.0	274.6	269.5
1984	274.2	275.3	276.1	280.0	281.3	281.9	281.3	281.6	281.8	283.4	284.1	284.7	280.5
1985	285.9	287.0	289.6	293.9	295.0	295.4	294.4	295.1	296.1	296.5	297.5	297.7	293.7
1986	298.1	299.1	299.3	301.4	301.9	302.9	301.7	302.5	304.0	304.2	304.8	305.5	302.1
1987	306.6	307.9	308.4	310.4	311.5	311.6	310.8	311.6	312.5	313.9	315.4	315.9	311.4
1988	315.6												
<i>Indicative HICP, percentage change over 12 months²</i>													
1976	22.7	22.2	20.4	18.8	15.6	14.0	13.1	14.0	14.6	15.1	15.3	14.9	16.5
1977	16.7	16.2	16.9	17.3	16.9	17.7	17.7	16.5	15.5	14.0	13.1	12.5	15.9
1978	10.1	9.9	9.5	8.5	8.0	7.6	7.8	7.8	7.7	7.4	7.6	7.7	8.3
1979	8.4	8.4	8.5	8.6	8.8	9.8	14.5	14.8	15.4	16.2	16.5	16.5	12.3
1980	17.1	17.6	18.4	20.2	20.3	19.5	15.1	14.5	14.0	13.5	13.4	13.2	16.3
1981	12.1	11.8	11.9	11.8	11.5	11.2	10.7	11.3	11.3	11.3	11.2	11.1	11.4
1982	11.0	10.2	9.5	8.4	8.6	8.2	7.8	7.0	6.8	6.6	6.5	6.4	8.1
1983	5.8	5.9	5.2	4.6	4.2	4.2	4.4	4.8	4.9	4.7	4.5	4.5	4.8
1984	4.1	4.1	4.3	4.6	4.6	4.6	4.1	3.9	3.5	3.8	3.7	3.7	4.1
1985	4.3	4.2	4.9	5.0	4.9	4.8	4.7	4.8	5.1	4.6	4.7	4.6	4.7
1986	4.3	4.2	3.3	2.6	2.3	2.5	2.5	2.5	2.7	2.6	2.5	2.6	2.9
1987	2.9	2.9	3.0	3.0	3.2	2.9	3.0	3.0	2.8	3.2	3.5	3.4	3.1
1988	2.9	2.9	3.1	3.6	3.7	4.1	4.2	4.4	4.6	4.5	4.4	4.5	3.9

¹ Estimated from RPI indices and weights, assuming a constant geometric mean effect of 0.25 per cent on the annual inflation rate during the period 1976-1987. The 1988 inflation rates are calculated from the indicative HICP index levels for 1987 and the calculated HICP for 1988.

² The identifiers for these series are: BGGI for the index and BGGJ for the 12-month percentage change.



shows that the HICP has been below RPIX throughout the length of the series except for the 12 months from April 1991 to March 1992 when a sharp drop in the Community Charge depressed the annual change in the RPIX. The chart also shows that HICP inflation peaked in April and June 1991 at 8.5 per cent whereas RPIX peaked earlier, in September - October 1990, at 9.5 per cent.

Table 4 provides a reconciliation of the differences between the HICP and RPIX inflation rates. The effect of the sharp movements in the Community Charge in the early 1990s, when it rose by 34 per cent during the 1990/91 financial year, only to fall by 30 per cent in the following year, can be clearly seen.

It is also noticeable how the formula effect has risen from about 0.23 per cent in 1989 to 0.54 per cent for the year to September in

Table 4 Analysis of differences between HICP and RPIX annual average 12 month percentage changes

	Difference between HICP and RPIX unrounded 12 month per- centage changes	Differences due to:						
		RPIX including			HICP including PCs ¹	Different treatment of insur- ance weights	Use of different formulae in HICP and RPIX	Other differences
		Council tax, rates etc	house depreciat- ion	road tax				
1989	-0.66	-0.16	0.00	0.05	0.00	-0.10	-0.23	-0.22
1990	-1.10	-0.92	0.00	0.07	0.00	0.05	-0.26	-0.04
1991	0.72	1.18	0.00	0.06	0.00	-0.12	-0.35	-0.05
1992	-0.41	0.25	0.00	-0.03	0.00	-0.17	-0.33	-0.13
1993	-0.49	0.22	0.00	-0.08	0.00	-0.19	-0.43	-0.02
1994	-0.37	0.09	0.00	-0.04	0.00	-0.02	-0.41	0.01
1995	-0.20	-0.06	0.08	-0.01	0.00	0.12	-0.38	0.05
1996	-0.47	-0.12	-0.04	-0.01	-0.07	0.21	-0.44	-0.01
1997	-0.93	-0.14	-0.08	0.00	-0.12	-0.03	-0.52	-0.02
1998 to Sept	-1.06	-0.17	-0.19	-0.01	-0.10	-0.12	-0.54	0.05

¹ PCs have been included in HICP since its start in 1996 but were not introduced into the RPI until 1998.

1998. The reasons for this increase are unclear but are being investigated as part of a wider research project into potential bias in the RPI. The main factors which are thought to influence the size of the formula effect are:

- the degree of heterogeneity of the products within a particular item description
- the use of January as the base period, particularly for goods and services which are affected by January sales.

This latter point may help explain why, for each year, the formula effect is greatest for clothing & footwear, followed by furniture & furnishings.

Another factor which has had a significant impact on the differences between RPIX and HICP is the different treatment of insurance weights. Both the HICP and RPIX use movements in gross prices of insurance policies as the indicator of price change. However, because the weight given to insurance is much lower in the HICP, the significant changes in insurance prices which tend to occur have much less impact on the HICP than on RPIX.

Table 4 also shows that house depreciation, which has been included in the RPI since 1995, has contributed to a widening of the gap between HICP and RPIX, particularly during 1998.

Chart 2

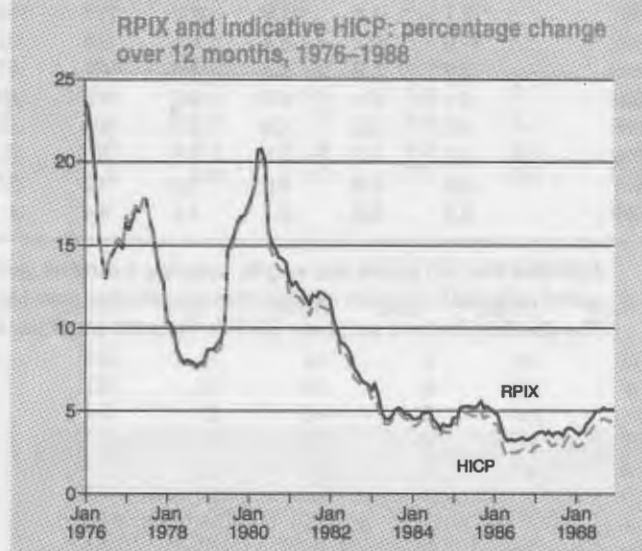


Chart 2 illustrates how the indicative HICP inflation rate compares with RPIX during the period 1976–1988. The two measures track each other closely with the peaks and troughs generally coinciding. Over this period, HICP was on average 0.46 per cent below RPIX, of which 0.25 per cent is attributable to the estimated formula effect.

Future development of the HICP

The HICP is still under development. From December 1999, the population covered by the HICP will be harmonised so that in each country the weights are based on expenditure by foreign visitors and institutional households, as well as private households. From the same date, the coverage of goods and services is also being extended to cover all expenditure by private consumers on education, health (except hospital services), and social protection services (except retirement homes and services provided in the home). Retirement homes will be brought into the index from December 2000. The implementation date for hospital services and services provided in the home is still under discussion.

The possibility of extending the HICP to include owner-occupier housing costs is also being considered by Eurostat and Member States. The two most likely options are the continued exclusion of such costs or an index covering the acquisition costs of new housing, perhaps accompanied by indices covering other costs faced by owner-occupiers.

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The development of a Land Registry-based national house price index



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Summary

The Office for National Statistics and H.M. Land Registry are investigating the possibility of constructing a house price index for England and Wales based on all domestic property transactions as notified to the Land Registry. The purpose of this note is to summarise progress achieved so far and to outline further work still needed.

Background

The most widely-used indicators of house price movements in the UK are those published by the Department of the Environment, Transport and the Regions (DETR - formerly DoE) and those published by Halifax plc and the Nationwide Building Society. Whilst these indices are useful measures of house price movement, none of them is ideal - for a variety of reasons.

DETR Index

This is based on a relatively small (five per cent) sample of completions as recorded by members of the Council of Mortgage Lenders - which comprises almost all UK-based lenders. The index takes no account of property purchases for cash only, which are estimated to account for about 25 per cent of all transactions.

Halifax and Nationwide Indices

These indices:

- also exclude cash purchases;
- are limited to applications for mortgages through these lenders only;
- are based on *approved applications* only, which may not always go through to completion.

The H.M. Land Registry database

H.M. Land Registry is the only institution in England and Wales that maintains a database of **all** domestic property transactions including cash purchases. However, this database was not compiled until mid-1994 and therefore only from that date did a house price index based on Land Registry data become a practical possibility.

The prices in the DETR, Halifax, Nationwide and Land Registry datasets are measured at different points in the property transfer process, as follows:

Halifax and Nationwide

Price at time of approval of application.

DETR

Price at completion.

Land Registry

Also price at completion - but not available until transfer documents are lodged with Land Registry. This can be up to several weeks, even months, after completion. H. M. Land Registry is the only institution in England and Wales.

On the above basis the Halifax and Nationwide indices are the most timely measures. However, some of the applications may not go through to completion; and, for those that do proceed to completion, the price of some transactions will be re-negotiated prior to completion. Consequently the Halifax and Nationwide indices may not be a true reflection of prices actually paid.

In terms of its total coverage, the Land Registry database is at a considerable advantage compared to other data sources. However, its usefulness is constrained because of:

- the time lag between completion and receipt of transfer documents at Land Registry;

- the range of particulars recorded for each property is extremely limited compared to the DETR, Halifax and Nationwide datasets.

Nevertheless, the comprehensive coverage of the Land Registry database justifies further investigation of its potential as a source for a house price index. Consequently, in 1996, the Office for National Statistics commissioned a feasibility study to assess the potential for constructing a house price index based on Land Registry data - see section below entitled. "1996 feasibility study of Land Registry data".

House price index methodology

Conceptually there are two different approaches to house price index construction:

- the "hedonic regression" approach (the basis for the Halifax and Nationwide indices);
- a simpler, matrix approach (the basis for the DETR index).

Both approaches incorporate the principle of **mix-adjustment**. This ensures that the relative importance of different property characteristics in different regions remains fixed throughout the life of the index - rather like the way the Retail Prices Index measures the changing total cost of a fixed basket of goods and services. If mix adjustment were not used, the house price index would reflect not just changes in house prices but also changes in, say, the proportion of property types sold from one period to the next. For example, if the proportion of detached homes sold in period t was higher than in period t-1, without mix adjustment this could lead to a rise in the house price index even if the general level of house prices had remained unchanged.

Details of these two approaches are described more fully in the Annex.

1996 feasibility study of Land Registry data

To assess the potential for constructing a house price index based on Land Registry data, ONS commissioned a study by Professor M. Fleming and Professor J. Nellis⁴. Fleming & Nellis constructed a house price index based on all property transfers processed by the Land Registry from the second quarter of 1994 to the third quarter of 1995. For analysis purposes they also created comparable datasets and price indices based on DETR data and Halifax data.

To illustrate the relative sizes of the Land Registry, DETR and Halifax databases - during 1994/5 the number of property transfers for England and Wales, recorded by Land Registry, was about **40 times** greater than the sample of properties included in the DETR house price index for the same period. It was also about **6 times** greater than the number of properties in the Halifax database.

Using the "hedonic regression" approach Fleming & Nellis calculated three different price indices - one for each dataset. Despite the limited range of information on house characteristics, the Land Registry index numbers gave reasonably robust results - in the sense that they compared well with those derived from the DETR and Halifax databases. On the other hand, in spite of the extremely large size of the Land Registry database, its explanatory power⁵ was lower than that provided by the DETR and Halifax databases.

Their report concluded that the usefulness of the Land Registry database would be enhanced by incorporating more information about house characteristics. Previous research had shown that, of those variables missing from the LR database, the most important was an indicator of house size - measured either in terms of floor area or in terms of number of rooms (or bedrooms). The importance of house size as an explanatory variable has been consistently borne out in other studies of house prices that Fleming & Nellis have carried out for the Halifax and Nationwide and for DETR.

Fleming & Nellis concluded that consideration needed to be given to extending the range of information collected by the Land Registry to include other relevant house characteristics - notably a proxy for property size.

Subsequent discussions with Land Registry have focused on how such information might be collected. The obvious solution was to modify the design of the transfer document. However, the range of information sought on the transfer forms is covered by legislation and an amendment to this legislation would be needed to make it compulsory for conveyancers to provide information on "number of bedrooms". This option has so far not been pursued.

As a compromise, Land Registry introduced the question (from April 1998) on a voluntary basis. To date, the level of response has been less than ten per cent. This in part may have been influenced by the fact that solicitors have been able to use the **unmodified** transfer document, which did not ask for number of

bedrooms. There are also concerns that the sample of those responding will be biased. This is because regions covered by conveyancers who provide this voluntary information will be very well represented in the sample but regions covered by conveyancers who fail to supply this information will be under-represented.

Whilst these early figures may not be indicative of response rates in the long term, it does suggest that there may be difficulties in constructing a representative index.

It is hoped that, in due course, the level of response will improve and Land Registry are currently discussing possible ways of achieving this.

The way ahead for the Land Registry option

Once a reliable datastream is available it will be necessary to accumulate a run of such data - covering at least five successive quarters. This will enable the ONS to carry out a further feasibility study to test whether the Land Registry-based price index, **including** information on property size, can be used as a reliable indicator of house price change. Such further study will also consider the relative merits of whether a Land Registry house price index should be based on a hedonic regression approach or a matrix approach.

Such are the imponderables that still have to be overcome it is too early to say whether a Land Registry-based house price index will ever become the "headline" house price index for England and Wales. Nevertheless the ONS is actively seeking solutions to these problems.

Parallel developments in Scotland and Northern Ireland will be necessary if a Land Registry price index for England and Wales is eventually to be extended to become a UK house price index.

Other developments

In addition to the collaboration between the ONS and Land Registry, the Bank of England has undertaken a simple, mix-adjustment of the Land Registry dataset (using the matrix approach), in order to supplement the range of house price indicators that inform the Bank's Monetary Policy Committee.

An EU taskforce has been set up to consider the possible inclusion of owner-occupied housing costs in the new Harmonised Index of Consumer Prices (HICP). A report on the interim findings of the taskforce is due in the middle of 1999. If they recommend that acquisition costs of new dwellings should be included in the HICP, the implementation of this recommendation would be helped by the development of a national house price index based on Land Registry data.

To ensure a co-ordinated approach to house price index development and to avoid any duplication of effort, representatives of the ONS, H.M. Treasury, the Bank of England and the DETR now meet on a regular basis to share ideas and discuss alternative developments.

ANNEX

Method 1: The “hedonic regression” approach

A set of house prices, P_i ($i=1,2,\dots,n$), may be observed in any time period (t) in which each house (i) is sold. Given the supply and demand conditions in the housing market, such houses may be priced differently due to differences in qualitative characteristics (such as type of property, the availability of certain amenities, the location of the property etc) and to differences in quantitative characteristics (such as the age of the property and the number of bedrooms etc). Thus, for each house i we can write P_i as some function of these various characteristics, X_j , together with a group of unmeasured factors (assumed to be randomly distributed) which are specific to each house but for which data are not available, e_j . In general terms the relationship may be expressed as follows:

$$\ln(P_i) = b_0 + b_1 X_{1i} + b_2 X_{2i} + b_3 X_{3i} + \dots + b_j X_{ji} + e_i$$

where b_1, b_2, \dots, b_j are the regression coefficients corresponding to the qualitative and quantitative variables, X_j .

The first step in regression analysis is to determine an appropriate functional form for the estimating equation. Box and Cox (1964)¹ developed a statistical test for the functional form providing the “best fit” based on likelihood ratio tests and the procedure they proposed has been adopted in both the Halifax and Nationwide models. The results showed that the **semi-logarithmic** functional form (with the dependent variable P_i measured in natural logs) was to be preferred.

Given the nature of the data employed, qualitative characteristics can only be represented by “dummy variables” which take the value of one or zero depending upon the presence or absence of a particular attribute. For instance, in the Halifax model there are five dummy variables representing house type: detached; semi-detached; terraced; bungalow; flat. Each of these variables take the value 1 if the property is of that type, 0 otherwise. Obviously, for any particular property one of these variables must have the value 1 and the other four must all be zero.

The technique of ordinary least squares regression allows us to estimate the coefficients b_j pertaining to each of the explanatory variables X_j for any set of houses. These coefficients indicate the relative importance of the variables in explaining the variation of house prices in a particular time period.

Of course, the average price for a set of houses within a particular period depends on the number of observations on each characteristic in that period. For instance a rise in price from one period to the next could come about simply because of an increase in the number of detached houses sold as a proportion of the total. This can be overcome by fixing the mix of characteristics between one period and another, by applying a standard set of weights corresponding to the numbers of each characteristic observed in a chosen period - usually the base period. The index numbers calculated then represent the movement in average prices for houses having the same proportion of characteristics as those bought in the base period. The index numbers themselves are computed by comparing the weighted (ie mix-adjusted) prices in each current period with the weighted average price in the base period.

The mix-adjusted house price is then given by:

$$\ln(P_i) = b_{0,i} + W_1 b_{1,i} + W_2 b_{2,i} + W_3 b_{3,i} + \dots$$

where the W_j are the weights - which are fixed over time. The weights are set as the proportion of houses with that characteristic during the base period.

The Halifax and Nationwide indices are effectively geometric means of different house prices, since the b_j can be interpreted as the log of the prices of different cells.

The above methodology is then used to produce base-weighted standardised house-price index numbers, whereby a weighted average of the estimated regression coefficients is calculated (each coefficient being regarded as an implicit characteristics-price). The steps involved are as follows:

- calculate the weights, W_j : the proportions of the qualitative variables and the means of the quantitative variables present in the chosen base period.
- with price recorded in natural log form, use the technique of ordinary least squares to estimate the regression coefficients b_j for the j explanatory variables in both the base period and for every subsequent time period.

- calculate a base-weighted (Laspeyre's type) index for the current period (I_t) as follows:

$$I_t = \frac{\text{anti log } \sum b_{jt} W_j}{\text{anti log } \sum b_{j0} W_j} \times 100$$

Summation is over all variables included in each regression.

Both the Halifax and Nationwide house price indices are determined by carrying out a hedonic regression on the entire UK database.

Method 2: The matrix approach

Unlike the wide range of property characteristics available to the Halifax and Nationwide, the range of information used to calculate the DETR index is limited to:

- price;
- region;
- property type;
- age;
- number of habitable rooms;
- type of borrower (first-time purchaser or former owner-occupier).

A 314-cell matrix is constructed, each cell representing a unique combination of the five independent variables.

The weights used in the calculation of the index are revised every January and are based on the proportions of transactions monitored during the preceding three calendar years. So a 314-cell vector is set up with these "weights". A second vector provides the average property price in the base period (1993) for each of the 314 different sets of properties.

To determine the current quarterly house price index the complete set of transactions for that quarter are divided up into the 314 categories, and the average price for the quarter calculated for each category.

The index is then calculated as:

$$I_t = \frac{\sum W_j P_{jt}}{\sum W_j P_{j0}} \times 100$$

In other words, the national weighted-average price is calculated for the current period and divided by the national weighted-average price for the base period. Multiplication by 100 gives the current house price index. In the calculation above, the average house price for each cell is determined as an arithmetic mean. Similarly the national weighted-average house price is also computed as a weighted arithmetic mean.

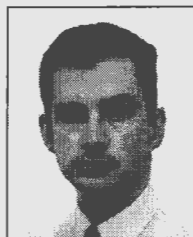
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- ¹ Box, G.E.P. and Cox D.R. (1964), "An Analysis of Transformations", Journal of the Royal Statistical Society, 26, Series B, pp 211-243.
- ² Fleming M, and Nellis J.G. (1984), *House Price Statistics for the United Kingdom: A Survey and Critical Review of Recent Developments*, Loughborough University Department of Economics, Occasional Research Paper No.80.
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Explanatory power

- ⁵ An ideal model for constructing a house price index would be one where *all* price variation could be explained in terms of changes in the characteristics of the houses sold during the latest month or quarter. In practice, this is not possible because information on certain characteristics (such as quality of decor or environmental quality of the neighbourhood) are simply not available, even though they can influence the price of the house. The *explanatory power* (something less than 100 per cent) is therefore a measure of the extent to which the changes in house prices are attributable to differences in the characteristics of the properties being sold. For example, the explanatory power obtained in the official Halifax house price index regressions is usually above 70 per cent. In the 1994/5 analysis of Land Registry data by Fleming and Nellis, the explanatory power was less than 50 per cent.

Improving the quality of the Producer Price Index



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Summary

- The current sample for the PPI has been built up over a number of years. This has led to an out of date sample that no longer fully reflects the current economy
- A new random sample from Prodcom is being introduced in three stages up to February 2000. Along with other changes this represents a significant improvement in the quality of the PPI
- In future it will be possible to produce estimates of accuracy (sampling errors) for the first time
- It is proposed to introduce systematic procedures to keep the new sample up-to-date
- A new estimator for weighting the PPI will be piloted
- There will be no revisions to historic series.

Introduction

This article explains in some detail the changes being made to improve the panel of contributors selected for the Producer Price Index (PPI). The project to overhaul the PPI sample started in 1996 and is the most significant update of the PPI sampling methodology since the 1950s. Updating the panel started in June 1998 and should be completed by early 2000. The article also explains other proposed improvements which are planned to be rolled out up to 2002. However, there is still considerable developmental and operational work to do.

The article is in six parts:

Part 1 – Current methods

Part 2 – Areas for improvement

Part 3 – What we are doing about the problems

Part 4 – Practical aspects of introducing the new sample

Part 5 – Further developments

Part 6 – Conclusion

Part 1 - CURRENT METHODS

To understand the improvements being made and proposed, it is necessary to understand the current PPI sampling and weighting methods, and the problems that these cause. The article therefore starts by outlining the current methods and practices.

1.1 What is the PPI?

The PPI measures the change in prices of goods produced by manufacturers in the UK and sold into the UK market. For the PPI, prices are collected for goods as they leave the 'factory gate' (e.g. sold to wholesalers/distributors). The PPI covers manufacturing and some other industries such as mining. About 700 indices are currently published each month (in one of three business monitors, and also available on disc). The PPI is used to monitor inflation, in the deflation of National Accounts, and by business users to price long term contracts.

The PPI indices are calculated using around 9,000 price quotes for various products supplied monthly, on a statutory basis, by some 3,700 contributors. In addition to the prices obtained directly from manufacturers, some prices are obtained from administrative sources, such as other government departments and trade publications.

1.2 Index calculation

The products which fall into each Producer Price Index for 1995=100 are defined by the European 'Classification of Products by Activity' (CPA) which is based on the 1992 Standard Industrial Classification. The CPA has a 'family tree' structure. 1,400 six digit products are grouped together to produce 240 four digit classes, which are grouped to give 23 two digit divisions, which are grouped into 'all-manufacturing' (see Table 1 for an example).

Table 1: Example of the system of classifying products used for the Producer Price Index

All Manufacturing

Division (PPI two digit level)

15 Manufacture of Food Products and Beverages

Class (PPI four digit level)

15.31 Prepared and preserved potatoes

Product (PPI six digit level)

15.31.11 Potatoes, frozen (e.g. oven-ready chips)

15.31.12 Potatoes, preserved

Prodcum product (eight digit level)

15.31.11.00 Potatoes, frozen

15.31.12.10 Dried potatoes

15.31.12.30 Potato flour, meal and flakes

15.31.12.50 Potatoes preserved other than by vinegar / acetic acid, frozen

15.31.12.70 Potatoes in form of flour, meal and flakes

15.31.12.90 Other preserved potatoes

The Producer Price Indices are Laspeyres (base weighted); the weights are updated every five years. The 1990 based index was released in August 1993 and was the 'live' index until September 1998 (by which time the weights were eight years old). The 1995 based index was published for the first time in October 1998. During rebasing, all the contributor weights within six digits, and all the index-to-index weights are updated to the latest base year. Each six digit PPI index is calculated as the weighted sum of price relatives. The price relative is simply the current price of an item, divided by the average price of that item in the base year (currently 1995). (An item is a specified product for which a producer provides a price quote every month. Contributors are asked to select items which are representative of their sales.) The formula is :

$$\text{Index value} = \frac{\sum_i \text{sales}_i \text{PR}_i}{\sum_i \text{sales}_i} \quad (1)$$

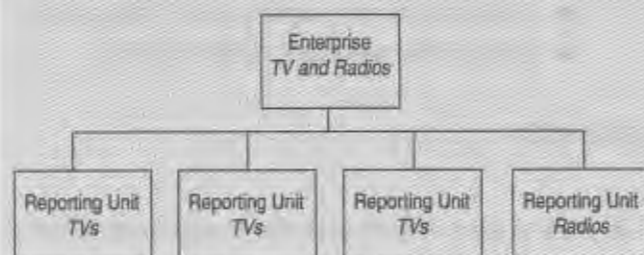
where PR_i represents the price relative for item i , sales_i represents the sales value in the base year for item i , and i counts the number of items in the six digit index.

The sales figures are obtained from the Prodcum (PRODucts of the European COMMunity) survey which collects sales information from about 29,000 contributors each year. Each contributor's sales are allocated between about 4,400 different products. Prodcum (eight digit) product definitions are based on the 1992 Standard Industrial Classification and can be unambiguously grouped into the CPA six digit classification (see Table 1).

1.3 Reporting structure and PPI weights

Prices for the PPI are collected from reporting units (RUs). A reporting unit (e.g. a factory) may be part of a larger enterprise (e.g. a company) as illustrated in Figure 1. A reporting unit selected for a particular six digit PPI (e.g. 323020, television receivers) may not be the only RU in the enterprise making that product. For the PPI weight, all the sales of the RUs in the enterprise making the product are summed (e.g. all the sales of TVs from all the factories in the company reporting to Prodcum). This summed figure is used to calculate the PPI weight. If, for example, the reporting units within an enterprise provide four price quotes for a product (e.g. the prices of four models of TV), then one quarter of the 'enterprise' sales figure is given to each specific item (e.g. each model of television).

Figure 1: An example enterprise structure

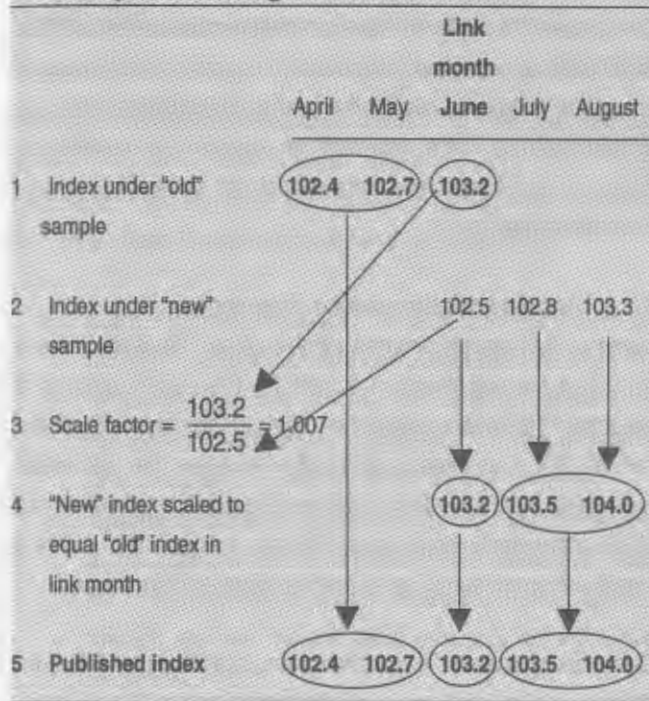


1.4 Linking in new items/deletions

The paragraphs above have explained how indices are calculated when first set up. However, it is necessary to keep the indices up-to-date to reflect new products being made and old products which manufacturers stop producing.

When a producer stops making a product the first step is to see if the producer makes another product within the same six digit; if so this will replace the old item (with an adjustment to account for any change in specification). If no replacement can be found it is necessary to delete the item from the index. The index is then recalculated, with new weights (which exclude the deleted item). When a new item is recruited, it needs to be added to the appropriate index. It is necessary to have sales figures for the base year to weight the new item into the index.

Example 1: Linking in new data



For both deletions and additions the index is recalculated using the new weights. To prevent any discontinuity in the index, the new index value is linked onto the old index value (Example 1 gives an example of linking in practice). Linking of six digit indices (because of deletion of 'dead' items or addition of new items) happens quite frequently in practice, but users see no obvious impact.

1.5 Weighting six digit indices together

Once six digit indices have been calculated, they are weighted together to produce four digit (and higher) indices using 'home sales'. These represent sales of the product manufactured in the UK and sold into the UK market. They are calculated from grossed Prodcom sales at the six digit level, minus the corresponding six digit exports (obtained from Intrastat, a Customs and Excise survey of product trade).

1.6 Summary of current methods

- PPI six digit indices are Laspeyres price indices with a current base year of 1995
- They are calculated by weighting together price relatives using Prodcom enterprise sales
- Higher level indices (four digit, two digit and all manufacturing) are calculated by weighting together the six digit indices using home sales
- Item weights are updated when items are deleted or added to an index or when reporting structures change. The newly constituted index is linked onto the old index value.

Part 2 - AREAS FOR IMPROVEMENT

The current PPI sample is a cut-off design, with larger producers of a product selected for the panel. The panel has been built up over a long period of time. Contributors drop out of the sample when they can no longer provide a price quote for a product and others are recruited when the number of price quotes gets too low. Selecting and maintaining the sample in this way has led to a number of deficiencies in the sample being used to calculate the PPI. These are detailed in the following sections.

2.1 Static panel

Once a contributor is selected and recruited to the PPI panel, they remain in the panel until they

- cease trading; or
- stop making the product for which they were selected (and are unable to provide a suitable replacement within the same index).

This means that price quotes may stay in the index even though they are no longer representative, and that the responsibility for providing price quotes is not shared between contributors.

2.2 Top-up recruitment

When products drop out of the PPI the total number of price quotes drops below the agreed 9,000. It is therefore necessary to periodically recruit new contributors or additional price quotes from existing contributors. In the past there has been top-up recruitment when the amount of drop-out became significant in total, or for particular indices. Recruitment took place about every couple of years in practice. This meant that there would be a gradual reduction in price quotes over a two year period, and then a top-up. The latest recruitment was carried out in 1997. New items were obtained from respondents to the 1995 Prodcom survey; respondents were chosen on the basis of keeping indices publishable. The previous companies for recruitment were chosen from the 1989 Annual and Quarterly Sales Inquiries (the predecessors to Prodcom).

2.3 Arbitrary Weights and classification problems

As explained in 1.2, the PPI Price Relatives are weighted together using sales data. For the latest recruitment, for instance, the sales data came from returns to the 1995 Prodcom survey. As the PPI panel has been built up over a long period, and bears no direct relation to the Prodcom sample, there is no guarantee that an existing PPI contributor will have been selected for Prodcom. Where no sales value is available from Prodcom for an existing PPI contributor they are given an arbitrary weight (up to a maximum

of 5 per cent) within the six digit index. In practice this means that the price information they provide has relatively little impact on the PPI index movement.

The problem of arbitrary weights is exacerbated if there is a difference in classification between the PPI and Prodcom surveys. For example, a manufacturer might reply to both surveys but Prodcom classify a product within one six digit but PPI classify it to another. For example, a chocolate snack biscuit might be classified as a biscuit in Prodcom but confectionery in the PPI. In such circumstances there will be no Prodcom sales for the producer within the PPI six digit, so the item will be given an arbitrary weight. This problem of inconsistent classification has been addressed recently by comparing the data held on the PPI and Prodcom systems, but there is nothing in the PPI selection procedures to ensure consistency of classification.

2.4 Problems arising from a change in company structure

As explained in 1.3, items are weighted into six digit indices using enterprise sales. Company structures may change over time (e.g. because of mergers, re-organisations, etc). The current PPI practice is to try and reflect up-to-date company structures, taken from the Inter Departmental Business Register. Any change in company structure may result in changes in the enterprise weights. This may cause problems if base year sales are not available for the reporting units in the new company structure.

2.5 Problems of a voluntary PPI and multiple price quotes

In 1991 price collection for the PPI in Great Britain became statutory under the Statistics of Trade Act 1947; and since 1993 has also been statutory in Northern Ireland under Article 5 of the Statistics of Trade and Employment (Northern Ireland) Order 1988. Prior to this the survey was voluntary.

When the survey was voluntary, the ONS relied on the co-operation of contributors and took price quotes where they could be obtained. In certain industries and for certain products, contributors were reluctant to provide price quotes, and the sample was deficient. For other products companies provided many price quotes for essentially the same products, which tended to move in a similar fashion. For some products many price quotes were collected because Trade Associations were active users of the PPI data and encouraged their members to participate in the PPI survey. Once the PPI became statutory, additional price quotes were obtained to fill in gaps, but the panel still partly reflected its voluntary history.

2.6 Panel does not reflect relative importance of industries

Using a cut-off sample with top-up recruitment has meant that the distribution of price quotes between products has not changed enough to reflect the relative importance of industries within the current economy. There are a lot of price quotes for some relatively small industries and few price quotes for some of the more important industries.

2.7 Small contributors under-represented

Using a cut-off sample ensures that the largest companies making a product are selected for the sample. The current method of weighting Price Relatives together (using enterprise sales) means that the price movements of small companies may be under-represented, because their sales represent only themselves, not all the other small contributors. This may be a problem where a significant proportion of sales are from smaller companies.

Our investigations have not shown any significant evidence for differences in price movements between small and large manufacturers of products. However, the current methods are potentially biased.

2.8 No estimates of index 'accuracy'

To produce estimates of sampling error (the error from taking a sample rather than a full census) a random sample is necessary rather than a cut-off sample. The current sample is not random so sampling errors cannot be calculated.

2.9 Summary of problems with current panel

Part 2 of this article has outlined the current problems with the PPI, which are summarised below:

- The current PPI panel has been built up over a long period of time using a cut-off sample with top-up recruitment
- It has too many price quotes for some products, but insufficient for others
- Multiple price quotes from some contributors add little value
- The use of arbitrary weights means that some price quotes have little impact on index results
- The panel does not reflect the current pattern of product sales as well as it should
- Small contributors are under-represented
- The panel is not random, so it is not possible to estimate sampling errors for the indices.

Part 3 - WHAT WE ARE DOING ABOUT THE PROBLEMS

Having identified the deficiencies in the PPI, ONS has worked since 1996 with Southampton University and Social and Community Planning Research (SCPR) to address the problems. Five main areas for improvement have been identified:

- i. **Sampling from Prodc**om: The sample for the PPI will be randomly sampled from those companies selected for Prodc
- om. This will ensure that when a company is recruited, information is available on the products produced, and the level of sales for those products.
- ii. **Optimal allocation**: A methodology has been developed to calculate the number of price quotes needed for each six digit index (given certain constraints) in an optimal fashion, so that the sampling errors of the PPIs are minimised.
- iii. **Sampling errors**: With the introduction of a random sample, it is possible to calculate sampling errors. It is intended to publish these periodically with the PPI data.
- iv. **Rotation (systematic updating)**: It is planned that the sample will be rotated annually to systematically pick up new products and contributors and spread the burden on smaller producers between a wider number of companies.
- v. **New estimator**: It is planned to introduce a new estimator which takes into account the likelihood of selection for the sample, as well as the level of sales for a contributor.

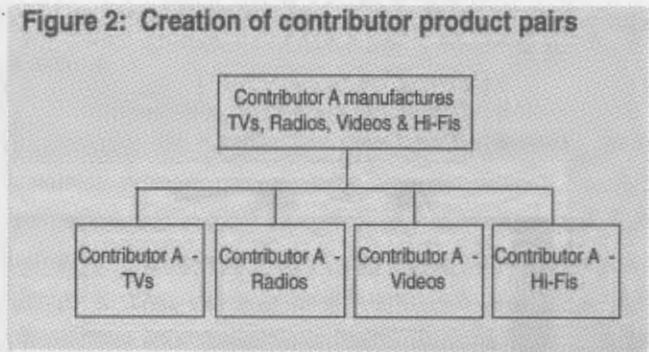
The first two areas of improvement are well underway and are described in the rest of this part of the article. Part 4 describes some of the operational changes being made to introduce the new sample. The last three areas of improvement are longer term and are described in Part 5 (Further Developments).

3.1 Sampling from Prodc

om The objective of the new sample was that it should be drawn from the contributors to Prodc

3.1.1 Creating the population of contributor product pairs

The units used for selecting a sample for the PPI are combinations of contributors and products called contributor product pairs. If a single contributor made products in four separate six digit indices, four contributor product pairs would be created (see Figure 2).



3.1.2 Stratifying the sample

For each six digit product the population of contributor product pairs is divided into three strata, depending on the value of their sales (see example 2). Each strata represents one third of the total sales for that product. The stratum containing the contributor product pairs with the highest sales is fully enumerated; that is all are selected for the PPI. A random sample is drawn from the other two strata (the sampling fractions are calculated individually for each six digit).

The strata boundaries are calculated for each four digit index and then applied to all the six digit indices that fall within that four digit.

Example 2: Stratifying contributor product pairs

Contributor product pairs	Sales		
1	£450,000	Strata 1 £1.1 million total	All contributor product pairs selected
2	£350,000		
3	£300,000		
4	£250,000	Strata 2 £1.1 million total	3 out of 6 contributor product pairs selected
5	£225,000		
6	£200,000		
7	£175,000		
8	£150,000		
9	£100,000	Strata 3 £1.1 million total	5 out of 14 contributor product pairs selected
10	£98,000		
11	£96,000		
12	£93,000		
13	£89,000		
14	£86,000		
15	£84,000		
16	£81,000		
17	£78,000		
18	£76,000		
19	£74,000		
20	£72,000		
21	£69,000		
22	£60,000		
23	£44,000		

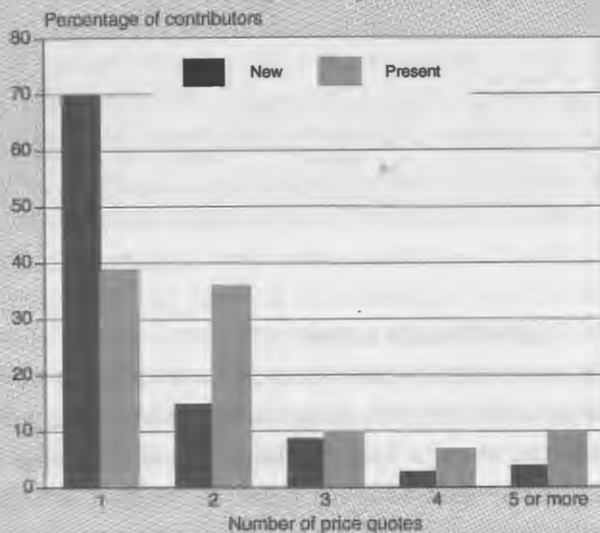
Boundary = £250,000

Boundary = £98,000

Total sales = £3.3 million

Chart 1

Comparison of price quotes per contributor between new sample and present sample



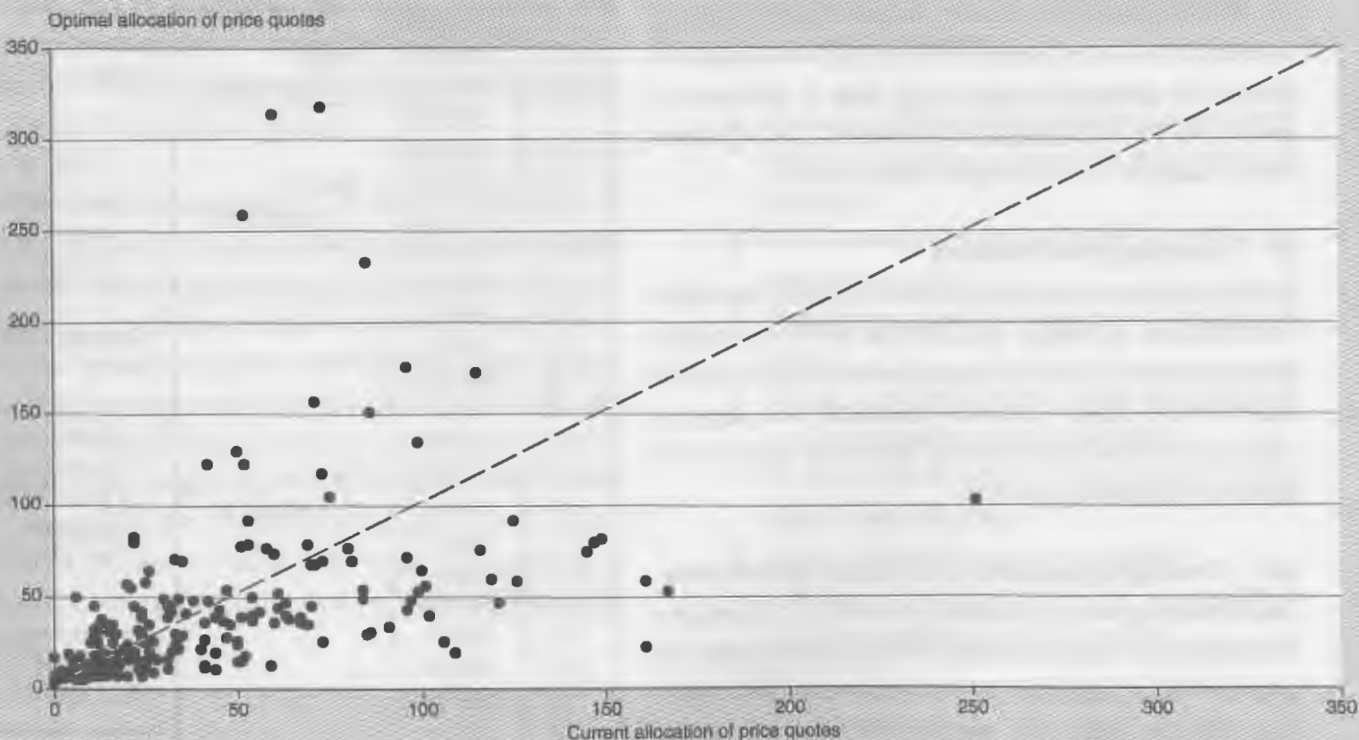
3.1.3 Selecting the sample in practice

For the randomly sampled strata a sample is selected using Permanent Random Numbers (PRNs). This procedure is important for any future updating of the sample (see 5.2). PRN sampling works as follows:

- a random number between 0 and 10,000,000,000 is permanently assigned to each contributor product pair in the stratum (this is its PRN);
- the contributor product pairs are ranked according to their PRN;
- the contributor product pairs with the lowest random numbers are selected for the sample, up to the number in the allocation;
- the lowest PRN for a contributor product pair in the sample and the lowest PRN for a contributor product pair **not** selected for the sample are stored for use in sample rotation (see 5.2).

Chart 2

Comparison of price quotes between current and optimal allocation for 4 digit indices



3.2 Optimal allocation

The next section explains, in a simplified way, how the optimal allocation was calculated. A comparison is then made between the new allocation and the existing panel.

3.2.1 Calculating the optimal allocation

The number of price quotes to be obtained for each strata in each six digit was calculated using 1996 Prodcum data. The objectives in calculating the allocation of price quotes between six digits and stratum were:

- a maximum of 9,000 price quotes in total;
- minimising the sampling error of the all manufacturing index;
- providing the highest quality four digit indices possible;
- each six digit index to have at least three contributor product pairs;
- each four digit index to have at least five contributor product pairs;
- broadly the same resources should be needed for monthly calculation of the PPI.

The allocation calculations were statistically complex. In very simple terms the allocation of price quotes for a stratum within a six digit was related to:

- the squared value of sales;
- the number of contributor product pairs; and
- the variance of the prices for the product (assuming that the present price indices were themselves the outcome of a random sample).

The higher the relative value of any of these, then the higher the allocation.

To minimise the sampling error for the overall index, each contributor provides only one price quote per product. The only exception to this is where the optimal allocation was greater than the number of contributor product pairs available from the Prodcum sample. In these instances contributors were asked to provide two or three price quotes for a product (the maximum is three price quotes per product per contributor).

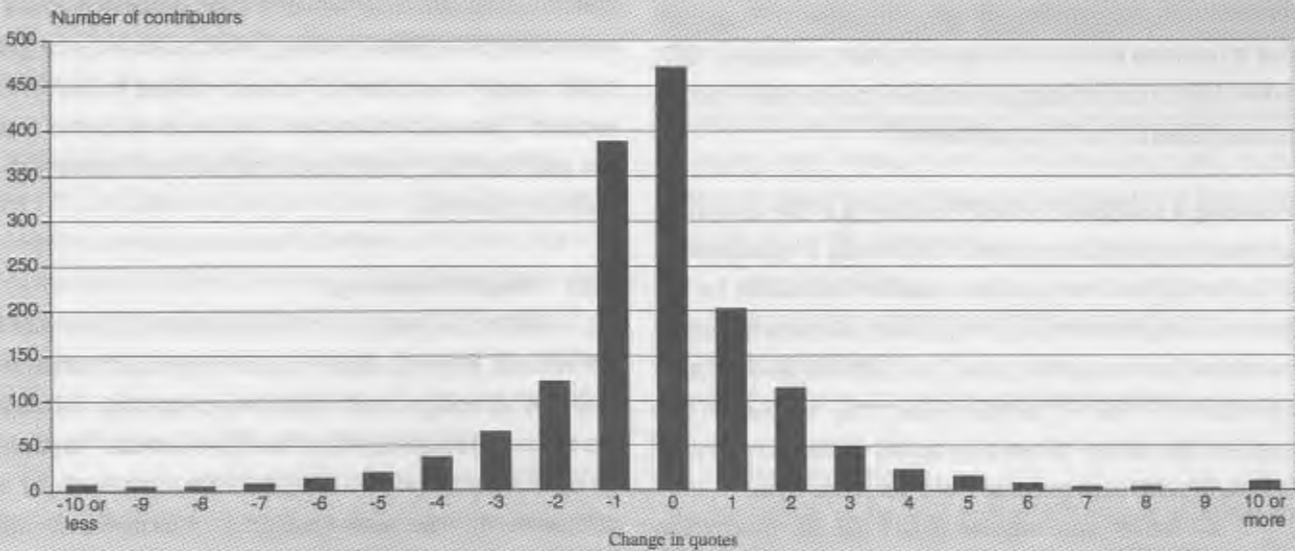
3.2.2 Results of using the optimal allocation

Using the optimal allocation to select a sample from the contributors to the 1996 Prodcum survey showed two main effects on the sample. The first was that it increased the number of contributors from 3,700 to just under 7,000 but with the same total of 9,000 price quotes. As a consequence, more of the contributors were providing fewer price quotes. 70 per cent of the new sample provide just one price quote in total compared to 38 per cent of the present sample (see Chart 1).

The sample has also been rebalanced to better reflect current production. The total number of price quotes for most products has remained fairly stable, but there are a few indices that have gained or lost a large number of price quotes. These include a large decrease in price quotes for navigation instruments and large gains for computers, motor vehicles and aircraft. In Chart 2 the number of price quotes in the current sample is plotted against the optimal allocation, for all four digit indices.

Chart 3

Change in number of price quotes provided by contributors from present sample to new sample



Comparing the sample selected from 1996 Prodcorn with the current panel showed that out of the present 9,000 price quotes from around 3,700 contributors, 2,000 price quotes were retained (from around 1,500 contributors).

Of those contributors retained on the sample, most were providing a similar number of price quotes under both the new allocation and the present sample (see Chart 3). A few experienced a large decrease or a large increase. Those contributors which show a big increase in the number of price quotes they provide were mainly large companies who make a wide range of products and will be providing price quotes for each product.

3.2.3 Recalculating the optimal allocation

The optimal allocation being used for the new sample was calculated using data from Prodcorn for 1996. It is therefore only optimal for that year. To ensure that the sample allocation reflects the relative importance of products within the economy, it needs to be recalculated periodically.

Re-calculating the allocation every year is impractical. It is proposed that the allocation is recalculated after three years, using data from Prodcorn for 1999. The changes from the original allocation will be assessed and a decision then made on how often to recalculate the allocation thereafter.

Part 4 - PRACTICAL ASPECTS OF INTRODUCING THE NEW SAMPLE

4.1 Phasing in the sample

The optimal allocation described in Part 3 was agreed in April 1998. Since it is known that some reporting units will have ceased trading or stopped manufacturing the specified product since 1996, an allocation was also agreed based on 11,000 price quotes (to allow for a 20 per cent drop-out rate). The figure of 20 per cent was an estimate based on the last recruitment exercise in 1997. In May 1998, a random sample was drawn from the 1996 Prodcorn results (based on the 11,000 allocation).

Recruiting a contributor to the PPI survey is a time consuming process since contributors have to first identify a typical product in the six digit and then provide a detailed specification for that product. As explained in 3.2.2, only about 2,000 price quotes will be retained from the current panel. The 7,000 new price quotes to be recruited to the PPI sample is too many to obtain in one exercise. Recruitment of new price quotes will therefore be done in three 'waves', each comprising of a set of four digits:

- the first wave requires about 3,000 new price quotes to be recruited between June and December 1998.

The new quotes will be run in parallel with the current sample from February 1999 for a few months during which time the PPI will be published using the current sample. Once the impact of the new sample has been assessed it will be linked into the PPI. The length of time the parallel run can be carried out may be limited by the resources available;

- the second wave of 1,000 new price quotes will be recruited between January and June 1999, and will be linked into the PPI indices after July 1999, depending on the results of the parallel run in the first wave. This wave will be selected from 1997 Prodcorn;
- the third wave of 3,000 new price quotes will be recruited between June and December 1999, and will be linked into the PPI indices after February 2000, depending on the results of the parallel run in the first wave. This wave will probably be selected from 1997 Prodcorn, although there is a chance that 1998 Prodcorn might be used if the timing of Prodcorn results and PPI selection can be brought closer together.

It is important to note that the existing method of linking new items and/or deletions into PPI indices (outlined in 1.4) will continue to be used. This means that the updating of the sample will have no impact on back data.

4.2 Improving the recruitment system

To recruit a contributor for the PPI it is necessary to:

- check to see if they are suitable for the survey;
- define a product for which they will provide a price;
- set up the contributor and their product(s) on the PPI computer system.

Carrying out this process for 7,000 new price quotes in 18 months within existing resources has only been possible because of extensive improvements in working practices and in the computer system used for recruitment. These are outlined in the following sections. These efficiencies mean that the same number of staff can now deal with nearly three times as much recruitment as previously possible.

4.2.1 Telephone warning

Not all companies selected from Prodcorn are suitable for the PPI. For instance, they may export most of the goods they produce or may only repackage goods from other companies. Companies are telephoned before recruitment forms are sent out. This provides an opportunity to exclude any unsuitable companies and any companies who have ceased production of the product for which they were selected from 1996 Prodcorn. Telephone warning

will give users an indication, for the first time, of the level of variation they might expect in the PPI indices. Sampling errors will be introduced after the sample has been fully implemented after February 2000.

5.2 Rotating the sample (systematic updating)

Sample updating in the PPI has occurred in the past. New contributors were recruited for products where they were needed and no-one was dropped from the sample. Rotation is a method of annually updating the contributors selected for a survey.

The proposed method of rotation for the PPI is to select the sample afresh from each year's Prodcum sample. Contributors who have been dropped from the Prodcum sample will no longer be available for the PPI, but their replacements will be available. Selecting a new sample each year using PRNs will retain a large proportion of the contributor product pairs in the PPI sample, but will allow rotation for the smaller contributors.

It is proposed to introduce rotation for the PPI once the new sample has been fully introduced (i.e. first rotation recruitment will take place during June to December 2000). The main benefits of rotation for the PPI are that it will:

- pick up new products and new contributors;
- pick up existing companies making a product for the first time;
- update company structures once a year only, and provide sales figures if structures have changed;
- fill in gaps in the sample caused by contributors dropping out; and
- spread the burden of completing forms between smaller contributors.

5.2.1 Proposed method of rotation

Prodcum already rotates its sample. Every year, around 2,000 contributors are dropped from the sample and replaced with new companies. Selecting a sample from each year's Prodcum will mean that some contributors previously selected for the PPI will no longer be available. However, the replacement contributors will be available for selection.

As described in 3.1.3, the sample is selected from Prodcum using Permanent Random Numbers assigned to contributor product pairs. Contributor product pairs retain their random numbers from one year to the next until they are dropped from Prodcum; new contributor product pairs are assigned a new, unique random number. Within each six digit, rotation is carried out within each randomly sampled PPI strata by:

1. Taking the upper and lower boundaries of the PRNs for contributor product pairs selected for the **previous** year's sample;
2. counting how many contributor product pairs now have random numbers within this range;
 - a) if the number of contributor product pairs within the range is greater than the optimal allocation drop those with the lowest random numbers until the sample is at the optimal allocation;
 - b) if the number of contributor product pairs within the range is less than the optimal allocation, increase the top end of the range until the sample is at the optimal allocation;
 - c) if the number of contributor product pairs in the range is the same as the optimal allocation, do nothing;
3. re-calculating the random number boundaries for the new sample.

The effect of this procedure will be a large overlap of contributor product pairs between the samples for adjacent years.

5.2.2 Timing of rotation

Annual rotation can only fully start once the new sample has been completely introduced (in early 2000). However, it is hoped to pilot rotation on a few four digit indices during 1999. This will give an opportunity to evaluate the rate of rotation of PPI contributors, and the effect on the indices. If the pilot is successful, it is expected that full rotation would take place during 2000. An estimated 800 new price quotes would be selected from 1998 Prodcum and would be recruited during June to December 2000. These would be linked into the indices around February 2001.

5.2.3 Implications of rotation

Updating the PPI sample every year means that:

- up-to-date sales information will be picked up for every reporting unit;
- contributor product pairs that have become unavailable during the year will be replaced;
- new contributor product pairs will become available for the PPI sample.

Annually updating the sales information used to weight together the price relatives will mean that, in practice, the PPI is chain linked at the six digit level.

5.3 New estimator

The estimator currently used to calculate the PPIs for six digit products was shown in equation (1). This weights together the price relatives for contributors using their enterprise sales values

Table 2: Problems and solutions

Problem	Solution
<ul style="list-style-type: none"> ● The current PPI panel has been built up over a long period of time using a cut-off sample with top-up recruitment. 	<ul style="list-style-type: none"> ● The optimal allocation gives most price quotes to relatively important products. The sample will be kept up to date by annual rotation.
<ul style="list-style-type: none"> ● It has too many price quotes for some products, but insufficient for others. 	<ul style="list-style-type: none"> ● Optimal allocation.
<ul style="list-style-type: none"> ● Multiple price quotes from some contributors add little value. 	<ul style="list-style-type: none"> ● The optimal allocation has a maximum of three price quotes per contributor per product.
<ul style="list-style-type: none"> ● The problem of arbitrary weights means that further price quotes have little impact on index results. 	<ul style="list-style-type: none"> ● Sample selection from Prodcorn means all items will have a Prodcorn sales value.
<ul style="list-style-type: none"> ● The panel does not reflect the current pattern of products as well as it should. 	<ul style="list-style-type: none"> ● The optimal allocation is based on up-to-date sales data and will be updated periodically.
<ul style="list-style-type: none"> ● Small contributors are under-represented. 	<ul style="list-style-type: none"> ● New estimator will account for probability of selection.
<ul style="list-style-type: none"> ● The panel is not random, so it is not possible to estimate sampling errors for the indices. 	<ul style="list-style-type: none"> ● Random sample from Prodcorn

for the particular product. Under the new sample, contributors are selected to represent a number of other companies but are only given a weight based on their own sales. This means that smaller contributors in the randomly sampled strata are under-represented in the final index.

The proposed new estimator introduces some extra weights to take account of the likelihood of selection for the sample in both Prodcorn and PPI. The formula for the new estimator is:

$$\text{Index value} = \frac{\sum_g \sum_h \sum_i w_{1g} w_{2h} \text{sales}_i \text{PR}_i}{\sum_g \sum_h \sum_i w_{1g} w_{2h} \text{sales}_i} \quad (2)$$

where sales_i represents sales in the year of sample by reporting unit i ; w_{1g} represents the weight for selection from PRODCORN in stratum g (first phase weight); w_{2h} represents the weight for selection for PPI in stratum h (second phase weight); i counts the number of price quotes selected from Prodcorn stratum g and PPI stratum h . The sales figure used is the reporting unit's sales of the specified product; it is not the enterprise sales as currently used.

The weights w_{1g} and w_{2h} are calculated as expansion weights which, when written as formulae, are:

$$w_{1g} = \frac{\text{Total number of companies in Prodcorn stratum } g}{\text{Number of companies selected for Prodcorn from stratum } g} \quad (3)$$

$$w_{2h} = \frac{\text{Total number of contributor product pairs in PPI stratum } h}{\text{Number of contributor product pairs selected for PPI from stratum } h} \quad (4)$$

For example, if there were 50 companies in a Prodcorn stratum and 10 were selected for the sample, the first phase weight would be 5.

Changes to the PPI programs mean that both the current and the new estimator can be run in parallel. In practice, however, it is only possible to calculate the new estimator when an industry has been rolled out onto the new sample (because only then will first and second phase weights be available). This means that the earliest that the PPI can switch to the new estimator is February 2000.

In practice, however, the existing estimator will be retained until the impact of the new estimator can be evaluated. This means

that a switch to the new estimator is unlikely before 2001. It will, however, be possible to obtain a limited indication of the impact of the new estimator from the first and second waves (but only for lower level indices – not at the all manufacturing level).

5.4 Summary of further developments

- Sampling errors will be introduced after the new sample has been fully implemented in February 2000
- The first rotation of the sample is scheduled to occur in February 2001. A pilot rotation will take place on selected indices during 1999 to assess the likely impact on the sample
- The new estimator will be run in parallel with the existing estimator from February 2000. Once the impact has been assessed the new estimator could be used from February 2001.

In addition to the significant methodological improvements already in hand, the article outlines future planned developments (sampling errors, rotating the sample and a new estimator) to improve the PPI further. Each step in hand or planned should strengthen the PPI and is worth doing in its own right. Taken together the package of improvements represents a significant investment to improve the quality and relevance of the PPI. The impact on users is being minimised by ensuring that no previously published data is being revised and by proposals for parallel running of the new sample and estimator prior to any switch.

If you have any comments on this article, or would like further information please contact Ian Cope or David Freeman at the address at the beginning of the article.

Part 6 - CONCLUSION

This article has outlined the current methodology used to calculate the PPI, problems with the current methods and how we intend to address the problems (see Table 2). The new methods and proposals for future work outlined in this paper are the result of two years of detailed methodological and operational development. Large efforts have already gone into identifying an optimal sample for the PPI and to improve operational procedures to make it possible. A large scale renewal of the PPI sample is already underway and will be completed in early 2000. The main implications for users of the PPI of the new sample currently being introduced are:

- No revisions to previously published data when the new sample is introduced.
- A better quality index at the four digit and all manufacturing levels.
- Estimates of quality can be calculated (see 5.1)
- Changes to the number of price quotes for six digits, some of which may be significant.