national statistics

Economic Trends

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Contents

In Brief

Articles

This month we feature four articles.

Richard Walton of the ONS discusses the profitability of UK companies The National Statistics First Releases (July 24th and October 4th) measured the profitability of private non-financial companies in the United Kingdom, using rates of return on capital employed. This article analyses data from nineteen countries, eight for the first time. The methodology, sources and coverage of the data presented are also described and the limitations that this places on its interpretation (page 33).

Rob Pike and Geoff Reed, both of ONS present for the first time constant price monthly index of Services (IoS). The article describes the development project to review and improve the indicators used to estimate short-term change in service industry output. The results will be published each month from now on, initially as an experimental index. This is a first step towards providing for the service industries, the periodicity, range and quality of output indicators that have existed for the production industries for many years (page 51).

Simon Humphries of the ONS outlines further improvements to the methodology for geographical breakdown of portfolio investment income in the balance of payments. The continuing review of methodology concentrated on new data sources for portfolio investment and the earlier stages were described in an article in the November 1999 *Economic Trends*. This article reports on further progress on this work and includes updated estimates of the breakdown of the income flows. Total income estimates reported in the September Balance of Payments First Release are unchanged (page 69).

David Lacey of the ONS provides a Methodological Guide to the UK Regional Gross Domestic Product. The article provides an overview of the regional estimates of UK GDP published by ONS in the August edition of *Economic Trends*. The coverage of these estimates is explained, together with details of the methodology employed to calculate them. This article does not detail the methodology employed to calculate the sub-regional estimates of GDP, last published by ONS in *Regional Trends 35*. A separate article covering these estimates will be published in 2001 (page 75).

Changes

The **Index of Distribution (Prototype)** monthly update is no longer published. Data up to August 2000 are included in the Index of Services (Experimental) summary table at the end of the article "Introducing the Experimental Monthly Index of services" outlined above. A monthly update of the Index of Services (Experimental) will be included from the January 2001 edition.

Amendments

Regional Accounts 1998 Part 2: Regional Household Sector Income

Part of Table B in the above named article on page 61 of the November 2000 issue of *Economic Trends* was incorrect. In the last two columns 1997 data was used. A corrected version of the table is shown on the next page and is on our Website *(www.statistics.gov.uk)* and Statfax (0906 736 0310).

The contact e-mail address given was also incorrect, it should read:
Alex.clifton-fearnside@ons.gov.uk

continued....

Table B
Sources of household income[1], by region, 1998[2]

	Percentage of total income							£ million	percentage
	Gross Operating Surplus	Gross Mixed Income	Compen-sation of Employees	Net Property Income[3]	All Pensions[4]	Other Social Benefits[5]	Net Other Income[6]	Total Income	Disposable Income as % of Total Income
United Kingdom	6	5	56	8	13	8	4	824,655	69
North East	4	4	56	7	13	11	5	30,523	70
North West	5	4	55	8	14	10	4	88,468	70
Yorkshire and the Humber	5	5	56	10	12	9	5	64,406	69
East Midlands	5	5	56	9	13	8	4	54,676	68
West Midlands	5	4	58	8	12	9	4	67,282	68
East	6	6	58	9	12	6	3	81,576	68
London	6	7	60	8	9	8	3	123,079	67
South East	7	6	56	8	14	6	3	126,652	67
South West	6	6	51	9	16	7	4	65,763	70
England	6	5	56	8	13	8	4	702,425	68
Wales	5	5	52	8	15	11	4	34,679	71
Scotland	4	4	57	9	13	9	4	68,023	69
Northern Ireland	4	6	51	9	9	17	4	18,912	72

1 Household income includes income received by households and non-profit institutions serving households
2 Provisional
3 Net Property Income is the difference between Property Income (Uses) & Property Income (Resources)
4 Includes Retirement & Widows Pensions, Unfunded Social Benefits and Privately Funded Social Benefits
5 Social Benefits excluding pensions
6 Includes Imputed Social Contributions, Non Life Insurance Claims and Miscellaneous Current Transfers

Economic Trends Annual Supplement: Measures of UK competitiveness in trade in manufactures (Table 1.22)

Series BBKM (Import price competitiveness) and BBKN (Relative profitability of exports) should have no data published before 1991; hence data shown from 1986–1990 should be disregarded (annual on page 135 and quarterly on pages 136 and 138). Data on Databank and StatBase (Timezone) are correct.

Recent economic publications

Annual

Economic Trends Annual Supplement 2000. The Stationery Office, ISBN 0 11 621208 X. Price £28.50.

Quarterly

Consumer Trends: 2000 quarter 2 The Stationery Office, ISBN 0 11 621317 5. Price £45.
UK Economic Accounts: 2000 quarter 2. The Stationery Office, ISBN 0 11 621275 6. Price £26.
UK Trade in Goods Analysed in Terms of Industries (MQ10): 2000 quarter 2. The Stationery Office, ISBN 0 11 538057 4. Price £75 p.a.

Monthly

Consumer Price Indices (MM23): September 2000. The Stationery Office, ISBN 0 11 538015 9. Price £185 p.a.
Financial Statistics: November 2000. The Stationery Office, ISBN 0 11 621194 6. Price £23.50.
Monthly Review of External Trade Statistics (MM24): August 2000. The Stationery Office, ISBN 0 11 538023 X. Price £185 p.a.

All of these publications are available from The Stationery Office, telephone 0870 600 5522, fax 0870 600 5533, e-mail bookorders@theso.co.uk or The Stationery Office bookshops; details on the inside back cover.

Economic Update - December 2000

by Peter Symons, Macro-Economic Assessment - Office for National Statistics

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Overview

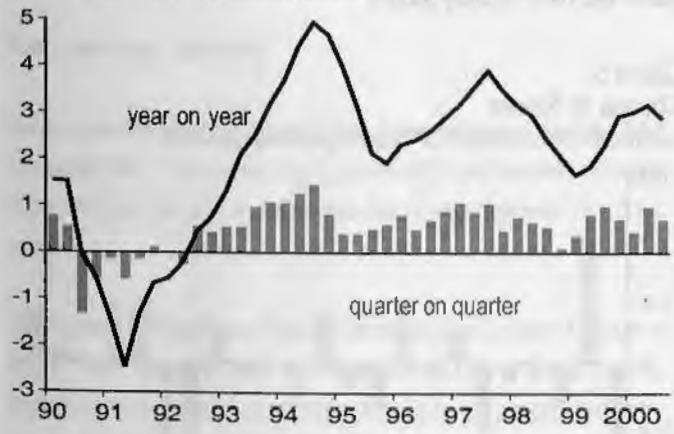
Economic activity moderated slightly in the third quarter of 2000, with growth in output slipping below 3 per cent in annual terms for the first time since the fourth quarter of 1999. Nevertheless, economic activity remains relatively strong, with growth continuing to exceed long run trend rates. In the third quarter of 2000, the UK economy recorded positive growth for the thirty-third consecutive quarter – the longest sustained expansion since quarterly data collection began in 1955. The pattern in 2000 to date is one of growth driven by increasing household expenditure and stock-building, with investment growth exerting a small positive influence. Net exports have detracted from growth.

Overall, the National Statistics dataset confirms the benign trends experienced over the past few years: sustained and low inflation, continued employment growth (and low levels of unemployment) and modest wages growth.

Economic growth and its components

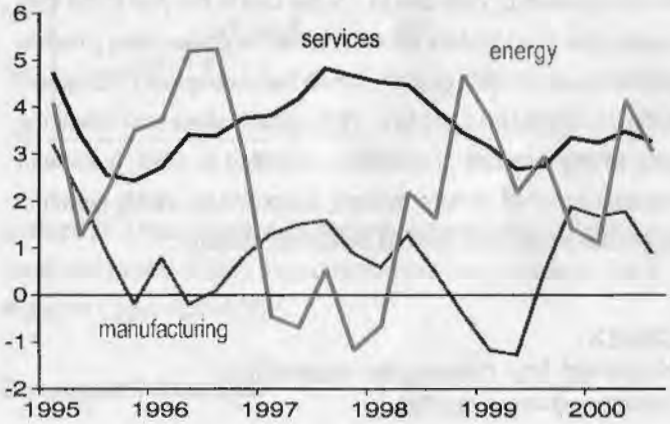
According to the second estimate of growth in output for the third quarter of 2000, the pace of growth moderated slightly in the quarter, from 0.9 per cent in the second quarter of 2000 to 0.7 per cent in the third quarter. Nevertheless, the latest output data confirm that economic growth remains strong - quarterly growth has averaged 0.7 per cent per quarter over the past year and growth remains broadly based, with most sectors of the economy recording growth in the third quarter and domestic demand continuing to contribute strongly to growth. In annual terms, economic growth also remains strong: in through-the-year terms, growth was 2.9 per cent in the year to the third quarter, the fourth consecutive quarter that it has remained above 2.5 per cent.

Chart 1
Gross Domestic Product
percentage changes, quarters, seasonally adjusted, 1995 prices



Services output increased by 0.7 per cent in the third quarter 2000 and by 3.3 per cent in the year to the third quarter 2000 (see Chart 2). Growth was recorded across each of the major categories of services output, with the distribution, hotels and catering and transport, storage and communication sectors showing particularly strong growth. Growth in the transport, storage and communication sector has been around double that in overall economic growth over the past year. Overall, the services sector accounts for around two-thirds of total output and contributed around 0.5 percentage points to growth in the third quarter 2000 and 2.2 percentage points over the past four quarters.

Chart 2
Manufacturing, services and energy output
annual percentage changes, seasonally adjusted



In line with longer term trends, growth in the services sector continued to outstrip that of the manufacturing sector in the third quarter 2000. The manufacturing sector grew by 0.6 per cent in the third quarter of 2000 and by 0.9 per cent over the year to the third quarter 2000. Quarterly growth picked up in the third quarter (0.6 per cent as against 0.4 per cent in the second quarter of 2000) and was the highest quarterly growth rate since growth of 1.5 per cent in the third quarter 1999. The manufacturing sector contributed 0.13 percentage points to growth in the third quarter 2000 and 0.2 percentage points over the past year.

However, despite the pick-up in output of this sector, growth has lagged well behind that of the services sector over the medium term. Moreover, as mentioned in previous Economic Updates, growth in the manufacturing sector is concentrated in a small number of industries.

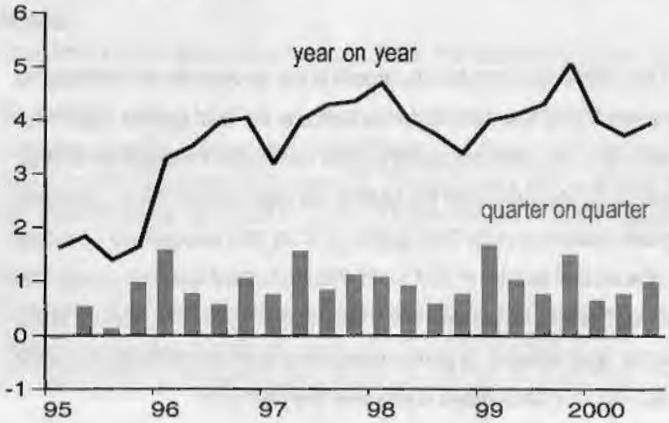
Growth in the mining, quarrying and oil and gas extraction sector has been volatile over the past few quarters. In the third quarter 2000, growth increased by a modest 0.5 per cent, a significant unwinding of the strong growth of 5.0 per cent recorded in the previous quarter. Growth in this sector had been driven by an increase in gas production for export to Continental Europe in quarter two of 2000, but slowed in quarter three.

The recent data from the major business surveys is broadly consistent with the picture of growth painted by the latest National Accounts data. The October 2000 CBI Quarterly Industrial Trends survey showed a slight pick-up in business optimism and the volume of new orders, however, business optimism remains below their recent peaks of quarter four 1999. The third quarter 2000 Economic Survey from the British Chambers of Commerce showed a mixed picture across the manufacturing and services sector in quarter three 2000 with a slight decline in home orders for the latter but a pick up in home orders for the manufacturing sector. Confidence levels remained unchanged in the services sector but picked up slightly in the manufacturing sector.

Domestic demand

Household final consumption expenditure increased by 1.0 per cent in the third quarter of 2000 and by 4.0 per cent in the year to the third quarter (see Chart 3). After some moderation in consumption growth in the first quarter of 2000, quarterly growth has subsequently accelerated in the second and third quarters. While growth rates remain below the very strong quarterly growth rates recorded in 1999, household expenditure is still growing strongly, supported by steady growth in disposable income and previous increases in wealth.

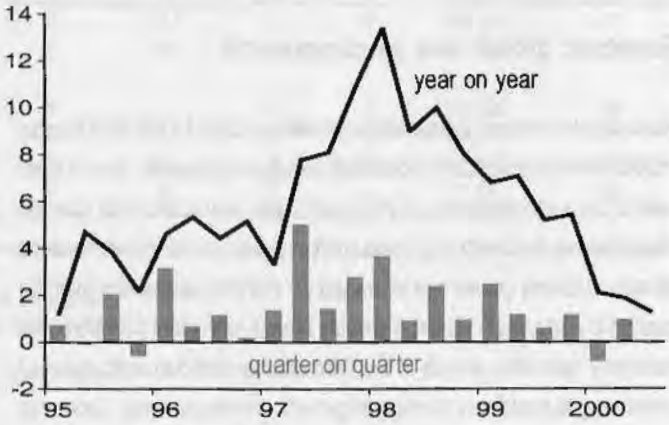
Chart 3
Household final consumption expenditure
percentage changes, quarters



Retail sales volumes increased by 1.2 per cent in the third quarter of 2000, following growth of 0.4 per cent in the previous quarter. Although retail sales volumes were flat in October, the overall trend in 2000 remains one of strong growth – retail sales volumes are currently around 4.2 per cent higher than a year earlier. Retail sales account for around 40 per cent of total household final consumption.

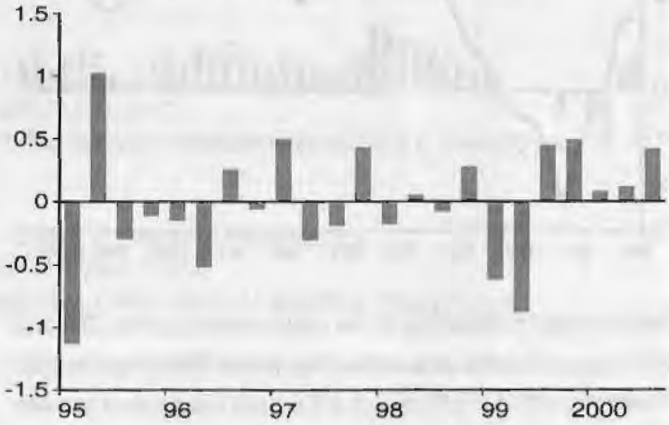
On the other hand, gross fixed capital formation (GFCF) remains subdued. GFCF was flat in the third quarter of 2000 and only 1.3 per cent higher than its level of a year earlier (see Chart 4). The slow growth in GFCF is, in part, a reflection of the very strong rates of growth in GFCF in 1997 and 1998, which resulted in GFCF reaching historically high shares of output. Lower rates of growth in GFCF will result in a slight fall in GFCF as a proportion of output.

Chart 4
Gross fixed capital formation
percentage changes, quarters



There was a sharp increase in inventory levels (including the alignment adjustment) in the third quarter of 2000, the largest increase since quarter two of 1995 and the fourth consecutive quarter of stock building. Stocks contributed 0.4 percentage points in the third quarter (see Chart 5). The increase in stocks in the third quarter was concentrated in the distributive trades and 'other' industry sectors.

Chart 5
Change in Stocks
contribution to quarterly GDP growth, percentage points



The overall pattern in 2000 to date is one of growth driven by increasing household expenditure and stock-building, with GFCF growth exerting a

Chart 6
Contributions to domestic demand
quarters, percentage points

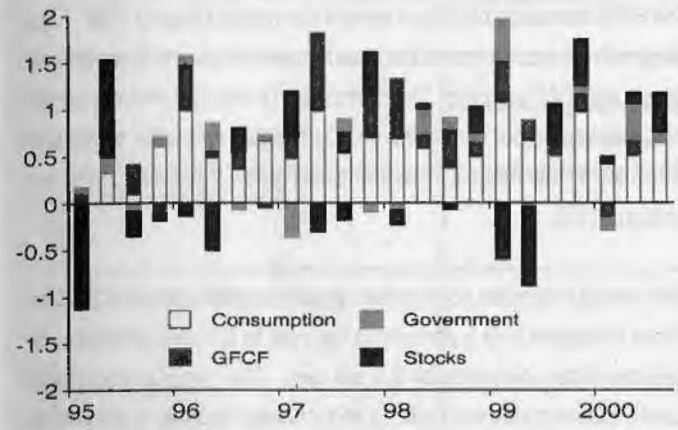


Chart 7
Contributions to quarterly GDP growth
quarters, percentage points

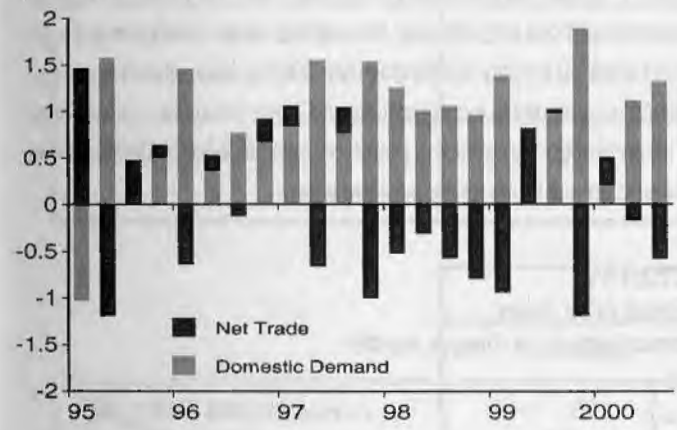


Chart 8
Exports
excluding oil and erratics, months, 1995=100

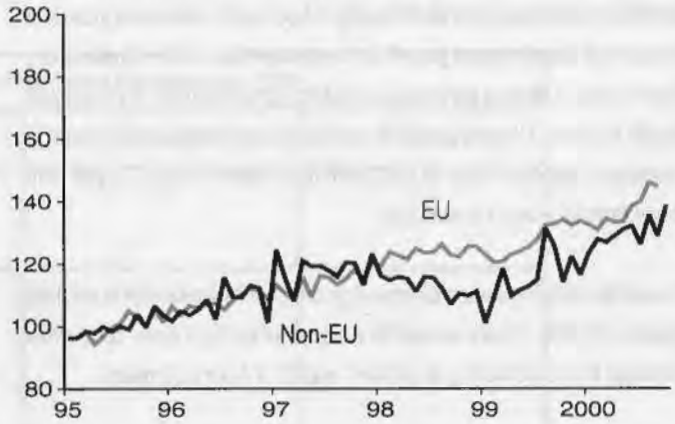


Chart 9
Imports
excluding oil and erratics, months, 1995=100

small positive influence (see Chart 6). Net exports have detracted from growth quite significantly (see Chart 7). Indeed, net exports have detracted from growth in 9 of the past 12 quarters.

Net overseas demand

Net exports detracted from growth by 0.6 percentage points in the third quarter of 2000. Very strong import growth of 3.0 per cent was recorded in the third quarter, just under double that of export growth (of 1.7 per cent).

The aggregate export data hides a somewhat mixed picture for trade in goods when oil and erratics are excluded, as charts 8 and 9 show. Exports to the EU picked up strongly, growing by 6.2 per cent in quarter three, compared with 1.9 per cent in the previous quarter. In contrast, exports to countries outside the EU fell by 0.4 per cent in quarter three, following growth of 3.6 per cent in quarter two. Imports from outside the EU rose by 7.2 per cent in quarter three, compared to growth of 3.4 per cent in imports from the EU in the same quarter.

In the year to the second quarter of 2000, the current account deficit stood at around £3.3 billion, significantly higher than the deficit of £2.7 billion in the second quarter of 1999. The current account deficit currently stands at around 1.2 per cent of GDP.

Government finances

In the six months to October 2000, the surplus on current budget stood at £11.9 billion, compared with £5.6 billion for the same period a year earlier. In October 2000, net debt stood at 32 per cent of GDP, compared with 37.6 per cent in October 1999.

Labour Market

The labour market continues to perform strongly: employment continues to increase, unemployment rates remain low and wages pressure is subdued.

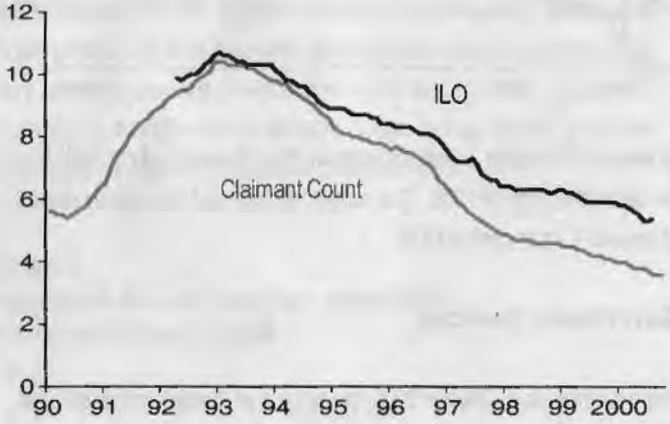
According to the Labour Force Survey, employment increased by 0.3 per cent in the third quarter of 2000 and by 1.1 per cent in the year to the third quarter of 2000. Male employment increased by 0.2 per cent in the third quarter while female employment increased by 0.4 per cent. However,

there was a marked difference in part-time and full-time growth in the quarter, with growth in part-time employment increasing by 1.3 per cent and full-time employment declining by 0.1 per cent. Workforce jobs data shows that the strongest growth in the quarter was in the construction, finance and business services and public administration, services and health sectors. Despite buoyant economic conditions, employment in manufacturing continued its long term trend decline to be 2.3 per cent lower than its level of a year ago.

In contrast to continued employment growth, hours worked fell in the third quarter of 2000. Hours worked in the quarter fell by 0.4 per cent, while average hours worked (per worker) was 32.7 hours per week.

Rates of unemployment continued to reach record lows. In August 2000, the ILO unemployment rate stood at 5.4 per cent (see Chart 10), while on a claimant count basis the unemployment rate was 3.6 per cent (in October 2000), the equal lowest rate since October 1975, despite a small increase in the number of unemployed in that month. The employment rate increased to 74.7 per cent in quarter three, 0.5 percentage points higher than in quarter three 1999.

Chart 10
Unemployment rate
months



Despite continued growth in employment, growth in average earnings remains modest. The headline rate of average earnings increased by 4.1 per cent in the third quarter of 2000. Average earnings growth is historically low given the duration and strength of the current economic cycle. The headline rate of average earnings in the manufacturing sector outpaced that in the services sector (4.3 per cent compared with 4.0 per cent) – a reversal of the stance a year ago – while private sector earnings growth continues to outstrip that in the public sector.

Whole economy productivity increased by 2.4 per cent in the second quarter of 2000, the highest rate of growth since the first quarter of 1995, while unit wage costs increased by 1.1 per cent, the lowest rate of growth since the first quarter of 1995.

Prices

The RPIX increased by 2.0 per cent in the year to October 2000 – the nineteenth consecutive month that it has remained below the Government's target rate of 2.5 per cent. The harmonised index of consumer prices increased by 1.0 per cent in the year to October – the rate of inflation according to this measure has remained below 2 per cent since the middle of 1998.

The annual data hides some interesting sectoral disparities. Tobacco prices increased by 9.2 per cent in the year to October, while leisure services prices increased by 5.3 per cent. The prices of household goods, leisure goods and clothing and footwear declined in the year to October 2000 by 0.5, 2.6 and 4.6 per cent respectively.

Chart 11 shows that increases in the prices of services have consistently outstripped those of goods over the past four years. The price of goods has remained broadly unchanged over 2000 to date, while the price of services continues to increase at around 3 per cent on an annual basis. The price of goods excluding petrol, oil, food, alcohol and tobacco has fallen in annual terms for the past two years.

Chart 11
Retail price index
annual percentage changes, months

* Note: Other goods excludes food, alcohol, tobacco, petrol and oil

Forecasts for the UK Economy

A comparison of independent forecasts, Novermber 2000

The tables below are extracted from HM Treasury's "FORECASTS FOR THE UK ECONOMY" and summarise the average and range of independent forecasts for 2000 and 2001, updated monthly.

	Independent Forecasts for 2000		
	Average	**Lowest**	**Highest**
GDP growth (per cent)	3.0	2.7	3.4
Inflation rate (Q4: per cent)			
- RPI	3.1	1.8	3.6
- RPI excl MIPs	2.1	1.5	2.4
Unemployment (Q4: mn)	1.04	1.00	1.11
Current Account (£ bn)	-15.6	-27.5	-9.0
PSNB *(2000-01: £ bn)	-16.0	-28.0	-8.0

	Independent Forecasts for 2001		
	Average	**Lowest**	**Highest**
GDP growth (per cent)	2.7	1.5	3.3
Inflation rate (Q4: per cent)			
- RPI	2.5	1.6	3.2
- RPI excl MIPs	2.4	1.3	3.7
Unemployment (Q4: mn)	0.98	0.84	1.10
Current Account (£ bn)	-17.9	-28.2	-7.2
PSNB* (2001-02: £ bn)	-9.8	-27.8	-1.9

NOTE: "FORECASTS FOR THE UK ECONOMY" gives more detailed forecasts, covering 27 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: 020-7270 4558). It is also available at the Treasury's internet site: http://www.hm-treasury.gov.uk.

* PSNB: Public Sector Net Borrowing (Treasury forecast excluding windfall taxes and associated spending).

International Economic Indicators - December 2000

by Craig Richardson, Macro-Economic Assessment - Office for National Statistics

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Overview

The EU15 economies continued to grow solidly into quarter two, with unemployment continuing to fall into the third quarter. German economic growth rose strongly into quarter two, whilst France's growth rate remained stable at 0.7 per cent. Italian economic growth slowed, with the growth rate falling from 1.0 per cent in quarter one to 0.3 per cent in quarter two. The EU15 economies also saw a rise in the inflation rate for both consumer and producer prices in the third quarter. Economic growth in the USA halved into quarter three, falling from 1.4 per cent to 0.7 per cent, quarter two had seen strong stock building but this was not repeated in the third quarter. Japanese GDP growth fell into quarter two, mainly reflecting the slowdown in consumption and the rise in imports.

EU 15

The EU15 economies continued their run of solid growth into the second quarter of 2000, with average quarterly growth of 0.8 per cent, the same as in quarter one (chart 1). The contribution of investment to quarterly GDP growth fell very slightly into the latest quarter, while the contribution of stockbuilding rose. In annual rates, the EU15 economies grew by 3.5 per cent in quarter two, up from 3.3 per cent in quarter one.

Chart 1
EU15 - GDP
seasonally adjusted percentage changes

Industrial production picked up strongly in quarter two, with quarterly growth of 2.0 per cent, compared to just 0.4 per cent in quarter one. This was mainly driven by the strong rise in the index in May 2000. Figures available for quarter three suggest that the growth will continue.

Annual growth in retail sales rose into quarter two, from 2.8 per cent in quarter one to reach 4.4 per cent in quarter two. This may also reflect a weak performance in quarter two 1999. As with industrial production, retail sales also saw a strong performance in May 2000.

Annual growth of consumer price inflation showed signs of picking up, with the rate rising from 2.3 per cent in quarter two to 2.7 per cent in quarter three. The rate had been at 2.5 per cent for both July and August, but then rose to 2.9 per cent in September, this may reflect the higher oil prices - the inflation rate for energy products rose from 9.5 per cent in quarter two to 10.4 per cent in quarter three. Annual growth of producer prices also rose into quarter three, although not as sharply. Annual growth was 4.9 per cent in quarter two, rising to 5.1 per cent in quarter three, again mainly driven by a rise in September 2000.

Annual growth in earnings rose to 3.6 per cent in 1999 quarter four and remained there in quarter one 2000. Quarterly employment growth was negative in quarter one, with the index declining by 0.8 per cent, but this was reversed in quarter two with positive growth of 1.2 per cent. However, the data is not seasonally adjusted and this appears to be a strong seasonal movement, the annual growth for 2000 quarter one was 1.5 per cent, the same as in the second quarter of 2000. Unemployment in the EU15 continues to fall, with the rate reaching 8.3 per cent in quarter three, down from 8.4 per cent in quarter two and 8.7 per cent in quarter one.

Germany

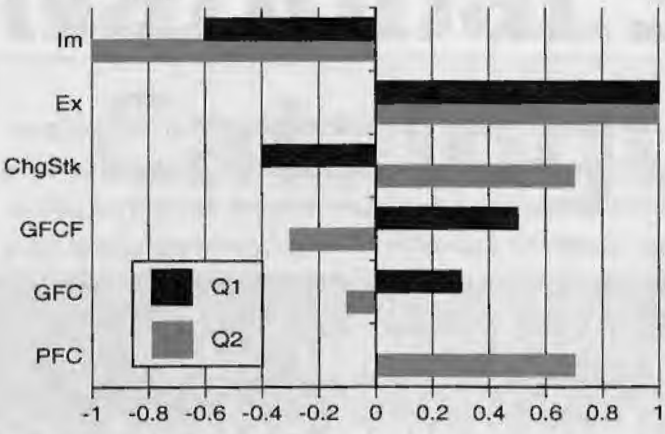
German economic growth picked up in the second quarter of the year, with growth rising from 0.8 per cent in quarter one 2000 to 1.2 per cent. Although the economy saw negative contributions from government expenditure, investment and imports, this was cancelled out by the strong rise in the contributions of private final consumption expenditure and stockbuilding (chart 2). At an annual rate the economy grew by 3.6 per cent in quarter two, up significantly from 2.3 per cent in quarter one 2000.

Corresponding to the higher total growth in quarter two, industrial production also grew strongly, with quarterly growth rising from 1.2 per cent in quarter one, to 3.0 per cent in quarter two. However, the quarterly growth rate then slowed to 1.7 per cent in quarter three, with the monthly

Chart 2

Germany - Contributions to quarterly GDP growth

seasonally adjusted



figures showing that this was mainly driven by a fall in output in September. Manufacturing survey data shows that the volume of new domestic orders fell into the third quarter after a strong rise into quarter two, whilst the volume of new export orders continues to rise.

Annual growth of retail sales had been negative in the first quarter of 2000, recording a decline of 0.6 per cent, but this was reversed in the second quarter with positive growth of 4.2 per cent. Monthly figures suggest that growth for quarter three will remain positive, although consumer confidence did decline into the third quarter after a pick-up in quarter two.

Annual consumer price inflation rose into the third quarter of 2000, up 0.4 percentage points to reach 2.0 per cent. The disaggregated figures show energy price inflation rising from 11.7 per cent in quarter two 2000 to 14.2 per cent in quarter three. Food prices recorded no annual growth in quarter three, after deflation of 1.3 per cent in quarter two. Annual growth in producer price inflation also rose into quarter three, by 1.1 percentage points to reach 3.7 per cent, the series had been experiencing deflation just a year ago.

Turning to the German labour market, annual growth in earnings rose into quarter four 1999, but then fell into quarter one 2000, falling 0.2 percentage points to reach 2.8 per cent. Employment growth had recorded a sharp decline of 1.9 per cent into quarter one 2000, but then recovered into quarter two with growth of 1.4 per cent. Unemployment had fallen relatively sharply into quarter one, but then remained steady into quarter two, and only recorded a very modest fall of 0.1 per cent into quarter three to reach 8.3 per cent.

France

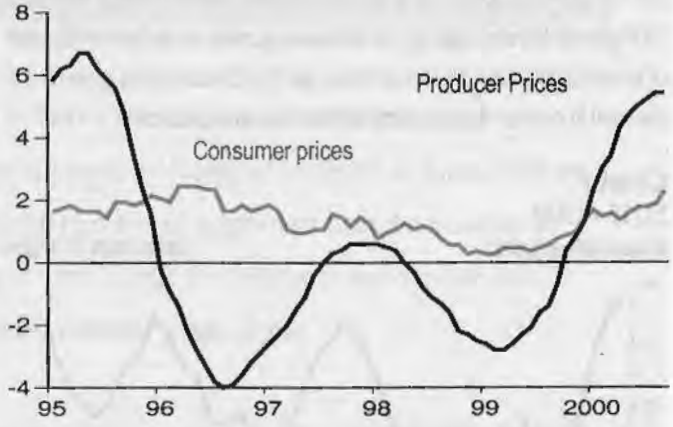
French economic growth remained solid in the second quarter of 2000, although the average rate for the first half of 2000 was 0.7 per cent, compared to 1.0 per cent in the second half of 1999. The second quarter saw falls in consumption private final consumption and investment, which were countered by rises in government final consumption, exports stockbuilding and by a fall in imports. Annual GDP growth fell slightly into quarter two, 3.4 per cent compared with 3.5 per cent in quarter one 2000.

Growth in industrial production fell quite sharply into quarter two 2000, with the growth rate declining from 0.7 per cent in quarter one to 0.1 per cent in quarter two. This was due to declines in the index in both April and June, however, the index grew strongly into July. French capital utilisation rose quite strongly into quarter three, the series has been rising steadily since the fourth quarter of 1998. Survey data shows that the industrial prospects measure halved in October, falling to a level last seen in July 1999.

Chart 3

France - Consumer and Producer Prices

annual percentage changes seasonally adjusted



Both consumer and producer price inflation rose into quarter three (chart 3). Annual growth in consumer prices rose from 1.5 per cent, where it had been for quarters one and two, to 1.9 per cent in quarter three. The breakdowns show that the rise cannot be wholly attributed to fuel prices, although energy inflation rose from 12.8 per cent in quarter two to 14.0 per cent in quarter three, food price inflation also rose over the period, from 1.6 per cent to 2.8 per cent. Annual producer price inflation rose from 4.7 per cent in quarter two to 5.3 per cent in quarter three. As in Germany, this series had been recording deflation in quarter three 1999. The disaggregated figures show that this is likely to be due to the continuing high inflation rate for petroleum products, although the rate fell marginally from 40.7 per cent in quarter two to 38.2 per cent in quarter three.

French annual earnings growth rose sharply into quarter one 2000, rising 1.8 percentage points to reach 5.2 per cent. There were suggestions by some commentators that the high rate of growth in earnings in quarter one was related to millennium related payments, however, growth then rose further to 5.4 per cent in quarter two 2000, suggesting that there may

be other factors at work here. Employment growth rose to 0.9 per cent in quarter one, but then fell back down to 0.5 per cent in quarter two, the rate it had recorded for most of 1999. Reflecting the continued employment growth, unemployment continues to fall, down from 9.8 per cent in quarter two to 9.6 per cent in quarter three 2000.

Italy

The Italian economy slowed in quarter two 2000, with quarterly growth falling from 1.0 per cent in quarter one to just 0.3 per cent in quarter two, significantly below the EU15 average for the quarter (chart 4). This was despite a strong contribution for stockbuilding, after the destocking recorded in the first quarter. The contribution of private final consumption fell, but the main driver of the fall in GDP growth was the strong rise in imports, which made a negative contribution to GDP of 1.4 percentage points in quarter two, following no contribution in quarter one. Annual GDP growth fell from 3.0 per cent in quarter one to 2.6 per cent in quarter two.

Chart 4
Italy - GDP
seasonally adjusted percentage changes

Italian industrial production grew relatively strongly in the second quarter of 2000, with growth rising by 0.7 percentage points to reach 1.3 per cent. The rise in output, coupled with the fall in consumption, would explain the rise in stockbuilding seen in the national accounts, although the high import demand remains an enigma. Italian capital utilisation fell marginally into quarter three, quarter two had been the highest rate the measured had reached since the second quarter of 1990. Industrial prospects for the future had also been extremely high in quarter two, and like capital utilisation, fell back into quarter three.

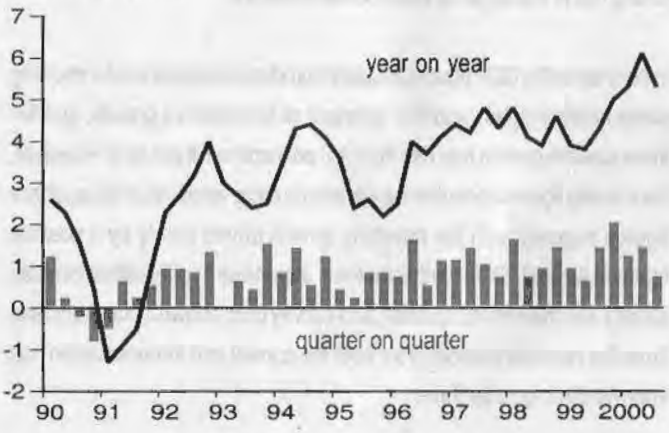
In contrast to other countries, Italian consumer price inflation remained steady into the third quarter, with the annual rate remaining at 2.6 per cent. However, annual producer price inflation rose from 6.2 per cent in quarter two to 6.7 per cent in quarter three, suggesting that the impact of oil may have affected producers, but has yet to filter through to consumers yet.

Annual employment growth rose from 1.5 per cent in quarter two 2000 to 2.1 per cent in quarter three. The standardised unemployment rate fell from 11.0 per cent in quarter one to 10.6 per cent in quarter two. Italian earnings data supplied by the OECD has not been updated since quarter four 1999, when earnings were growing by 1.8 per cent on the year.

USA

Quarterly GDP growth in America halved in the third quarter of 2000, falling from 1.4 per cent in quarter two to 0.7 per cent in quarter three (chart 5). Although the contribution of private final consumption expenditure picked up slightly in the third quarter after its sharp fall in the second, there was a decline in the contributions from investment, government expenditure and stockbuilding. Annual growth fell from 6.1 per cent in quarter two to 5.3 per cent in quarter three.

Chart 5
USA - GDP
seasonally adjusted percentage changes



As with GDP, quarterly growth of industrial production also fell into quarter three, down from 1.9 per cent in quarter two to 0.7 per cent. Monthly figures show that this was caused by a weak figure in July. Capital utilisation fell slightly into quarter three after their peak in quarter two.

In line with the fall in fall in private final consumption in quarter two, annual growth of retail sales fell into quarter two, from 8.5 per cent in quarter one to 7.0 per cent in quarter two, the lowest annual growth rate seen since the third quarter of 1998. Consumer confidence slipped slightly into the third quarter of 2000.

Annual growth of consumer prices rose from 3.3 per cent in quarter two to 3.5 per cent in quarter three, although the monthly data shows that this is primarily due to the high growth in July, the annual rate then fell back

into August. Annual growth of producer prices actually fell into quarter three, down 0.5 percentage points to reach 3.5 per cent. Again, the monthly figures show a high rate of growth in July, suggesting that this was the period when the high oil prices had their greatest impact on the US economy.

Following what appears to be a millennium related peak in quarter one, annual growth of earnings fell from 4.3 per cent to 2.9 per cent in quarter two, and remained there in quarter three. Employment growth slowed into the third quarter, after recording quarterly growth of 1.2 per cent in quarter two, it could only manage 0.1 per cent in quarter three. Although the unemployment rate remained at 4.0 per cent in quarter three, the monthly figures show that the rate dropped to 3.9 per cent in September 2000.

Japan

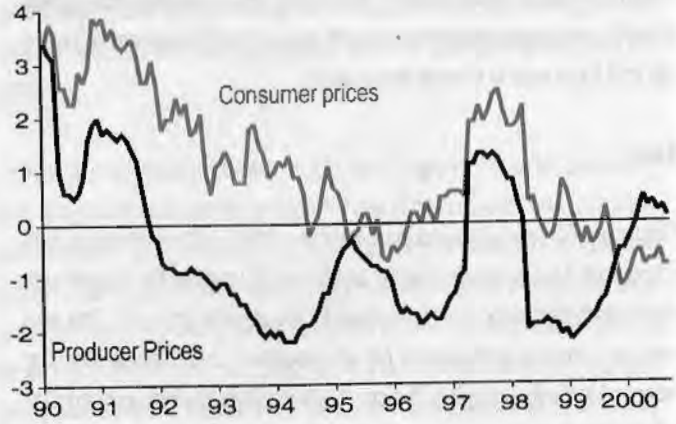
Japanese economic growth fell quite substantially into the second quarter of 2000, with growth of 1.0 per cent following growth of 2.5 per cent in quarter one. The second quarter saw falls in private final consumption expenditure, government expenditure and exports, coupled with a very strong rise in the negative contribution of imports.

In contrast to the GDP figures, industrial production appears to be showing some healthy signs, with five quarters of consecutive growth, quarter three saw the growth rate rise from 1.6 per cent to 1.8 per cent. However, the monthly figures show that the situation is more volatile than the quarterly figures suggest, with the quarterly growth driven purely by a positive figure in August 2000. Nethertheless, Japanese capital utilisation rose slightly into the second quarter, and survey data showed that Japanese firms felt that their prospects for both the current and future situation had improved into quarter three.

Annual growth of retail sales continues to record negative growth, although the situation may be slowly improving. Quarter three saw the annual rate of decline fall to 1.1 per cent, from 1.9 per cent in quarter two. The monthly figures remain erratic though. Consumer confidence rose marginally into the third quarter, after a relatively strong rise into the second quarter.

Consumer prices continued to deflate at an annual rate of 0.7 per cent into the third quarter, the same value as in quarters one and two, although inflation in fuel and energy prices rose from 1.9per cent in quarter two to 3.0 per cent in quarter three, food continued to deflate by 2.3 per cent (chart 6). Annual growth in producer prices returned to inflation in quarter two 2000, growing by 0.4 per cent on the year, this fell to 0.2 per cent in quarter three. Inflation in producer prices for petroleum and coal products fell from 18.8 per cent in quarter two to 15.6 per cent in quarter three.

Chart 6
Japan - Consumer and Producer Prices
annual percentage changes seasonally adjusted



In contrast to the deflating consumer prices, annual growth of earnings remains positive, although the rate fell from 2.3 per cent in quarter two to 1.4 per cent in quarter three. Employment growth picked up into quarter two, rising by 2.3 per cent on the quarter, but the index remained levelled off into quarter three. Correspondingly, unemployment remained at 4.7 per cent in quarter three, after falling from 4.8 per cent in quarter two.

World Trade

OECD exports of goods grew by 2.3 per cent in the second quarter of 2000, following growth of 5.0 per cent in quarter one. Within this, the exports of manufactures grew by 2.5 per cent, following 5.5 per cent growth in quarter one. OECD imports of goods rose by 3.6 per cent in quarter two, up from 3.2 per cent in quarter one. Within this, imports of manufactures rose by 4.1 per cent, up from 3.5 per cent in quarter one 2000.

Exports of goods from non-OECD countries rose by 3.6 per cent in quarter four 1999, up from 3.4 per cent in quarter three. Data on the export of manufactures by non-OECD countries is available up to quarter two 2000, the data shows growth falling from 4.1 per cent in quarter one 2000 to 3.6 per cent in quarter two. Imports of goods rose from 1.4 per cent in quarter three 2000 to 3.3 per cent in quarter four. Within this, imports of manufactures doubled over the same period, from 1.8 per cent to 3.6 per cent in quarter four 2000.

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. The definitions and methodologies used conform to SNA 68 and SNA 93.

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

Data for France, Germany, Italy and the USA has been updated to SNA93 basis. All other tables are on the SNA68 basis. The two bases are not directly comparable meaning that cross-country comparisons with countries on different bases are less valid. All the European data is likely to be put on the SNA93 basis in OECD data very soon. Japan will not be available on SNA93 basis until near the end of 2000.

All data is *seasonally adjusted* except for the following:
Consumer Price Indices
Producer Price Indices
Earnings (excluding Japan)
Employment

1 European Union 15

	Contribution to change in GDP													
	GDP	PFC	GFC	GFCF	ChgStk[1]	Exports	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
1991	1.5	1.4	0.5	0.3	–0.2	0.4	0.9	–0.1	..	5.2	2.2	6.7	0.1	8.4
1992	1.0	0.9	0.5	–0.1	–0.2	0.8	0.9	–1.3	..	4.4	1.2	5.6	–1.8	9.1
1993	–0.4	–0.2	0.2	–1.2	–0.4	0.4	–0.9	–3.5	..	3.6	1.4	4.3	–2.0	10.7
1994	2.7	1.0	0.2	0.5	0.7	2.4	2.0	4.9	..	3.1	2.1	4.0	–0.2	11.1
1995	2.4	1.1	0.1	0.6	0.2	2.3	2.0	3.6	–0.3	3.1	4.5	3.4	0.5	10.7
1996	1.7	1.1	0.3	0.4	–0.5	1.4	1.2	0.6	0.2	2.5	0.6	3.7	0.5	10.8
1997	2.6	1.2	0.1	0.7	0.2	3.0	2.7	3.9	2.5	2.0	0.9	3.2	0.8	10.6
1998	2.7	1.8	0.3	1.2	0.4	2.0	2.9	3.6	3.2	1.7	–0.3	2.5	1.6	9.9
1999	2.4	1.8	0.3	1.1	–0.2	1.5	2.1	1.7	3.0	1.3	–	3.0	1.7	9.2
1998 Q1	3.5	1.8	0.2	1.4	0.5	3.3	3.7	5.5	2.6	1.8	0.8	2.9	1.5	10.2
Q2	2.8	1.7	0.2	1.0	0.5	2.5	3.1	4.5	2.6	2.1	0.3	2.8	1.3	10.0
Q3	2.6	2.0	0.2	1.3	0.2	1.6	2.6	3.2	3.9	1.7	–0.7	2.8	1.7	9.9
Q4	2.1	1.9	0.3	1.0	0.2	0.7	2.1	1.3	3.6	1.3	–1.6	1.8	1.8	9.7
1999 Q1	1.9	1.9	0.4	1.0	0.1	0.2	1.5	0.4	3.5	1.1	–1.7	2.8	1.8	9.5
Q2	2.1	1.7	0.3	1.2	–0.3	0.8	1.7	0.4	2.2	1.1	–1.0	2.8	2.0	9.3
Q3	2.5	1.7	0.3	1.1	–0.2	1.8	2.3	2.0	2.4	1.1	0.4	2.7	1.6	9.1
Q4	3.1	1.8	0.3	1.1	–0.2	3.0	2.9	3.9	3.7	1.6	2.2	3.6	1.6	8.9
2000 Q1	3.3	1.6	0.2	1.1	–0.1	3.8	3.3	4.2	2.8	2.2	4.0	3.6	1.5	8.7
Q2	3.5	1.7	0.3	1.0	0.2	3.9	3.5	5.6	4.4	2.3	4.9	..	1.5	8.4
Q3	..	..	..	..	..	..	..	..	..	2.7	5.1	..	..	8.3
1999 Aug	..	..	..	..	..	..	..	2.6	1.9	1.2	0.3	..	..	9.1
Sep	..	..	..	..	..	..	..	2.3	2.8	1.2	1.0	..	..	9.1
Oct	..	..	..	..	..	..	..	2.8	4.7	1.4	1.6	..	..	9.0
Nov	..	..	..	..	..	..	..	4.1	2.8	1.5	2.2	..	..	8.9
Dec	..	..	..	..	..	..	..	4.7	3.7	1.8	2.8	..	..	8.9
2000 Jan	..	..	..	..	..	..	..	2.8	3.7	2.0	3.5	..	..	8.8
Feb	..	..	..	..	..	..	..	4.7	3.7	2.1	4.1	..	..	8.8
Mar	..	..	..	..	..	..	..	4.9	0.9	2.2	4.4	..	..	8.6
Apr	..	..	..	..	..	..	..	5.3	4.7	2.1	4.3	..	..	8.5
May	..	..	..	..	..	..	..	6.7	5.6	2.2	5.0	..	..	8.4
Jun	..	..	..	..	..	..	..	4.7	2.8	2.6	5.3	..	..	8.4
Jul	..	..	..	..	..	..	..	4.4	1.8	2.5	5.0	..	..	8.3
Aug	..	..	..	..	..	..	..	4.8	..	2.5	5.0	..	..	8.4
Sep	..	..	..	..	..	..	..	..	..	2.9	5.3	..	..	8.3
Percentage change on previous quarter	ILGL	HUDY	HUDZ	HUEA	HUEB	HUEC	HUED	ILHF	ILHZ				ILIT	
1998 Q1	0.8	0.6	0.1	0.4	–	0.5	0.9	1.1	1.6				–0.6	
Q2	0.4	0.4	0.1	0.1	0.2	0.3	0.5	0.6	0.7				1.0	
Q3	0.6	0.4	0.1	0.4	–0.3	0.2	0.3	0.3	0.9				1.2	
Q4	0.3	0.4	0.1	0.1	0.4	–0.3	0.4	–0.6	0.3				0.2	
1999 Q1	0.6	0.6	0.2	0.4	–0.2	0.1	0.3	0.2	1.6				–0.6	
Q2	0.6	0.3	–	0.3	–0.2	0.8	0.7	0.6	–0.6				1.2	
Q3	0.9	0.4	–	0.3	–0.2	1.2	0.9	1.9	1.2				0.9	
Q4	0.9	0.4	0.1	0.1	0.3	0.8	0.9	1.2	1.6				0.2	
2000 Q1	0.8	0.4	0.1	0.3	–0.1	0.9	0.7	0.4	0.6				–0.8	
Q2	0.8	0.4	0.1	0.2	0.1	0.9	0.9	2.0	0.9				1.2	
Q3	..	..	..	..	..	..	..	..	..				..	
Percentage change on previous month								ILKF	ILKP					
1999 Aug								0.5	–0.9					
Sep								–0.3	–					
Oct								0.5	1.8					
Nov								1.0	–					
Dec								–0.2	–					
2000 Jan								–0.8	0.9					
Feb								1.3	–					
Mar								0.6	–0.9					
Apr								0.5	0.9					
May								1.5	1.8					
Jun								–1.2	–1.8					
Jul								0.9	–					
Aug								0.9	..					
Sep								..	..					

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

Sales = Retail Sales Volume
CPI = Consumer Prices, measurement 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

2 Germany

	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	ILFY	HUBW	HUBX	HUBY	HUBZ	HUCA	HUCB	ILGS	ILHM	HVLL	ILAF	ILAO	ILIG	GABD
1991	..	..	..	..	..	..	..	3.3	5.6	4.1	2.2	6.1	1.9	4.2
1992	1.8	1.3	1.0	0.8	–0.6	–0.5	0.1	–2.5	–2.1	5.0	1.6	5.4	–1.4	4.5
1993	–1.1	0.1	–	–1.1	–0.1	–1.3	–1.2	–7.6	–4.2	4.5	0.1	5.1	–1.0	7.9
1994	2.4	0.6	0.5	0.9	0.3	1.7	1.6	3.6	–	2.7	0.7	3.7	–0.4	8.5
1995	1.8	1.3	0.3	–0.1	0.2	1.4	1.3	1.0	0.8	1.7	1.9	4.0	–0.2	8.2
1996	0.8	0.5	0.4	–0.2	–0.4	1.3	0.8	0.7	–1.1	1.4	–1.2	3.5	–0.3	8.9
1997	1.5	0.4	–0.2	0.2	0.2	2.9	2.1	3.7	–1.6	1.9	1.1	1.5	–0.4	9.9
1998	1.8	1.1	0.1	0.5	0.5	1.8	2.1	4.2	1.0	1.0	–0.4	1.8	0.7	9.4
1999	1.4	1.4	–	0.6	0.2	1.4	2.2	1.6	0.6	0.6	–1.0	2.6	0.9	8.7
1998 Q1	3.0	0.9	–	1.0	0.5	3.0	2.4	6.3	0.8	1.2	0.7	1.3	0.1	9.8
Q2	1.7	0.5	–	0.4	0.5	2.8	2.5	4.8	–0.8	1.4	0.2	1.8	0.4	9.6
Q3	1.6	1.4	0.1	0.5	0.2	1.3	1.9	4.5	2.4	0.7	–0.8	2.1	0.9	9.2
Q4	0.9	1.5	0.3	0.1	0.7	0.1	1.7	1.4	1.9	0.4	–1.7	2.2	1.4	9.0
1999 Q1	0.6	1.4	–	0.2	0.7	–0.1	1.5	–0.6	1.6	0.3	–2.4	2.5	1.5	8.8
Q2	1.0	1.5	–0.1	0.6	0.4	0.5	1.9	0.5	–0.1	0.5	–1.7	2.4	1.3	8.7
Q3	1.6	1.3	–	0.9	–0.1	1.9	2.4	1.8	–0.1	0.7	–0.7	2.7	0.7	8.8
Q4	2.4	1.3	–	0.9	–0.1	3.1	2.8	4.3	0.8	1.0	0.6	3.0	0.2	8.7
2000 Q1	2.3	0.4	0.3	0.9	–0.5	4.0	2.9	4.9	–0.6	1.7	2.3	2.8	0.4	8.4
Q2	3.6	1.3	0.3	0.5	0.5	4.1	3.0	7.0	4.2	1.6	2.6	..	0.5	8.4
Q3	..	..	..	..	..	..	..	6.8	..	2.0	3.7	..	..	8.3
1999 Aug	..	..	..	..	..	..	..	2.6	0.8	0.7	–0.7	..	..	8.8
Sep	..	..	..	..	..	..	..	3.0	–1.1	0.7	–0.5	..	..	8.8
Oct	..	..	..	..	..	..	..	3.6	2.0	0.8	0.2	..	..	8.7
Nov	..	..	..	..	..	..	..	4.9	–0.9	1.0	0.7	..	..	8.7
Dec	..	..	..	..	..	..	..	4.5	1.3	1.2	1.1	..	..	8.6
2000 Jan	..	..	..	..	..	..	..	2.7	–0.4	1.6	2.0	..	..	8.5
Feb	..	..	..	..	..	..	..	5.9	2.5	1.8	2.4	..	..	8.4
Mar	..	..	..	..	..	..	..	6.1	–3.7	1.9	2.4	..	..	8.4
Apr	..	..	..	..	..	..	..	6.8	5.8	1.5	2.1	..	..	8.4
May	..	..	..	..	..	..	..	9.1	7.9	1.4	2.7	..	..	8.4
Jun	..	..	..	..	..	..	..	5.1	–1.2	1.9	2.9	..	..	8.3
Jul	..	..	..	..	..	..	..	7.8	0.5	1.9	3.3	..	..	8.3
Aug	..	..	..	..	..	..	..	6.6	2.3	1.8	3.5	..	..	8.3
Sep	..	..	..	..	..	..	..	6.1	..	2.5	4.3	..	..	8.3
Percentage change on previous quarter	ILGI	HUCC	HUCD	HUCE	HUCF	HUCG	HUCH	ILHC	ILHW				ILIQ	
1998 Q1	1.2	1.0	0.3	0.3	–	0.3	0.8	2.5	1.4				–2.2	
Q2	–0.5	–0.3	–	–0.3	0.1	0.4	0.4	–0.1	–0.7				1.5	
Q3	0.3	0.5	–0.1	0.2	–	–0.2	0.2	0.6	0.7				1.5	
Q4	–0.1	0.3	0.1	–0.2	0.5	–0.4	0.3	–1.6	0.4				0.6	
1999 Q1	0.9	0.9	–	0.4	–	0.1	0.6	0.6	1.2				–2.1	
Q2	–0.1	–0.1	–0.1	0.2	–0.2	1.0	0.9	0.9	–2.4				1.3	
Q3	0.9	0.3	–	0.5	–0.4	1.1	0.6	1.9	0.7				0.9	
Q4	0.8	0.3	–	–0.2	0.6	0.9	0.8	0.8	1.3				0.1	
2000 Q1	0.8	–	0.3	0.5	–0.4	1.0	0.6	1.2	–0.2				–1.9	
Q2	1.2	0.7	–0.1	–0.3	0.7	1.0	1.0	3.0	2.3				1.4	
Q3	..	..	..	..	..	..	..	1.7	..				..	
Percentage change on previous month								ILKC	ILKM					
1999 Aug								1.7	–0.5					
Sep								–0.9	–2.2					
Oct								0.8	3.7					
Nov								0.2	–1.2					
Dec								–0.3	0.4					
2000 Jan								–0.3	–0.7					
Feb								2.1	1.9					
Mar								0.3	–1.9					
Apr								1.4	2.6					
May								2.3	4.4					
Jun								–2.9	–7.7					
Jul								3.0	2.2					
Aug								0.6	1.3					
Sep								–1.3	..					

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 measurement 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

3 France

	GDP	Contribution to change in GDP: PFC	GFC	GFCF	ChgStk	Exports	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
1991	1.1	0.4	0.6	–0.3	–0.1	1.0	0.5	–0.2	–0.2	3.2	–1.2	4.7	0.1	9.5
1992	1.3	0.4	0.8	–0.3	–0.2	1.0	0.3	–1.1	0.3	2.3	–1.1	4.0	–0.6	10.4
1993	–0.9	–0.1	1.0	–1.3	–1.2	–	–0.7	–3.7	0.2	2.2	–2.2	3.0	–1.3	11.7
1994	1.8	0.3	0.1	0.3	1.0	1.6	1.6	3.9	–0.1	1.7	1.2	2.0	0.1	12.3
1995	1.8	0.9	–	0.4	0.5	1.7	1.6	2.5	–	1.7	5.2	2.4	0.9	11.7
1996	1.1	0.7	0.5	–	–0.5	0.7	0.3	0.9	–0.3	2.0	–2.7	2.6	0.2	12.3
1997	1.9	0.1	0.5	–	0.1	2.8	1.5	3.7	1.0	1.2	–0.6	2.6	0.7	12.3
1998	3.2	1.9	0.1	1.2	0.6	2.0	2.5	5.2	2.6	0.8	–0.9	2.2	1.6	11.8
1999	2.9	1.3	0.6	1.4	–0.4	1.0	0.9	2.1	2.4	0.5	–1.4	2.5	1.9	11.3
1998 Q1	3.3	1.5	0.1	1.1	0.6	3.2	3.1	7.5	2.3	0.9	0.5	2.4	1.2	11.9
Q2	3.5	2.1	–	1.2	0.9	2.4	3.1	6.7	3.1	1.1	–0.3	2.0	1.6	11.8
Q3	3.3	2.1	–	1.3	0.4	1.7	2.3	3.9	2.5	0.7	–1.4	2.1	1.8	11.8
Q4	2.9	1.8	0.1	1.3	0.7	0.5	1.6	2.6	2.7	0.4	–2.3	2.0	1.8	11.8
1999 Q1	2.6	1.5	0.5	1.5	–0.2	–0.1	0.5	1.3	3.4	0.2	–2.8	2.0	2.0	11.7
Q2	2.6	1.1	0.6	1.4	–0.3	0.3	0.5	0.5	1.8	0.4	–2.4	2.0	1.9	11.5
Q3	3.1	1.3	0.6	1.3	–0.7	1.4	0.9	2.7	2.2	0.5	–1.2	2.7	1.8	11.2
Q4	3.4	1.3	0.6	1.2	–0.3	2.3	1.7	4.0	1.9	1.0	0.8	3.4	2.0	10.8
2000 Q1	3.5	1.6	0.4	1.2	–	3.3	3.0	4.5	2.1	1.5	3.0	5.2	2.3	10.3
Q2	3.4	1.3	0.4	1.2	–0.1	3.8	3.3	4.1	1.4	1.5	4.7	5.4	2.3	9.8
Q3	..	..	..	..	..	..	..	..	0.1	1.9	5.3	..	..	9.6
1999 Aug	..	..	..	..	..	..	..	2.5	–0.3	0.5	–1.4	..	..	11.2
Sep	..	..	..	..	..	..	..	3.2	2.8	0.7	–0.7	..	..	11.1
Oct	..	..	..	..	..	..	..	3.5	0.1	0.8	0.4	..	..	10.9
Nov	..	..	..	..	..	..	..	4.2	3.1	0.9	0.8	..	..	10.8
Dec	..	..	..	..	..	..	..	4.1	2.8	1.3	1.3	..	..	10.6
2000 Jan	..	..	..	..	..	..	..	3.9	1.8	1.6	2.3	..	..	10.5
Feb	..	..	..	..	..	..	..	5.0	2.4	1.4	3.0	..	..	10.3
Mar	..	..	..	..	..	..	..	4.7	2.0	1.5	3.4	..	..	10.2
Apr	..	..	..	..	..	..	..	4.5	–1.0	1.3	4.3	..	..	10.0
May	..	..	..	..	..	..	..	4.2	4.1	1.5	4.7	..	..	9.8
Jun	..	..	..	..	..	..	..	3.7	1.2	1.7	5.0	..	..	9.6
Jul	..	..	..	..	..	..	..	3.9	–1.5	1.7	5.2	..	..	9.6
Aug	..	..	..	..	..	..	..	3.9	1.5	1.8	5.4	..	..	9.6
Sep	..	..	..	..	..	..	..	..	0.3	2.2	5.4	..	..	9.5
Percentage change on previous quarter														
	ILGJ	HUBQ	HUBR	HUBS	HUBT	HUBU	HUBV	ILHD	ILHX				ILIR	
1998 Q1	0.9	0.4	–0.1	0.3	0.5	0.6	0.9	1.5	–				0.4	
Q2	0.8	0.8	–	0.4	–	0.2	0.6	1.3	1.0				0.6	
Q3	0.6	0.3	0.1	0.3	–	0.1	0.2	–0.4	0.7				0.5	
Q4	0.6	0.3	0.1	0.3	0.2	–0.4	–	0.2	1.1				0.3	
1999 Q1	0.6	0.1	0.2	0.4	–0.4	–	–0.2	0.2	0.7				0.6	
Q2	0.8	0.3	0.1	0.3	–	0.6	0.5	0.5	–0.6				0.5	
Q3	1.0	0.5	0.1	0.3	–0.5	1.2	0.6	1.9	1.0				0.5	
Q4	1.0	0.3	0.1	0.2	0.7	0.5	0.9	1.4	0.8				0.5	
2000 Q1	0.7	0.4	–	0.4	–0.2	1.0	1.0	0.7	0.8				0.9	
Q2	0.7	0.1	0.1	0.3	–0.1	1.1	0.8	0.1	–1.2				0.5	
Q3	..	..	..	..	..	..	..	..	–0.3				..	
Percentage change on previous month														
								ILKD	ILKN					
1999 Aug								–	–3.7					
Sep								0.5	1.8					
Oct								0.5	–0.2					
Nov								1.3	1.8					
Dec								–1.0	–0.4					
2000 Jan								0.3	–0.5					
Feb								1.0	1.1					
Mar								0.1	0.6					
Apr								–0.5	–4.0					
May								0.6	3.7					
Jun								–0.4	–1.0					
Jul								1.6	–0.6					
Aug								–	–0.8					
Sep								..	0.6					

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
Sales = Retail Sales volume
CPI = Consumer Prices, measurement 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

4 Italy

	GDP	Contribution to change in 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
1991	1.4	1.7	0.3	0.2	–0.1	–0.3	0.5	–1.8	3.2	6.3	3.3	9.7	1.3	8.6
1992	0.8	1.2	0.1	–0.3	–0.1	1.4	1.6	–1.0	1.8	5.3	2.0	5.4	–1.0	8.9
1993	–0.9	–2.3	–	–2.2	–0.7	1.9	–2.5	–2.3	–2.9	4.6	3.7	3.6	–4.1	10.2
1994	2.2	0.9	–0.2	–	0.8	2.2	1.7	5.8	–6.2	4.1	3.7	3.4	–1.7	11.1
1995	2.9	1.0	–0.4	1.1	0.2	3.1	2.1	5.8	–5.1	5.3	7.9	3.1	–0.6	11.7
1996	1.1	0.7	0.2	0.7	–0.7	0.2	–0.1	–1.5	–1.4	4.0	1.8	3.1	0.5	11.7
1997	1.8	1.7	0.1	0.2	0.3	1.7	2.3	3.8	6.9	2.0	1.3	3.6	0.4	11.8
1998	1.5	1.4	0.1	0.8	0.6	0.9	2.2	1.3	3.0	2.0	0.1	2.8	1.2	11.8
1999	1.4	1.0	0.1	0.8	0.4	–0.1	0.9	–	..	1.7	–0.2	2.3	1.2	11.4
1998 Q1	2.8	1.5	0.1	1.2	1.1	2.4	3.5	5.2	3.8	2.0	1.2	2.2	1.0	11.8
Q2	1.5	1.2	0.1	0.8	0.3	1.4	2.3	2.7	0.4	2.1	0.6	3.1	0.9	11.9
Q3	1.5	1.3	0.1	0.8	0.2	0.7	1.7	0.3	3.2	2.1	–0.1	2.8	1.1	11.9
Q4	0.4	1.5	0.1	0.3	0.7	–0.7	1.5	–2.5	5.1	1.7	–1.2	3.0	1.5	11.8
1999 Q1	1.1	1.4	0.1	0.3	1.2	–1.5	0.5	–1.3	..	1.4	–1.8	3.0	1.2	11.6
Q2	1.1	1.0	0.1	0.8	0.9	–0.8	0.9	–2.6	..	1.4	–1.4	2.1	1.3	11.4
Q3	1.3	0.9	0.1	0.9	0.2	0.1	1.0	0.5	..	1.7	–	2.3	1.2	11.3
Q4	2.2	0.8	0.1	1.3	–0.6	1.6	1.1	3.2	..	2.1	2.2	1.8	1.4	11.1
2000 Q1	3.0	1.2	0.2	1.5	–1.0	2.6	1.5	3.4	..	2.4	4.6	..	1.2	11.0
Q2	2.6	1.2	0.2	1.4	–0.8	2.6	2.2	5.6	..	2.6	6.2	..	1.5	10.6
Q3	..	..	..	..	..	..	..	..	..	2.6	6.7	..	2.1	..
1999 Sep	..	..	..	..	..	..	..	–0.3	..	1.8	0.8	2.1	..	11.2
Oct	..	..	..	..	..	..	..	1.6	..	2.0	1.6	1.9	..	11.1
Nov	..	..	..	..	..	..	..	2.5	..	2.0	2.2	1.8	..	11.1
Dec	..	..	..	..	..	..	..	5.9	..	2.1	2.8	1.8	..	11.2
2000 Jan	..	..	..	..	..	..	..	1.8	..	2.2	3.8	..	..	11.2
Feb	..	..	..	..	..	..	..	4.8	..	2.4	4.7	..	..	11.0
Mar	..	..	..	..	..	..	..	3.6	..	2.5	5.4	..	..	10.8
Apr	..	..	..	..	..	..	..	4.1	..	2.3	5.3	..	..	10.6
May	..	..	..	..	..	..	..	7.8	..	2.5	6.4	..	..	10.6
Jun	..	..	..	..	..	..	..	4.9	..	2.7	6.9	..	..	10.6
Jul	..	..	..	..	..	..	..	2.8	..	2.6	6.6	..	..	10.5
Aug	..	..	..	..	..	..	..	3.5	..	2.6	6.5	..	..	..
Sep	..	..	..	..	..	..	..	..	..	2.6	6.8	..	..	..
Oct	..	..	..	..	..	..	..	..	..	2.6	..	..	..	..

Percentage change on previous quarter	ILGK	HUCO	HUCP	HUCQ	HUCR	HUCS	HUCT	ILHE	ILHY				ILIS	
1998 Q1	–0.4	0.4	–	0.2	–0.8	0.4	0.5	–0.9	5.1				–0.7	
Q2	0.6	0.6	0.1	–	0.6	–0.2	0.4	0.6	–0.5				1.1	
Q3	0.5	0.3	–	0.1	–0.2	0.2	–0.1	–0.9	–				1.4	
Q4	–0.3	0.2	–	–	1.2	–1.0	0.7	–1.4	0.6				–0.3	
1999 Q1	0.3	0.3	–	0.3	–0.3	–0.3	–0.4	0.4	..				–1.0	
Q2	0.6	0.2	–	0.4	0.3	0.5	0.8	–0.8	..				1.2	
Q3	0.7	0.2	0.1	0.3	–0.9	1.0	–0.1	2.3	..				1.3	
Q4	0.5	0.1	0.1	0.4	0.3	0.5	0.8	1.3	..				–0.1	
2000 Q1	1.0	0.7	–	0.4	–0.7	0.6	–	0.6	..				–1.2	
Q2	0.3	0.3	–	0.3	0.5	0.5	1.4	1.3	..				1.5	
Q3	..	..	..	..	..	..	..	..	..				1.9	

Percentage change on previous month	ILKE	ILKO
1999 Sep	–0.3	..
Oct	0.6	..
Nov	1.1	..
Dec	0.1	..
2000 Jan	–1.0	..
Feb	1.5	..
Mar	0.3	..
Apr	–0.6	..
May	2.3	..
Jun	–0.8	..
Jul	–0.9	..
Aug	1.3	..
Sep	..	..
Oct	..	..

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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 not seasonally adjusted

5 USA

	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
1991	–0.5	–0.1	0.2	–0.9	–0.3	0.6	–	–2.0	–1.9	4.2	2.0	3.2	–0.8	6.8
1992	3.1	1.9	0.1	0.8	0.3	0.6	0.6	3.1	3.4	3.0	1.3	2.7	0.6	7.5
1993	2.7	2.2	–0.1	1.0	–	0.3	0.9	3.4	4.9	2.9	1.2	2.6	1.5	6.9
1994	4.0	2.5	–	1.2	0.7	0.9	1.2	5.5	6.5	2.6	0.6	2.4	2.3	6.1
1995	2.7	2.0	–	0.9	–0.5	1.0	0.9	4.8	3.6	2.8	1.9	2.6	1.5	5.6
1996	3.6	2.1	0.1	1.5	–	0.9	1.0	4.4	4.9	2.9	2.6	3.3	1.4	5.4
1997	4.4	2.4	0.3	1.6	0.4	1.4	1.7	6.3	4.1	2.3	0.4	3.1	2.3	4.9
1998	4.4	3.1	0.2	2.1	0.2	0.3	1.6	4.2	6.4	1.6	–0.9	2.5	1.5	4.5
1999	4.2	3.5	0.3	1.9	–0.4	0.3	1.5	3.5	8.6	2.1	1.9	2.9	1.5	4.2
1998 Q1	4.8	2.8	0.2	2.0	0.8	0.8	1.8	5.7	4.8	1.4	–1.5	2.8	1.9	4.7
Q2	4.1	3.4	0.2	2.2	–0.3	0.2	1.7	4.7	7.5	1.6	–0.8	2.8	1.5	4.4
Q3	3.9	3.0	0.2	1.9	0.3	–0.2	1.3	3.8	5.3	1.6	–0.6	2.5	1.1	4.5
Q4	4.6	3.3	0.3	2.2	–	0.3	1.5	2.9	7.7	1.5	–0.4	1.9	1.3	4.4
1999 Q1	3.9	3.4	0.4	2.0	–0.8	–	1.2	2.8	9.0	1.7	0.7	1.8	1.7	4.3
Q2	3.8	3.4	0.1	1.8	–0.5	0.2	1.4	3.3	7.8	2.2	1.3	2.8	1.4	4.3
Q3	4.3	3.5	0.3	1.9	–0.4	0.6	1.8	3.7	9.3	2.4	2.3	3.7	1.4	4.2
Q4	5.0	3.7	0.4	1.9	0.1	0.5	1.8	4.2	8.3	2.6	2.9	3.6	1.5	4.1
2000 Q1	5.3	4.0	0.7	2.2	–0.1	0.9	2.0	5.4	8.5	3.4	3.6	4.3	1.6	4.1
Q2	6.1	3.6	0.9	2.2	0.7	1.2	2.2	6.1	7.0	3.3	4.0	2.9	1.6	4.0
Q3	5.3	3.6	0.6	1.9	0.4	1.4	2.1	5.6	..	3.5	3.5	2.9	1.1	4.0
1999 Aug	..	..	..	..	..	..	..	3.1	10.2	2.3	2.3	3.7	1.6	4.2
Sep	..	..	..	..	..	..	..	3.4	8.7	2.6	3.1	3.6	1.2	4.2
Oct	..	..	..	..	..	..	..	3.7	7.8	2.6	2.8	3.7	1.5	4.1
Nov	..	..	..	..	..	..	..	4.3	8.3	2.6	3.0	3.6	1.5	4.1
Dec	..	..	..	..	..	..	..	4.7	8.9	2.6	2.8	3.6	1.4	4.1
2000 Jan	..	..	..	..	..	..	..	5.2	8.9	3.0	2.5	4.5	1.5	4.0
Feb	..	..	..	..	..	..	..	5.3	8.6	3.3	4.0	4.5	1.7	4.1
Mar	..	..	..	..	..	..	..	5.4	8.0	3.8	4.3	3.6	1.7	4.1
Apr	..	..	..	..	..	..	..	5.9	7.6	3.0	3.7	2.7	2.1	3.9
May	..	..	..	..	..	..	..	6.2	6.7	3.1	3.7	2.7	1.2	4.1
Jun	..	..	..	..	..	..	..	6.4	6.6	3.7	4.3	3.6	1.3	4.0
Jul	..	..	..	..	..	..	..	5.5	6.8	3.7	4.0	3.6	1.0	4.0
Aug	..	..	..	..	..	..	..	5.7	..	3.4	3.3	2.7	1.0	4.1
Sep	..	..	..	..	..	..	..	5.7	..	3.4	3.3	2.6	1.1	3.9
Percentage change on previous quarter														
	ILGM	HUDM	HUDN	HUDO	HUDP	HUDQ	HUDR	ILHG	ILIA				ILIU	
1998 Q1	1.6	0.8	–0.1	0.7	0.6	–	0.5	0.6	1.4				–1.0	
Q2	0.7	0.9	0.2	0.7	–0.7	–0.1	0.4	0.7	2.6				1.5	
Q3	0.9	0.7	–	0.3	0.1	–0.1	0.2	0.8	0.5				0.6	
Q4	1.4	0.8	0.1	0.5	–	0.4	0.4	0.8	2.9				0.2	
1999 Q1	0.9	0.9	–	0.6	–0.2	–0.2	0.2	0.5	2.6				–0.6	
Q2	0.6	0.9	–	0.4	–0.4	0.2	0.6	1.2	1.5				1.2	
Q3	1.4	0.8	0.2	0.4	0.3	0.3	0.6	1.2	2.0				0.6	
Q4	2.0	1.0	0.2	0.5	0.5	0.3	0.4	1.2	2.0				0.3	
2000 Q1	1.2	1.2	0.3	0.8	–0.5	0.2	0.4	1.6	2.7				–0.5	
Q2	1.4	0.5	0.3	0.4	0.5	0.4	0.7	1.9	0.1				1.2	
Q3	0.7	0.7	–0.1	0.1	–	0.5	0.5	0.7	..				0.1	
Percentage change on previous month														
								ILKG	ILKQ				ILLA	
1999 Aug								0.2	1.1				–0.4	
Sep								0.2	–0.1				–0.6	
Oct								0.7	0.5				0.7	
Nov								0.3	1.1				0.1	
Dec								0.4	1.4				0.1	
2000 Jan								0.7	0.8				–0.9	
Feb								0.4	1.0				0.4	
Mar								0.6	–0.2				0.5	
Apr								0.7	–0.3				0.6	
May								0.9	0.3				–0.2	
Jun								0.4	0.1				0.8	
Jul								–0.2	0.9				–	
Aug								0.5	..				–0.4	
Sep								0.2	..				–0.5	

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption 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

Sales = Retail Sales volume
CPI = Consumer Prices, measurement 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

6 Japan

	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
1991	3.8	1.5	0.2	1.1	0.3	0.6	−0.3	1.9	2.5	3.2	1.2	3.5	1.9	2.1
1992	1.0	1.2	0.2	−0.5	−0.4	0.5	–	−5.7	−0.2	1.8	−1.0	1.3	1.1	2.1
1993	0.3	0.7	0.2	−0.6	−0.2	0.2	–	−3.4	−2.8	1.2	−1.6	0.3	0.2	2.5
1994	0.7	1.1	0.2	−0.2	−0.2	0.5	0.8	1.3	0.3	0.7	−1.8	2.2	0.1	2.9
1995	1.4	1.2	0.3	0.4	0.2	0.7	1.4	3.0	0.1	−0.1	−0.7	2.9	–	3.1
1996	5.2	1.8	0.2	3.4	0.4	0.8	1.3	2.2	0.7	0.1	−1.7	2.6	0.5	3.4
1997	1.6	0.3	0.1	−0.3	0.1	1.4	0.1	4.0	−1.9	1.7	0.6	2.9	1.0	3.4
1998	−2.6	−0.3	0.1	−2.3	−0.6	−0.3	−0.9	−6.7	−5.5	0.7	−1.3	−0.8	−0.6	4.1
1999	0.3	0.7	0.1	−0.3	0.1	0.2	0.6	1.0	−2.0	−0.3	−1.5	−0.6	−0.8	4.7
1998 Q1	−2.9	−2.1	0.3	−1.8	−0.1	0.3	−0.7	−4.2	−10.0	2.0	0.4	−0.2	–	3.7
Q2	−1.1	0.7	–	−1.8	−0.6	−0.5	−1.1	−7.9	−2.4	0.4	−1.9	−0.3	−0.7	4.1
Q3	−3.2	−0.2	0.2	−3.0	−0.9	−0.2	−1.0	−7.9	−3.8	−0.2	−1.8	−1.7	−0.9	4.2
Q4	−3.1	0.3	0.1	−2.6	−0.9	−0.9	−0.9	−6.7	−5.2	0.5	−2.0	−0.7	−1.0	4.4
1999 Q1	−0.4	0.6	0.2	−0.9	−0.2	−0.4	−0.4	−3.7	−4.2	−0.1	−2.1	−0.4	−1.2	4.6
Q2	0.7	1.1	0.1	−0.1	0.1	−0.1	0.5	0.3	−2.1	−0.3	−1.8	−1.1	−1.1	4.7
Q3	0.9	1.0	0.1	–	0.2	0.5	0.8	2.7	−1.4	–	−1.4	−0.3	−0.7	4.7
Q4	−0.2	0.1	–	–	0.2	1.0	1.5	5.1	−0.3	−1.0	−0.6	−0.3	−0.2	4.6
2000 Q1	0.7	0.6	–	−0.5	0.1	1.8	1.2	4.4	−2.9	−0.7	−0.1	2.0	−0.5	4.8
Q2	0.8	0.6	–	−0.5	–	2.2	1.5	6.3	−1.9	−0.7	0.4	2.3	−0.4	4.7
Q3	..	..	..	..	..	..	..	5.3	−1.1	−0.7	0.2	1.4	−0.4	4.7
1999 Aug	..	..	..	..	..	..	..	3.9	−1.1	0.3	−1.4	0.4	−0.6	4.7
Sep	..	..	..	..	..	..	..	2.8	−1.1	−0.2	−1.1	1.6	−0.2	4.6
Oct	..	..	..	..	..	..	..	3.8	–	−0.7	−0.8	1.0	−0.4	4.6
Nov	..	..	..	..	..	..	..	5.4	−1.1	−1.2	−0.5	0.1	–	4.6
Dec	..	..	..	..	..	..	..	6.2	–	−1.1	−0.5	−2.2	−0.3	4.7
2000 Jan	..	..	..	..	..	..	..	4.4	−2.2	−0.9	−0.3	2.5	−0.4	4.7
Feb	..	..	..	..	..	..	..	4.0	−3.3	−0.6	−0.1	1.8	−0.4	4.9
Mar	..	..	..	..	..	..	..	4.7	−3.3	−0.5	0.2	1.7	−0.6	4.9
Apr	..	..	..	..	..	..	..	7.3	−3.3	−0.8	0.5	2.2	−0.5	4.8
May	..	..	..	..	..	..	..	4.7	−1.1	−0.7	0.3	2.1	−0.5	4.6
Jun	..	..	..	..	..	..	..	6.9	−1.1	−0.7	0.4	2.8	−0.3	4.7
Jul	..	..	..	..	..	..	..	5.7	−1.1	−0.5	0.2	1.3	−0.1	4.7
Aug	..	..	..	..	..	..	..	6.8	−1.1	−0.8	0.3	2.0	−0.4	4.6
Sep	..	..	..	..	..	..	..	3.5	−1.1	−0.8	0.1	1.2	−0.5	4.7
Percentage change on previous quarter														
	ILGN	HUDA	HUDB	HUDC	HUDD	HUDE	HUDF	ILHH	ILIB				ILIV	
1998 Q1	−1.2	0.2	−0.1	−0.8	−0.4	−0.4	−0.3	−1.7	−0.3				−1.6	
Q2	−0.2	0.1	–	−0.4	−0.2	−0.2	−0.5	−4.3	−2.4				2.1	
Q3	−1.2	–	0.1	−1.2	−0.2	0.1	–	0.3	−0.7				−0.4	
Q4	−0.5	–	0.1	−0.2	−0.1	−0.4	−0.1	−1.1	−1.8				−1.1	
1999 Q1	1.5	0.5	0.1	0.9	0.3	–	0.3	1.4	0.8				−1.8	
Q2	1.0	0.7	−0.1	0.4	0.1	0.2	0.3	−0.3	−0.3				2.2	
Q3	−1.0	−0.1	0.1	−1.1	−0.1	0.7	0.3	2.7	–				–	
Q4	−1.6	−1.0	–	−0.2	–	0.1	0.6	1.2	−0.8				−0.6	
2000 Q1	2.5	1.0	0.1	0.4	0.1	0.8	–	0.7	−1.9				−2.1	
Q2	1.0	0.6	−0.1	0.4	0.1	0.6	0.6	1.6	0.8				2.3	
Q3	..	..	..	..	..	..	..	1.8	0.8				–	
Percentage change on previous month														
								ILKH	ILKR				ILLB	
1999 Aug								2.3	–				0.2	
Sep								−0.5	−1.1				0.1	
Oct								−0.1	–				−0.2	
Nov								1.2	–				−0.3	
Dec								0.2	–				−0.9	
2000 Jan								−0.4	−1.1				−1.1	
Feb								−0.2	−1.1				−0.7	
Mar								2.1	–				0.6	
Apr								−0.5	–				1.4	
May								0.2	1.1				1.0	
Jun								1.8	1.1				–	
Jul								−0.5	–				−0.2	
Aug								3.3	–				−0.1	
Sep								−3.5	−1.1				–	

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Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce

7 World trade in goods[1]

	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
1991	3.8	2.8	8.9	5.4	3.8	10.4	3.8	3.5	4.9	4.6	3.6	7.4	4.6	4.2
1992	4.3	3.4	8.3	5.2	4.3	7.9	4.2	3.7	5.7	5.0	4.2	7.4	4.8	4.6
1993	4.7	2.2	15.3	4.0	1.0	12.4	3.9	2.2	9.0	3.3	0.8	10.3	4.3	3.6
1994	12.0	9.9	20.2	11.9	12.3	11.1	10.6	9.4	14.2	10.8	10.9	10.8	12.0	10.7
1995	9.6	9.9	8.7	10.9	10.3	12.4	8.9	9.4	7.8	9.8	8.9	12.3	10.3	9.4
1996	6.6	6.2	7.8	7.3	7.7	6.6	6.5	6.1	7.6	6.6	7.2	4.9	7.0	6.5
1997	11.0	11.3	10.0	10.8	11.4	9.4	10.3	10.7	9.1	9.6	9.9	8.8	10.9	9.9
1998	6.1	6.4	5.3	6.5	9.2	-0.4	5.5	5.8	4.7	5.9	8.1	-0.1	6.3	5.7
1999	5.8	5.2	7.8	7.1	9.4	0.7	5.4	5.0	6.5	6.0	8.3	-0.3	6.5	5.7
1995 Q1	13.2	13.4	12.6	13.7	14.0	12.8	12.2	13.0	10.1	12.4	12.2	12.8	13.5	12.3
Q2	10.0	10.3	8.9	12.1	11.5	13.8	9.6	10.2	7.9	11.3	10.3	13.7	11.1	10.4
Q3	8.5	9.0	6.9	10.5	9.5	12.9	7.8	8.2	6.7	9.3	7.9	12.7	9.5	8.5
Q4	6.8	6.9	6.4	7.4	6.3	10.3	6.2	6.0	6.6	6.3	5.0	9.8	7.1	6.2
1996 Q1	5.6	5.3	6.7	7.5	7.3	8.1	5.3	4.7	6.8	6.5	6.3	6.8	6.6	5.9
Q2	5.5	5.1	7.1	6.2	6.3	5.9	5.3	4.6	7.2	5.3	5.8	4.1	5.9	5.3
Q3	6.9	6.6	7.9	7.6	8.5	5.5	7.0	6.7	7.8	6.8	8.0	3.6	7.3	6.9
Q4	8.2	7.9	9.3	8.1	8.6	7.0	8.4	8.3	8.7	7.6	8.5	5.3	8.2	8.0
1997 Q1	8.1	7.5	10.0	8.1	8.1	8.1	7.9	7.4	9.2	7.5	7.6	7.3	8.1	7.7
Q2	12.1	12.6	10.5	11.5	12.4	9.5	11.4	12.1	9.5	10.1	10.6	9.1	11.8	10.7
Q3	12.6	13.4	10.1	11.9	12.7	10.0	11.6	12.5	9.0	10.5	10.8	9.5	12.3	11.0
Q4	11.2	11.7	9.5	11.6	12.3	9.9	10.2	10.8	8.6	10.3	10.6	9.3	11.4	10.2
1998 Q1	10.6	11.5	7.5	10.5	12.6	5.0	9.9	11.2	6.5	9.5	11.2	5.1	10.5	9.7
Q2	6.7	6.8	6.8	7.1	9.1	1.9	6.2	6.3	6.0	6.6	8.2	2.3	6.9	6.4
Q3	4.1	4.1	4.3	4.6	7.4	-2.6	3.5	3.4	3.8	4.2	6.6	-2.3	4.4	3.8
Q4	3.1	3.3	2.6	3.9	7.7	-5.9	2.5	2.5	2.3	3.2	6.5	-5.7	3.5	2.8
1999 Q1	1.8	1.7	2.2	3.1	5.8	-4.4	1.5	1.1	2.4	2.4	5.1	-5.1	2.5	1.9
Q2	3.6	3.2	4.7	5.6	8.2	-1.8	3.5	3.2	4.2	4.6	7.3	-2.9	4.6	4.0
Q3	7.7	7.0	10.1	8.7	10.9	2.2	7.3	6.9	8.1	7.3	9.5	1.0	8.2	7.3
Q4	10.1	8.8	14.4	11.2	12.7	6.9	9.4	8.7	11.3	9.8	11.2	5.7	10.7	9.6
2000 Q1	15.7	14.9	18.6	..	15.9	..	..	14.0	..	..	14.0	..	..	..
Q2	15.7	15.1	17.8	..	16.2	..	..	13.9	..	..	14.0	..	..	..
Q3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter	ILJN	ILJO	ILJP	ILJQ	ILJR	ILJS	ILJT	ILJU	ILJV	ILJW	ILJX	ILJY	ILJZ	ILKA
1995 Q1	3.0	3.4	1.8	2.0	1.5	3.4	2.8	3.2	1.7	1.7	1.0	3.3	2.5	2.2
Q2	1.0	0.9	1.7	2.3	1.9	3.2	1.0	0.8	1.6	2.3	2.0	3.2	1.6	1.7
Q3	1.0	0.9	1.5	1.2	0.8	2.2	0.8	0.6	1.6	0.9	0.4	2.0	1.1	0.9
Q4	1.5	1.5	1.3	1.8	2.0	1.1	1.4	1.3	1.6	1.3	1.5	0.8	1.6	1.3
1996 Q1	2.0	1.9	2.0	2.1	2.4	1.3	1.9	2.0	1.8	1.8	2.3	0.5	2.0	1.9
Q2	1.0	0.7	2.0	1.0	0.9	1.2	1.0	0.7	2.0	1.2	1.5	0.6	1.0	1.1
Q3	2.3	2.3	2.3	2.5	2.8	1.8	2.5	2.6	2.2	2.3	2.6	1.5	2.4	2.4
Q4	2.7	2.7	2.7	2.3	2.1	2.5	2.7	2.9	2.4	2.0	1.9	2.5	2.5	2.4
1997 Q1	1.9	1.6	2.7	2.1	2.0	2.4	1.4	1.1	2.3	1.7	1.5	2.4	2.0	1.6
Q2	4.7	5.3	2.5	4.2	4.9	2.5	4.3	5.1	2.2	3.7	4.3	2.3	4.5	4.0
Q3	2.8	3.1	1.8	2.8	3.1	2.2	2.6	3.0	1.8	2.6	2.8	2.0	2.8	2.6
Q4	1.4	1.2	2.2	2.0	1.8	2.5	1.5	1.3	2.0	1.9	1.7	2.3	1.7	1.7
1998 Q1	1.3	1.5	0.8	1.0	2.3	-2.3	1.2	1.5	0.4	1.0	2.0	-1.6	1.2	1.1
Q2	1.0	0.8	1.8	1.0	1.6	-0.5	0.8	0.4	1.7	1.0	1.5	-0.4	1.0	0.9
Q3	0.3	0.5	-0.5	0.5	1.5	-2.2	0.1	0.2	-0.3	0.3	1.3	-2.6	0.4	0.2
Q4	0.4	0.4	0.5	1.3	2.1	-1.0	0.4	0.4	0.6	0.8	1.6	-1.3	0.9	0.6
1999 Q1	0.1	-0.1	0.5	0.2	0.6	-0.8	0.2	0.1	0.4	0.3	0.7	-1.0	0.2	0.2
Q2	2.8	2.3	4.3	3.5	3.9	2.2	2.8	2.5	3.5	3.2	3.6	1.9	3.1	3.0
Q3	4.3	4.2	4.6	3.4	4.0	1.8	3.7	3.8	3.4	2.9	3.3	1.4	3.9	3.3
Q4	2.7	2.1	4.5	3.7	3.7	3.6	2.5	2.1	3.6	3.2	3.1	3.3	3.2	2.8
2000 Q1	5.2	5.5	4.1	..	3.5	..	..	5.0	..	..	3.2	..	..	..
Q2	2.8	2.5	3.6	..	4.1	..	..	2.3	..	..	3.6	..	..	..
Q3	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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

Source: OECD - SNA68

Final Expenditure Prices Index (Experimental) – October 2000

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Note that further development work is ongoing and the FEPI will be available only as an experimental index until this work has been completed.

Summary

The rate of inflation for the FEPI increased slightly between September and October from 1.5 per cent to 1.6 per cent; the rate of inflation for the FEPI(P), a variant version of the FEPI incorporating government output prices (see Note 6), was unchanged between these months at 1.4 per cent.

The FEPI and FEPI(P) annual percentage change

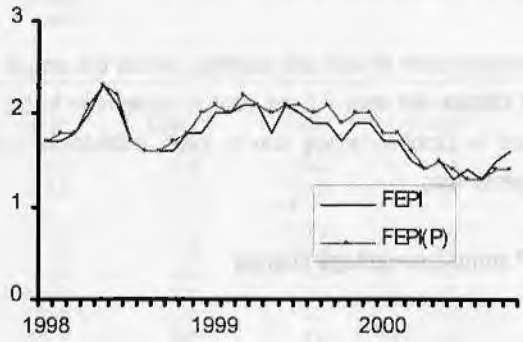


Table A

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

		ICP		IIP		IGP		IGP(P)		FEPI		FEPI(P)	
		Index	%change	Index	%change	Index	%change	Index	%change	Index	%change	Index	%change
2000	May	123.2	1.0	114.4	2.3	123.4	2.2	122.3	2.6	121.5	1.5	121.2	1.5
	Jun	123.4	1.1	114.4	2.0	123.5	1.3	122.4	1.7	121.6	1.3	121.3	1.4
	Jul	122.6	1.0	114.5	1.9	123.6	2.1	122.6	2.2	121.2	1.4	120.9	1.3
	Aug	122.6	0.7	115.0	2.3	123.7	2.1	122.7	1.9	121.3	1.3	121.1	1.3
	Sep	123.4	1.1	114.9	2.2	124.1	2.2	123.0	1.9	121.8	1.5	121.6	1.4
	Oct	123.2	1.1	115.0	2.4	123.9	2.2	122.8	1.7	121.7	1.6	121.4	1.4

The Index of Consumer Prices (ICP)

Consumer price inflation, as measured by the ICP, was the same in October as in September, at 1.1 per cent.

Upward pressure came from:

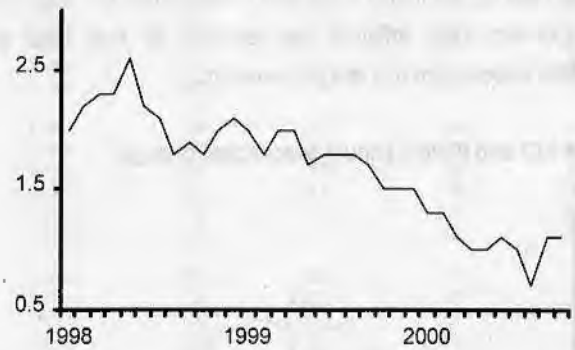
- Clothing and footwear, where the annual rate of inflation was less negative in October, at minus 4.6 per cent, than in September at minus 5.6 per cent. Special offers last year on many clothing items, particularly women's outerwear, were not repeated in October 2000.

- Food, where the annual rate of inflation increased from 1.1 per cent in September to 1.3 per cent in October due to supermarket discounting for a range of items last October not being repeated this year.

Downward pressure came from:

- Transport and communication, where the annual rate of inflation fell from 1.3 per cent in September to 0.7 per cent in October, largely due to falls in petrol and oil prices in contrast to increases last October.

The ICP annual percentage change



The Index of Investment Prices (IIP)

Investment price inflation, as measured by the IIP, increased from 2.2 per cent in September to 2.4 per cent in October.

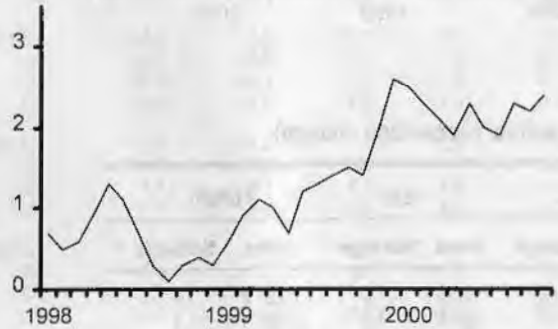
Upward pressure came from:

- Other Machinery & Equipment (ie, excluding transport equipment), where the annual rate of inflation was less negative, at minus 1.3 per cent, in October compared with minus 1.6 per cent in September.

Downward pressure came from:

- Transfer costs of land and buildings, where the annual rate of inflation fell from 7.2 per cent in September to 5.0 per cent in October largely due to lower inflation for estate agents' fees.

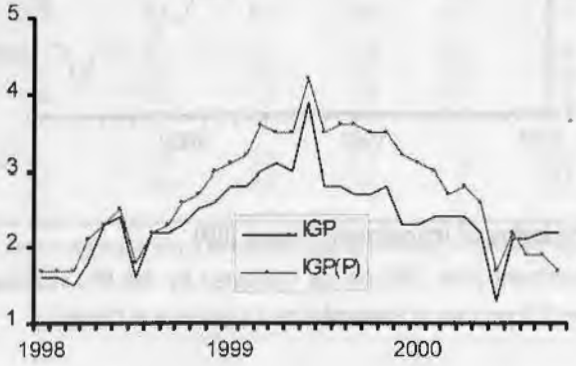
The IIP annual percentage change



The Index of Government Prices - IGP and IGP(P)

The rate of inflation for the IGP was unchanged between September and October at 2.2 per cent. Within the total IGP, lower inflation for local government pay and procurement was offset by higher inflation for central government pay and procurement. The rate of inflation for the IGP(P), a variant version of the IGP which incorporates government output prices (see Note 6), fell from 1.9 per cent in September to 1.7 per cent in October; lower inflation was recorded for both local and central government pay and procurement.

The IGP and IGP(P) annual percentage change



Comparison between FEPI and other inflation measures

Table B
Measures of Inflation (annual percentage changes)

		FEPI	FEPI(P)	RPIX	HICP	ICP(FEPI)	PPI
2000	May	1.5	1.5	2.0	0.5	1.0	2.5
	Jun	1.3	1.4	2.2	0.8	1.1	2.9
	Jul	1.4	1.3	2.2	1.0	1.0	2.8
	Aug	1.3	1.3	1.9	0.6	0.7	2.5
	Sep	1.5	1.4	2.2	1.0	1.1	2.5
	Oct	1.6	1.4	2.0	1.0	1.1	2.6

NOTES

1. The headline measure of inflation is the Retail Prices Index (RPI). The RPI should be used as the main indicator of inflation affecting average households.

2. The Final Expenditure Prices Index (FEPI) is a measure of the change in the prices paid by UK households, business and government for final purchases of goods and services. Intermediate purchases by business are excluded. The FEPI is made up of three components:

The Index of Consumer Prices (ICP)
The Index of Investment Prices (IIP)
The Index of Government Prices (IGP).

3. The ICP measures inflation affecting all consumers in the UK. The price indicators used in the ICP are taken mainly from the Retail Prices Index (RPI).

4. The IIP is a measure of the change in the prices paid for capital goods by business and by government. It also covers new construction projects and dwellings built for consumers, businesses and government. The price indicators used are mainly Producer Price Indices (PPIs), implied import deflators, construction output price indices and average house price indicators.

5. The IGP measures inflation affecting government. It covers expenditure by central and local government on pay and on procurement. The price indicators used are mainly Average Earnings Indices (to reflect labour costs), PPIs and RPIs (to reflect the cost of goods consumed by government).

6. The IGP(P) is a variant version of the IGP which incorporates government output prices for health, education, social security, legal aid, crown and county courts and magistrates courts (which comprise around 55% of general government final consumption expenditure) and therefore reflects movements in productivity. The IGP(P) feeds into a variant version of the FEPI, the FEPI(P), which differs from the FEPI solely because of the inclusion of government output prices. An article describing the development of the FEPI(P) is included in Economic Trends, No 555, February 2000.

7. An article describing the development and composition of the FEPI is included in Economic Trends, No 526, September 1997. Data are available in computer readable form from the National Statistics Databank service (telephone 020-7533 5675, fax 020-7533 5689 or e-mail sales.ons@gtnet.gov.uk).

1 Final Expenditure Prices Index - FEPI & FEPI(P) Summary Table

Experimental price indices

	Index of Consumer Prices ICP	Index of Investment Prices IIP	Index of Government Prices IGP	Final Expenditure Prices Index FEPI	Annual percentage changes ICP	IIP	IGP	FEPI
January 1992=100								
Weights								
1997	595	180	225	1000				
1998	597	183	220	1000				
1999	608	182	210	1000				
2000	602	191	207	1000				

FINAL EXPENDITURE PRICES INDEX - FEPI

	CUSE	CUSK	CUSO	CUSP	CGAZ	CGBF	CGBJ	CGBK
1998 Oct	120.1	110.8	118.0	117.8	1.8	0.3	2.3	1.6
Nov	120.3	110.8	118.2	117.9	2.0	0.4	2.5	1.8
Dec	120.6	110.7	119.0	118.2	2.1	0.3	2.6	1.8
1999 Jan	120.0	110.8	119.2	118.0	2.0	0.6	2.8	2.0
Feb	120.4	111.0	119.1	118.3	1.8	0.9	2.8	2.0
Mar	121.1	111.3	119.1	118.7	2.0	1.1	3.0	2.1
Apr	121.7	111.6	120.3	119.4	2.0	1.0	3.1	2.1
May	122.0	111.8	120.7	119.7	1.7	0.7	3.0	1.8
Jun	122.0	112.2	121.9	120.0	1.8	1.2	3.9	2.1
Jul	121.4	112.4	121.1	119.5	1.8	1.3	2.8	2.0
Aug	121.7	112.4	121.2	119.7	1.8	1.4	2.8	1.9
Sep	122.1	112.4	121.4	120.0	1.7	1.5	2.7	1.9
Oct	121.9	112.3	121.2	119.8	1.5	1.4	2.7	1.7
Nov	122.1	113.0	121.5	120.1	1.5	2.0	2.8	1.9
Dec	122.4	113.6	121.7	120.5	1.5	2.6	2.3	1.9
2000 Jan	121.5	113.6	122.0	120.0	1.3	2.5	2.3	1.7
Feb	122.0	113.5	122.0	120.3	1.3	2.3	2.4	1.7
Mar	122.4	113.6	121.9	120.5	1.1	2.1	2.4	1.5
Apr	122.9	113.7	123.2	121.1	1.0	1.9†	2.4	1.4
May	123.2	114.4†	123.4†	121.5	1.0	2.3†	2.2†	1.5
Jun	123.4	114.4	123.5	121.6	1.1	2.0	1.3	1.3
Jul	122.6	114.5	123.6	121.2†	1.0	1.9	2.1	1.4†
Aug	122.6	115.0	123.7	121.3	0.7	2.3	2.1	1.3
Sep	123.4	114.9	124.1	121.8	1.1	2.2	2.2	1.5
Oct	123.2	115.0	123.9	121.7	1.1	2.4	2.2	1.6

FINAL EXPENDITURE PRICES INDEX INCORPORATING IMPLIED GOVERNMENT OUTPUT PRICES - FEPI(P)

			LGTZ	LGUA			GXVN	GXVO
1998 Oct	120.1	110.8	116.6	117.5	1.8	0.3	2.6	1.7
Nov	120.3	110.8	116.8	117.6	2.0	0.4	2.7	1.8
Dec	120.6	110.7	117.4	117.9	2.1	0.3	3.0	2.0
1999 Jan	120.0	110.8	117.7	117.7	2.0	0.6	3.1	2.1
Feb	120.4	111.0	117.9	118.0	1.8	0.9	3.2	2.0
Mar	121.1	111.3	118.2	118.5	2.0	1.1	3.6	2.2
Apr	121.7	111.6	118.9	119.1	2.0	1.0	3.5	2.1
May	122.0	111.8	119.2	119.4	1.7	0.7	3.5	2.0
Jun	122.0	112.2	120.3	119.6	1.8	1.2	4.2	2.1
Jul	121.4	112.4	120.0	119.3	1.8	1.3	3.5	2.1
Aug	121.7	112.4	120.4	119.5	1.8	1.4	3.6	2.0
Sep	122.1	112.4	120.7	119.9	1.7	1.5	3.6	2.1
Oct	121.9	112.3	120.7	119.7	1.5	1.4	3.5	1.9
Nov	122.1	113.0	120.9	120.0	1.5	2.0	3.5	2.0
Dec	122.4	113.6	121.2	120.3	1.5	2.6	3.2	2.0
2000 Jan	121.5	113.6	121.4	119.8	1.3	2.5	3.1	1.8
Feb	122.0	113.5	121.4	120.1	1.3	2.3	3.0	1.8
Mar	122.4	113.6	121.4	120.4	1.1	2.1	2.7	1.6
Apr	122.9	113.7	122.2	120.8	1.0	1.9	2.8	1.4
May	123.2	114.4†	122.3†	121.2	1.0	2.3†	2.6†	1.5
Jun	123.4	114.4	122.4	121.3	1.1	2.0	1.7	1.4
Jul	122.6	114.5	122.6	120.9	1.0	1.9	2.2	1.3
Aug	122.6	115.0	122.7	121.1	0.7	2.3	1.9	1.3
Sep	123.4	114.9	123.0	121.6†	1.1	2.2	1.9	1.4†
Oct	123.2	115.0	122.8	121.4	1.1	2.4	1.7	1.4

† Indicates earliest revision.

2 Final Expenditure Prices Index (FEPI) Index of Consumer Prices (ICP)

Experimental price indices

	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	*Of which: goods*	*Of which: services*
January 1992=100													
Weights													
1997	126	68	30	67	90	39	71	189	119	201	1000	595	405
1998	127	68	29	67	87	39	71	188	118	206	1000	597	403
1999	119	66	28	70	85	34	75	192	113	218	1000	600	400
2000	117	64	26	68	85	31	76	191	126	216	1000	595	405
	CURU	CURV	CURW	CURX	CURY	CURZ	CUSA	CUSB	CUSC	CUSD	CUSE	MJYH	MJYI
1998 Oct	113.9	125.6	163.4	104.7	131.1	97.5	112.4	121.5	111.2	129.5	120.1	*114.9*	*128.6*
Nov	113.8	125.2	163.4	105.3	131.3	97.4	113.6	121.1	111.2	130.2	120.3	*114.9*	*129.0*
Dec	114.7	125.1	168.2	104.7	131.4	97.2	115.7	120.5	111.0	130.6	120.6	*115.2*	*129.3*
1999 Jan	115.1	126.5	172.0	97.6	131.5	97.3	111.3	121.2	110.7	130.6	120.0	*114.2*	*129.5*
Feb	115.4	126.8	172.1	100.0	131.5	97.2	112.8	121.2	110.6	131.0	120.4	*114.8*	*129.7*
Mar	114.7	126.8	178.2	101.6	131.4	97.5	114.5	122.6	110.7	131.3	121.1	*115.5*	*130.2*
Apr	114.1	127.0	180.7	102.0	133.5	97.3	113.2	124.1	111.1	132.3	121.7	*115.7*	*131.5*
May	114.7	127.6	180.7	102.5	133.6	97.1	114.6	124.1	111.2	132.5	122.0	*116.0*	*131.7*
Jun	114.2	128.2	181.2	102.3	133.7	97.1	114.0	123.8	111.0	132.9	122.0	*115.8*	*131.9*
Jul	113.5	127.9	184.3	97.4	134.0	97.4	112.0	123.8	110.3	133.6	121.4	*114.7*	*132.4*
Aug	113.0	128.1	184.7	98.8	134.3	97.4	113.1	124.2	110.1	133.7	121.7	*115.0*	*132.5*
Sep	112.9	128.1	184.8	102.6	134.4	97.7	114.0	123.9	110.6	133.9	122.1	*115.5*	*133.0*
Oct	112.8	128.2	184.7	101.6	134.8	97.9	113.4	123.7	110.9	133.1	121.9	*115.2*	*132.8*
Nov	113.4	127.8	184.8	102.0	135.1	98.1	114.6	123.3	110.8	133.7	122.1	*115.3*	*133.3*
Dec	113.5	127.5	184.7	101.2	135.3	98.7	116.5	123.6	110.7	134.1	122.4	*115.5*	*133.7*
2000 Jan	113.4	128.4	184.9	94.4	136.0	98.6	111.5	124.1	110.3	133.9	121.5	*114.0*	*133.9*
Feb	113.4	128.5	186.7	97.5	136.1	98.6	112.6	124.2	110.8	134.1	122.0	*114.6*	*134.1*
Mar	112.7	128.7	186.9	98.9	135.9	98.7	113.9	125.2	110.7	134.7	122.4	*115.1*	*134.5*
Apr	112.6	129.0	198.5	100.2	135.7	97.4	113.8	125.9	111.2	134.6	122.9	*115.6*	*134.7*
May	113.6	129.6	198.6	100.0	135.9	96.7	114.3	126.0	111.5	135.2	123.2	*115.9*	*135.2*
Jun	113.9	129.9	199.0	99.4	136.2	96.2	113.7	126.8	111.2	135.5	123.4	*115.9*	*135.6*
Jul	115.0	129.7	199.1	92.0	136.6	96.1	111.5	126.7	110.6	135.7	122.6	*114.6*	*135.8*
Aug	114.0	129.9	200.2	93.7	137.0	96.1	112.6	125.2	110.8	136.1	122.6	*114.5*	*135.9*
Sep	114.1	130.1	201.6	96.9	137.3	96.7	113.9	125.5	111.6	136.7	123.4	*115.3*	*136.7*
Oct	114.3	130.2	201.7	96.9	137.7	97.0	112.8	124.6	111.6	136.7	123.2	*115.0*	*136.7*

Annual Percentage Changes

	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	*Of which: goods*	*Of which: services*
	CGAP	CGAQ	CGAR	CGAS	CGAT	CGAU	CGAV	CGAW	CGAX	CGAY	CGAZ	MJYJ	MJYK
1998 Oct	1.5	3.2	7.7	–1.2	3.4	–2.5	0.9	1.0	0.4	3.8	1.8	*0.7*	*3.5*
Nov	2.0	3.4	7.6	–1.8	3.5	–2.2	1.2	0.9	0.5	4.3	2.0	*0.7*	*3.9*
Dec	2.7	3.7	8.4	–1.9	3.5	–1.9	2.2	0.4	0.3	4.3	2.1	*0.9*	*3.9*
1999 Jan	3.0	3.6	8.0	–2.1	3.3	–1.1	1.4	0.5	0.4	4.1	2.0	*1.1*	*3.6*
Feb	3.3	3.0	7.9	–2.0	3.2	–1.5	1.2	0.3	0.1	3.6	1.8	*0.8*	*3.4*
Mar	2.9	2.7	11.7	–2.4	3.0	–1.4	1.2	1.5	0.3	3.5	2.0	*1.0*	*3.6*
Apr	2.1	2.8	11.5	–2.9	2.8	–1.6	1.0	1.6	0.3	3.7	2.0	*0.8*	*3.7*
May	1.1	2.5	11.1	–3.3	2.7	–1.2	1.1	1.5	0.1	3.4	1.7	*0.4*	*3.5*
Jun	1.0	3.1	11.3	–3.2	2.7	–0.5	1.2	1.3	0.3	3.5	1.8	*0.6*	*3.5*
Jul	0.6	2.4	13.1	–1.9	2.8	0.1	0.5	1.5	–0.1	3.9	1.8	*0.6*	*3.8*
Aug	–1.0	2.3	13.2	–2.4	2.8	0.2	0.8	1.9	–0.3	3.8	1.8	*0.3*	*3.7*
Sep	–0.7	2.2	13.2	–3.0	2.8	0.4	1.0	1.6	–0.4	4.0	1.7	*0.3*	*3.8*
Oct	–1.0	2.1	13.0	–3.0	2.8	0.4	0.9	1.8	–0.3	2.8	1.5	*0.3*	*3.3*
Nov	–0.4	2.1	13.1	–3.1	2.9	0.7	0.9	1.8	–0.4	2.7	1.5	*0.3*	*3.3*
Dec	–1.0	1.9	9.8	–3.3	3.0	1.5	0.7	2.6	–0.3	2.7	1.5	*0.3*	*3.4*
2000 Jan	–1.5	1.5	7.5	–3.3	3.4	1.3	0.2	2.4	–0.4	2.5	1.3	*–0.2*	*3.4*
Feb	–1.7	1.3	8.5	–2.5	3.5	1.4	–0.2	2.5	0.2	2.4	1.3	*–0.2*	*3.4*
Mar	–1.7	1.5	4.9	–2.7	3.4	1.2	–0.5	2.1	–	2.6	1.1	*–0.3*	*3.3*
Apr	–1.3	1.6	9.9	–1.8	1.6	0.1	0.5	1.5	0.1	1.7	1.0	*–0.1*	*2.4*
May	–1.0	1.6	9.9	–2.4	1.7	–0.4	–0.3	1.5	0.3	2.0	1.0	*–0.1*	*2.7*
Jun	–0.3	1.3	9.8	–2.8	1.9	–0.9	–0.3	2.4	0.2	2.0	1.1	*0.1*	*2.8*
Jul	1.3	1.4	8.0	–5.5	1.9	–1.3	–0.4	2.3	0.3	1.6	1.0	*–0.1*	*2.6*
Aug	0.9	1.4	8.4	–5.2	2.0	–1.3	–0.4	0.8	0.6	1.8	0.7	*–0.4*	*2.6*
Sep	1.1	1.6	9.1	–5.6	2.2	–1.0	–0.1	1.3	0.9	2.1	1.1	*–0.2*	*2.8*
Oct	1.3	1.6	9.2	–4.6	2.2	–0.9	–0.5	0.7	0.6	2.7	1.1	*–0.2*	*2.9*

† indicates earliest revision.

3 Final Expenditure Prices Index (FEPI) Index of Investment Prices (IIP)

Experimental price indices

	Transport Equipment	Other Machinery and Equipment	Dwellings	Other Buildings and Structures	Transfer Costs of Land and Buildings	Intangible Fixed Assets[1]	Index of Investment Prices IIP
January 1992=100							
Weights							
1997	95	382	187	270	32	34	1000
1998	97	392	181	262	35	33	1000
1999	98	390	178	260	42	32	1000
2000	97	383	180	267	41	32	1000
	CUSH	CUSG	CUSJ	CUSF	CUSI	MJYL	CUSK
1998 Oct	120.3	97.8	120.1	115.9	165.7	120.1	110.8
Nov	121.2	97.5	119.7	116.5	165.1	120.1	110.8
Dec	121.7	97.1	119.0	117.0	164.3	120.3	110.7
1999 Jan	121.2	97.3	118.7	117.3	167.0	120.0	110.8
Feb	121.8	97.2	118.9	117.6	168.0	120.4	111.0
Mar	121.9	96.8	120.6	117.9	170.2	120.9	111.3
Apr	122.1	96.6	122.7	118.1	171.6	121.4	111.6
May	122.1	96.0	124.3	118.3	175.4	121.5	111.8
Jun	122.3	95.7	126.3	118.5	179.9	121.4	112.2
Jul	121.5	95.2	128.5	118.8	182.5	121.1	112.4
Aug	121.3	94.2	130.8	119.0	185.3	121.3	112.4
Sep	121.2	93.6	131.4	119.2	186.0	121.5	112.4
Oct	121.0	93.0	131.9	119.7	189.4	121.4	112.3
Nov	122.8	93.5	133.2	120.0	186.4	121.7	113.0
Dec	123.7	93.8	135.2	120.4	186.1	121.9	113.6
2000 Jan	121.9	93.5	135.9	120.6	191.1	121.2	113.6
Feb	121.8	93.1	136.3	121.0	189.6	121.2	113.5
Mar	121.7	92.6	138.3	121.0	191.4	121.7	113.6
Apr	120.6	92.1	140.6	121.3	191.9	123.1	113.7
May	121.7	92.8†	141.9	121.4	191.7	123.3†	114.4†
Jun	122.1	92.4	142.2	121.6	193.5	123.2	114.4
Jul	122.7	92.1	142.6	122.0	194.2	122.9	114.5
Aug	122.0†	92.7	143.5†	122.3	195.8	122.7	115.0
Sep	122.8	92.1	143.5	122.7	199.4	122.7	114.9
Oct	123.0	91.8	144.0	123.2	198.9	122.8	115.0

Annual Percentage Changes

	Transport Equipment	Other Machinery and Equipment	Dwellings	Other Buildings and Structures	Transfer Costs of Land and Buildings	Intangible Fixed Assets[1]	Index of Investment Prices IIP
	CGBC	CGBB	CGBE	CGBA	CGBD	MJYM	CGBF
1998 Oct	2.5	–7.9	8.9	4.4	8.9	0.8	0.3
Nov	3.7	–7.6	8.5	4.6	7.8	0.8	0.4
Dec	3.8	–7.8	7.8	4.7	8.0	0.9	0.3
1999 Jan	3.6	–6.8	7.4	4.5	10.4	1.1	0.6
Feb	4.3	–5.9	7.0	4.3	9.5	1.1	0.9
Mar	3.0	–5.2	6.7	4.2	10.1	1.4	1.1
Apr	3.4	–5.0	6.8	4.1	7.7	1.6	1.0
May	2.4	–5.8	7.2	3.9	9.6	1.0	0.7
Jun	2.9	–5.1	7.4	3.8	12.0	1.3	1.2
Jul	2.1	–4.7	8.1	3.7	10.6	1.4	1.3
Aug	1.3	–4.9	9.5	3.5	12.6	1.3	1.4
Sep	1.2	–4.6	9.5	3.3	12.5	1.2	1.5
Oct	0.6	–4.9	9.8	3.3	14.3	1.1	1.4
Nov	1.3	–4.1	11.3	3.0	12.9	1.3	2.0
Dec	1.6	–3.4	13.6	2.9	13.3	1.3	2.6
2000 Jan	0.6	–3.9	14.5	2.8	14.4	1.0	2.5
Feb	–	–4.2	14.6	2.9	12.9	0.7	2.3
Mar	–0.2	–4.3	14.7	2.6	12.5	0.7	2.1
Apr	–1.2	–4.7	14.6	2.7	11.8	1.4	1.9
May	–0.3	–3.3†	14.2	2.6	9.3	1.5†	2.3†
Jun	–0.2	–3.4	12.6	2.6	7.6	1.5	2.0
Jul	1.0	–3.3	11.0	2.7	6.4	1.5	1.9
Aug	0.6†	–1.6	9.7†	2.8	5.7	1.2	2.3
Sep	1.3	–1.6	9.2	2.9	7.2	1.0	2.2
Oct	1.7	–1.3	9.2	2.9	5.0	1.2	2.4

† indicates earliest revision.

1 This covers mineral exploration, computer software and entertainment, literary and artistic originals.

4 Final Expenditure Prices Index - FEPI & FEPI(P)
Index of Government Prices - IGP & IGP(P)

Experimental price indices

	Local Government Pay & Procurement	Central Government Pay & Procurement	Education Grants	Index of Government Prices	Annual percentage changes: Local Government Pay & Procurement	Central Government Pay & Procurement	Education Grants	Index of Government Prices
January 1992=100								
Weights								
1997	354	569	77	1000				
1998	353	570	77	1000				
1999	351	567	82	1000				
2000	352	569	79	1000				
	INDEX OF GOVERNMENT PRICES - IGP							
	CUSL	CUSM	CUSN	CUSO	CGBG	CGBH	CGBI	CGBJ
1998 Oct	121.1	115.8	120.6	118.0	2.5	2.2	2.0	2.3
Nov	121.3	116.0	120.7	118.2	2.5	2.7	2.1	2.5
Dec	122.1	116.7	121.4	119.0	2.7	2.5	2.3	2.6
1999 Jan	122.0	117.1	122.3	119.2	2.7	2.8	2.5	2.8
Feb	122.0	117.0	122.3	119.1	2.7	3.1	2.5	2.8
Mar	122.1	116.9	122.3	119.1	2.9	3.2	2.6	3.0
Apr	123.7	117.7	123.7	120.3	2.7	3.2	3.0	3.1
May	123.7	118.5	123.7	120.7	2.6	3.2	3.0	3.0
Jun	125.9	119.3	123.7	121.9	4.4	3.7	3.0	3.9
Jul	124.4	118.7	124.7	121.1	3.2	2.6	3.4	2.8
Aug	124.5	118.8	124.7	121.2	3.1	2.6	3.4	2.8
Sep	125.1	118.8	124.8	121.4	3.2	2.3	3.5	2.7
Oct	125.1	118.4	124.8	121.2	3.3	2.2	3.5	2.7
Nov	125.2	118.9	124.9	121.5	3.2	2.5	3.5	2.8
Dec	125.3	119.2	124.9	121.7	2.6	2.1	2.9	2.3
2000 Jan	125.3	119.5	124.9	122.0	2.7	2.0	2.1	2.3
Feb	125.3	119.6	124.9	122.0	2.7	2.2	2.1	2.4
Mar	125.3	119.5	124.9	121.9	2.6	2.2	2.1	2.4
Apr	127.5	120.2	126.9	123.2	3.1	2.1	2.6	2.4
May	127.6	120.5	126.2†	123.4†	3.2	1.7	2.0†	2.2†
Jun	127.7	120.6	126.2	123.5	1.4	1.1	2.0	1.3
Jul	127.7	120.6	127.3	123.6	2.7	1.6	2.1	2.1
Aug	127.8	120.8†	127.3	123.7	2.7	1.7†	2.1	2.1
Sep	128.3†	121.1	127.3	124.1	2.6	1.9	2.0	2.2
Oct	128.2	120.9	127.3	123.9	2.5	2.1	2.0	2.2
	INDEX OF GOVERNMENT PRICES INCORPORATING IMPLIED OUTPUT PRICES - IGP(P)							
	LGTU	LGTX		LGTZ	GXVL	GXVM		GXVN
1998 Oct	114.6	117.4	120.6	116.6	2.0	2.9	2.0	2.6
Nov	115.0	117.7	120.7	116.8	2.3	3.2	2.1	2.7
Dec	115.5	118.2	121.4	117.4	2.7	3.2	2.3	3.0
1999 Jan	115.9	118.4	122.3	117.7	3.2	3.1	2.5	3.1
Feb	116.3	118.6	122.3	117.9	3.6	3.3	2.5	3.2
Mar	116.7	118.8	122.3	118.2	4.0	3.5	2.6	3.6
Apr	117.3	119.4	123.7	118.9	3.6	3.4	3.0	3.5
May	117.7	119.7	123.7	119.2	3.9	3.3	3.0	3.5
Jun	120.1	120.2	123.7	120.3	5.9	3.4	3.0	4.2
Jul	119.1	120.2	124.7	120.0	4.9	2.8	3.4	3.5
Aug	119.6	120.6	124.7	120.4	5.1	2.9	3.4	3.6
Sep	120.3	120.6	124.8	120.7	5.1	2.7	3.5	3.6
Oct	120.5	120.5	124.8	120.7	5.1	2.6	3.5	3.5
Nov	120.8	120.7	124.9	120.9	5.0	2.5	3.5	3.5
Dec	121.0	121.0	124.9	121.2	4.8	2.4	2.9	3.2
2000 Jan	121.1	121.2	124.9	121.4	4.5	2.4	2.1	3.1
Feb	121.3	121.2	124.9	121.4	4.3	2.2	2.1	3.0
Mar	121.3	121.2	124.9	121.4	3.9	2.0	2.1	2.7
Apr	122.3	121.7	126.9	122.2	4.3	1.9	2.6	2.8
May	122.4	121.9	126.2†	122.3†	4.0	1.8	2.0†	2.6†
Jun	122.6	122.0†	126.2	122.4	2.1	1.5†	2.0	1.7
Jul	122.6	122.2	127.3	122.6	2.9	1.7	2.1	2.2
Aug	122.7	122.4	127.3	122.7	2.6	1.5	2.1	1.9
Sep	123.2	122.5	127.3	123.0	2.4	1.6	2.0	1.9
Oct	123.1	122.3	127.3	122.8	2.2	1.5	2.0	1.7

† Indicates earliest revision.

Corporate Services Price Index (Experimental) – 3rd quarter 2000

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Introduction

This summary contains the latest quarter's results for the experimental Corporate Services Price Index (CSPI) and the 22 industry-level indices currently available. Full background and details of the development of the CSPI were included in an article published in the July 2000 issue of Economic Trends.

"Corporate services" are those services purchased by businesses from other businesses to support them in their usual line of activity. Broadly, the CSPI is the services sector equivalent of the manufacturing Producer Price Index (PPI). Examples of services currently covered are road freight, courier services and business telecommunications. Others to be added in the future include insurance, banking and professional services such as accountancy. Services provided to final consumers are excluded since these are in the Retail Price Index (RPI).

The main uses of the CSPI are as:

- a key indicator of inflation in the services sector;
- a deflator of service sector output for use in calculating GDP and, in the near future, the compilation of the Index of Services; and
- an information tool for business itself.

From late 2001 onwards, the aim is to issue a quarterly ONS First Release which will cover around 75 per cent of the corporate services sector in the top-level index.

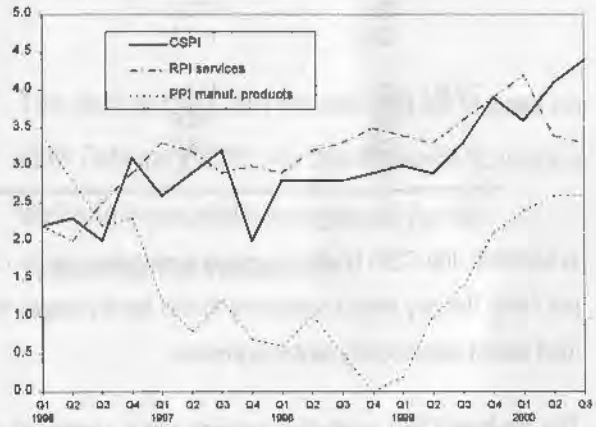
N.B. Measurement of service sector prices is inherently difficult and challenging. When viewing the results ***it should be borne in mind that many of the indices shown are regarded as experimental****, particularly those that have been added to the series more recently. Therefore some of the results will be subject to revision before the completion of the CSPI development project. The top-level index should also be viewed as* ***experimental****.*

Results for Quarter 3, 2000

The top-level CSPI is constructed by weighting together the currently available industry level indices, which cover around 45% of all business to business services. The top-level index is shown below alongside the service sector RPI and the manufacturing PPI.

The results include indices for 2 additional industries: business air fares and national post parcels. These were previously included in the top-level CSPI but were not shown separately due to disclosure reasons.

Experimental top-level CSPI compared with RPI for services and PPI for manufactured products: percentage change on same quarter a year ago



The graph shows that the annual rate of increase for the CSPI rose to 4.4 per cent in Q3 2000, compared to a rise of 4.1 per cent for the previous quarter. The annual rate of increase of the RPI for services has reduced over the last 2 quarters.

The top-level quarterly results are shown in the table that follows. Results are also shown with *property rental payments* excluded from the top-level index – a service category which has a significant effect on the overall index due to its relatively high weighting (just under a third). As more industries are included then its impact will reduce (in an index covering all the targeted industries, property rental payments would have a weighting of less than 15 per cent).

Experimental corporate services price index (CSPI), quarterly index values and percentage changes:

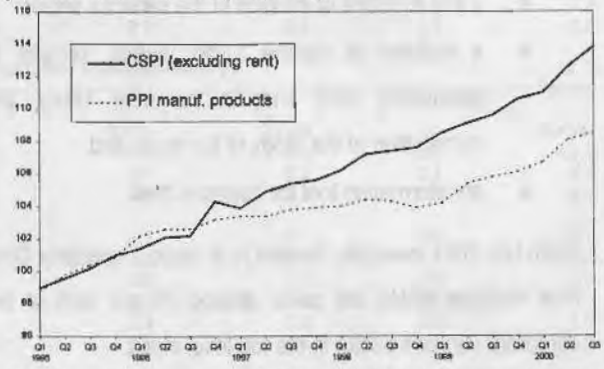
		Quarterly CSPI index values (1995 =100)		Percentage change on same quarter in previous year (%)	
		Including rent	Excluding rent	Including rent	Excluding rent
1995	Q1	99.2	99.0	.	.
	Q2	99.7	99.6	.	.
	Q3	100.2	100.2	.	.
	Q4	100.8	101.0	.	.
1996	Q1	101.4	101.4	2.2	2.4
	Q2	102.0	102.1	2.3	2.5
	Q3	102.3	102.2	2.0	1.9
	Q4	103.9	104.3	3.1	3.3
1997	Q1	104.0	103.9	2.6	2.5
	Q2	104.9	104.9	2.9	2.8
	Q3	105.5	105.4	3.2	3.1
	Q4	105.9	105.6	2.0	1.2
1998	Q1	106.9	106.2	2.8	2.2
	Q2	107.9	107.2	2.8	2.2
	Q3	108.4	107.4	2.8	1.9
	Q4	109.0	107.6	2.9	2.0
1999	Q1	110.1	108.5	3.0	2.1
	Q2	111.0	109.1	2.9	1.8
	Q3	112.0	109.6	3.3	2.1
	Q4	113.2	110.6	3.9	2.7
2000	Q1	114.0	111.0	3.6	2.3
	Q2	115.6	112.6	4.1	3.2
	Q3	116.9	113.8	4.4	3.8

In Q3 2000, the CSPI (including property rentals) rose by 1.2 per cent. The key rises contributing to this were charges for road freight and property rental payments.

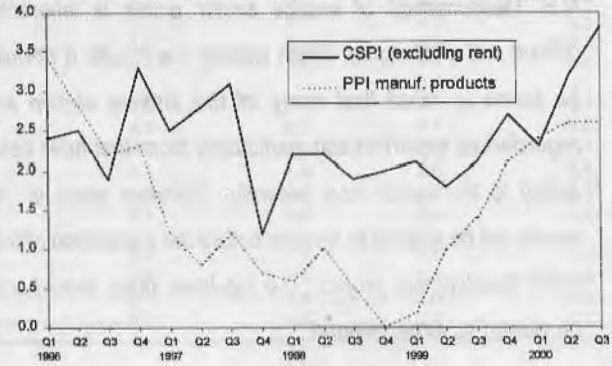
The top-level CSPI (excluding property rental payments) is compared to the net sector output PPI for manufactured products. As the graph indicates, increases in the prices of corporate services covered by this inquiry have shown a relatively smooth upward path since 1997 but have been at a greater rate over this period than that of the PPI.

Looking at the annual changes, i.e. the percentage change over the same quarter in the previous year, increases in the CSPI since mid-1996 have almost always been higher than those for the PPI. During 1999 the differences narrowed but since then there have been higher annual increases for the CSPI.

Experimental 'top-level' CSPI and PPI for manufactured products: index values (1995=100)



Experimental 'top-level' CSPI and PPI for manufactured products: percentage change on same quarter a year ago



Industry-specific indices

The main table contains the series for the 22 industries for which indices of corporate services prices are currently available. The weighting for each index is shown separately for when property rentals are included and excluded. Some key points to note are:

- *bus and coach hire* prices are up almost 10 per cent over the year, mainly due to increases in fuel bills and drivers' wages according to the industry;
- the costs of *road freight* have continued to rise, apparently due to the impact of increased fuel costs and drivers' wages and are 7 per cent higher than a year ago;
- a slight recovery in the prices for *sea and coastal water freight* appears to be continuing as a result of improved market conditions – a similar pattern is evident for *freight forwarding*;
- the latest annual price changes in *national post parcel* rates are evident for the 2nd quarter of 2000 and the index is 6 per cent higher than a year ago;
- *business air fares* show a 6 per cent increase over the year, mainly due to higher fares being reported for long haul flights;
- the 13 per cent fall in charges for *sewerage services* in the previous quarter reflects OfWat's new price controls which came into effect in April 2000;
- charges for *waste disposal* partly reflect the higher rate of Landfill Tax which came into force in April 2000. The tax rose to £11 per tonne from £10 per tonne according to the annual price escalator announced in the Budget. Previously it had risen to £10 per tonne from £7 in April 1999 following its introduction in quarter 4 1996 – the effects of these earlier changes are also apparent in the waste disposal index. Increased fuel costs have also had an effect according to the industry.

The next set of CSPI results will be issued on 20th February 2001 via the National Statistics Website www.statistics.gov.uk (under "Experimental statistics").

Note to the main table:

There are external sources for the indices denoted by an asterisk, as follows:

Index	Source
Property rental payments	Investment Property Databank (IPD)
Car contract hire and maintenance and repair of motor vehicles	Yewtree.com Ltd
Construction plant hire	Construction Plant Association (CPA)
Business telecommunications	Published sources: Tarifica Telecom Pricing Intelligence and What Cellphone magazine
Sewerage services	OfWat (Office of the Water Regulator)
National post parcels	Parcel Force

Corporate Services Price Indices (EXPERIMENTAL) (1995=100)

		Freight transport by road						
	Maintenance and repair of motor vehicles*	Bus and coach hire	Total	International component	Commercial vehicle ferries	Sea and coastal water freight	Business air fares	Freight forwarding
SIC(92):	50.20	60.23/1	60.24	60.24/3	61.10/1	61.10/2	62.10/1	63.40
1995 weights (%):								
(including property rentals)	4.16	0.62	20.87		0.54	0.62	2.07	6.09
(excluding property rentals)	6.17	0.92	30.92		0.80	0.92	3.07	9.02
Annual								
1995	100.0	100.0	100.0	100.0	..	..	..	..
1996	99.8	103.0	103.8	101.1	..	..	103.4	..
1997	104.5	108.5	110.4	105.2	96.9	95.4	115.1	103.9
1998	106.0	115.2	113.4	105.4	96.4	88.6	123.5	99.2
1999	108.0	119.7	116.5	101.4	101.9	79.6	127.2	95.5
Percentage change, latest year on previous year								
1996	-0.2	3.0	3.8	1.1	..	..	..	..
1997	4.7	5.4	6.3	4.0	..	..	11.3	..
1998	1.4	6.1	2.7	0.2	-0.4	-7.2	7.3	-4.5
1999	1.9	3.9	2.7	-3.8	5.6	-10.2	3.0	-3.7
Quarterly results (not seasonally adjusted)								
1996 Q1	99.1	101.9	102.3	101.6	..	..	101.4	..
Q2	99.5	102.4	103.4	100.0	..	..	101.8	..
Q3	99.9	103.5	103.6	100.2	103.4	97.2	101.8	..
Q4	100.8	104.2	105.9	102.5	100.9	96.3	108.5	..
1997 Q1	104.2	106.8	108.3	101.7	99.2	95.2	112.7	103.5
Q2	104.4	108.4	110.5	106.3	98.0	95.4	113.7	103.7
Q3	104.8	109.2	111.3	106.3	95.8	95.7	116.6	104.0
Q4	104.8	109.8	111.4	106.3	94.4	95.5	117.3	104.4
1998 Q1	105.4	111.9	112.2	105.2	97.0	93.7	119.8	102.2
Q2	106.4	115.5	113.3	105.8	96.3	88.4	124.2	99.7
Q3	106.3	116.2	113.9	106.0	95.9	88.1	124.9	98.1
Q4	106.1	117.1	114.3	104.6	96.6	84.0	125.1	96.7
1999 Q1	107.0	118.4	114.8	104.3	103.8	81.8	125.4	97.4
Q2	107.9	119.6	115.5	100.6	102.7	81.2	127.5	94.7
Q3	108.2	120.1	116.8	100.5	101.5	77.1	127.7	94.5
Q4	108.9	120.5	119.0	100.4	99.6	78.0	128.3	95.4
2000 Q1	109.2	126.6	119.3	102.3	102.1	79.3	129.5	95.2
Q2	109.5	130.8	121.9	102.3	101.5	81.3	132.4	95.7
Q3	110.1	131.6	124.8	102.9	101.4	82.8	135.7	96.3
Percentage change, latest quarter on previous quarter								
1996 Q1	0.5	0.6	1.1	0.2	..	..	..	..
Q2	0.4	0.5	1.0	-1.6	..	..	0.4	..
Q3	0.5	1.1	0.3	0.1	..	..	0.1	..
Q4	0.8	0.7	2.2	2.3	-2.4	-1.0	6.5	..
1997 Q1	3.4	2.4	2.3	-0.8	-1.7	-1.1	3.9	..
Q2	0.2	1.5	2.0	4.6	-1.2	0.2	0.8	0.2
Q3	0.4	0.8	0.6	0.0	-2.3	0.3	2.6	0.3
Q4	0.0	0.5	0.1	0.0	-1.4	-0.2	0.6	0.4
1998 Q1	0.6	1.9	0.8	-1.1	2.7	-1.9	2.2	-2.1
Q2	0.9	3.2	0.9	0.6	-0.8	-5.7	3.7	-2.5
Q3	-0.1	0.6	0.5	0.2	-0.4	-0.3	0.6	-1.6
Q4	-0.2	0.8	0.3	-1.3	0.8	-4.6	0.1	-1.4
1999 Q1	0.8	1.1	0.5	-0.3	7.4	-2.6	0.2	0.7
Q2	0.8	1.0	0.6	-3.6	-1.1	-0.7	1.7	-2.8
Q3	0.4	0.5	1.2	-0.1	-1.2	-5.1	0.2	-0.2
Q4	0.6	0.3	1.9	-0.1	-1.8	1.1	0.5	0.9
2000 Q1	0.2	5.1	0.3	1.9	2.5	1.6	1.0	-0.2
Q2	0.3	3.3	2.2	0.0	-0.6	2.6	2.2	0.5
Q3	0.5	0.6	2.4	0.6	-0.1	1.8	2.5	0.7
Percentage change, latest quarter on corresponding quarter of previous year								
1996 Q1	-2.8	4.5	3.3	2.7	..	..	..	..
Q2	-0.6	2.2	4.0	0.6	..	..	..	..
Q3	0.8	2.3	3.4	0.0	..	..	..	..
Q4	2.2	3.0	4.6	1.1	..	..	..	..
1997 Q1	5.1	4.8	5.9	0.1	..	..	11.2	..
Q2	5.0	5.9	7.0	6.3	..	..	11.7	..
Q3	4.9	5.5	7.4	6.1	-7.4	-1.6	14.5	..
Q4	4.0	5.3	5.1	3.8	-6.5	-0.8	8.1	..
1998 Q1	1.1	4.8	3.6	3.4	-2.2	-1.5	6.2	-1.2
Q2	1.9	6.6	2.5	-0.5	-1.8	-7.3	9.3	-3.8
Q3	1.4	6.4	2.4	-0.3	0.1	-7.9	7.1	-5.7
Q4	1.3	6.6	2.6	-1.6	2.3	-12.0	6.7	-7.3
1999 Q1	1.5	5.8	2.3	-0.9	7.0	-12.7	4.7	-4.7
Q2	1.4	3.5	1.9	-4.9	6.6	-8.1	2.6	-5.0
Q3	1.8	3.4	2.6	-5.2	5.8	-12.5	2.2	-3.6
Q4	2.7	2.9	4.1	-4.1	3.1	-7.2	2.6	-1.3
2000 Q1	2.0	6.9	3.9	-1.9	-1.6	-3.1	3.3	-2.3
Q2	1.5	9.3	5.6	1.7	-1.1	0.1	3.8	1.0
Q3	1.7	9.5	6.8	2.4	0.0	7.4	6.3	1.9

Corporate Services Price Indices (EXPERIMENTAL) (1995=100) – continued

	National post parcels*	Courier services	Business telecomm--unications*	Property rental payments*	Car contract hire*	Construction plant hire*	Employment agencies	Security services
SIC(92):	64.11	64.12	64.20	70.20	71.10	71.32	74.50	74.60
1995 weights (%):								
(including property rentals)	4.52	1.02	7.80	32.51	1.41	2.10	6.66	1.21
(excluding property rentals)	6.69	1.51	11.56	0.00	2.09	3.11	9.87	1.79
Annual								
1995	..	..	..	100.0	..	..	..	..
1996	100.0	100.4	..	102.2	..	98.4	..	99.4
1997	103.7	101.4	85.8	105.4	96.4	96.5	108.9	99.5
1998	110.5	105.6	83.4	110.0	97.5	99.8	114.9	100.3
1999	113.3	107.0	83.4	116.0	99.2	103.9	120.6	103.0
Percentage change, latest year on previous year								
1996	..	..	..	2.2	..	..	..	..
1997	3.7	1.0	..	3.1	..	-1.9	..	0.1
1998	6.6	4.2	-2.7	4.3	1.2	3.4	5.5	0.9
1999	2.5	1.3	0.0	5.4	1.7	4.1	4.9	2.7
Quarterly results (not seasonally adjusted)								
1996 Q1	100.0	99.7	..	101.4	..	98.4	..	99.9
Q2	100.0	100.3	..	101.8	93.4	99.7	..	100.3
Q3	100.0	100.8	..	102.3	93.2	99.0	..	98.8
Q4	100.0	100.6	..	103.2	94.1	96.7	..	98.7
1997 Q1	100.0	101.2	88.0	104.2	96.1	98.2	107.0	98.9
Q2	104.9	101.5	85.6	105.1	96.7	96.3	108.4	99.2
Q3	104.9	101.2	85.0	105.7	96.2	94.9	109.9	99.7
Q4	104.9	101.7	84.4	106.7	96.5	96.6	110.4	100.0
1998 Q1	104.9	102.7	83.5	108.4	97.6	101.3	112.9	100.3
Q2	112.4	105.8	83.1	109.3	98.4	99.8	114.1	99.8
Q3	112.4	106.8	83.5	110.5	96.9	99.1	115.3	100.4
Q4	112.4	107.3	83.5	111.7	97.3	99.1	117.5	100.8
1999 Q1	112.4	107.3	83.5	113.4	97.8	105.3	119.4	101.4
Q2	113.6	106.9	83.4	114.9	98.1	102.6	120.7	102.5
Q3	113.6	106.9	83.3	116.9	99.6	103.0	121.0	103.9
Q4	113.6	107.0	83.3	118.7	101.4	104.9	121.3	104.3
2000 Q1	113.6	108.5	83.7	120.3	102.3	105.6	121.6	104.3
Q2	120.5	108.6	83.7	121.7	102.7	108.7	122.9	104.4
Q3	120.5	110.2	83.7	123.3	102.2	110.0	123.2	105.5
Percentage change, latest quarter on previous quarter								
1996 Q1	..	-0.6	..	0.8	..	..	..	0.0
Q2	0.0	0.5	..	0.4	..	1.3	..	0.4
Q3	0.0	0.5	..	0.5	-0.2	-0.7	..	-1.6
Q4	0.0	-0.3	..	0.9	1.0	-2.3	..	0.0
1997 Q1	0.0	0.6	..	0.9	2.1	1.5	..	0.2
Q2	4.9	0.3	-2.8	0.8	0.6	-1.9	1.2	0.3
Q3	0.0	-0.4	-0.6	0.6	-0.5	-1.4	1.4	0.5
Q4	0.0	0.5	-0.8	0.9	0.3	1.8	0.5	0.3
1998 Q1	0.0	1.0	-1.0	1.6	1.1	4.8	2.2	0.3
Q2	7.1	3.1	-0.4	0.9	0.8	-1.4	1.1	-0.5
Q3	0.0	0.9	0.4	1.1	-1.5	-0.7	1.0	0.6
Q4	0.0	0.5	0.0	1.1	0.4	0.0	1.9	0.3
1999 Q1	0.0	0.0	0.0	1.5	0.5	6.3	1.6	0.6
Q2	1.1	-0.4	-0.1	1.3	0.3	-2.6	1.0	1.1
Q3	0.0	0.0	-0.1	1.8	1.6	0.5	0.2	1.4
Q4	0.0	0.1	0.0	1.5	1.9	1.8	0.3	0.4
2000 Q1	0.0	1.4	0.5	1.4	0.9	0.7	0.2	0.0
Q2	6.1	0.1	0.0	1.2	0.4	2.9	1.1	0.1
Q3	0.0	1.4	0.0	1.3	-0.5	1.3	0.2	1.1
Percentage change, latest quarter on corresponding quarter of previous year								
1996 Q1	..	..	..	2.0	..	..	..	..
Q2	..	..	..	2.0	..	..	..	..
Q3	..	1.0	..	2.2	..	..	..	-1.2
Q4	..	0.2	..	2.7	..	..	..	-1.3
1997 Q1	0.0	1.5	..	2.8	..	-0.2	..	-1.0
Q2	4.9	1.2	..	3.2	3.5	-3.4	..	-1.1
Q3	4.9	0.3	..	3.3	3.2	-4.1	..	1.0
Q4	4.9	1.1	..	3.3	2.5	-0.1	..	1.3
1998 Q1	4.9	1.4	-5.2	4.0	1.5	3.1	5.5	1.4
Q2	7.1	4.2	-2.9	4.1	1.8	3.6	5.3	0.6
Q3	7.1	5.5	-1.8	4.5	0.8	4.4	4.9	0.7
Q4	7.1	5.5	-1.0	4.8	0.8	2.5	6.4	0.8
1999 Q1	7.1	4.5	0.0	4.7	0.2	4.0	5.8	1.1
Q2	1.1	1.0	0.3	5.1	-0.3	2.8	5.7	2.6
Q3	1.1	0.1	-0.3	5.8	2.7	4.0	4.9	3.4
Q4	1.1	-0.3	-0.2	6.2	4.2	5.9	3.2	3.5
2000 Q1	1.1	1.1	0.2	6.1	4.7	0.3	1.8	2.9
Q2	6.1	1.6	0.3	5.9	4.8	5.9	1.9	1.9
Q3	6.1	3.1	0.5	5.4	2.6	6.8	1.9	1.6

Corporate Services Price Indices (EXPERIMENTAL) (1995=100) – continued

	Industrial cleaning	Commercial film processing	Translation & interpretation services	Adult education	Sewerage services	Waste disposal	Commercial washing & dry cleaning	TOP-LEVEL CSPI Including property rentals	TOP-LEVEL CSPI Excluding property rentals
SIC(92):	74.70	74.81	74.83 (part)	80.42	90.10	90.20	93.01		
1995 weights (%):									
(including property rentals)	2.40	0.09	0.16	0.61	1.40	2.52	0.61	100.00	..
(excluding property rentals)	3.55	0.13	0.23	0.91	2.07	3.74	0.90	..	100.00
Annual									
1995	100.0	100.0	..	100.0	100.0	100.0	..	100.0	100.0
1996	99.4	101.7	..	103.4	105.5	111.3	..	102.5	102.8
1997	98.8	104.7	..	108.5	109.9	126.8	..	105.1	104.9
1998	101.3	105.5	106.9	111.1	114.1	129.0	108.9	108.0	107.1
1999	101.8	105.6	108.5	114.7	118.1	138.1	112.1	111.6	109.4
Percentage change, latest year on previous year									
1996	-0.6	1.7	..	3.4	5.5	11.3	..	2.5	2.8
1997	-0.5	2.9	..	4.9	4.2	13.9	..	2.5	2.1
1998	2.5	0.8	..	2.4	3.8	1.8	..	2.8	2.1
1999	0.5	0.1	1.5	3.2	3.4	7.0	2.9	3.3	2.2
Quarterly results (not seasonally adjusted)									
1996 Q1	100.1	101.3	..	102.7	101.4	105.4	..	101.4	101.4
Q2	99.8	101.1	..	103.4	106.8	107.1	..	102.0	102.1
Q3	98.7	100.2	..	103.6	106.8	109.2	..	102.3	102.2
Q4	98.8	104.1	..	104.1	106.8	123.7	..	103.9	104.3
1997 Q1	98.8	104.4	..	107.2	106.8	126.4	..	104.0	103.9
Q2	98.6	104.4	..	107.3	111.0	125.9	..	104.9	104.9
Q3	98.9	104.7	106.5	108.8	111.0	126.8	106.5	105.5	105.4
Q4	99.0	105.3	106.6	110.7	111.0	128.0	107.7	105.9	105.6
1998 Q1	100.8	105.5	106.9	111.1	111.0	128.5	107.3	106.9	106.2
Q2	101.3	105.5	106.7	110.9	115.2	129.2	109.2	107.9	107.2
Q3	101.5	105.5	106.9	110.7	115.2	128.9	109.8	108.4	107.4
Q4	101.7	105.5	107.1	111.9	115.2	129.3	109.4	109.0	107.6
1999 Q1	101.8	105.5	108.5	113.9	115.2	130.9	110.5	110.1	108.5
Q2	101.9	105.6	108.6	114.4	119.0	139.6	112.5	111.0	109.1
Q3	101.9	105.6	108.5	115.0	119.0	140.8	112.4	112.0	109.6
Q4	101.7	105.6	108.5	115.4	119.0	140.9	112.9	113.2	110.6
2000 Q1	101.8	105.9	108.9	117.6	119.0	141.7	114.6	114.0	111.0
Q2	102.1	105.9	109.0	117.6	104.0	147.3	115.0	115.6	112.6
Q3	102.0	106.5	108.2	119.5	104.0	146.0	115.6	116.9	113.8
Percentage change, latest quarter on previous quarter									
1996 Q1	0.2	0.3	..	2.0	0.0	1.2	..	0.6	0.5
Q2	-0.3	-0.2	..	0.8	5.3	1.7	..	0.5	0.6
Q3	-1.1	-0.9	..	0.2	0.0	2.0	..	0.3	0.1
Q4	0.0	3.9	..	0.4	0.0	13.3	..	1.6	2.1
1997 Q1	0.0	0.3	..	3.0	0.0	2.2	..	0.2	-0.3
Q2	-0.2	0.0	..	0.1	3.9	-0.4	..	0.9	0.9
Q3	0.3	0.3	..	1.4	0.0	0.7	..	0.5	0.4
Q4	0.1	0.6	0.1	1.7	0.0	0.9	1.1	0.4	0.2
1998 Q1	1.8	0.2	0.2	0.3	0.0	0.4	-0.4	0.9	0.6
Q2	0.5	0.0	-0.1	-0.2	3.8	0.5	1.7	0.9	0.9
Q3	0.2	0.0	0.2	-0.2	0.0	-0.2	0.6	0.5	0.2
Q4	0.1	0.0	0.2	1.1	0.0	0.3	-0.4	0.5	0.2
1999 Q1	0.1	0.0	1.3	1.8	0.0	1.2	1.0	1.0	0.8
Q2	0.1	0.1	0.0	0.4	3.3	6.7	1.8	0.8	0.6
Q3	0.0	0.0	0.0	0.5	0.0	0.8	-0.1	0.9	0.5
Q4	-0.2	0.0	0.0	0.4	0.0	0.1	0.5	1.1	0.9
2000 Q1	0.0	0.3	0.4	1.9	0.0	0.6	1.5	0.7	0.4
Q2	0.3	0.0	0.0	0.0	-12.6	4.0	0.4	1.4	1.5
Q3	-0.1	0.6	-0.7	1.6	0.0	-0.9	0.5	1.2	1.1
Percentage change, latest quarter on corresponding quarter of previous year									
1996 Q1	0.1	2.7	..	3.3	5.8	10.4	..	2.2	2.4
Q2	-0.1	1.2	..	3.3	5.3	8.4	..	2.3	2.5
Q3	-1.3	-0.2	..	3.7	5.3	7.4	..	2.0	1.9
Q4	-1.2	3.0	..	3.4	5.3	18.8	..	3.1	3.3
1997 Q1	-1.3	3.0	..	4.5	5.3	20.0	..	2.6	2.5
Q2	-1.2	3.3	..	3.7	3.9	17.6	..	2.9	2.8
Q3	0.2	4.5	..	5.1	3.9	16.1	..	3.2	3.1
Q4	0.3	1.1	..	6.4	3.9	3.4	..	2.0	1.2
1998 Q1	2.1	1.1	..	3.6	3.9	1.6	..	2.8	2.2
Q2	2.8	1.1	..	3.3	3.8	2.6	..	2.8	2.2
Q3	2.6	0.8	0.4	1.7	3.8	1.7	3.1	2.8	1.9
Q4	2.6	0.2	0.4	1.1	3.8	1.1	1.5	2.9	2.0
1999 Q1	0.9	0.0	1.6	2.5	3.8	1.9	3.0	3.0	2.1
Q2	0.6	0.1	1.7	3.2	3.3	8.1	3.0	2.9	1.8
Q3	0.4	0.1	1.5	3.8	3.3	9.2	2.3	3.3	2.1
Q4	0.1	0.1	1.4	3.1	3.3	8.9	3.2	3.9	2.7
2000 Q1	0.0	0.4	0.4	3.2	3.3	8.2	3.7	3.6	2.3
Q2	0.2	0.3	0.4	2.8	-12.6	5.5	2.2	4.1	3.2
Q3	0.1	0.9	-0.3	4.0	-12.6	3.7	2.8	4.4	3.8

International comparisons of company profitability

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Overview

In the second of an annual series of articles[1], figures are released of the profitability of UK companies compared with companies in other parts of the world. The National Statistics First Releases (July 24th and October 4th) measured the profitability of private non-financial corporate sector operations in the United Kingdom, using rates of return on capital employed. *This article analyses the data on profitability which have been made available by 19 countries.* Data for 8 countries are presented here for the first time. The methodology, sources and coverage of the data presented are also described and the limitations that this places on its interpretation. The author would like to thank the staff of the statistical offices in those countries who have contributed to this review.

The decline in corporate profitability in the UK in 1999 meant that UK companies were no longer the most profitable in the world. Profits grew from £71.6 billion in 1990 to £116.1 billion in 1999, an annual average growth rate of 6 per cent, at current prices. Over the same period, in the United States profits grew faster, at a rate of 8 per cent, Germany by 4 per cent and in Japan they declined. Ireland has had dynamic corporate profits in the 1990s with the fastest profit growth, of 12 per cent. Ireland also has the highest share of profits in the national economy, at 27 per cent. Finnish companies are now the most profitable in the world, a golden mix of 'new' and 'old' economy. UK companies slipped to the fifth highest level of profitability in the world and the eleventh for manufacturing companies. Profitability of UK service companies fell back slightly in 1999 and UK companies took third place, behind US retail trade corporations and service companies in Finland. Profitability of UK companies declined in 1999, a year in which global investment in the United Kingdom was $200 billion, mergers and acquisitions activity was close to twice that of US companies and UK companies borrowed heavily on the capital markets.

International standings compiled by rates of returns averaged over the last five years are shown in the summary table and analysed in more detail in this paper.

Top countries, by recent profitability

	All companies	Manufacturing	Services
1st	Finland	United States	United States (Retail trade)
2nd	Singapore	Netherlands	Finland
3rd	Norway	Singapore	**United Kingdom**
4th	Israel	Belgium	Norway
5th	**United Kingdom**	Finland	Spain
11th		**United Kingdom**	

For the purpose of this article, profitability is defined as the ratio of profits to capital employed. Profits are defined fairly precisely in international manuals and it is likely that they will be measured reasonably consistently. On the other hand, capital employed is not defined so precisely and there is more scope for variations in the detail of its definition and the methods used to estimate it. We have not sought to impose a common detailed definition or to check any of the data provided.

It follows that differences between countries can reflect a mixture of real differences in profitability and the results of differences in the calculations. In virtually every case, countries will, however, have estimated profitability consistently over time, so rises and falls will reflect real changes in their economies. Estimates for the latest year may be subject to revision. The statistics presented here have to be interpreted accordingly.

It is not possible to use this data to make detailed comparisons of competitiveness between countries. This requires a review of all

factor inputs, in, for example, a multi-factor productivity analysis. And, economic cycles may not be coincident in all countries, so rankings will vary from year-to-year. But, due to global markets, trends in the strength of other countries' companies as measured by profitability are likely to be more coincident than in the past.

The analysis of profitability in particular key industrial sectors has been continued in this review. Manufacturing, service companies and the exploration of oil and gas are sectors presented here in an international context.

The reasons for the improvement in US, Canadian and Belgian manufacturing profitability compared with the lower returns by UK manufacturers are analysed. Is profitability of German companies about to take off? What lies behind the poor performance of the Japanese service sector? Ireland's spectacular profits in the 1990s and the recovery in rates of return earned by Spanish manufacturers are also featured. As is the Finnish profitability boom and the faltering performance of companies in Norway. What factors have influenced profitability in Italy and in the Netherlands? Reviews also are included of industry in Asia, in the EC accession countries and in Israel. Finally, the assessment considers international profitability against the economic background of heavy corporate borrowing.

The structure of the article is as follows:

- Overview.
- International rates of return.
- Country coverage.
- International comparison of net operating surplus and capital employed.
- Trends in international company profitability: United States, Japan, Germany, Ireland, Italy, Spain, Belgium, Netherlands, Canada, Korea and Singapore, Israel, Latvia, Czech Republic, Slovak Republic, Hungary and Estonia, Finland and Norway.
- Analysis of UK and Norwegian Continental Shelf companies.
- Assessment.

International rates of return

Table 1 shows international rates of return in 17 countries.

In international comparisons, there is always the problem of how to handle different national currencies. The author has calculated the data for capital and profits in sterling, shown in Tables 2 and 3. Thus, yearly changes include not just national changes in profits and capital, but also the effect of different exchange rates. The other international comparisons (for example, of productivity by the US Bureau of Labour Statistics) are shown in both the national currency and a comparable currency.

In **Germany**, the calculation is the ratio of the net operating surplus of non-financial corporations to the capital of **all** sectors of the economy. This will have underestimated profitability for non-financial corporations in Germany. The rate of return reported for the corporate sector in Germany was only 3.6 per cent in 1999.

West German firms often fare poorly in international comparisons of profitability, because the profit disclosed in German financial accounts tends to be understated. This is mainly because of the importance attached to creditor protection rights and to the prudence principle in German accounting[2]. Using the national accounts' definition of profits for German companies seeks to address this issue.

Table 1 International comparison of net rates of return of non-financial companies

per cent

	UK	Norway	Japan	Germany	United States	Spain	Belgium	Canada	Finland	Nether-lands	Czech Republic	Slovak Republic	Israel	Singapore	Latvia	Hungary	Estonia
1990	11.5	12.2	13.3		7.8	8.1	11.3		6.9					17.9			
1991	9.9	12.8	12.6	3.2	7.2	6.8	10.3		6.4					16.5			
1992	9.5	12.0	11.1	3.0	7.0	5.9	9.4		6.4					14.9			
1993	10.1	12.0	10.3	2.7	7.4	5.1	8.8		8.0		9.2			17.1			
1994	11.7	12.1	9.3	3.1	8.3	6.2	10.5	8.1	10.6		7.8			16.0			
1995	12.1	12.9	9.5	3.3	8.6	7.3	11.1	8.1	13.0	4.3	9.0		13.6	14.8		4.7	
1996	12.9	14.8	6.1	3.2	9.1	7.3	10.7	8.5	12.7	4.3	7.7		12.7	13.8		5.7	
1997	12.9	14.6	5.4	3.4	9.5	7.6	12.1	8.4	14.9	4.6	7.3	-0.3	12.5	13.1		9.7	
1998	12.8	10.5	5.4	3.7	9.2	8.4	12.2	8.4	16.7	4.6	8.3	-2.1	12.5	10.9	-2.7	10.3	9.5
1999	12.0	11.8		3.6	9.2	8.7			17.2	4.4	7.2	-0.3	12.1				

The author has received analysis from a Research Institute in Germany[3] which records the post tax rate of return on sales earned by German international companies. The data are at similar levels to those provided for this survey. 1998 was the best earnings performance since the start of the 1990s and at 3 per cent compares with 2.3 per cent in the period 1994–1998. German industrial companies score a 3 per cent rate of return which is below the OECD average. This review is also supported by research[4] prepared by the Bundesbank, as a result of analysis of 21,480 annual accounts or 40 per cent of the total balance sheet liabilities of German companies. The gross return on turnover (the ratio of companies' annual results before taxes to turnover) went up from 3.1 per cent in 1997 to 3.5 per cent in 1998.

In 1999, the **UK corporate sector** was not able to maintain its profitability and the net rate of return on capital fell to 12.0 per cent, from an average of between 12.8 per cent and 12.9 per cent over the three previous years. It was the lowest since 1994.

Manufacturing profits fell sharply and the average rate of return in the manufacturing industry dropped from 11 per cent in 1997 to 6 per cent in the second quarter of 2000. Margins for manufacturing were reported to have been cut, both in home and export markets. The **service sector** suffered a fall in profitability in 1999 and the first half of 2000. Profitability of **retail trade and wholesale trade corporations in the US** rose in 1999, to 25 per cent and to 14 per cent, respectively.

Profitability of the international manufacturing sector is generally higher than the service companies. The UK and Finnish service sectors are exceptions. So too are US retailers, although they can operate on a relatively small capital base.

Net operating surplus as a proportion of GDP has been stable between 1995 and 1998/1999. Norway and Japan are the only two countries to show a declining share of profits in the national economy. Ireland has the highest share of profits in the economy, probably reflecting the attractiveness of its low corporate tax regime.

BOX 1: Country coverage

The following 19 countries have contributed profitability data in this research:

Belgium, Canada, Czech Republic, Estonia, Finland, Germany, Hungary, Ireland, Israel, Japan, Korea, Latvia, Netherlands, Norway, Singapore, Slovak Republic, Spain, United Kingdom and United States.

For the following 15 countries, it is not possible at the present time to calculate profitability:

Austria was not able to provide comparable data on company profitability. The main reason is that institutional sector accounts will not be available until December 2000.

Australia used to publish gross and net rates of return for non-financial corporations, by industry. However, as a consequence of introducing annual benchmarks derived from the annual supply and uses tables for the *UN System of National Accounts* (SNA93), Australia had to suspend publication of gross operating surplus by institutional sector, by industry. Publication should resume in time for the 2001 international review. In addition, the capital stock system in Australia has been overhauled to meet SNA93 and many significant improvements are being introduced. Because of the large number of privatisation's of public financial and non-financial corporations in Australia over recent years, the private/public split for these two corporate sectors has not been retained in the Perpetual Inventory Method (a model-based approach to calculating capital stock estimates) for the capital stock calculations.

Bulgaria is now preparing the methodology for profitability of the company sector. At present, rates of return are not part of published indicators of Bulgarian companies.

In **Denmark**, time series for operating surplus and capital are available for the years 1966 to 1992 only, but they are based on the old system of national accounts, ESA79. Even then, some further work would be needed to separate out private non-financial corporations and data on inventories are not available. National accounts in Denmark since 1993 are based on the new *European System of Accounts* (ESA95), but data for capital and capital consumption have not yet been compiled according to the new methodology. These changes are important for gross capital formation and will revise significantly the capital data. There are two other problems preventing the calculation of profitability data in Denmark, at the present time. The first is that there is no formal separation of private non-financial corporations from publicly owned corporations and households. This applies to both the operating surplus and capital. The second is the calculation of inventories, by industry. Calculation of inventories for manufacturing might be possible, but the coverage of service industries would be incomplete.

BOX 1: *continued*

France is in the process of calculating profitability data consistent with ESA95. Previous estimates of capital did not include either computer software or mineral exploration costs. The new data will also provide profitability estimates for the service and manufacturing companies.

In **Greece**, data are not collected for manufacturing companies, for the wholesale/retail sector and for tourism. Data for companies in telecommunication and transport will be available by the end of 2001. Profitability data on audio-visual services are available, but for 1995 only.

In **New Zealand**, there is no quarterly profit survey and annual information from the Annual Enterprise Survey comes with a considerable time lag (2 years).

In **South Africa**, data on company accounts have not been published since 1993.

Sweden's continuing work in adjusting their national accounts to SNA93 principles means that data for the main institutional sectors are not yet ready. **Sweden** has only information for the total non-financial corporations' sector.

Switzerland is not able, for the time being, to supply data on profitability. The Office Federal de la Statistique is finishing a comprehensive review of statistical surveys. This review includes the data required to calculate profitability ratios and quality checks are currently being carried out.

Croatia, Cyprus, Italy, Poland and **Portugal** have not been able to provide data on profitability.

The calculation of profitability under ESA95/SNA93

The methodology used in calculating profitability is well accepted. Data used are generally based on national accounts' data. Annual rates of return are calculated as the ratio of the operating surplus to capital employed. Profits are the main source of the operating surplus and capital stock the main component of capital employed.

Table 2 presents the net operating surplus by value and as a proportion of GDP, in nine countries. Clearly, Ireland's net operating surplus, for example, will be much smaller than the UK's, because GDP is so much smaller. The same point applies to the capital data in Table 3.

Table 2 International comparison of net operating surplus

£ billions

	UK	US	Norway	Japan	Germany	Netherlands	Belgium	Ireland	Israel
1990	71.6	232.1	12.6	270.2			8.6	5.0	
1991	67.1	223.7	13.1	302.4	107.4		8.2	4.8	
1992	63.7	222.0	13.3	294.8	109.4		8.5	5.1	
1993	68.6	287.2	14.7	374.6	112.7		9.0	5.8	
1994	83.2	333.0	15.1	361.4	132.6		11.3	6.3	
1995	92.5	353.7	18.2	394.7	158.6	32.2	13.2	8.4	8.2
1996	106.5	395.6	21.9	229.4	152.1	32.4	12.5	9.5	8.4
1997	114.3	412.4	20.8	179.6	137.9	30.0	12.3	10.6	8.3
1998	117.3	416.2	14.9	164.4	149.5	30.8	12.7	11.9	7.9
1999	116.1	451.1	17.3		144.6	30.5		13.5	8.9
					per cent of GDP				
1995	13	7	20	13	10	13	8	20	12
1998	15	8	17	7	12	13	8	26	12
1999	15	8	18		11	13		27	12

Table 3 International comparison of capital employed

£ billions

	UK	US	Norway	Japan	Germany	Netherlands	Belgium	Israel	Slovak Republic
1990	622.1	3045.3	103.2	2035.3			75.9		
1991	676.4	3118.7	102.8	2393.0	3348.1		80.1		
1992	673.8	3219.6	111.5	2658.8	3677.6		89.9		
1993	680.9	3970.5	122.2	3633.3	4205.9		102.3		
1994	709.8	4115.3	124.9	3878.6	4315.8		107.3		
1995	763.5	4214.8	141.1	4139.9	4858.4	753.3	118.1	60.0	
1996	824.4	4454.4	147.4	3733.4	4810.4	759.6	117.0	66.3	
1997	884.5	4471.9	142.7	3353.9	4063.2	653.9	102.1	66.3	29.6
1998	919.4	4623.1	142.6	3018.6	4040.4	669.0	104.0	63.3	29.0
1999	970.6	5021.8	147.1		4040.4	696.6		73.2	26.0

Trends in international company profitability

United States

The peaks and troughs in profitability of companies in the United Kingdom and United States were reasonably consistent in the last three decades. This section looks at these trends within the context of investment, labour productivity growth and company borrowing.

In the **United States,** rates of return were stable between 1998 and 1999, at 9.2 per cent (Chart 1). Together with a rate of return of 9.5 per cent in 1997, these were the highest rates in more than 25 years. The average rate of return in the 1990s was 8.3 per cent, an improvement from rates of 7.9 per cent earned since 1980.

Corporate profits before tax for non-financial corporations rose by 4.7 per cent (with inventory valuation and capital consumption adjustments) in 1999, compared with 1 per cent in the UK. In the first quarter of 2000, profits rose by 5.7 per cent in the US (a rise of 2 per cent in the UK), as a result of increased unit prices and unchanged unit costs. In the second quarter, profits rose by 5.5 per cent (a rise of 3 per cent in the UK), with profit increases widespread among major industry groups.

UK and US manufacturing industry

Manufacturing companies in both countries have recovered from the 1991/92 recession, but the pace of recovery has been very different (Chart 2).

Chart **1**

Profitability of non-financial corporations in the United Kingdom and the United States

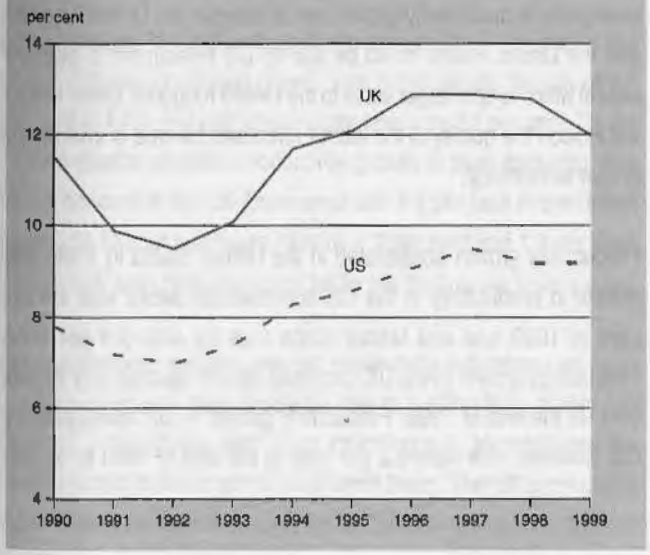
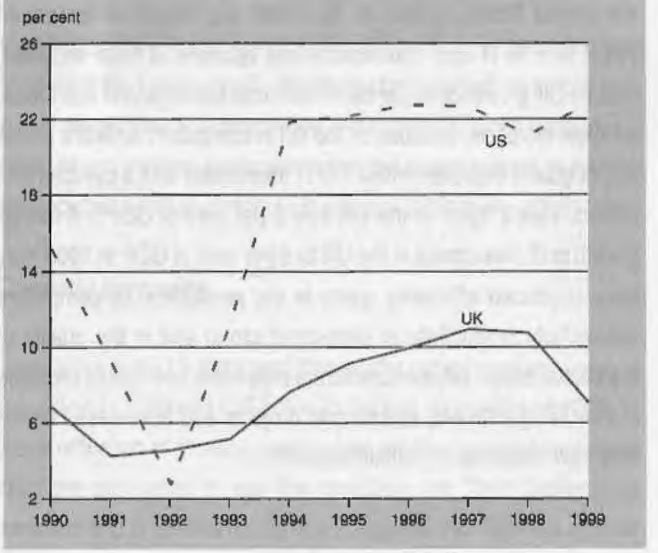


Chart **2**

Manufacturing companies' profitability in the United Kingdom and the United States



In the **United Kingdom,** the manufacturing companies' rate of return improved steadily in each year from 1992 to 1998 and then fell in 1999[5]. Despite its further fall to 6 per cent in the second quarter of 2000 (less than half its peak of 13.2 per cent two years ago), this was still above the average rate of 5.4 per cent of the past three decades. Manufacturing industry profit margins in 1999 and 2000 were reported to be particularly hard hit by exchange rate movements.

In the **United States**, the recovery in manufacturing profitability was faster in the early 1990s and since 1994 profitability has generally moved in the 20 per cent to 23 per cent range. More recently, rates of profit were closer to 25 per cent. Growth in new technology companies could have been a key determinant. Exchange rate influences are less so. The key industries driving manufacturing profits in the United States in 1999 and in 2000 were drugs, electronic and electrical equipment, food and instruments which includes the manufacture of photographic, medical and optical goods. Rates of profit exceeding 30 per cent were being earned in drugs and food products. Profits advanced, despite the increased demand for energy at higher prices needed to transfer raw materials into manufactured goods and also to power the computer equipment that serves the electronic and electrical equipment industries. The growth in operating profits in 2000 was also driven by petroleum and coal products.

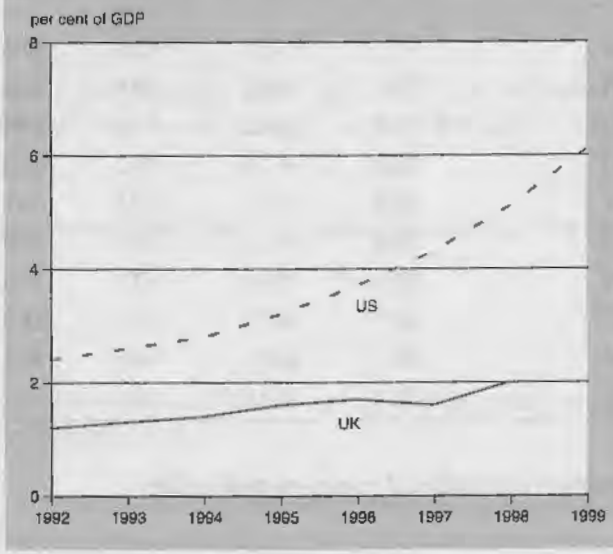
Investment in IT equipment and software

A key factor in faster profitability growth could be the higher and more diffuse capital investment made by US manufacturers in IT equipment and software which has made a larger contribution to output and profitability growth of US firms.

In 1992, UK IT investment (in office machinery and computers and computer services) was 1.2 per cent of GDP, against 2.4 per cent in the United States (Chart 3). By 1998, the impact of increased investment in IT and communications appears to have widened, despite UK growth of 25 per cent in nominal terms (and in real terms, a higher increase, because of the fall in computer hardware prices and of quality improvements). US IT investment was 5 per cent and the equivalent figure in the UK was 2 per cent of GDP[6]. A further growth in IT investment in the US to 6 per cent of GDP in 1999 may have produced efficiency gains in the production of computers (particularly productivity in semi-conductors) and in the quality of the capital stock. UK manufacturers may have been more cautious in their IT investment, investing in projects and businesses where they saw evidence of profitable growth.

Chart **3**

Investment in IT equipment and software in the United Kingdom and the United States



Profitability in US manufacturing industry benefited from the returns on new investment in information technology. In 1998 and 1999, business investment in equipment and software contributed 1.3 per cent to the change in GDP growth. In the first and second quarters of 2000, the respective contributions were 1.9 per cent and 1.7 per cent, to growth in GDP of 4.8 per cent and 5.6 per cent. In the UK (where the IT-producing sector is smaller), the 15 per cent fall in manufacturing investment in 1999 may have reflected both excessive optimism of future profits that hadn't been realised and a deterioration of company finances and consequent build-up in borrowing.

Labour productivity

As Charts 4 and 5 show, US workers' productivity growth has been rising by an average of 3.2 per cent since 1995, compared with 1.5 per cent in the United Kingdom. As mentioned above, part of the divergence in productivity growth trends between the United Kingdom and the United States could be due to US investment in physical capital which is on a larger scale to the United Kingdom. Other factors will include the quality of the labour force and the rate of investment in new technology.

Productivity growth accelerated in the United States in 1999. The growth in productivity in the *US non-financial sector* was 4.4 per cent in 1999 and unit labour costs rose by only 0.9 per cent. Productivity growth in the UK corporate sector reached only 2.0 per cent, at the end of 1999. Productivity growth in *UK manufacturing* did, however, rise from 0.2 per cent at the end of 1998 to 5.6 per

Chart 4

Productivity in the UK and US Corporate sectors

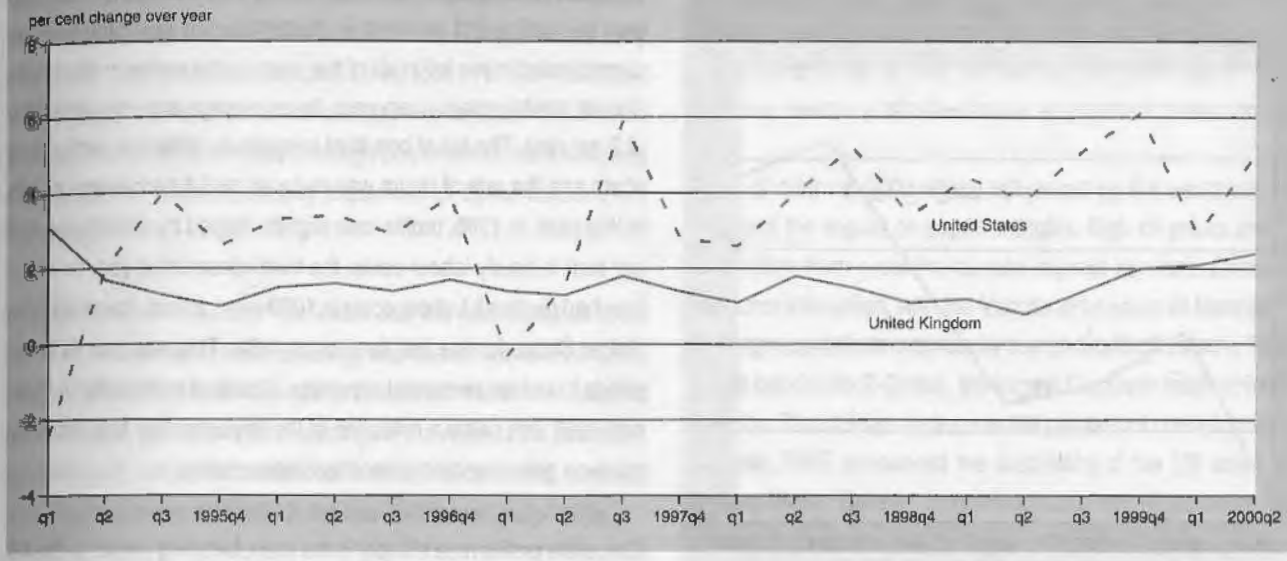
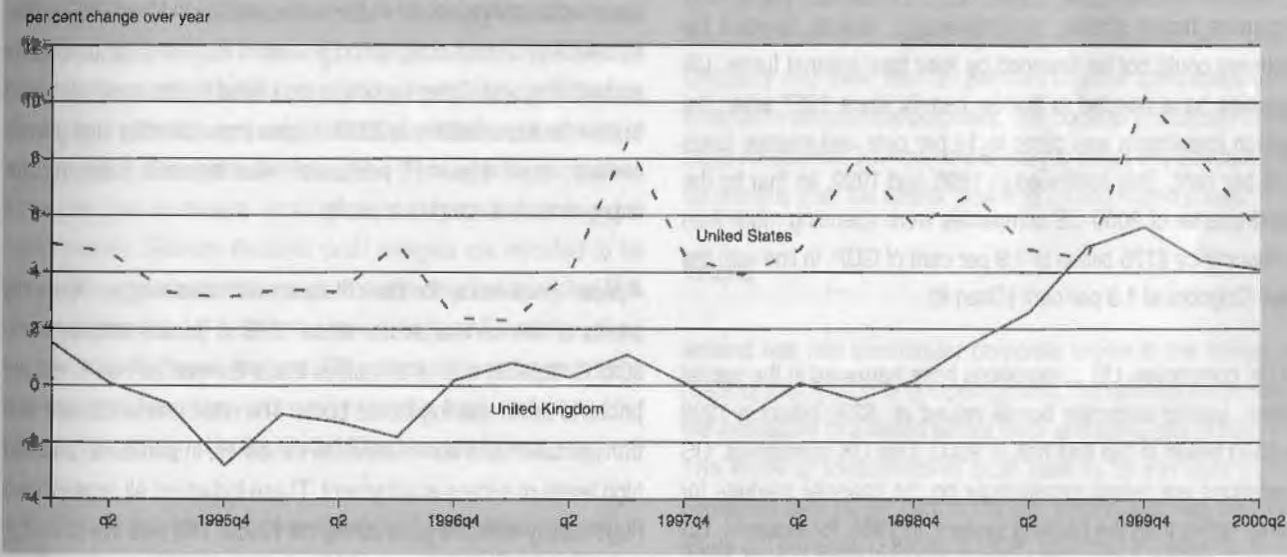


Chart 5

Productivity in the UK and US Manufacturing industries



cent at the end of 1999, with unit labour costs flat at the end of this period. *US manufacturing* growth was more robust, growth of 6.8 per cent in 1999 and unit labour costs falling by 2.2 per cent. By the second quarter of 2000, productivity growth in manufacturing rose by 5.4 per cent in the US (compared with 4.1 per cent in the United Kingdom). Output and hours rose by 7.3 per cent and 1.9 per cent, respectively and unit labour costs fell for the third consecutive quarter.

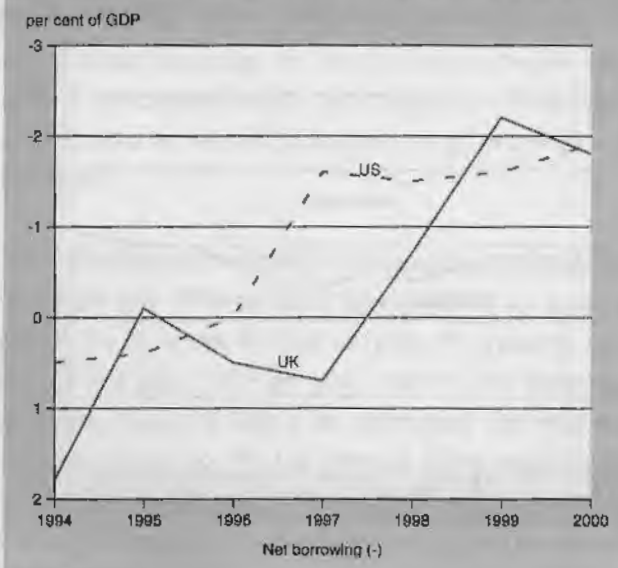
But, productivity indexes can be misleading indicators, as rapid productivity growth may simply be due to starting from a very low level of productivity and then catching up. In addition, the measurement indexes are on a different basis. The US productivity index measures output per hour; the UK measures output per worker. The UK plans to introduce productivity estimates on an hours worked basis, from next year. Finally, structural changes such as investment in new developments in information and communications technology, the skills and training environment and the measurement of service sector output could all contribute to different productivity growth rates.

Company borrowing

Companies in the UK borrowed through the capital markets a record £39 billion in 1999 and £25 billion in the first six months of 2000, in part a reflection of growing pressure on profits. In part also to meet cash pre-payments to use the spectrum for Third Generation purposes and to finance mergers and acquisitions. This was against

Chart **6**

Borrowing by the Corporate sectors in the United Kingdom and the United States



the background of corporate net borrowing rising to £17 billion in 1999 and remaining strong at £7 billion in the first half of 2000. US companies faced similar circumstances. Funds needed for investment could not be financed by their total internal funds. US companies have needed to borrow heavily since 1997 when the growth in investment was close to 14 per cent and internal funds only 8 per cent. This continued in 1998 and 1999, so that by the second quarter of 2000 US companies were spending more than their income by $175 billion or 1.9 per cent of GDP, in line with the United Kingdom at 1.8 per cent (Chart 6).

Like UK companies, US corporations have borrowed in the capital markets, issuing corporate bonds valued at $230 billion in 1999 and $340 billion in the first half of 2000. Like UK companies, US corporations are reliant increasingly on the financial markets for funding, rather than the banking system. In 1994, for example, US companies borrowed more from banks. In the first half of 2000, borrowing in bonds exceeded bank loans by $50 billion. In addition, net equity issues of $63 billion were made in Q1, the first net issuance over the last six years.

Companies in the **Euro area** have faced similar tight liquidity positions. From data supplied by the European Central Bank, Euro area company liabilities as a percentage of financing requirements rose from 31 per cent to 44 per cent in just two years to 1999. During 2000, euro bond issuance grew, driven by telecommunications companies. But, the net flow of bank finance to Euro-area companies was nearly ten times greater than net bond issuance in the first six months of 2000. This relected the historic dependence in the Euro area on bank rather than bond finance.

Japan

In **Japan**, profitability of non-financial corporations fell from 13.3 per cent in 1990 to 5.4 per cent in 1998. The net operating surplus denominated in yen fell in six of the years under review in the 1990s and net capital rose in every year, by an average annual growth rate of 3 per cent. The fall of one-third in profits in 1996 was particularly sharp and the rate of return was reduced by 3.4 percentage points in that year. In 1998, profits rose slightly, helped by a decrease of 7 per cent in hourly labour costs, the third consecutive year in which they had declined. Labour costs in 1998 were, in fact, lower than the United States for the first time since 1991. This was due to firms' efforts to reduce personnel expenses. Subdued profitability in 1997 and 1998 was partly a reflection of the impact of the Asia financial crisis on growth and balance sheet restructuring.

Corporate profits rose sharply in the manufacturing sector in the six months to March 2000, after sharp declines in the previous two years [*Bank of Japan, 'Tankan: Short-Term Economic Survey of Enterprises in Japan'*]. This was attributed to a recovery in sales and to cost reductions from corporate restructuring. Profits expanded in the non-manufacturing sector, in the twelve months to March 2000. The introduction of more competition in sectors like telecommunications and retailing and higher exports to the United States could also lead to benefits to profitability in 2000. Higher investment by high growth sectors, especially in IT production was reported, following the improvements to corporate profits.

A paper[7] prepared by the Bank of Japan, attributes sluggish operating profits of the *service sector* since 1993 to excess employment, surplus capacity and to difficulties these companies had in raising prices to cover soaring labour costs. The retail and wholesale and transportation and communication industries, in particular, showed high levels of excess employment. These industries all experienced huge supply-demand gaps during the 1990s. This was due primarily to over-optimistic estimates of future demand, intensified by the prospects of deregulation in the retail and wholesale industries (in 1992) and transport and telecommunications (in 1994).

The operating profits-to-sales ratio of services declined from 1993, but manufacturing improved from 1993–1997. This could reflect Japan's relative efficiency in producing manufacturing goods which are tradable, than services which are not. The service industry included many regulated companies which lacked competition and incentives to improve productivity. Manufacturers, on the other hand, needed to reduce costs and increase productivity and this was facilitated by the increased use of information technology. As a result, Japanese companies have strong positions in consumer electronic products and in the manufacture of office and business machines.

Germany

Germany's rates of return have, in the 1990s, been in a narrow range. The highest rate in the 1990s was in 1998. This reflected only moderate rises in unit labour costs. Costs rose in Unified Germany by only 1 per cent in 1998 which was very similar to the rise in West Germany and which reflected the large proportion of manufacturing employment in Unified Germany accounted for by the former West Germany.

The Bundesbank research[8] indicates that the profitability of West German enterprises in manufacturing, wholesale trade and transport sectors showed a further strong improvement in 1998. This enabled them to make good the drop in earnings in the wake of the recession in 1993 and renewed setback in 1996. The return on turnover matched the levels achieved in the late 1980s and early 1990s.

Manufacturing companies improved their return on turnover by 0.4 percentage points to 4.5 per cent. One of the most profitable industries was in transport equipment. Other above-average performers were in basic metal manufacture, automobiles and office machinery and computers. Electrical machinery manufacturers suffered a steep decline in earnings. The Bundesbank reported that this was due mainly to a fall in export earnings. Retailers suffered a decline in profitability compared with the late 1980s and early 1990s. In part, said the Bundesbank this was due to strong price competition between the dominant retail groups (Metro is the biggest hypermarket). German retailers' profit margins are reported to be below EU rivals and one reason is that the discount retailers (Aldi, Lidl and Penny Markt) in Germany have a bigger influence on prices than in other European markets. Other reasons are the continuing costs of more floorspace acquired by German food retailers and flat food sales, compared to the United Kingdom and France.

Affecting the sources and uses of funds of German companies in 1998 was a moderate increase (4.5 per cent) in the tax burden (although this was moderated by the abolition of trade capital tax) and a 5 per cent increase in interest payments. Investment in machinery and equipment by manufacturing industry rose strongly by over 9 per cent, helped by continuing improvements in corporate earnings. More than 80 per cent of the increase in required funding was generated from external sources (including injections of equity capital, bank finance and transfers of funds from affiliates) whose weight in total funding grew by 13 percentage points to 35 per cent. This share of external financing was last seen in 1988–1991. German companies are seeking financing from the capital markets and cutting their long-established links with domestic banks.

Little change in profitability in 1999 could reflect a weakening in growth in the second half of 1998 and the first half of 1999, the weakness in the Euro and rising oil and import prices. Increases in unit labour and social security costs could also have been a factor. The latter account for over 50 per cent of gross labour costs in Germany. Germany also has strong employment protection laws.

Rates of return in 2000 will be influenced by the weakness of the Euro and the impact on export margins, high oil prices and price competition from e-commerce and Internet services. Competitive pressures intensified, with the Vodafone takeover of Mannesmann and large acquisitions overseas by companies like Deutsche Telecom and its backing for T-Online, the largest European Internet Services Provider. The Utilities sector is in the process of consolidation. For example, RWE announced the acquisition of the UK water utility, Thames Water. German companies face a loss of protection from a switch in their shares held by large German institutional investors to a more global shareholder base. In addition, the abolition of capital gains tax on companies' sales of stakes in other companies will also raise international competitiveness.

Germany is now one of Europe's leading e-commerce centres: more than one-third of Europe's top Internet companies are based in Germany and more than 30 per cent of small companies use the Internet for commercial purposes. The boost to profitability from this more competitive environment is likely to offset any adverse impact on margins from the further growth in oil and import prices.

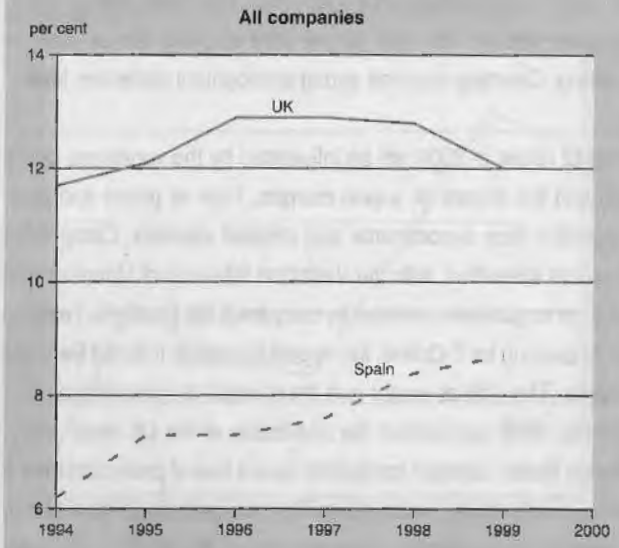
Ireland

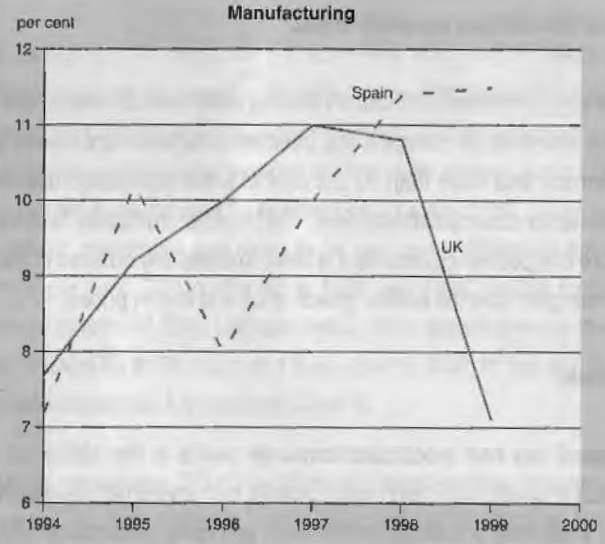
Ireland has had spectacular corporate profits in the 1990s, as a result of strong GDP and export growth, high investment levels and the availability of a skilled labour force and rising productivity rates. The share of investment in GDP rose to 24 per cent in 1999, compared with 19 per cent in the UK. Ireland also has the highest share (27 per cent) of profits in GDP, reflecting the attractiveness of its low tax regime. There have been corporate tax cuts in this period and corporation tax is expected to be reduced to 12.5 per cent in 2003.

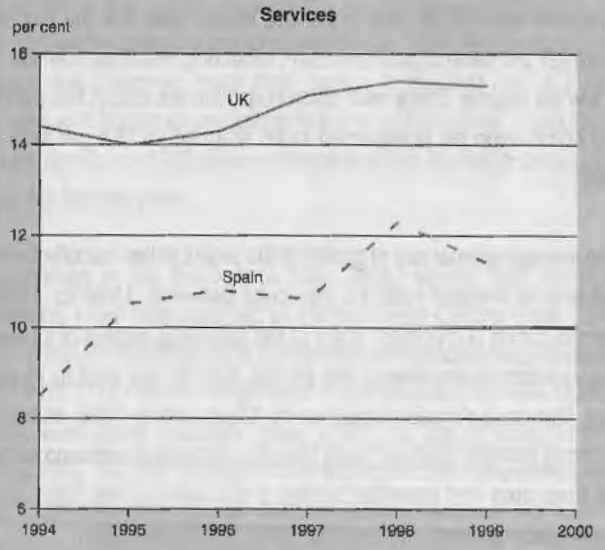
The average annual rate of growth in the profits of the *manufacturing industry* in Ireland was 15 per cent between 1990 to 1999. Manufacturing companies' share of net operating surplus of all non-financial companies rose in this period, from 61 per cent to 71 per cent. Manufacturing earnings rose by 13 per cent in 1999, as result of strong external demand, both from the recovery in demand within the Euro area and from the decline in the value of the Euro. Unit wage costs declined *vis-à-vis* the major trading partners.

Chart **7**

Profitability in the United Kingdom and Spain







Ireland's high productivity growth may have been due to the largely foreign-owned high technology sectors whose scale of operations in Ireland has increased significantly in recent years. Ireland accounts for one-third of all US electronics investment in Europe and all leading US IT companies have a presence. One constraint which emerged in 1999 was the shortage of skilled workers in key industries. Another constraint was a slowdown in manufacturing output in the first half of 1999. This was reported to be largely attributable to a deceleration in the growth rate of output from the high technology sectors, including electrical engineering and foods.

Profits of *service sector companies* in Ireland have been more volatile than in the manufacturing sector. But, in four of the five years, 1995 to 1999 (but not 1997), the growth in net operating surplus was 20 per cent or more. Ireland has been successful in attracting high-tech computer and software firms and in developing e-commerce and telecommunications infrastructure. This was reflected in the surge of close to 30 per cent in profits in 1999.

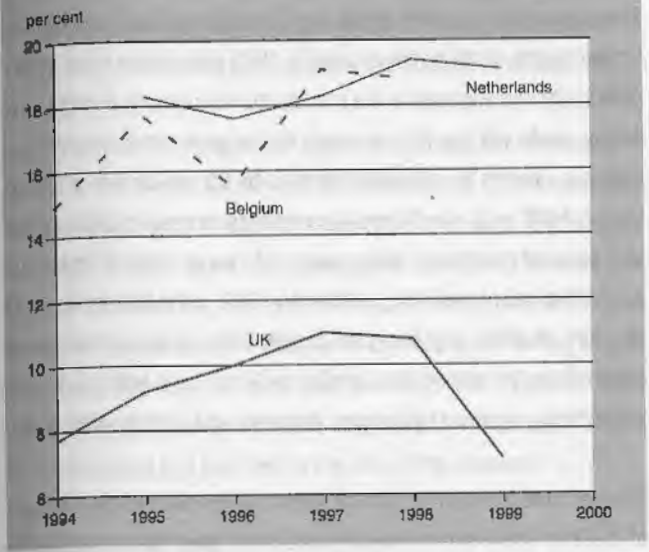
Italy

Although data on profitability are not readily available, it is possible to provide a brief assessment based on Italy's national accounts data and on indicators of Italy's global competitiveness published by the Banca d'Italia.

In the first half of the 1990s, the competitiveness of Italian goods was enhanced by the two large deprecations of the lira (1992/1993 and 1995). Since 1996, the unfavourable inflation differential has progressively eroded that advantage. In 1999, although Italy's global competitiveness improved, the competitiveness of Germany and France increased even more and Italy's competitive position worsened with respect of its main European partners.

The largest relative increase in real value added was in the *services sector* where the share of the total accounted for by companies in the wholesale and retail trade, repairs, hotels and restaurants, transport and telecommunications increased from 23.7 per cent in 1990 to 24.8 per cent in 1999. To some extent, this reflected the cutback in State intervention and the increase in privatisation in the telecommunications industry. It also reflects investment growth. In 1999, a rise of 5 per cent in investment shown by the national accounts appears to have been concentrated in the services sector. This investment was financed by good profitability and low borrowing costs. Employment in the service sector rose between 1970 and 1990, from 37 per cent to 58 per cent of the total and to 61 per cent in 1998. This proportion was about the same as in Germany and Japan, but lower than in France (69%), the United Kingdom (71%) and the United States (74%). In the *manufacturing sector*, Italy's relative weakness in the high technology sectors could have subdued profitability in the manufacturing sector. In 1997, high-technology products accounted for just 8.5 per cent of its exports of manufactures, compared with 16 per cent for European exports and close to

Chart 8
Profitability of the manufacturing sectors in the United Kingdom, Belgium and the Netherlands



30 per cent in Japan and in the United States. In addition, Italy's spending on research and development is considerably lower than in most other industrial countries. This may reflect the low proportion of small firms investing in research and development.

Spain

Results of non-financial firms in **Spain** confirm a continuing improvement in rates of return in the 1990s (Chart 7). Rates of return of close to 9 per cent were earned in 1999, a year in which GDP growth was 3.7 per cent and unit labour costs grew by 2 per cent (2.6 per cent in 1998).

In the fourth quarter of 1999 (using data from a higher population of companies - 7,500 - in a quarterly database), rates of return for manufacturing industry rose to 11.5 per cent. There was strong export growth, a containment of labour and interest costs and the continuing resilience of domestic demand. Manufacturers would have benefited from lower prices for production, resulting from the liberalisation of communications and the electricity sectors. Strong profitability was achieved, despite high oil price rises where industry's exposure to energy costs is higher than elsewhere in the EU.

Returns on net assets recorded by *distributive trades* in *Spain* was stronger than manufacturing in the 1990s, but turned down in 1999 as these companies began to face increased competitive pressures. Service sector companies in *transport, storage and communications* reported lower returns on net assets, within a narrow range of 5 per cent to 7 per cent. In part, this was due to slow liberalisation in opening up domestic utilities to competition. Rates of return do not yet reflect higher margins in the sale of mobile phones or the effects of potential mergers in the energy sector.

Belgium

Both the manufacturing and service sectors in **Belgium** contributed to the recovery in profitability in the second half of the 1990s, to a rate of return of 12.2 per cent in 1998. The recovery in manufacturers' profitability from 1994 was strong; an increase in current prices of over 75 per cent in the net operating surplus of manufacturing companies. By 1998, profitability of the *manufacturing sector* was 18.8 per cent (Chart 8), over 10 percentage points higher than in 1993 and amongst the highest in the world. These levels of profitability were achieved against an economic background of low labour force participation rates[9] (one of the EU's lowest). Consequently Belgium's corporate tax burden is high, relative to the EU average.

Service companies' profits growth in Belgium has been stable, growing each year, on average, by 12 per cent in the 1990s. Service companies' contribution to non-financial companies' profits has risen to one-fifth in 1998, from 7 per cent in 1984.

Netherlands

The recent peak in profitability in the **Netherlands** was in 1997/ 1998, at 4.6 per cent. In 1999, profitability is estimated to have shown little change, reflecting growth in real GDP rising by 3.6 per cent, well above the Euro-area average and a modest rise in unit labour costs reflecting a tight labour market.

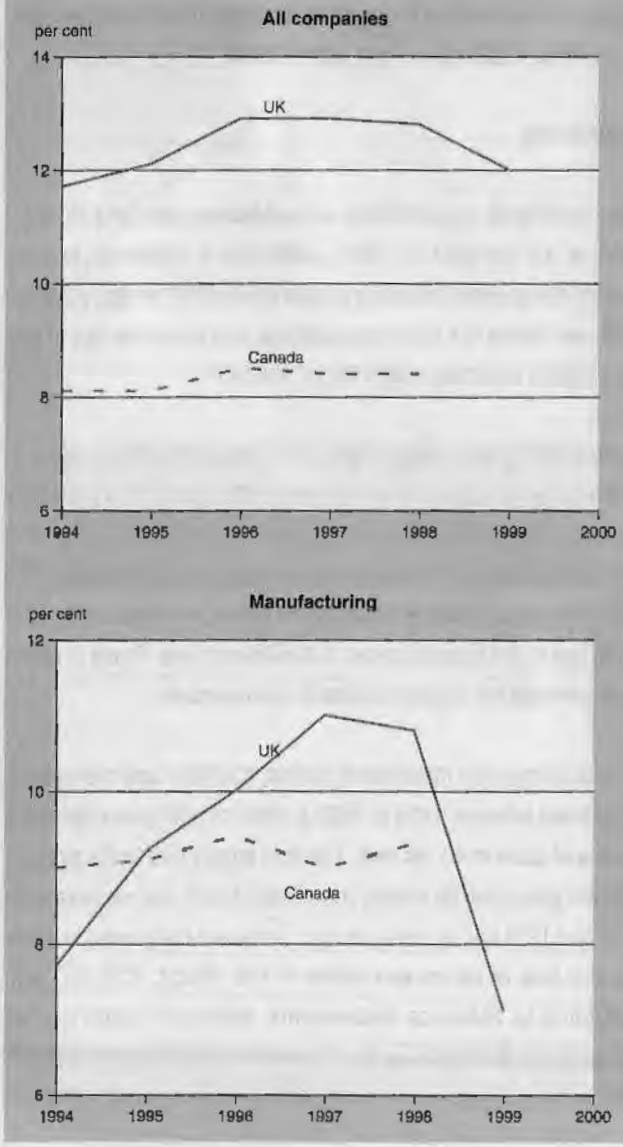
Manufacturing companies' share of the gross operating surplus in Netherlands has been stable between 1995 and 1999. Profitability has been strong. The rate of return rose to over 19 per cent in 1998 and 1999 (Chart 8). Profitability was maintained in 1999, led by the chemicals sector which is highly export driven and which suffered in 1998, due to the financial crises in Russia and Asia. Rates of return were amongst the highest recorded, internationally.

Service companies (distribution, hotels, transport and real estate) maintained between 1995 to 1999 a share of total gross operating surplus of close to 40 per cent. This was largely due to the strength in profits generated by trading companies, hotels and restaurants in 1998 and 1999 and by transport and real estate companies in 1998. The net rate of return was stable in this period, at 5 per cent. According to Statistics Netherlands, profits of Dutch quoted companies in services rose by 25 per cent in 1998, compared with 1997.

There was further evidence in 1999 of an increasing share being earned by service industries and this is expected to continue, as the number of small businesses grows. Profits of Dutch quoted companies in services expanded by 11 per cent in the first six months of 1999, compared with the corresponding previous period.

In the Netherlands in 1999, there was a major expansion in issues of corporate bonds. Companies increased their issues by 30 per cent and the proportion of bond issued as a percentage of bank and bond financing rose to 16 per cent. In addition, companies active in information and communication technology (ICT) increased their equity and bond issues. Since the beginning of 1997, ICT companies have accounted for at least one-quarter of the value of equity issues and in the four quarters to 2000 Q1 have risen further to over one-third.

Chart **9**
Profitability in the United Kingdom and Canada



Canada

The return on capital by all companies in **Canada** was in a very narrow range of 8.1 per cent to 8.5 per cent in 1994–1998 (Chart 9). This narrow range is not dissimilar to companies operating in the United States. And, a recent peak in 1996 was also a peak in the profitability of companies in the manufacturing industry. In 1998, unit labour costs fell by 4.7 per cent, the largest one-year decline. Operating profits for all industries rose by 20 per cent to a record high in 1999, with non-financial companies increasing their profits by 8 per cent on average each quarter. A rate of return of close to 9 per cent, a recent record is predicted for 1999. In the first and second quarters of 2000, non-financial corporations have become more competitive, increasing their profits by 9 per cent and 5 per cent respectively, boosted by buoyant domestic and external demand.

The net rates of return for *service sector companies* are the average of the four main service sectors (transport and communications, wholesale trade, retail trade and 'other' services). The decline in profitability in 1998 was in all sectors, except transport and communications. The most profitable service sector is *transport and communications*. The return on capital for these companies was 8.8 per cent in 1998, but this was below the recent peak of 9.5 per cent in 1996. The *retail trade* has reported falls in the return on capital in each year since 1995. But, operating revenues were reported at record fourth quarter levels in 1999 Q4. *Wholesalers* (food, drink and tobacco) operating profits rose throughout 1999 and into 2000.

Manufacturing industry in Canada reported a sharp increase in profits in 1999, rising by close to 40 per cent. Manufacturers account for more than one-quarter of all corporate profits. Manufacturers of motor vehicles increased operating profits by 84 per cent, caused by low interest rates and high consumer confidence. Canadian motor vehicle sales were the highest in a decade. Wood and paper manufacturers increased their operating profits by over 60 per cent, on the back of higher exports which were driven by the strong North American housing market and rising demand from Asia. Manufacturers of electronics and computers enjoyed record revenues from domestic and foreign demand for telecommunications and other high-tech equipment.

In the first and second quarters of 2000, manufacturers increased profits by 11 per cent and 2 per cent, respectively. Manufacturers' profits have now strengthened for eight consecutive quarters. Robust domestic and US housing market kept upward pressure on lumber demand and prices, increasing margins for wood and paper producers. Manufacturers of electronics and computers saw profits jump by 14 per cent and 12 per cent in the first two quarters, as a result of domestic and foreign demand for telecommunications and

other high-tech equipment and components. Exports of Internet infrastructure equipment was a major contributor to strong exports. Margins in plastics and rubber also benefited from strong demand in construction, as well as in motor vehicles. Profits in motor vehicles and parts were strong, as exports of automobile parts reached record levels to support strong production demand in the United States.

Investment in IT equipment, software and telecommunications equipment by Canadian companies is reported to have contributed to manufacturing profitability[10]. Investment intentions (based on a sample of 27,000 businesses surveyed in June 2000) showed that telecommunications, computer manufacturing, scientific and computer-related service industries in Canada are investing in new technologies at a faster pace than the rest of the economy. Total investment by these industries is expected to increase by 25 per cent, compared to 3 per cent by the rest of the economy.

Korea and Singapore

Although data of companies in **Singapore** are only available until 1998, the picture in the 1990s is one of two halves. Until 1995, rates of return averaged 17 per cent. Subsequently, they have been closer to 13 per cent and in 1998 were at 10.9 per cent, the lowest in the decade. Rates of return were generally higher for manufacturers than service companies, particularly the foreign-owned companies who were earning rates of return in excess of 20 per cent. This largely reflects the international exposure of manufacturers, led by electronics and pharmaceuticals' companies. Whether this also reflects the factor that service firms are generally more regulated and the government hold substantial shareholdings cannot be determined from the data. In the 1990s, rates of return averaged 16 per cent in transport and storage, compared with 8 per cent in real estate and other business services. Deregulation measures in 2000 have included the loss of monopoly on fixed-line services by Singapore Telecom and the entry of foreign legal firms.

For manufacturing companies in **Korea**, 1998 was a recent hard time when large losses were made, particularly in office and computing equipment and in motor vehicles. Businesses owned by Korea's largest companies have traditionally subsidised illiquid group units, through loan guarantees and cross-holdings. In 1999, profitability of manufacturers as a sector improved, mainly due to lower interest rates. There were a number of other factors, including the fall in bad debt expenses and raw material costs. In the medical and precision equipment, radio, TV and communications equipment, electrical machinery and chemicals sectors, profitability improved, largely due to the reduction of financial expenses and to the gains on the disposals of investments. In specific sectors, ordinary income to sales was negative: for companies in the office and computing machinery sector for a third consecutive year and for textiles for a fifth. Motor vehicles and shipbuilding and other transport conglomerates operated at a loss. Companies had problems servicing borrowings and faced competition in their export markets. Indeed, manufacturers of motor vehicles ran losses for a third consecutive year. Losses began during the Asia financial crisis in 1997 and were reported to have resulted from attempts to gain market share at a loss.

In 2000, the rise in oil prices will have an adverse impact on margins in Asia, because of the manufacturing focus and its energy dependence. This is being offset by rapid growth in industrial production and in exports, especially electronic products.

Israel

Businesses in Israel have very similar returns on capital to UK companies, but a lower proportion of profits to total GDP and driven harder by manufacturing. Manufacturers have held profitability at a very stable 12.4 per cent over the last five years. Profits have grown by 65 per cent and capital has doubled. Trends are expected to be positive in 2000, as the transition to new economy industries using high-tech infrastructure continues and output expands. The service sector has been less profitable, but deregulation and privatisation and Internet access for business-to-business sales and purchases could lead to higher rates of return. The state-controlled telecommunications company, Bezeq is to be privatised and new entrants will increase competition. The national airline, El Al remains state-controlled, as do the ports and utilities.

EC Accession Countries: Latvia, Czech Republic, Slovak Republic, Hungary and Estonia

Within the EC Accession countries implementing the market economy, there is a contrast between the company sectors in Czech

Table 4 Net rates of return of non-financial companies in Korea and Singapore

per cent

	All companies		Manufacturers	
	Singapore	Korea	Singapore	Korea
1995	14.8		21.0	
1996	13.8		18.3	
1997	13.1		18.3	8.3
1998	10.9		14.8	6.1
1999				6.6

Republic and Hungary and those of Estonia, Latvia and the Slovak Republic. Profitability of the manufacturing industry in **Latvia** and **Slovak Republic** was at a low point in 1998, with negative operating surpluses. During 1999, there was more equity owned by the private sector and solvency ratios edged up. In Slovak Republic, operating surpluses of manufacturing companies were positive in the first quarter of 2000, after heavy losses in 1998 and 1999, and the fall in capital was not as dramatic.

In **Estonia**, manufacturing companies led a recovery in company profits in 1997. Economic growth in 1997 resulted from the structural reforms of earlier years and from strong investment. Profitability was restored also by increased exports, particularly in timber and paper. But, in 1998 and 1999 their profits were low and rates of return of 9.5 per cent for all companies were driven by the transport support and telecommunications sectors. The impact of the crisis in Russia in 1998 was felt in manufacturing and many companies like food producers suffered from a collapse in export markets. Timber and electronics industries maintained margins, through exports to Europe. Manufacturers continued to invest, over half of the finance being drawn from their own funds and one-fifth borrowed from the banks.

In the **Czech Republic**, rates of return of close to 12 per cent were being earned in Q1 2000, the highest in recent years. This coincided with a recovery in industrial output, lower rises in unit labour costs, lower interest rates and a turnaround in demand from EU trading partners. Manufacturing industry was earning twice the rate as in services and, at 14 per cent, was 4 percentage points higher than in 1993. The Government intervened to improve the legal framework for economic transactions and to restructure and refinance key industrial companies. 1996 and 1997 were low points for profitability, as the Czech Republic experienced low productivity growth and a decline in competitiveness. Firms began to restructure and with GDP growth negative from 1997 to 1999, profitability was subdued.

Chart **10**
Further international comparison of company profitability in Finland and Norway

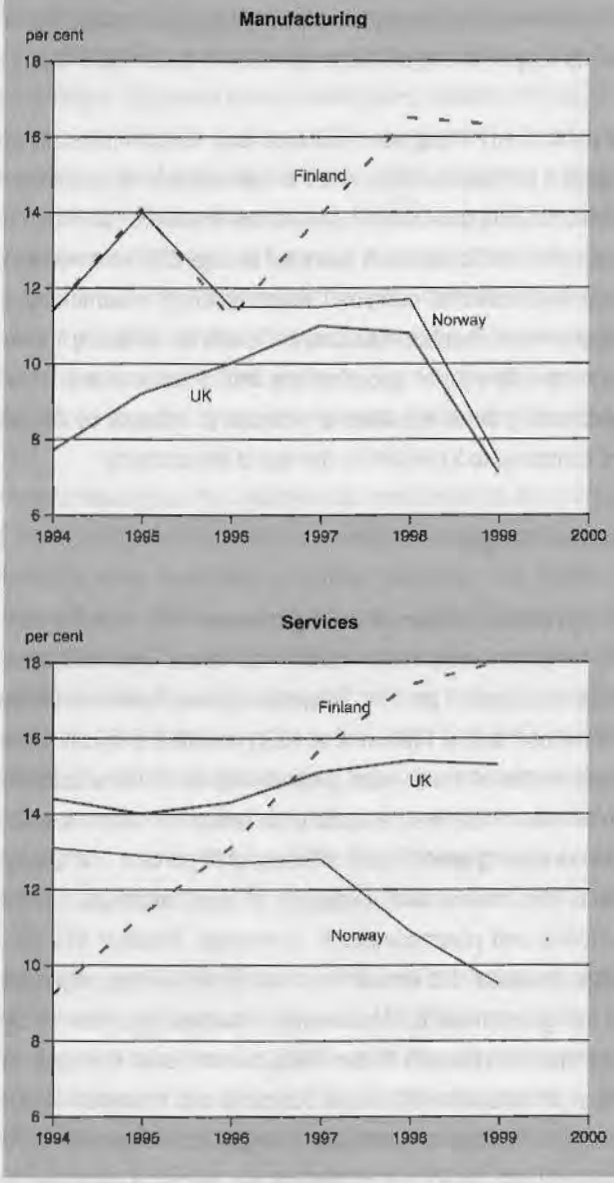


Table 5 Net rates of return of non-financial companies in Latvia, Czech Republic, Slovak Republic, Hungary and Estonia

per cent

	All companies					Manufacturers				
	Latvia	Czech Republic	Slovak Republic	Hungary	Estonia	Latvia	Czech Republic	Slovak Republic	Hungary	Estonia
1995		9.0		4.7			11.4		9.8	
1996		7.7		5.7			9.5		11.2	
1997		7.3	-0.3	9.7			10.1	2.8	17.6	
1998		8.3	-2.1	10.3	9.5	-2.7	10.7	-4.6	17.3	
1999		7.2	-0.3				9.8	-1.9		

In **Hungary,** rates of return earned by manufacturing companies were in excess of 17 per cent in 1997 and 1998. This was more than twice as high as those earned by companies in the service sector. This was achieved through strong export margins, offsetting the negative influence on margins from the crisis in Russia in 1998 and the war in neighbouring Yugoslavia. Hungary has attracted foreign corporations (like Vodafone) who have established major operations in sectors such as automobiles and automobile components, electronics and computer manufacture. Hungary has also privatised the energy sector and is now de-regulating the energy market, including prices in the gas markets.

Finland and Norway

Finland had a similar profile of profitability to the UK in the 1990s. There was a trough in 1991/92 of 6.4 per cent. But, the Finnish corporate sector showed a more dynamic recovery, to 17.2 per cent in 1999. This reflected growth in the Finnish economy at a faster rate than the European average for the past five years. Growth was led by exports. In 1999, although GDP growth slowed (to 3.5 per cent from 5 per cent in 1998) profitability was maintained, by the weak Euro which boosted Finnish exports outside the Euro-zone and by stronger growth inside the zone which created more demand for Finnish goods.

The return on capital for *manufacturers* in Finland in 1991 was 3.3 per cent. In 1999, it was 16.3 per cent (Chart 10). Finland's manufacturing sector is a mix of 'old economy' industry led by pulp and paper and the 'new economy' industry led by telecommunications equipment and IT. In the forestry sector (forest products account for 40 per cent of exports), Finnish companies have consolidated and developed a global presence, as well as extending skills and knowledge into related products of coated paper and magazine paper. Finland also has one of the world's leading paper machine producers and one of Europe's major specialist metal suppliers. Finnish companies have outstripped the United States and the rest of the EU in applying for patents for high-technology applications and they score highest in business expenditure on research and development.

In telecommunications equipment and IT, metals and engineering, Helsinki has become a world capital. Nokia is the world's largest maker of mobile phones, including mobile networks and the wireless application protocol phone for gaining access to the Internet. Annual sales growth since 1997 has been 50 per cent and operating margins in mobile phones are estimated at 20 per cent. Nokia is reported to have a 30 per cent share of the handset market. Nokia accounts for 20 per cent of Finnish exports, one-third of corporate R&D spend and 60 per cent of the value of the Stock Exchange.

The depth of the 1991/92 recession was not as severe for the *service sector* as in the manufacturing sector and, subsequently, the sector's profits have accelerated ahead of manufacturers. Rates of return rose from 6.0 per cent in 1991 to 18.0 per cent in 1999. The rapid improvement in rates of return since 1995 has been led by the many new service companies who have provided security and software services for mobile phone and for mobile Internet developments.

For **Norway**, company profitability fell sharply in 1998 to 10.5 per cent, from 14.6 per cent in 1997. Profitability suffered from a rise in unit wage costs and from the depreciation in the value of the Krone. In 1999, unit wage costs rose twice as fast as in the Euro area. Rates of return recovered to 11.8 per cent, but were still below levels recorded in 1990-97.

Manufacturing companies' profitability has fallen since 1995 when rates of return of 14 per cent were recorded (Chart 10). The fall in profitability in 1999 was particularly acute. Manufacturers appear to have suffered most from weaker domestic demand and export orders and from weaker productivity. The decline in profitability impacted on business investment which fell in 1999.

Service companies' profitability suffered in 1999, but not as severely as manufacturers. Profits fell by 9 per cent, compared with a fall of over one-third in manufacturing. Capital intensity in service companies has been quicker than in manufacturing companies. Net capital increased at current prices by over 75 per cent since 1990. Service industries appear to continue to benefit from the strength in domestic demand. One restraint on profitability in the sector could be the continued public involvement in Norway's telecommunications sector. Norway is one of the few OECD countries not to have started privatisation of its public telecommunications operator, Norwegian Telenor.

Analysis of oil and gas exploration profitability in the international context

The UK and Norway are close rivals in crude oil and natural gas production. The UK is the eighth largest oil producer in the world and the ninth largest exporter. Norway is one place higher in production and the second largest exporter of crude oil. The United Kingdom is the fourth largest producer of natural gas. Norway is tenth, but the fifth largest exporter.

For **UK** and **Norwegian** companies operating in oil and gas exploration, profitability has been largely determined by oil prices (Chart 11). The major collapses in the oil prices were in 1986, 1988, 1991/92 and more recently in 1997/98. In 1998, the rates of return were reduced by oil prices one-third the level in 1997, due to a world surplus in oil which occurred just as the South East Asian crisis began. The second OPEC oil price rise in 1979/80 (the first rise was in 1973/74) and subsequent rises to 1985 took rates of return for UK companies to the highest recorded, at over 60 per cent. In 1999, the latest rise in oil prices of one-third exceeds rises at the time of the Gulf War and took returns in excess of 20 per cent for both countries. Chart 11 shows the percentage change in oil prices and the net rates of return of companies operating in oil and gas exploration.

In 1999 and the second quarter of 2000, profitability of *UK Continental Shelf companies* rose to 33 per cent, the highest levels since 1985. Similarly, Norwegian oil companies came close to doubling profits and recorded rates of return of 20 per cent.

A doubling in rates of return over the past year by companies in both countries mainly resulted from rising oil and gas prices. The strong growth in the world economy created the external demand for crude oil and oil products. Natural gas supplies in the US fell short of demand and oil was needed to fill the gap. Stocks held in refineries and plants internationally round the world were low, in expectation that prices would fall. In addition, OPEC exercised restraint on supplies of oil.

1998 and 1999 saw record levels of production of crude oil from the North Sea. Oil companies' inventory holdings of crude oil have been reduced and costs held down by improved oil distribution. Lower North Sea operating costs have resulted from lower labour costs and from the focus on new low-cost fields.

The value of UK net exports of oil and oil products in the first half of 2000 was £2.6 billion, 83 per cent higher than in the same period of 1999. In addition, rates of return on capital have been boosted by tighter capital expenditure. Investment decisions were shelved as a result of the fall in oil prices in 1997/1998. Capital was unchanged in 1998, and rose by only 4 per cent in 1999 as exploration investment fell by 40 per cent. This is likely to change in 2001. Investment is forecast to increase, reflecting the higher oil prices. Short-term projects will be initiated, investing more in gas and condensates production.

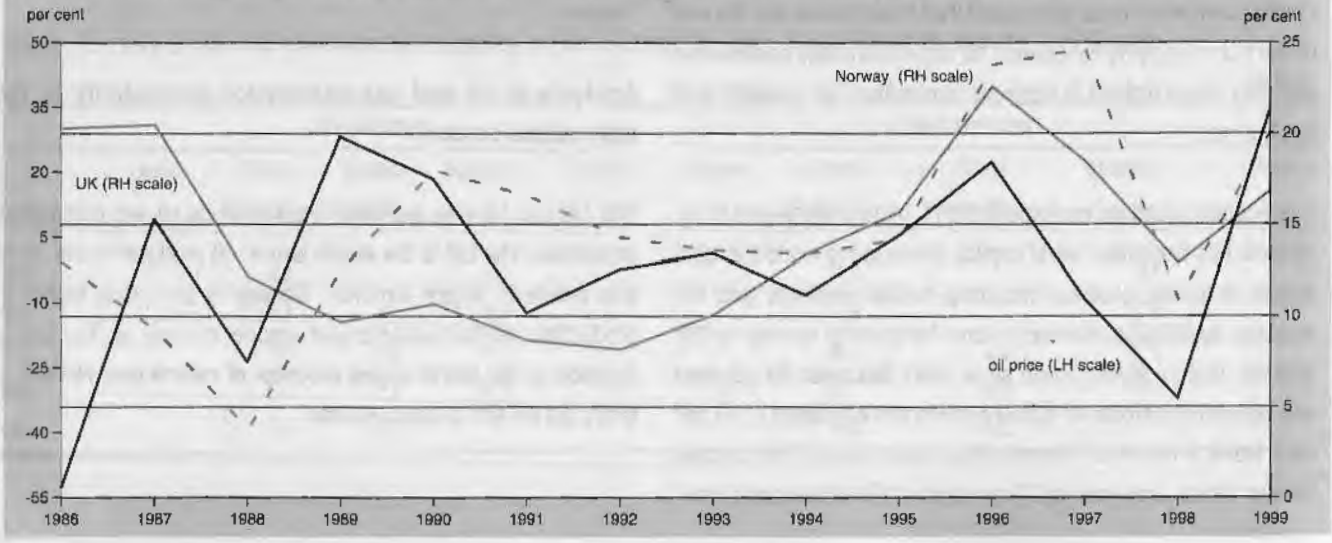
In **Norway**, a number of large investment projects were underway in 1999 and new oilfields came on stream to boost oil production.

Assessment

The story in the UK in the 1990s was of a surge in manufacturing profitability by 1998. But, in 1999, the impact of higher raw material prices, especially oil and cuts in export margins pushed manufacturing profitability to its lowest rate for five years. The strength of sterling against the Euro and the weakness against the US dollar raised the costs of raw materials priced in dollars, like oil, fuel and metals, while cutting margins on the main European export markets. The UK manufacturing industry was not unique in facing exchange rate and oil price pressures. Other internationally-exposed manufacturing companies in the EU also faced a squeeze on margins in 1999 and 2000, from the weakness in the Euro against the US dollar. Investment intentions of these firms may well respond to inadequate net returns and to uncertainty over future profit margins.

Chart **11**

International comparisons of UK and Norwegian companies operating in oil and gas extraction



In the United States, profitability of manufacturers advanced despite higher oil prices. One major factor could have been a higher rate of investment in IT equipment and software and in communications technology. Another could have been intense competition, as profit margins for US firms were enhanced by the increased demands for information and communications technology. This may also have been the case for Canadian manufacturers who also benefited from strong export markets in the United States. Trends in international profitability can also be explained by the divergence in productivity growth over recent years.

Profit margins internationally are being squeezed by greater price transparency, discounting and intense global product competition. Britain's companies borrowing rose to a decade-high of £17 billion in 1999 and a further £7 billion in the first half of 2000. Greater mergers and acquisitions activity to achieve growth has also impacted on margins. International mergers, particularly in telecommunications are exposing many more companies to global institutional investors and this, in turn, has led to rapid growth in corporate borrowing levels. In particular, telecommunications companies have borrowed heavily to finance investment and international expansion. This has included the cash pre-payments to use the spectrum for Third Generation purposes, the costs of networks and the takeovers of Internet communications companies to handle the data communications and electronic commerce needs of multinational companies. But, revenues have not kept pace and debt levels have risen.

Other factors depressing profitability in recent years have included the structural factors of excess employment particularly in service companies prior to deregulation and privatisation (in sectors such as communications, electricity and transport), limited competition in domestic markets and to strong employment protection laws. The Japanese service sector case study reviewed in the article is a case in point. The service sector in Singapore may be another. Companies in Latvia and Slovak Republic are now beginning to earn positive rates of return, as more equity is injected by the private sector and solvency improves. Companies in the Czech republic are examples of the benefits to profitability, from company law reform and from company restructuring.

Industry internationally is being driven by competition and by the drive to cut costs and to achieve economies of scale in order to counter weak prices. 'Old economy' companies have needed to invest in the Internet and Y2K preparations and to meet the technology requirements of their customers. 'New economy' companies in electrical and optical equipment such as computers and mobile phone production have been exploiting their huge exposure to the benefits of information and communications technology investment. This has happened from Israel to Finland and involved restructuring, re-skilling and investment in research and development. New technology including the effects of using the Internet is reducing costs and increasing production. Finland's 'old economy' and 'new economy' companies provide a golden corporate sector which includes world leaders in both sectors, in forestry products and in telecommunications equipment. Canadian firms have also advanced their profitability, driven by strong export markets in the United States.

In Ireland corporate tax cuts have led to a rising share of profits in a national economy. And, other countries like Belgium, Netherlands, Spain and Germany are implementing employment reforms which is likely to improve profitability ratios. Other countries surveyed are involved in reforms in their labour markets. These reforms have lifted participation and employment rates and skill levels improved the efficiency of labour markets.

Companies in the United Kingdom and Norway operating in the North Sea show remarkably similar patterns in profitability. This is, in large part, determined by climbing oil prices and the associated and similar impact on short-term investment plans.

Companies internationally in 1999 and in 2000 have diversified their corporate financing against a background of rising borrowing requirements. Investment and interest payments could not be financed from internal funds, particularly for the former state-run companies. With profit margins also under pressure, weak investment in 2000 and 2001 may result. Corporate financing from the bond and equity markets including equity-linked bond issues and company debt to equity ratios are increasing for companies in the United Kingdom, United States, Germany, Spain and the Netherlands. Bond offerings rather than syndicated loans are becoming the norm. For German companies this is a radical departure, from their long-established links with domestic banks. This surge in financing could put pressure on international debt and equity markets. Companies may attempt to reduce debt levels, by disposal of assets and by demergers and by sales of stakes in international operations.

Notes

1 'International comparisons of profitability', January 2000 *Economic Trends*, pages 33–46. This reviewed data provided to 1998. This article also provided separate sections on how profits and capital employed are calculated internationally. These reviews have been updated and are available, on request from the author.

2 'International comparison of corporate profitability'. Deutsche Bundesbank, October 1997, pages 33 to 43.

3 'International comparison of rates of return on sales and industry'. The *Institut derDeutschen Wirtschaft* of Cologne (Lichtblau, 1999).

4 'West German enterprises' profitability and financing in 1998'. Deutsche Bundesbank Monthly Report, March 2000.

5 'Company profitability and finance', August 2000 *Economic Trends*, pages 33–48.

6 The UK estimates are taken from the United Kingdom Input-Output, Annual Supply and Use Tables, 1998. Alternative estimates of investment in information and communication technologies in 1998 (Goldman Sachs, *'Productivity-The Role of New Technology', 20 October, 2000*) are 3.4% of business GDP in the United States, 3.0% in the United Kingdom and 2.5% in Euroland.

7 'Stagnation and Structural Adjustments of Nonmanufacturing Industries during the 1990s'. Research and Statistics Department, Bank of Japan. February 1999.

8 'West German enterprises' profitability and financing in 1998'. Deutsche Bundesbank Monthly Report, March 2000.

9 The policy of the new Belgian government in July 1999 was designed to reduce employer social security contributions from Q2 2000 and to introduce a youth employment programme and an increase in participation in the labour force by persons over 50 years old.

10 In 'Capital Expenditures by Type of Asset', 1997, manufacturing companies in Canada invested over one-third of their total capital expenditure in computerised processing equipment and in communication and office equipment.

Introducing the Experimental Monthly Index of Services

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Summary

This article presents for the first time an experimental constant price monthly Index of Services (IoS) and describes the development project to review and improve the indicators used to estimate short-term change in service industry output. This is an important step in the ONS response to the customer demand for this information and completes the first phase of the IoS work programme outlined in *Economic Trends* in October 1999[1]. Results will be published each month from now on: initially as an experimental index.

The experimental monthly IoS is based on a range of data collected monthly, quarterly and annually. The proportion of monthly data will increase from its current level of about 40 per cent as suitable new monthly data sources become available. When fully developed the monthly IoS will provide a timely indicator of growth in service industries and, along with the monthly Index of Production (IoP), will assist economists in monitoring changes in growth and detecting turning points in the economy.

- The experimental monthly IoS is a first step towards providing, for the service industries, the periodicity, range and quality of output indicators that have existed for the production industries for many years.
- The IoS development programme aims to meet demand for monthly services' output indicators from users of economic data, including HM Treasury, the Bank of England and the City. The fully established IoS will move us towards monthly GDP.
- It is being released as an experimental index, to inform users of progress and to obtain feedback. Data are given from January 1995 to August 2000.
- The experimental monthly IoS is based on about 40 per cent monthly data. This will increase as new monthly sources are taken on from 2002/3. Revisions will occur as improved data sources are included.
- The IoS capitalises on the ONS' investment during the 1990s in surveys of service activities (e.g. turnover and prices), an area where we are among the world leaders.
- As the next stage of a challenging development programme, from May 2001 for the distribution industries we expect to speed up the release of information by a month and drop the 'experimental' label.
- A five way split of monthly service industry detail is provided. As the range of monthly data increases, the aim is to publish more detailed indices.

This set of monthly IoS figures is consistent with GDP(O) estimates published on 20 October.

This article is in six sections:

- Conceptual basis for the IoS, its relationship with GDP(O) and the national accounts;
- Work done to produce this experimental index;
- Data sources and the proportion of monthly information;
- Future plans;
- Conclusion;
- The first set of results.

Service industries overall account for around 70 per cent of GDP. Monthly IoS results will be published each month from now on: initially as an experimental index. This experimental monthly IoS uses the same concepts and data sources as the output approach to measuring GDP for the services. IoS development plans aim to:

- extend the range of monthly indicators:
  - converting quarterly turnover inquiries to monthly
  - investigating alternative sources;
- review the methodology of existing indicators:
  - follow EU guidance on measurement of price and volume
  - make the most of turnover and price information available;
- improve the timeliness of the experimental monthly IoS.

Section 1 – Conceptual basis for the IoS, its relationship with GDP(O) and the national accounts

The conceptual basis of the output measure of GDP - GDP(O) - applies to all its components, to the index of industrial production (IoP) and in future also to the IoS: the article in October 1999 *Economic Trends* refers[1]. (See Box: Measurement of gross value-added (GVA) - for GDP(O) and IoS - in the UK Economic Accounts.) The new monthly IoS is intended ultimately to replace the present quarterly total services index within GDP(O) - it shares exactly the same industry coverage and will be consistent with the corresponding quarterly series in GDP(O).

The two largest components of GDP(O) cover production and services. The IoP has been based on mainly monthly indicators for many years, while the service sector has relied on mainly quarterly indicators. The statistics on production are more detailed and more established than those on services. The introduction of the monthly IoS, with related developments in monthly data collection, will help correct this imbalance in the quality of output components.

Within the IoS, IoP and GDP(O), indicators used to estimate short-term change are selected for their:

- appropriate industrial coverage;
- consistency over time; and
- suitable quality and timeliness.

For current-price indicators the choice of indicator also takes account of the need for suitable deflators (see Box: Indicators used to measure short-term change in gross value-added (GVA) for GDP(O) and the IoS).

The categories used for classifying industries in the experimental IoS, the IoP and for GDP(O) are the UK version of the latest international standard classification of industries, usually abbreviated to the 'SIC92'. Using this, industry indicators are combined together according to their relative contribution to total GDP, based on their gross value-added. At present these contributions, or 'weights', are updated every five years. (See GSS Methodology Series report no. 15: *Gross Domestic Product: Output Approach (Gross Value Added)*[2]). On this basis – using indirect indicators - GDP(O) and the IoS serve primarily as measures of short-term change in economic output. In order to have their longer term movements re-set periodically, GDP(O) (and in future the IoS and the IoP) is benchmarked or balanced against the other measures of GDP.

Effects of national accounts revisions policy and balancing

The IoS will follow the national accounts revisions policy and practices[3]. Quarterly averages of the monthly IoS index numbers

Measurement of gross value-added (GVA) - for GDP(O) and IoS - in the UK Economic Accounts

The UK economic accounts are based on the European System of Accounts (ESA)[4] which in turn is based on the UN System of Accounts (SNA)[5]. Under the ESA, the level of gross value added (**GVA**) for each industry is measured in basic prices as:

GVA = outputs	***less*** inputs
Or, in more detail:	
GVA = turnover	***less*** purchases for intermediate consumption
	plus changes in inventories
	plus own account capital formation

GDP is measured at market prices and is the sum of the industry **GVA** estimates, plus taxes on products (e.g. value added tax, alcohol duty), less subsidies on products[6].

will match the quarterly industry index series published in GDP(O), both at the overall aggregate level, where the aggregate IoS will match the quarterly 'total services index' in GDP(O), and for individual service industry series.

Indicators used to measure short-term change in gross value-added (GVA) for GDP(O) and the IoS.

It is impractical to collect the data relating to each industry which are necessary to carry out the GVA calculation every month or quarter. So the IoS and GDP(O) generally use indirect indicators to assess the short-term change in gross value-added.

- For a small number of industries it **is** practicable to calculate value-added directly every month/quarter, where the necessary details of industry inputs and outputs, and their prices, are available. For such industries direct industry value-added measures are obtained.
- Elsewhere the 'ESA-preferred' type of output indicator is one which measures deflated gross output (or turnover) for an industry. These use an appropriate price change estimator to remove the effects of inflation.
- The use of volume indicators is also acceptable under ESA regulations. This requires no deflation but will usually miss quality changes, or changes in the mix of outputs.
- Other types of indicator, which measure inputs to an industry, are not now regarded as satisfactory, but for some industries they are the only short-term indicators available. The most obvious and widely used of these is employment.

A separate quarterly national accounts estimate of GDP is produced in each of the three months of the quarter. These are termed the 'preliminary'[7], 'provisional', and 'final' GDP estimate for each quarter. Most of the time no revisions are made to earlier quarters for the preliminary or provisional GDP estimates. For the 'final' estimate each quarter, revisions to earlier quarters *are* made, but on a controlled basis for a specified number of earlier quarters. The annual *Blue Book* process allows historical figures to be revised for a longer period. The purpose of this control over revisions is to avoid creating uncertainty and unnecessary cost to users by frequently revising long runs of data for relatively minor changes. The GDP(O) index numbers for the period open for revisions (also the IoP and in future the IoS) are always designed to show the estimate of short-term change in the series.

The quarterly national accounts estimate of GDP is arrived at by 'balancing' the output, income and expenditure measures of GDP[3]. These three measures are balanced by applying quarterly 'coherence adjustments' to reduce any inconsistencies between them[7]. The result, for each quarter's estimates, is a consistent and firm view of GDP. Where coherence adjustments are applied to the service industries within quarterly GDP(O) they are also included within the corresponding components of the monthly IoS.

Section 2 - Work done to produce an experimental monthly IoS

The background to the IoS development was described in an article in October 1999[1]. The 'prototype' Index of Distribution (IoD) was released in December 1999[8]. This section of the article covers the development of a computer system, the recruitment of a team of people to work on the experimental monthly IoS, together with quality assurance and seasonal adjustment of the monthly series. It also explains the achievements in two key areas: the improvement of survey methodology and the collection of monthly data.

Computer system

The IoS computer system is based on the design and structure of the system used to produce quarterly estimates of the service industries for GDP(O). It has additional features, for example benchmarking to quarterly GDP(O) estimates and interpolation to produce monthly estimates where necessary. The IoS system was in place by June 2000.

Building the IoS team

Over the past twelve months the number of people working within the IoS team has increased from five to fifteen. This team includes those who will be responsible for producing the monthly IoS and those who will focus on improving the methodology. The IoS and the GDP(O) teams have recently been brought into the same Division (Short Term Output Indicators Division). This strengthens the links between the two and facilitates progress in the IoS development programme.

Quality assuring and seasonally adjusting the data

Between March and August 2000 the team quality assured over 100 monthly series back to January 1995, introducing quality adjustments where appropriate. The quarterly GDP(O) team worked closely with IoS providing advice and assistance. During September we reviewed and improved the seasonal adjustment of IoS components.

Increasing the proportion of monthly data

The development of service sector turnover inquiries began in the early 1990s[9]. Their quality is being improved for the experimental monthly IoS by including more actual monthly data. Since April 2000 around 70 per cent of ONS quarterly turnover inquiries have been converted to monthly, the remainder are to be converted to monthly in January 2001. It will be some time before the monthly data sources can be considered for inclusion in the IoS and GDP(O) (see below).

Methodological improvements

The ONS introduced quarterly turnover inquiries for parts of the service sector in 1991, to provide turnover results for use as short-term indicators of value added for the output measure of GDP[9]. This allowed the ONS to begin publication in April 1993 of the preliminary estimate of quarterly GDP to a much earlier timetable than had previously been possible. However some of the new series had a high level of unexplained volatility. Considerable improvements have been made in this difficult statistical area but some turnover series are still not used by IoS and GDP(O) compilers because of concerns about quality. Two thirds of individual returns from businesses currently feed directly into estimates for IoS and GDP(O), while others are used for comparative analysis.

The IoS development programme has given impetus to investigating the cause of volatility with the aim of making more turnover series suitable for inclusion in GDP(O) and the IoS. Some of the problems are due to sampling practice (see Review of Short-Term Output Indicators, Annex D[10]) and some steps have already been taken to improve the survey methodology (see box: 'Improvements made to monthly and quarterly sources').

Improvements made to monthly and quarterly sources

- To improve the early estimates of services turnover, since October 1999 extra effort has been put in to encouraging early responses to survey forms. Response rates have been improved to achieve around 80 per cent response within 4 weeks.

- Firms with high turnover (greater than £40 million) and relatively low employment (between 10–99) caused discontinuities when rotated in and out of sample strata. Since January 2000 they are included in the sample every month.

- Smaller firms (10–99 employees) stay in the survey longer, which reduces the discontinuities each makes when sample members are dropped and new ones introduced.

- Since January 2000 outliers are being treated differently. The new procedures detect more unrepresentative returns and prevent them distorting movements in the series.

Deflation

To make full use of the available industry turnover data, good quality industry-specific data on prices are needed for deflation. Where there is no industry-specific index, deflators are constructed from other indicators, such as the Retail Prices Index and average earnings indices. These are less satisfactory as they may not reflect the movements in specific industries.

Monthly Retail Prices Indices are available for the most important services sold directly to consumers, such as vehicle insurance and hairdressing. However around half of the GVA in private sector services comes from business-to-business or 'corporate' services, such as accounting and software consultancy. The ONS is developing a range of Corporate Services Price Indices (CSPIs) to improve this position. An article in the July 2000 *Economic Trends* explains the latest developments in this project[11].

Section 3 - Data sources and proportion of monthly information

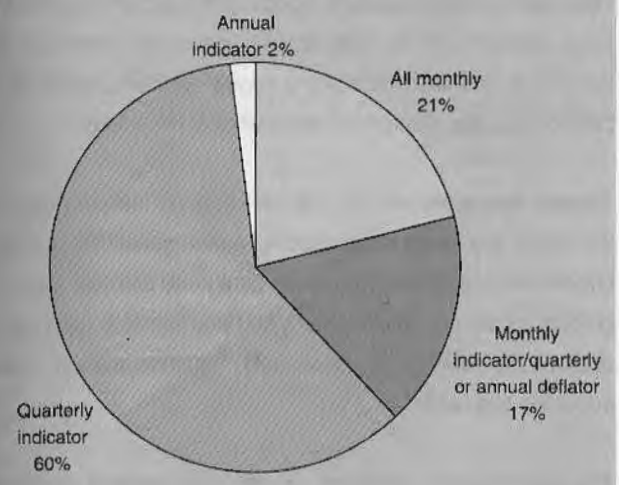
This section looks at the proportion of monthly data used in the five published categories of the experimental monthly IoS. It also provides details of the type of indicators used. The IoS development project aims to increase the proportion of monthly data.

Proportion of monthly information

Chart 1 shows the proportions of IoS data, by gross value added weight, derived from monthly, quarterly or annual sources. The 'all monthly' category includes either volume indicators or indicators derived from monthly turnover series divided by monthly price series. Included here are monthly figures derived from turnover figures provided with value added tax (VAT) returns to Customs and Excise. Of VAT returns, 20 per cent are monthly while the remainder are apportioned to individual months. (The 'monthly' categories exclude any contribution from the new monthly turnover inquiries – see Section 4.)

As chart 1 shows, 38 per cent of the data used in the IoS is based on monthly indicators. Of this, 21 per cent includes monthly deflation; a further 17 per cent uses monthly current price series with a quarterly or annual deflator. Two per cent of series are based on annual data. The greatest proportion of series (60 per cent) is based on quarterly indicators with the monthly path being derived using standard interpolation techniques. Some quarterly data may be based on annual source data, interpolated by the supplier.

Chart 1
Periodicity of IoS data



Part of the IoS development programme has been to convert quarterly turnover series to monthly collection. When these are fully incorporated into the monthly IoS approximately 50 per cent of it will be based on monthly indicators.

Industry detail for publication

The experimental monthly IoS will initially be published as a headline figure for all of services, plus five component series:

Description	*Definition*
Distribution	SIC92 Divisions 50-52
Hotels and restaurants	SIC92 Division 55
Transport, storage and communication	SIC92 Divisions 60-64
Business services and finance	SIC92 Divisions 65-74
Government and other services	SIC92 Divisions 75-95

The categories correspond to the industry classifications for services used in the published estimates of GDP(O). The decision to publish at this level of detail is dictated by the proportion of monthly data available. 'Distribution' and 'hotels and restaurants' are shown separately because they include high proportions of monthly data. Since December 1999 a prototype Index of Distribution (IoD) has been published. Now that the experimental monthly IoS has been introduced, the headline IoD will be included within the monthly release for the experimental IoS. The IoD release currently shows values for lower level industry components; these will not be shown in the experimental monthly IoS release but will continue to be available on request. More detailed components of the other IoS series will be made available as more monthly data are incorporated and the quality of monthly series improves.

Chart 2 shows, for each of the industry categories, the percentage based on monthly indicators. For instance 'distribution' contains 98 per cent monthly indicator data. 'Hotels and restaurants' contains 95 per cent monthly indicator data, most based on VAT turnover. By contrast, the 'government and other services' series include seven per cent monthly data.

Chart 2
Proportion of monthly data in published services series

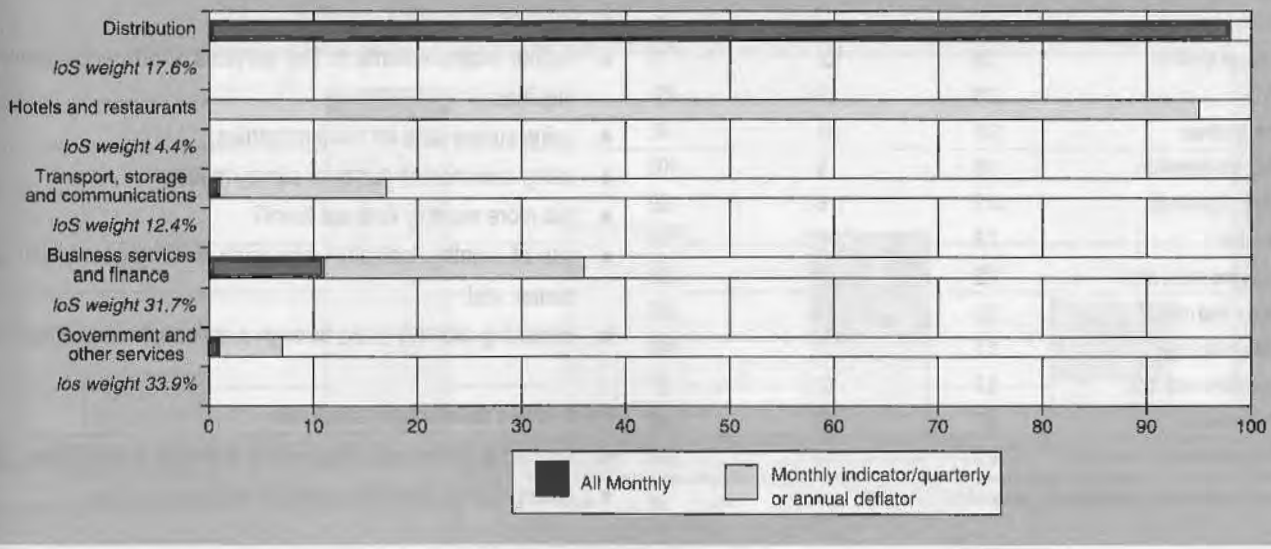


Table 1 shows the proportion of monthly data at the 2-digit divisional level. The long-term aim is to publish IoS at this level of detail, but at present about half of these categories have no monthly data.

Present IoS and GDP(O) services' indicators.

Changes in the output of the service industries are estimated through a wide range of indicators. Chart 3 shows the main types of indicator used now. About 28 per cent of total service industry estimates are based on turnover indicators, using either inquiry data or aggregate turnover data from VAT returns.

Services are provided by a mixture of the public and private sectors – the private sector accounts for about three-quarters of total services. Chart 4 gives the same information as Chart 3, but just for private sector services, and shows that 35 per cent of private sector service industry estimates are based on turnover indicators.

Table 1 Periodicity of IoS data - by industry divisions

	IoS weight (%)	Monthly* (%)	Quarterly (or annual) indicator (%)
Motor trades	3.0	100	0
Wholesale trade	6.4	96	4
Retail trade	7.2	100	0
Hotels and restaurants	4.1	95	5
Land transport	3.6	54	46
Water transport	0.4	0	100
Air transport	0.9	0	100
Auxiliary transport	2.7	5	95
Post and telecomm.	4.1	0	100
Financial intermediation	6.0	63	37
Insurance and pensions	2.7	0	100
Financial auxiliaries	0.9	26	74
Real estate activities	2.8	59	41
Renting of machinery	1.2	0	100
Computer services	1.8	100	0
R & D	0.6	0	100
Other business	9.3	58	42
Public administration	8.8	0	100
Letting of dwellings	10.2	0	100
Education	7.9	0	100
Health and social work	9.2	0	100
Sewage and refuse	0.8	0	100
Membership orgs.	0.8	0	100
Recreational activities	3.2	63	37
Other services	0.7	52	48
Private households	0.7	0	100

* Includes monthly indicator with quarterly or annual deflator.

The contents of the general categories in charts 3 and 4 are:

Other current price indicators includes: some IoP components; retail sales; railway freight; international passenger revenue; bank and non-bank loans and deposits; building society liabilities; insurance net premium income; government rent subsidies; forces' pay.

Volume indicators includes: car registrations; fuel deliveries; rail passenger and freight transported; air passenger and freight miles; shipping volumes; Post Office series; bank credit and debit clearings, building society advances; property and land transfers; public sector output indicators for: social security, administration of justice, education and health.

This wide variety of indicators reflects the diversity of the service industries themselves. Part of the IoS work programme will be to review the data sources used.

Employment is still in wide use in the IoS and GDP(O): the majority of service industries using employment indicators lie within the public sector where the measurement of output is often difficult. The different mix of indicators used for private sector services and for public sector services is shown in chart 5.

Section 4 - Future plans

Future developments will increase the proportion of monthly data and review and improve the indicators used.

The IoS development program looks at improving both the range and quality of output indicators; key examples being turnover data and price indices. Other aims are to improve the methods used and to improve the IoS' timeliness. This section also explains the criteria for dropping the 'experimental' label from the IoS component series.

Indicator developments include:

- further improvements to the services short-period turnover inquiries;
- using survey data for more industries;
- using new monthly turnover survey results;
- are more monthly data out there?
- use of monthly indicators alongside existing quarterly/annual series; and
- improving monthly paths through a review of interpolation.

Price series developments include:

- improving the range and quality of services' output prices; and
- mixing CSPIs and RPI components as appropriate.

Chart 3

Types of indicator used for all service industries: proportions by value-added weight

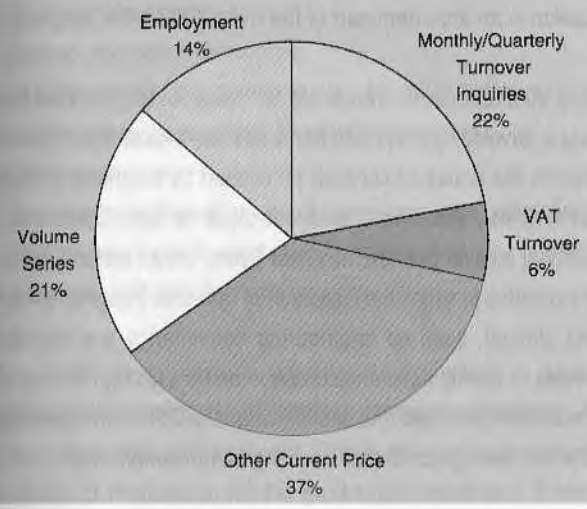
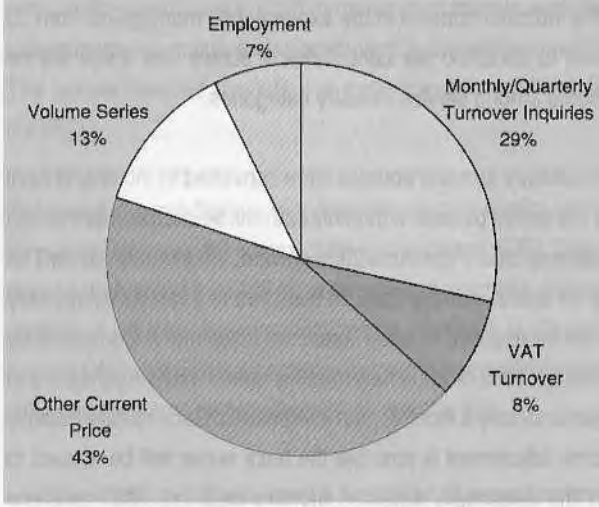


Chart 4

Types of indicator used for private sector service industries: proportions by value-added weight



Methods developments include:

- estimating changes in inventories;
- improving public sector indicators;
- implications of the Short-Term Output Indicators Review; and
- co-ordinating data and methodology improvements.

The timeliness strategy includes:

- using the National Statistics web-site; and
- speeding up IoS processes.

Indicator developments:

Further improvements to the services short-period turnover inquiries

- Evaluation of a 'matched-pairs' survey estimation method to assess whether reductions in volatility outweigh any possible additional bias and whether such bias can be dealt with.
- Re-evaluating the allocation of survey forms to industry and size bands, to ensure that the sample design is still up-to-date and minimises sampling errors.

Using services survey data for more industries

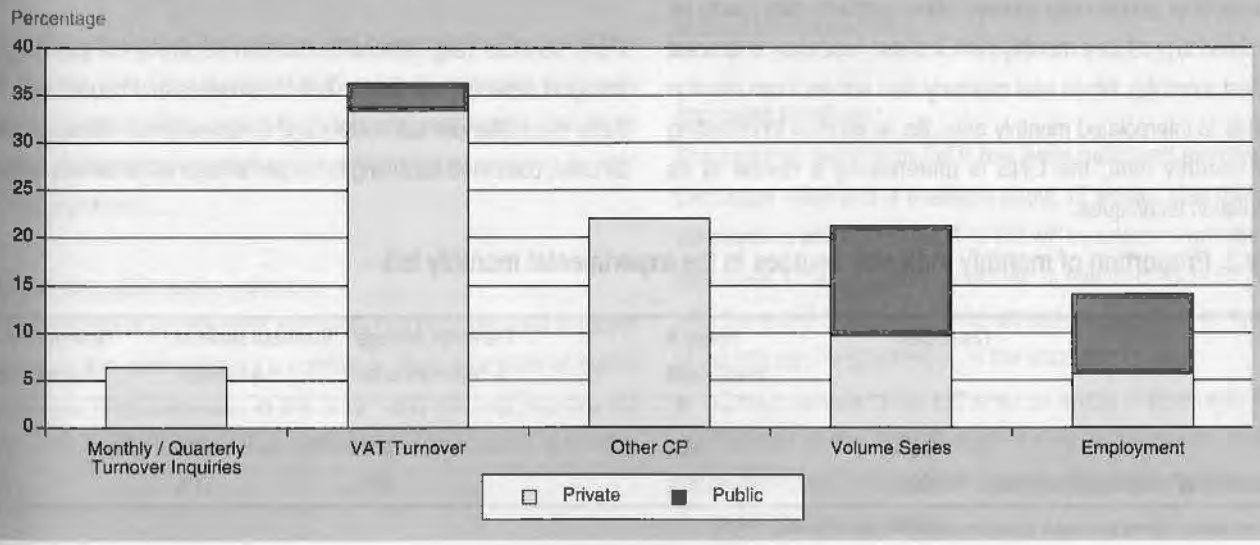
Improvements to turnover surveys should allow fuller use of these data (two thirds of individual returns currently feed directly into the IoS). Any resulting revisions will be handled through the national accounts revisions policy.

Using new monthly turnover survey results

Initially the experimental monthly IoS will use current GDP(O)[2] indicator series. Nearly all of the IoD[8] is based on monthly indicators.

Chart 5

Types of indicator used in service industries: proportion by public and private sector and by services value-added weight



Elsewhere amongst the service industries the identification of suitable monthly indicators will often take more research and new or improved collections. Where quarterly services turnover inquiries are being converted to monthly collection, this will raise the proportion of monthly indicator sources in the experimental monthly IoS from 38 per cent to about 50 per cent. Table 2 shows how these will be distributed among service industry categories.

Many quarterly turnover sources were converted to monthly in April 2000. For earlier periods, a monthly path will be interpolated through the quarterly data. From April 2000 onward, the monthly path will be based on actual monthly data. At least two to three years' monthly data will be required to allow seasonal adjustment. Consequently until at least 2002 or 2003 new monthly series will be aggregated to quarters and have a monthly path interpolated. Once reliable monthly seasonal adjustment is possible the back series will be revised to reflect the seasonally adjusted monthly data (as ONS revisions practices allow).

Are more monthly data out there?

A number of indicators in the IoS/GDP(O) are provided by non-ONS data suppliers (e.g. other government departments). We will explore whether they can provide monthly data.

Use of monthly indicators alongside existing quarterly/annual series

In some industries it may not be possible to identify monthly indicators which are as conceptually sound as the existing quarterly/annual indicators. However, in these cases, it may be useful to benchmark monthly indicators to a conceptually superior quarterly/annual measure. We will investigate whether this is better than interpolation and forecasting of quarterly/annual data, e.g. for government services.

Improving monthly paths through a review of interpolation

Over sixty per cent of the experimental monthly IoS data is based on quarterly or annual data sources. Here quarterly data has to be interpolated to produce a monthly path. It is also necessary to forecast the latest month(s). When new quarterly data arrives it can result in revisions to interpolated monthly data. So, in addition to collecting more monthly data, the ONS is undertaking a review of its interpolation techniques.

Price developments:

Improving the range and quality of services output prices

Given the weakness of some of the available price data for service industries, the development of the data and methodology used in deflation is an important part of the overall IoS work programme.

A July 2000 *Economic Trends* article[11] spelt out the progress being made in developing Corporate Services Price Indices (CSPIs), which measure the prices of services purchased by business (including government) . The article spelt out plans for development of 23 additional indices over the next two years. These include some of the industries in which the collection of consistent data on prices is most difficult, such as engineering consultancy and computer services. A quality assurance programme for existing CSPIs is due to be completed by the end of 2002 when the CSPI contributor base will widen through an overall doubling of the sample size.

At present the IoS and GDP(O) use eight established CSPIs. The many anticipated improvements in CSPIs indicate increasing scope to make more use of them in the IoS and GDP(O). They will replace less appropriate price indices or enable us to replace volume indicators with deflated turnover indicators.

There are no existing plans to start producing monthly CSPIs and monthly paths for CSPIs are generated through forecasting and interpolation. Given the current stability in CSPIs, the ONS priority is to extend the range of CSPIs rather than to shorten their periodicity.

Mixing CSPIs and RPI components, as appropriate

Ideally, for any service, that part of output sold to businesses should be deflated by an output price index which measures the prices charged to businesses – CSPIs are appropriate for this. That part of output sold to households should, however, be deflated using a consumer price index (adjusted for the effects of some sales taxes) – components of the Retail Prices Index are appropriate for this purpose.

Many services (e.g. telecommunication services, rail passenger transport services) are sold to both businesses and households. In these circumstances both output and consumer price indices should be used, combined according to the percentage of the service output

Table 2 Proportion of monthly indicator sources in the experimental monthly IoS

	Distribution	Hotels & restaurants	Transport, storage & communication	Business services & finance*	Government & other services
Now	98%	95%	17%	36%	7%
With additional monthly turnover data	100%	100%	49%	51%	10%

Note * The proportion of monthly data is before applying the adjustment for financial services.

going to the business or household sectors. The reviews of methods will include an evaluation of whether an improved range of price indices can be used, as an increased number of CSPIs become available.

Methodology developments:

Estimating changes in inventories

Ideally changes in inventories should be taken into account in calculating gross value added. Inventories consist of:

- Work-in-progress;
- Inventories of finished goods of companies' own production;
- Inventories of goods purchased for resale; and
- Inventories of materials and supplies.

It is appropriate to make an adjustment for changes in work-in-progress and 'inventories of finished goods of companies' own production' if these are significant. (This is the approach adopted in the Index of Production, for the production industries.) There is, however, currently no adjustment for changes in inventories in the monthly IoS or the services part of quarterly GDP(O). It is planned to assess whether adjusting industries for changes in work-in-progress would bring worthwhile improvements in services short-term output indicators.

In the hotels and restaurants and distribution sectors, data on total inventories are collected. In the ONS' 1999 Annual Business Inquiry (ABI), contributors were, for the first time, asked to provide a separate value for work-in-progress. In the rest of the service industries, work-in-progress is considered to be the only significant part of inventories (e.g. accountants can not hold inventories of finished cases, but they can have work-in-progress) and is to be covered in ONS surveys. In previous years only a subset of service industries were asked about work-in-progress, and there was concern that significant inventories were being missed. The results from the 1999 Annual Business Inquiry which is collecting data on work-in-progress from all service industries, will be due in 2001.

Established quarterly data exist on total inventories for the distribution industries. In the first quarter of 2000 quarterly collection of data on total inventories also began for hotels and restaurants and those parts of other business activities in which work-in-progress is likely to be significant.

Improving public sector indicators

Here the use of employment indicators has been reduced in recent years by the introduction of a number of direct indicators of output volumes. Work continues in this area[12] and will help improve the indicator quality for the IoS as well as the wider national accounts.

Implications for the IoS of the Short-Term Output Indicators Review

The first of the National Statistics quality reviews was into the ONS's short-term output indicators[10]. The review looked into the compilation of the indicators for use in short term macro-economic analysis and assessment, i.e. mainly their contribution to the estimation of GDP. The review covered the IoP, the experimental monthly IoS and (GDP(O)).

The report showed that the indicators are of good quality and are fit for purpose (mainly in the context of the compilation of GDP). It identified the key strengths of the ONS short-term output indicators and made a number of valuable recommendations for improving quality and the way the ONS compiles the indicators. Some of these recommendations will affect the future development of the monthly IoS:

- 'The ONS should assess the feasibility of producing monthly estimates of GDP'. *This would mean reviewing the relationship between the IoS, IoP and GDP(O), and putting in place consistent operating systems and working practices.*
- 'That an harmonised economy-wide design across the short-period inquiries should be sought'. *This would mean harmonising and improving the design and methods for the monthly turnover surveys for the service industries and the production industries. It may mean rebalancing sample sizes between industries.*
- 'A joint program should be agreed ... for incorporating new (turnover and price) data into the GDP(O)/IoS'. *This should help ensure best use is made of new service data sources as they become available.*

Co-ordinating data and methodology improvements

It is planned that methods and data sources will be reviewed industry-by-industry jointly between the IoS and GDP(O). This process is expected to continue into 2002 and possibly beyond. Implementation of the outcomes will lead to revisions, handled in line with the national accounts revisions policy.

Improving timeliness:

The Index of distribution (IoD) has been published monthly since December 1999 and is available about 15 weeks after the end of the month to which it relates. The IoS will be released with the same timeliness. (The long established IoP is released about 5½ weeks after the end of the month.) There are two ways in which components of the IoS can be speeded up in the short-term :

- Current release of the IoD is via an article in *Economic Trends*. Release of the data through a new 'experimental statistics' section of the National Statistics web-site will cut about two weeks out of the release delay.

- Improvements to the operational procedures within the IoS teams will allow earlier publication. Given the experience with the IoD, it will be possible to catch up by a month for the distribution industries for May 2001. Speeding up the remaining industries within services will take longer.

These two improvements will reduce the delay in release of distribution indices from 15 to 9 weeks. Further improvements in timeliness will require survey results and other indicator information to be produced more quickly. It is currently too early to assess what will be feasible, although users have requested that ultimately the IoS has the same timeliness as the IoP.

Dropping the 'experimental' label

Publication of the experimental monthly IoS at this early stage enables us to explain progress to date, plans for the future, and to seek feedback from users. It also encourages us to ensure that robust computer systems and procedures are in place. At this stage users should take care in the interpretation or analysis of the data. The series will be re-categorised as mainstream statistics when the following criteria are met:

- series are based on a higher proportion of monthly data;
- results have been quality assured; and
- data are fit for purpose.

The next key milestone within the IoS development project will be the launch of the distribution component of the IoS as a mainstream statistic. The distribution component is already based on a high proportion of monthly data and it is expected that the other criteria will be met by May 2001. As the quality of other components improves their timeliness will be improved and as each component meets all the criteria it will become a mainstream statistic.

Relationship with GDP(O)

At present the monthly data of the experimental monthly IoS and its component series are made to be consistent with the equivalent quarterly series within GDP. As the quality of the IoS monthly components improves so they will replace detailed quarterly GDP(O) indicators. Aggregate quarterly GDP(O) and its industrial breakdown will continue to be published as now, but will be built up from largely monthly sources rather than, as now, largely quarterly ones. The monthly IoS will then no longer need to be benchmarked to GDP(O) but will rather help to set its value directly. As a national accounts component, the IoS will continue to take national accounts balancing adjustments as GDP(O) does now and to follow national accounts revisions policy[3].

The timing and nature of the change from GDP(O) leading (with the IoS benchmarked to it) and the IoS leading (with GDP(O) equal to the average of its months) is likely to vary by industry depending on the quality and extent of the monthly data available. The incorporation of monthly services data into GDP(O), which already includes monthly data for manufacturing industries, is a significant necessary step if the ONS is to publish a monthly estimate of GDP.

Section 5 - Conclusion

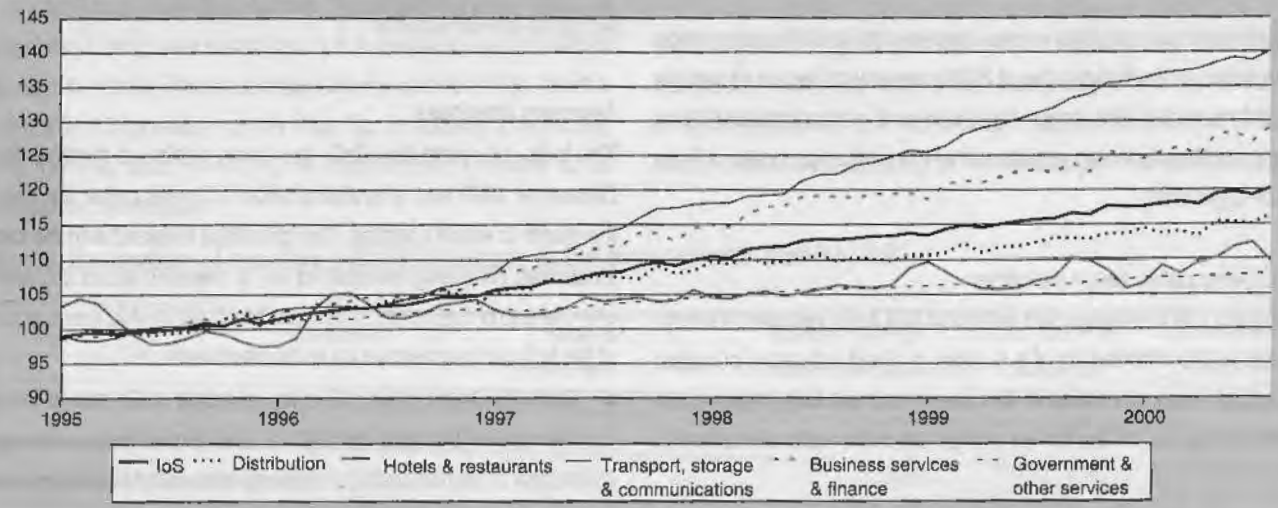
This article is held on the National Statistics web-site (http://www.statistics.gov.uk) within the Economy Theme. It can be found at http://www.statistics.gov.uk/nsbase/themes/economy/Articles/ShortTermIndicators/ReportsServices.asp

The article has explained the conceptual basis of the experimental monthly IoS, and how it relates to the IoP to GDP(O) and to the national accounts. The data in the IoS have been explained and attention has

Chart **6**

Experimental Index of services and showing industry breakdown

(Seasonally adjusted: 1995 = 100)



been drawn to the lack of monthly data: the implications for interpolation, seasonal adjustment and revisions have been spelt out.

The future IoS work programme includes increasing the range of monthly indicators, with a focus on an increased use of turnover and price information. Planned improvements to methodology have been explained, as have steps to improve timeliness. We have explained how the interaction between GDP(O) and the IoS will change, and have set out the criteria to decide when to drop the 'experimental' label from components of the IoS.

Any questions or comments on this article are welcome, as are offers to participate in the process of improving industry sources and methods.

Section 6 - Monthly IoS' results (August 2000)

IoS data from January 1995 to August 2000 for the IoS and its five sub-indices is shown graphically in chart 6 and in tables at the end of the article.

The experimental IoS will now be released on a monthly basis. The monthly results will be placed within the 'experimental statistics' area of the National Statistics web-site. The link to 'experimental statistics' can be found in the 'latest figures' area. The direct address for 'experimental statistics' is http:/www.statistics.gov.uk/press_release/Experimental.asp

A monthly update of the results for the experimental IoS will be available on the National Statistics web-site at 10 am on the day of release (the area lists the dates of forthcoming releases). The results will also be published in *Economic Trends* for the first few months.

The monthly figures for the experimental IoS will be consistent with the corresponding quarterly series for the same industries in the quarterly estimates of GDP(O). The estimates of IoS that follow are consistent with the 0.7 per cent third quarter services growth in GDP(O) published on 20 October. There has been a full update of the monthly path of the IoD as part of the work for the introduction of the IoS.

From May 2001 the experimental monthly IoS will be consistent with the latest published estimate of GDP(O).

The experimental IoS shows the monthly movements in volume terms of gross value added in the services sector. It covers all services, including government services. Index numbers are based on 1995=100 and all values are seasonally adjusted.

Index of services 1995=100

In August, the experimental monthly Index of Services (IoS) showed the service industries' gross value added rising by 1.0 per cent in the latest three months, compared with the previous three months see (charts 7 and 8) and by 3.5 per cent in the latest 3 months compared with the same three months a year ago.

Chart 7

IoS: 3 month or previous 3 month percentage changes

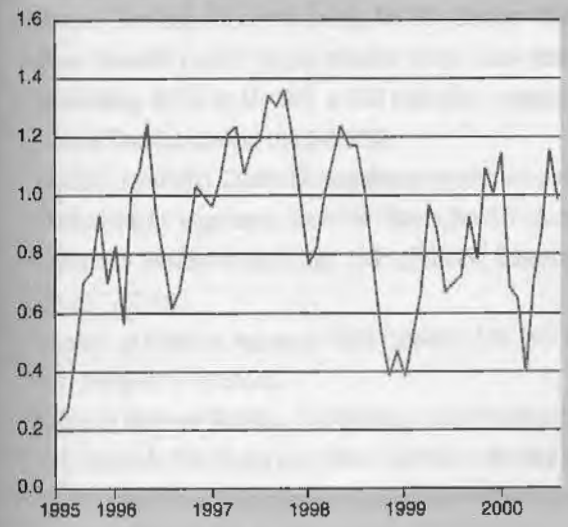
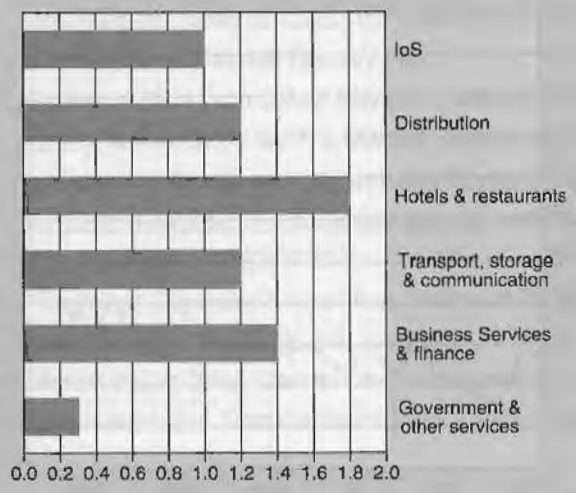


Chart 8

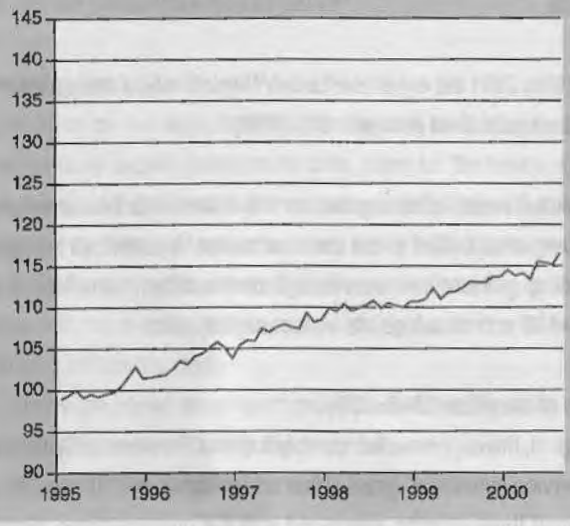
IoS showing industry breakdown: latest 3 months-on-previous 3 months, percentage changes



Distribution (SIC 92 Divisions 50-52)

In August, the experimental monthly index of gross value added for the distribution sector rose by 1.2 per cent in the latest three months compared with the previous three months, and by 2.9 per cent in the latest three months compared with the same three months a year ago.

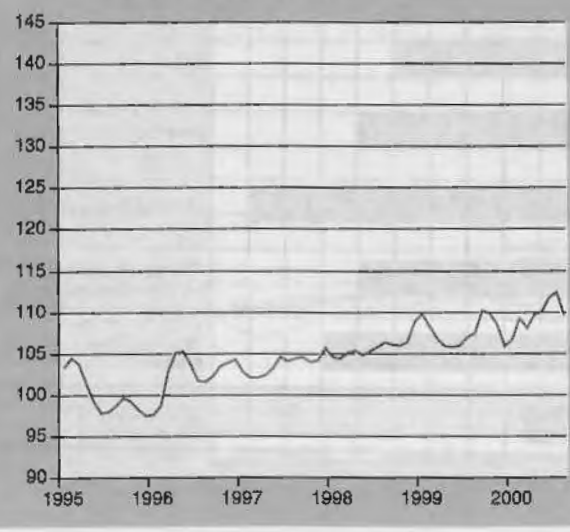
Chart **9**
Experimental index for Distribution
(seasonally adjusted: 1995 = 100)
(Weights: IoS 17.6%, GVA 11.7%)



Hotels and restaurants (SIC 92 Division 55)

In August, the experimental monthly index of gross value added for hotels and restaurants increased by 1.8 per cent in the latest three months compared with the previous three months, and by 4.1 per cent in the latest three months compared with the same three months a year ago.

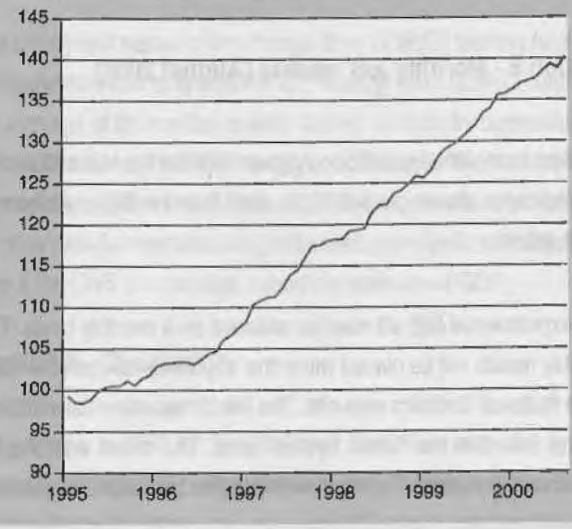
Chart **10**
Experimental index for Hotels and restaurants *(seasonally adjusted: 1995 =100)*
(Weights: IoS 4.4% , GVA 2.9%)



Transport, storage and communication (SIC 92 Divisions 60-64).

In August, the experimental monthly index of gross value added for transport, storage and communication increased by 1.7 per cent in the latest three months compared with the previous three months, and by 6.2 per cent in the latest three months compared with the same three months a year ago.

Chart **11**
Experimental index for Transport, storage and communication
(seasonally adjusted: 1995 = 100)
(Weights: IoS 12.4% , GVA 8.3%)



Business services and finance (SIC92 Divisions 65-74)

In August, the experimental monthly index of gross value added for business services and finance increased by 0.4 per cent in the latest three months compared with the previous three months, and by 5.2 per cent in the latest three months compared with the same three months a year ago.

Government and other services (SIC92 Divisions 75-95)

In August, the experimental monthly index of gross value added for government and other services increased by 0.2 per cent in the latest three months compared with the previous three months, and by 1.7 per cent in the latest three months compared with the same three months a year ago.

Chart 12

Experimental index for Business services and finance

(seasonally adjusted: 1995 = 100)
(Weights: IoS 31.7% , GVA 21.1%)

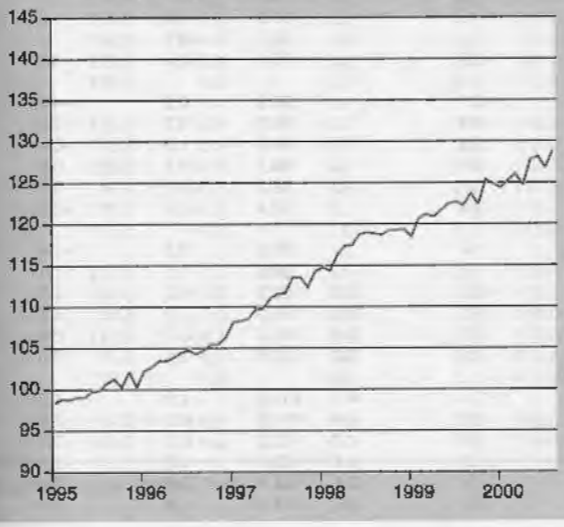
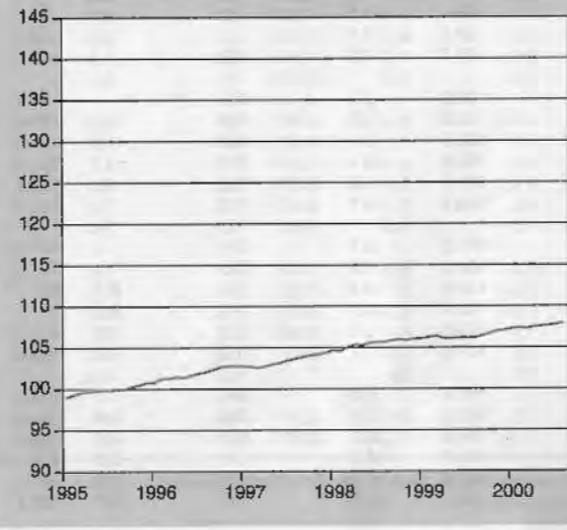


Chart 13

Experimental index for Government and other services

(seasonally adjusted: 1995 = 100)
(Weights: IoS 33.9% , GVA 22.5%)



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IOS Index of Services (EXPERIMENTAL)

Index numbers of service industries' gross value added at constant basic prices [1,2,3]

1995=100, seasonally adjusted

	Total service industries [4]				Industry groups: Distribution: wholesale and retail trade; repairs [4]				Industry groups: Hotels and restaurants [4]			
		percentage change				percentage change				percentage change		
	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago
1995 weights	*1000*				*176*				*44*			
	FVQQ	FVGC	FVGD	FVGE	FVVR	FVVK	FVVL	FVVM	FVXT	FVXA	FVXB	FVXC
1995 Jan	99.0	..	..	..	98.8†	..	..	..	103.2	..	..	..
Feb	99.4	0.4	..	..	99.3	0.5†	..	..	104.4	1.2	..	..
Mar	99.5	0.1	..	..	99.9	0.6	..	..	103.7	–0.7	..	..
Apr	99.4	–0.1	..	..	99.0	–1.0	..	..	101.3	–2.4	..	..
May	99.5	0.1	..	..	99.4	0.4	..	..	99.1	–2.1	..	..
Jun	99.7	0.2	0.2	..	99.1	–0.3	–0.2	..	97.7	–1.4	–4.3	..
Jul	99.9	0.2	0.3	..	99.4	0.4	–0.1†	..	97.9	0.2	–4.8	..
Aug	100.2	0.3	0.5	..	99.6	0.2	–0.1	..	98.6	0.7	–3.3	..
Sep	100.6	0.4	0.7	..	100.3	0.7	0.6	..	99.6	1.0	–0.7	..
Oct	100.5	–0.1	0.7	..	101.4	1.1	1.1	..	99.1	–0.5	0.8	..
Nov	101.5	1.0	0.9	..	102.7	1.3	2.1	..	98.1	–1.0	0.9	..
Dec	100.8	–0.7	0.7	..	101.3	–1.4	2.0	..	97.4	–0.7	–0.5	..
1996 Jan	101.5	0.7	0.8	..	101.4	0.1	1.4	..	97.5	0.1	–1.4	..
Feb	102.0	0.5	0.6	..	101.6	0.2	–	..	98.6	1.1	–1.1	..
Mar	102.4	0.4	1.0	2.7	101.7	0.2	–0.2	2.2	102.8	4.3	1.5	–4.0
Apr	102.7	0.3	1.1	3.0	102.4	0.6	0.1	2.5	105.0	2.1	4.6	–1.0
May	103.0	0.3	1.2	3.3	103.4	1.0	1.1	3.1	105.2	0.2	6.6	2.9
Jun	103.1	0.1	0.9	3.4	103.0	–0.4	1.3	3.8	103.6	–1.5	5.0	5.3
Jul	103.4	0.3	0.8	3.5	104.0	1.0	1.5	4.2	101.6	–1.9	1.3	5.3
Aug	103.5	0.1	0.6	3.4	104.3	0.2	1.2	4.4	101.5	–0.1	–2.0	4.3
Sep	104.0	0.5	0.7	3.4	105.0	0.7	1.5	4.7	102.2	0.7	–2.7	3.1
Oct	104.6	0.6	0.8	3.6	105.7	0.6	1.5	4.6†	103.4	1.2	–1.1	3.3
Nov	104.6	–	1.0	3.5	105.0	–0.6	1.5	3.8	103.8	0.4	0.8	4.3
Dec	104.8	0.2	1.0	3.7	103.7	–1.3	0.4	3.0	104.2	0.4	2.0	5.7
1997 Jan	105.7	0.9	1.0	3.7	105.3	1.6	–0.3	2.9	102.7	–1.5	1.2	6.0
Feb	106.0	0.3	1.1	4.0	105.9	0.6	–0.3	3.5	102.0	–0.7	–0.2	5.2
Mar	106.1	0.1	1.2	3.9	105.8	–0.1	0.9	4.1	102.0	–	–1.5	2.6
Apr	106.9	0.8	1.2	3.9	107.3	1.4	1.6	4.4	102.3	0.3	–1.4	–
May	106.9	–	1.1	3.8	106.9	–0.4	1.6	4.1	103.1	0.8	–0.5	–1.8
Jun	107.7	0.7	1.2	4.1	107.5	0.5	1.5	4.2	104.5	1.4	1.1	–1.2
Jul	108.2	0.5	1.2	4.3	107.8	0.3	1.0	3.8	104.0	–0.5	1.7	0.4
Aug	108.3	0.1	1.3	4.6	107.5	–0.3	0.8	3.7	104.3	0.3	1.7	2.0
Sep	109.2	0.8	1.3	4.8	107.3	–0.2	0.3	3.0	104.5	0.2	0.9	2.4
Oct	109.7	0.5	1.4	4.8	109.2	1.7	0.5	2.9	103.9	–0.5	0.3	1.8
Nov	109.2	–0.5	1.2	4.8	108.1	–0.9	0.6	2.8	104.1	0.2	–0.1	1.0
Dec	110.0	0.7	1.0	4.7	108.4	0.3	1.0	3.6	105.6	1.4	0.3	0.7
1998 Jan	110.5	0.5	0.8	4.6	109.8	1.3	0.8	3.9	104.5	–1.0	0.5	1.1
Feb	110.3	–0.2	0.8	4.5	109.4	–0.4	1.0	4.1	104.3	–0.2	0.6	1.8
Mar	111.4	1.0	1.0	4.5	110.3	0.8	1.2	3.9	105.0	0.6	0.1	2.3
Apr	111.7	0.3	1.1	4.5	109.5	–0.7	0.9	3.2	105.3	0.3	0.1	2.7
May	111.8	0.1	1.2	4.7	109.8	0.3	0.6	3.0	104.7	–0.6	0.2	2.4
Jun	112.6	0.7	1.2	4.5	110.2	0.3	–	2.4	105.2	0.5	0.4	1.7
Jul	112.9	0.3	1.2	4.5	110.7	0.5	0.5	2.7	105.7	0.5	0.3	1.3
Aug	112.8	–0.1	1.0	4.3	109.8	–0.8	0.3	2.5	106.3	0.6	0.7	1.4
Sep	113.0	0.2	0.8	4.0	110.4	0.5	0.4	2.6	106.0	–0.3	0.9	1.7
Oct	113.3	0.3	0.5	3.6	110.1	–0.2	–0.1	2.0	105.9	–0.1	0.9	1.8
Nov	113.3	–	0.4	3.5	109.9	–0.3	–0.1	1.8	106.3	0.3	0.3	1.8
Dec	113.7	0.4	0.5	3.5	110.6	0.7	–0.1	1.5	108.8	2.4	0.9	2.3

1 Indices are valued at constant basic prices, which exclude taxes and subsidies on products.

2 Estimates cannot be regarded as accurate to the last digit shown.

3 Any apparent inconsistencies between the index numbers and the percentage changes shown in these tables are due to rounding.

4 The equivalent quarterly index series are released electronically as part of the GDP(O) estimates. For further information about obtaining these series please telephone 020 7533 5675, fax 020 7533 5688 or email on-line.services.branch@ons.gov.uk

Sources: For further information on these data please;
telephone 01633 812624;
fax 01633 819043;
or email los.enquiries@ons.gov.uk

IOS Index of Services (EXPERIMENTAL)

Index numbers of service industries' gross value added at constant basic prices [1,2,3]

continued

1995=100, seasonally adjusted

	Industry groups											
	Total service industries [4]				**Distribution: wholesale and retail trade; repairs [4]**				**Hotels and restaurants [4]**			
		percentage change				*percentage change*				*percentage change*		
	Index	*month on month*	*latest 3 months on previous 3 months*	*latest 3 months on same 3 months a year ago*	Index	*month on month*	*latest 3 months on previous 3 months*	*latest 3 months on same 3 months a year ago*	Index	*month on month*	*latest 3 months on previous 3 months*	*latest 3 months on same 3 months a year ago*
1995 weights	*1000*				*176*				*44*			
	FVQQ	FVGC	FVGD	FVGE	FVVR	FVVK	FVVL	FVVM	FVXT	FVXA	FVXB	FVXC
1999 Jan	113.4	–0.3	0.4	3.2	110.6	*–0.1*	*0.2*	*1.4*	109.7	0.9	2.0	3.4
Feb	114.3	0.8	0.5	3.2	110.9	*0.3*	*0.5*	*1.3*	108.2	–1.4	2.7	3.9
Mar	114.9	0.5	0.7	3.1	112.2	*1.2*	*0.9*	*1.2*	106.7	–1.4	1.1	3.4
Apr	114.5	–0.3	1.0	3.1	110.9	*–1.2*	*0.9*	*1.4*	105.8	–0.8	–1.3	1.9
May	115.0	0.4	0.9	2.8	111.7	*0.7*	*0.8*	*1.6*	105.7	–0.1	–2.6	1.0
Jun	115.4	0.3	0.7	2.6	111.8	*0.1*	*0.2*	*1.5*	105.9	0.2	–2.2	0.7
Jul	115.7	0.3	0.7	2.6	112.3	*0.4*	*0.5*	*1.5*	106.9	0.9	–0.7	0.9
Aug	115.8	0.1	0.7	2.5	113.0	*0.6*	*0.7*	*1.9*	107.4	0.5	0.6	0.9
Sep	116.6	0.7	0.9	2.8	112.9	*–0.1*	*1.1*	*2.2*	110.1	2.5	2.2	2.0
Oct	116.4	–0.2	0.8	2.9	112.9	*0.1*	*0.9*	*2.6*	109.8	–0.3	2.8	2.9
Nov	117.7	1.1	1.1	3.3	113.6	*0.6*	*0.7*	*2.7*	108.4	–1.3	2.6	3.2
Dec	117.5	–0.2	1.0	3.3	113.6	*–*	*0.6*	*2.9*	105.8	–2.4	–0.1	1.0
2000 Jan	117.6	0.1	1.1	3.6	114.4	*0.7*	*0.8*	*3.2*	106.6	0.8	–2.0	–1.2
Feb	118.0	0.3	0.7	3.4	113.7	*–0.6*	*0.7*	*2.9*	109.2	2.4	–2.1	–1.5
Mar	118.3	0.3	0.7	3.3	114.0	*0.2*	*0.6*	*2.5*	108.0	–1.2	–0.1	–0.2
Apr	117.9	–0.3	0.4	3.1	113.3	*–0.6*	*–0.2*	*2.1*	109.6	1.5	1.8	1.9
May	119.4	1.3	0.7	3.3	115.4	*1.8*	*0.3*	*2.3*	110.0	0.4	1.8	3.0
Jun	119.7	0.3	0.9	3.5	115.3	*–0.1*	*0.5*	*2.8*	111.7	1.5	2.3	4.4
Jul	119.2	–0.4	1.2	3.5	115.0	*–0.2*	*1.4*	*2.9*	112.3	0.6	2.2	4.9
Aug	120.2	0.8	1.0	3.5	116.4	*1.2*	*1.2*	*2.9*	109.5	–2.5	1.8	4.1

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IOS Index of Services (EXPERIMENTAL)

Index numbers of service industries' gross value added at constant basic prices [1,2,3]

continued

1995=100, seasonally adjusted

	Industry groups											
	Transport, storage and communication [4]				Business services and finance [4]				Government and other services [4]			
		percentage change				percentage change				percentage change		
	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago
1995 weights	*124*				*317*				*339*			
	FVYD	FVYE	FVYG	FVYF	FVPA	FVGF	FVGG	FVGH	FVPI	FVGI	FVGJ	FVGK
1995 Jan	99.2	..	..	..	98.5	..	..	..	99.1	..	..	..
Feb	98.4	–0.8	..	..	99.0	0.5	..	..	99.4	0.3	..	..
Mar	98.3	–0.1	..	..	98.9	–0.1	..	..	99.7	0.3	..	..
Apr	98.7	0.4	..	..	99.2	0.3	..	..	99.8	0.1	..	..
May	99.7	0.9	..	..	99.2	–	..	..	99.9	0.1	..	..
Jun	100.2	0.6	0.9	..	99.9	0.7	0.6	..	100.0	0.1	0.5	..
Jul	100.4	0.2	1.7	..	100.0	0.1	0.7	..	100.0	–	0.3	..
Aug	100.4	–	1.5	..	100.9	0.9	1.2	..	100.1	0.1	0.2	..
Sep	101.0	0.6	1.1	..	101.4	0.5	1.3	..	100.1	–	0.2	..
Oct	100.5	–0.5	0.5	..	100.4	–1.0	1.2	..	100.4	0.3	0.2	..
Nov	101.3	0.8	0.6	..	102.3	1.9	1.1	..	100.6	0.2	0.3	..
Dec	101.7	0.4	0.6	..	100.4	–1.9	0.3	..	100.9	0.3	0.6	..
1996 Jan	102.8	1.1	1.3	..	102.4	2.0	0.8	..	100.9	–	0.6	..
Feb	103.1	0.3	1.6	..	102.8	0.4	0.5	..	101.4	0.5	0.7	..
Mar	103.2	0.1	1.8	4.5	103.6	0.8	1.9	4.2	101.4	–	0.6	1.8
Apr	103.3	0.1	1.2	4.8	103.6	–	1.6	4.3	101.6	0.2	0.7	1.8
May	103.3	–	0.7	4.4	104.0	0.4	1.8	4.7	101.5	–0.1	0.4	1.7
Jun	103.0	–0.3	0.1	3.6	104.6	0.6	1.1	4.7	101.8	0.3	0.4	1.7
Jul	103.6	0.6	0.1	3.2	104.9	0.3	1.1	4.8	102.0	0.2	0.3	1.8
Aug	104.3	0.7	0.4	3.2	104.4	–0.5	0.9	4.4	102.2	0.2	0.5	2.0
Sep	104.6	0.3	1.0	3.5	104.9	0.5	0.6	3.9	102.5	0.3	0.6	2.2
Oct	106.0	1.4	1.6	4.3	105.6	0.7	0.4	4.0	102.8	0.3	0.7	2.3
Nov	106.5	0.4	2.0	4.7	105.6	–	0.7	3.9	102.9	0.1	0.7	2.4
Dec	107.4	0.9	2.4	5.4	106.5	0.9	1.1	4.8	102.9	–	0.6	2.2
1997 Jan	108.1†	0.6	2.3	5.3	108.3	1.7	1.7	5.0	102.9	–	0.4	2.1
Feb	110.2	1.9	2.7	5.9	108.4	0.1	2.2	5.8	102.8	–0.1	0.1	1.8
Mar	110.7	0.4	2.8	6.4	108.7	0.3	2.4	5.4	102.7	–0.1	–0.1	1.5
Apr	111.1	0.4	3.1	7.2	109.8	1.0	2.0	5.5	102.9	0.2	–0.1	1.3
May	111.2	0.1	2.2	7.5	109.9	0.1	1.6	5.5	103.1	0.2	–	1.4
Jun	112.3	1.0	1.7	8.1	111.2	1.2	1.7	6.0	103.3	0.2	0.3	1.4
Jul	113.8	1.3	1.6	8.9	111.7	0.4	1.8	6.2	103.6	0.3	0.5	1.5
Aug	114.4	0.5	2.2	9.5	111.8	0.1	1.9	6.6	103.8	0.2	0.6	1.5
Sep	115.9	1.3	2.8	10.1	113.7	1.7	1.9	7.3	104.0	0.2	0.7	1.5
Oct	117.3	1.2	3.0	10.4	113.7	–	1.9	7.7	104.2	0.2	0.6	1.5
Nov	117.4	0.1	3.0	10.6	112.5	–1.1	1.6	7.5	104.3	0.1	0.6	1.4
Dec	117.9	0.4	2.5	10.2	114.4	1.7	1.0	7.2	104.5	0.2	0.5	1.4
1998 Jan	118.1	0.1	1.7	9.8	114.9	0.4	0.8	6.7	104.8	0.3	0.5	1.6
Feb	118.1	–	1.0	8.7	114.5	–0.3	1.1	6.4	104.7	–0.1	0.5	1.7
Mar	119.1	0.8	0.8	8.0	116.4	1.7	1.5	6.3	105.2	0.5	0.5	2.0
Apr	119.2	0.1	0.9	7.4	117.5	0.9	1.9	6.6	105.5	0.3	0.6	2.3
May	119.4	0.2	1.0	7.4	117.6	0.1	2.2	7.0	105.4	–0.1	0.7	2.4
Jun	121.3	1.5	1.3	7.5	118.9	1.1	2.4	7.0	105.7	0.3	0.6	2.4
Jul	122.2	0.8	1.8	7.5	119.1	0.2	2.1	6.9	105.8	0.1	0.5	2.2
Aug	122.3	0.1	2.2	7.4	119.0	–0.1	1.6	6.7	105.8	–	0.4	2.1
Sep	123.6	1.0	2.3	7.0	118.8	–0.2	0.8	5.8	106.0	0.2	0.3	2.0
Oct	124.0	0.3	1.9	6.4	119.4	0.5	0.4	5.3	106.1	0.1	0.3	1.9
Nov	124.8	0.7	1.8	6.2	119.4	–	0.2	5.2	106.0	–0.1	0.3	1.8
Dec	125.7	0.7	1.7	6.2	119.5	0.1	0.4	5.2	106.2	0.2	0.2	1.7

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IOS Index of Services (EXPERIMENTAL)

Index numbers of service industries' gross value added at constant basic prices [1,2,3]

continued

1995=100, seasonally adjusted

	Industry groups											
	Transport, storage and communication [4]				Business services and finance [4]				Government and other services [4]			
		percentage change				percentage change				percentage change		
	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago	Index	month on month	latest 3 months on previous 3 months	latest 3 months on same 3 months a year ago
1995 weights	*124*				*317*				*339*			
	FVYD	FVYE	FVYG	FVYF	FVPA	FVGF	FVGG	FVGH	FVPI	FVGI	FVGJ	FVGK
1999 Jan	125.5	–0.1	1.7	6.4	118.6	–0.8	0.1	4.6	106.2	–	0.2	1.5
Feb	126.4	0.7	1.4	6.6	120.8	1.9	0.4	4.4	106.4	0.2	0.2	1.5
Mar	128.1	1.3	1.5	7.0	121.3	0.4	0.7	4.3	106.5	0.1	0.3	1.4
Apr	129.0	0.7	2.0	7.6	121.0	–0.2	1.6	4.2	106.2	–0.3	0.2	1.2
May	129.5	0.4	2.4	8.1	121.8	0.7	1.4	3.6	106.2	–	–	0.9
Jun	130.2	0.6	2.3	8.0	122.6	0.7	1.3	3.2	106.3	0.1	–0.1	0.7
Jul	131.1	0.6	1.9	7.7	122.8	0.2	1.1	3.3	106.3	–	–0.1	0.6
Aug	131.9	0.7	1.7	7.5	122.4	–0.3	1.0	3.0	106.3	–	–	0.5
Sep	133.3	1.0	1.9	7.7	123.8	1.1	1.0	3.4	106.5	0.2	0.1	0.5
Oct	133.9	0.4	2.1	7.9	122.5	–1.1	0.4	3.2	106.8	0.3	0.3	0.5
Nov	135.5	1.2	2.4	8.1	125.5	2.4	1.1	4.0	107.1	0.3	0.5	0.7
Dec	135.7	0.2	2.2	8.2	125.0	–0.4	1.1	4.1	107.2	0.1	0.6	0.9
2000 Jan	136.2	0.3	2.1	8.3	124.5	–0.4	1.7	4.9	107.4	0.2	0.7	1.0
Feb	136.9	0.6	1.5	8.2	125.4	0.7	0.8	4.5	107.5	0.1	0.5	1.0
Mar	137.2	0.2	1.3	7.9	126.2	0.6	0.8	4.3	107.4	–0.1	0.4	1.0
Apr	137.5	0.2	1.1	7.3	124.8	–1.1	0.4	3.7	107.6	0.2	0.2	1.1
May	138.4	0.7	1.1	6.9	127.9	2.5	1.1	4.1	107.7	0.1	0.2	1.2
Jun	139.2	0.6	1.2	6.8	128.3	0.3	1.3	4.3	107.8	0.1	0.2	1.4
Jul	138.8	–0.3	1.2	6.6	126.9	–1.1	1.8	4.3	107.9	0.1	0.3	1.4
Aug	140.1	1.0	1.2	6.3	129.0	1.7	1.4	4.5	108.1	0.2	0.3	1.5

For footnotes see page 1 of this Table

Sources: Sources: For further information on these data please;
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or email ios.enquiries@ons.gov.uk

Geographical breakdown of income in the balance of payments: further improvements to the methodology for portfolio investment income

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Summary

A geographical breakdown of the United Kingdom balance of payments current account has been published since 1997 - the most recent being in the 2000 edition of the *Pink Book*. Many balance of payments data sources are now able to distinguish transactions with individual countries, but where country data are not reported, estimates are made by using related information. One area where relatively little hard geographical data has historically been available is portfolio investment income credits and debits.

The commentary in this year's *Pink Book* explained that the ONS was continuing to review the methodology used to estimate the geographical breakdown of portfolio investment income flows. This review concentrated on the new and emerging data sources for portfolio investment, so that best use is made of all available data. Earlier stages in this work were described in *Economic Trends* last year (November 1999). This article reports on further progress on this work, and includes updated estimates of the breakdown of the income flows. There are no changes to the total income estimates reported in the September Balance of Payments First Release.

Summary Results

Table 1 shows the effects of the new methodology for portfolio investment on the published estimates of total balance of payments income for 1998, between the UK and its most significant balance of payments partners. Although the new methodology will be carried forward to 1999, 1998 has been chosen to illustrate the impact of the changes. Annual inquiry results for 1999 will impact on the geographical breakdown, and will be included in the broad quarterly disaggregates published in the quarterly Balance of Payments First Release on 21 December. The next full 42-country breakdown of investment income and balance of payments current account will be published in the 2001 edition of the *Pink Book* (September 2001).

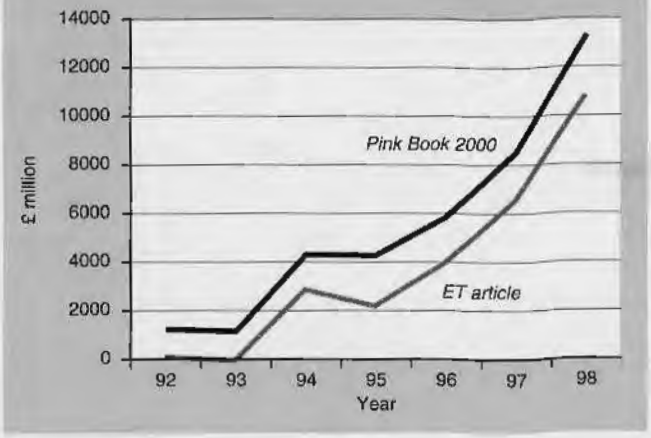
Table 1 Changes in estimates of total income with EU, USA and Japan in 1998

£ billion

	Credits		Debits		Balance	
	PB2000	Latest	PB2000	Latest	PB2000	Latest
EU	43.2	43.2	29.9	32.3	13.3	10.9
USA	24.2	24.2	30.2	23.7	-6.0	0.5
Japan	7.3	7.3	4.3	7.3	3.0	0.0
RoW	34.5	34.5	30.6	31.7	3.9	2.8
Total	109.2	109.2	95.0	95.0	14.2	14.2

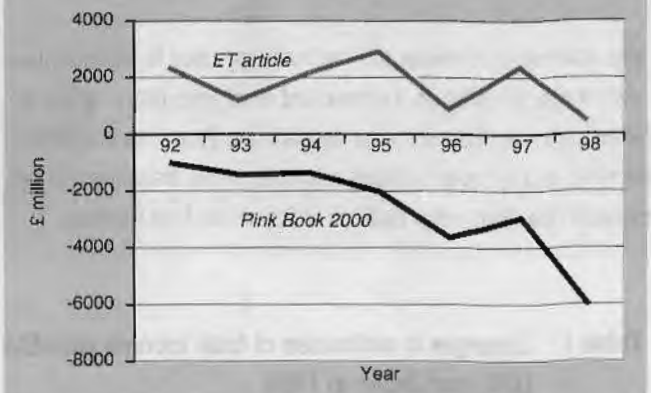
The new methodology has been taken back to 1992 for debits. For credits, a new data source for money market instruments income has been introduced from 1999 only. The overall impact on the income balances for the European Union, USA and Japan can be seen in the charts below.

Chart 1
Income balance - EU



The effect of the changes has been to reduce the overall income surplus with EU countries for all years by between £1 billion and £2.5 billion. For example, the income surplus of £13.3 billion in 1998, as published in *Pink Book* 2000, has been revised down to a surplus of £10.9 billion.

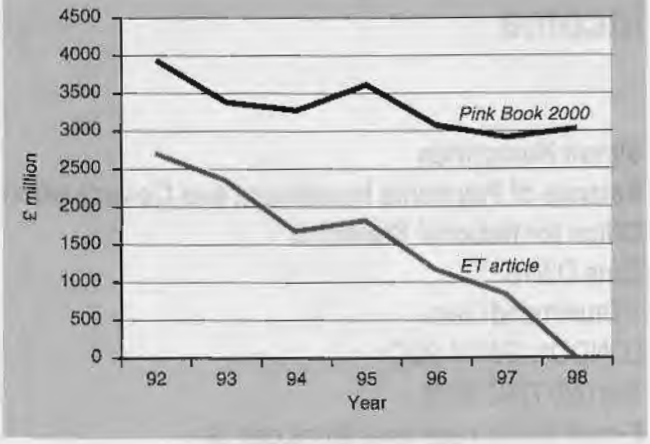
Chart 2
Income balance – USA



The resulting impact on the income balance with the United States has been more pronounced, with the balance being revised up in all years, by between £4 billion and £6.5 billion. This is mainly due to lower estimates of US holdings of UK issued debt securities, and subsequently lower income accruing to the USA.

The balance with Japan has been revised down in all years, primarily as a result of increased holdings of UK issued debt securities than earlier estimates. This has resulted in higher income payments to Japan, and therefore a smaller surplus than previously published.

Chart 3
Income balance – Japan



Background to review

Estimating portfolio investment and associated income flows across international boundaries is one of the most difficult parts of balance of payments statistics. This problem is compounded when we allocate those income flows to the individual countries that own or issue the security as the transactions are often made through financial intermediaries in a third country. The importance of London as a financial centre increases the complexity in identifying securities issued or owned by UK residents.

Data Sources

We have three main sources of geographical data for portfolio investment income.

Share Register Survey (SRS)

The ONS Share Register Survey provides information on the beneficial holders (as distinct from nominee accounts) of shares in UK listed companies. Since 1995, the survey has been extended so as to identify the geographical area of residence of non-resident holders of UK issued equities. Information from this survey is used to allocate portfolio holdings of UK equities, and associated dividends, by country. The last survey for which a geographical breakdown was available was in respect of 1997, although work is underway to construct a geographical breakdown from the 1999 survey.

Co-ordinated Portfolio Investment Survey (CPIS)

The world-wide difficulties of providing a geographical breakdown of portfolio investment, led the IMF to launch an international survey whereby countries were asked to provide co-ordinated information

on the residency of issue of securities held by their own residents. Thus for a specific reference date, end December 1997, we have a matrix with information from each respondent country, on the country of issue of securities held by that country, and hence can estimate for each country which other countries were holding securities issued by them.

The UK participated in the first Co-ordinated Portfolio Investment Survey in 1998, with inquiries to both UK banks and non-banks on the geographical breakdown of their portfolio investment holdings as at end 1997, broken down into equities and long-term debt securities. The results from these inquiries are used as a proxy for the geographical breakdown of investment income accruing from those holdings. In addition, this review has made use of CPIS results from other countries as a source of the breakdown of UK long-term debt security liabilities.

An analysis of the experience and results from the UK's participation in the first CPIS survey was published in the November 1999 edition of *Economic Trends*.

The Bank of England

The Bank of England collects balance of payments information relating to UK banks' own-account business and supplies estimates of income from UK banks' portfolio investments abroad. Surveys of UK banks' balance sheets provide information on the geographic breakdown of their investments abroad. This breakdown is applied to the estimates of global earnings, also obtained from surveys of UK banks, to derive a geographical breakdown of UK banks' income from abroad.

Methodology

Portfolio credits

These are the earnings, or dividends paid to UK residents from their investment in equities and debt securities issued by foreign institutions. Estimates are based on surveys of UK institutions (banks, securities dealers, unit and investment trusts, insurance companies, pension funds and some industrial companies). The Bank of England provides estimates for the geographic breakdown of banks' earnings, but for other institutions, information is more limited. To participate in the CPIS, the UK collected a geographic breakdown of the levels of non-banks portfolio investment holdings. This country breakdown is used to estimate non-banks portfolio investment income credits. Effectively, therefore, a single rate of return is applied. Earlier and later data are estimated by applying the movements in the country allocation of banks' assets to non-banks.

The only change to the methodology underlying portfolio investment credits that has been implemented as part of this review, has been the use of the Bank of England data for the geographic breakdown of money market instruments income credits. This data source has been introduced from 1999. These data were previously estimated using the geographical breakdown derived from the UK's CPIS results as a proxy.

Portfolio debits

For debits, it is more difficult for the issuer to keep track of the beneficial owner of the securities. One of the advantages of the CPIS was that the results of the surveys conducted by other countries could be analysed centrally to provide information on which countries held UK issued securities. That is, we could use information from other countries on their holdings of UK issued securities as a source for the geographical breakdown of portfolio investment in the UK.

The IMF published the data from the 29 participating countries and aggregate results in *Results of the 1997 CPIS*. A major part of this review has been the analysis of these results, and their subsequent inclusion in the methodology for deriving earnings from foreign holdings of UK issued securities.

Previously, the geographical distribution of holders of UK issued shares, based on the ONS Share Register Survey results, was used as a proxy for all portfolio investment debits. We assumed that the distribution of holders of equities was a reasonable proxy for the geographical distribution of both long-term bonds and notes and short-term money market instruments. This assumption has been modified now that we have an alternative data source available.

Equities

Both the Share Register Survey and the CPIS results for equity securities issued in the UK, provide a geographical breakdown of the owners of UK issued shares as at end 1997. Part of the review into the geographical breakdown of portfolio investment was to determine which of the two sources provided the most appropriate proxy for foreign earnings on UK issued shares.

A major limitation with the CPIS data was that not all major investing countries participated (Germany, Switzerland and Luxembourg perhaps being the most prominent non-participants). It is therefore not possible to fully compare the geographical breakdown of both the SRS and the CPIS. However, by making some assumptions about the size of the German, Swiss and Luxembourg holdings of UK issued shares, it was clear that the results from the two sources

were broadly compatible. That is, the broad pattern of share ownership was similar in both the CPIS and the SRS, although the proportions allocated to individual countries did vary between the two surveys. This may be because in some cases, and for the CPIS in particular, it may have been difficult to follow through nominee holdings in order to determine the country of residence of the true beneficial holder of the securities.

The review into this aspect of the geographical breakdown of portfolio investment concluded that the Share Register Survey continues to be used as the proxy for portfolio investment share dividends paid abroad. This is primarily because the SRS provides a full breakdown for UK issued equity, while the CPIS results did not include all key investing countries.

Long-term debt securities

Previously, there has been no specific data source for the geographical breakdown of UK issued long-term debt securities (or bonds and notes). The 1999 *Economic Trends* article explained that in the absence of a geographic data source for long-term debt securities, the Share Register Survey results were used as a proxy. This methodology has been reviewed and assessed now that the CPIS results are available.

The results from the CPIS showed that the reported distribution of holdings of UK issued long-term debt was very different from the SRS geographical split that had previously been used as a proxy for holdings of UK issued long-term debt (see Table 2 below).

Table 2 shows that the USA holds a high proportion of foreign held UK issued equity (as sourced from the SRS), but a much smaller proportion of foreign held UK issued long-term debt securities. That is, the SRS results were not a good proxy for a geographical breakdown of long-term debt securities, and that by using the SRS results, we had been overestimating UK liabilities with the USA.

Table 2 Percentages of SRS and CPIS results as a source for allocating long term debt holdings by country (1997)

	EU	USA	Japan	Other	Total
SRS	22	55	3	20	100
CPIS	33	18	23	26	100

The CPIS results were discussed in some detail with the balance of payments compilers from a number of the key investing countries in the UK – especially the USA and Japan. It has been decided that the results from the CPIS more accurately reflect the geographical holdings of UK issued long-term debt securities than the SRS results, as the CPIS specifically collected this information from compiling countries.

To make use of the CPIS information, it was necessary to construct estimates of the holdings of UK issued long-term debt securities by those countries that did not participate – in particular Germany, Switzerland and Luxembourg. Data was constructed using information on the total long-term debt security holdings of Germany and Switzerland from the IMF, and Bank of International Settlements (BIS) data on the geographical split of their bank's holdings of long-term debt securities.

For those countries where no geographical data was available from the CPIS or BIS, estimates were based on the geographical split of portfolio holdings of 'like' countries. That is, those countries where no geographical data were available, were allocated a 'pair' (i.e. a country thought likely to be similar in investment behaviour, that had supplied a geographical breakdown to CPIS or BIS). Finally, the overall results were constrained to the world total for UK long-term debt securities liabilities, as published in the *Pink Book*.

Short-term money market instruments (MMIs):

These are defined as debt securities with an original maturity of less than one year. The IMF Balance of Payments Manual (BPM5) requires that these be classified into portfolio investment (previously they were part of other investment).

MMIs may be viewed as close substitutes for bank deposits. Information is available from the Bank of England on the geographical distribution of holders of time deposits with UK banks. This distribution is taken as a proxy for the geographical pattern of non-resident holdings of MMIs. MMIs are now allocated among countries in proportion to the income payable on other investment. (This assumes again, that the distribution of income flows would be the same as that of the underlying holdings.)

For 1998 this gives the following changes in the percentage allocations for UK income from investments in money market instruments:

Table 3 Percentage allocation for UK income for investments in MMIs for 1998

	Previous allocation	Latest allocation
EU	21.4	37.2
USA	52.6	11.5
Japan	3.4	7.3
RoW	22.6	44.0
Total	100	100

Looking ahead

CPIS

The IMF are planning a second CPIS at the end of 2001. It is hoped that participation will be more extensive, and that the results will be more representative of the overall geographical breakdown of global portfolio assets. The UK plans to prepare for this exercise with a limited pilot exercise at the end of 2000. The results of these exercises will provide more up to date information. The new information will be analysed and used in future portfolio investment methodological updates.

SRS

The ONS now conducts the SRS on an annual basis, and is currently analysing the geographical breakdown of foreign holders of UK issued shares for 1999. When complete, these data will be used to provide a more up to date analysis of the holders of UK equity.

Other methodological improvements

The ONS are undertaking a number of methodological reviews into the global income estimates. These include the reclassification of interest rate swap settlements from the income to the financial account and a review of the adjustments made to exclude the offshores from the UK balance of payments in the 1998 edition of the *Pink Book*. Both changes are likely to impact on the geographical breakdown of income.

Conclusions

The information from the CPIS, the use of banking data for MMI credits and new methodology for constructing a geographical split of MMI debits has produced an improved geographical breakdown of portfolio investment income. The changes to the geographical breakdown are significant, and although the data are still largely based on a geographical breakdown of balance sheets (or level of holdings), rather than actual income flows, the estimates are much more firmly based than before. As additional information becomes available, the estimates for more recent periods in particular will be updated.

UK Regional Gross Domestic Product (GDP): Methodological Guide

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Introduction

This article provides an overview of the methodologies employed to compile the regional estimates of UK GDP published by ONS in the August 2000 edition of *Economic Trends*. The coverage of these estimates is also discussed and a summary is shown in table 1. Some understanding of national accounts methods is assumed throughout this article and for more information on this area, readers are referred to the publications listed in the references section.

This article does not detail the methodology employed to calculate the sub-regional estimates of GDP, last published by ONS in *Regional Trends 35*. It is intended that a separate article covering these estimates will be published in 2001.

Published geographical and industrial detail

The ONS currently publishes estimates of GDP for the nine Government Office Regions (GORs) of England and for Wales, Scotland and Northern Ireland. Together, these regions form NUTS level 1 for the UK, that is level 1 of the Nomenclature of Units for Territorial Statistics, a Europe-wide classification system of areas for statistical purposes, as shown in Table A.

A further "geography" termed Extra-regio is also shown in the accounts. Extra-regio describes that part of UK economic activity that cannot be allocated to a specific region. Extra-regio includes "continental shelf" activity relating to offshore oil and gas extraction, UK embassies overseas and armed forces stationed abroad. In 1998, the amount of UK GDP allocated to Extra-regio was £9.8bn, 1.3% of total UK GDP.

Regional GDP is calculated using the income approach and this concept is explained later in this article. Regional estimates of the largest of the components of income, Compensation of Employees (CoE), are published separately. For each region, both total GDP and GDP per head figures are published. The per head figures are calculated by dividing total regional GDP by the resident population.

The regional estimates of GDP are calculated at the level of industry detail shown in table 2, based on the Standard Industrial Classification 1992 (SIC92).

Data sources and concepts

Regional GDP is calculated based on a variety of data sources. For each component of income-based GDP, the most appropriate data sources available are used to calculate the regional estimates. The sources used conform as far as possible to those suggested in *Regional Accounts Methods*, a guideline document published by Eurostat, the statistical office of the EC, to coincide with the introduction of the European System of Accounts 1995 (ESA95).

Table 1: Regional GDP, 1998[1]

Region	Total £bn	Share of UK (%)	Per Head £	Per Head Index UK=100
United Kingdom[2]	737.8	*100.0*	12,500	100.0
North East	25.5	*3.5*	9,800	78.8
North West	75.8	*10.3*	11,000	88.2
Yorkshire & the Humber	55.2	*7.5*	10,900	87.8
East Midlands	49.3	*6.7*	11,800	94.8
West Midlands	60.9	*8.3*	11,400	91.7
East	76.3	*10.3*	14,200	114.2
London	116.4	*15.8*	16,200	130.4
South East	116.2	*15.7*	14,500	116.7
South West	56.1	*7.6*	11,400	91.9
England	631.7	*85.6*	12,800	102.5
Wales	29.0	*3.9*	9,900	79.4
Scotland	61.1	*8.3*	11,900	95.6
Northern Ireland	16.0	*2.2*	9,400	75.8

1. Provisional GDP at basic prices
2. Excluding Extra-regio and statistical discrepancy

Table 2: Industrial detail for regional GDP

SIC92 Code	Industry Description
A01[1]	Agriculture
A02[1]	Forestry
B[1]	Fishing
CA	Oil & Gas Extraction
CB	Other Mining & Quarrying
DA	Manufacture of Foods, Beverages & Tobacco
DB	Manufacture of Textiles & Textile Products
DC	Manufacture of Leather & Leather Products
DD	Manufacture of Wood & Wood Products
DE	Manufacture of Paper & Paper Products
DF	Manufacture of Coke Products, Refined Petroleum Products & Nuclear Fuel
DG	Manufacture of Chemicals & Chemical Products
DH	Manufacture of Rubber & Plastic Products
DI	Manufacture of Other & Plastic Mineral Products
DJ	Manufacture of Basic Metals & Fabricated Metal Products
DK	Manufacture of Machinery & Equipment Not Elsewhere Classified
DL	Manufacture of Electrical & Optical Equipment
DM	Manufacture of Transport Equipment
DN	Manufacturing Not Elsewhere Classified
E	Electricity, Gas & Water Supply
F	Construction
G	Wholesale & Retail Trade, Repair of Motor Vehicles & Household Goods
H	Hotels & Restaurants
I	Transport, Storage & Communication
J	Financial Intermediation
K	Real Estate, Renting and Business Activities
L	Public Administration & Defence
M	Education
N	Health & Social Work
O[1]	Other Activities
P[1]	Persons Employed by Private Households

1. Before publication, industries A01, A02 & B are aggregated and these industries are published combined. Indsutries O & P are also published combined. This is due to quality and confidentiality issues in publishing estimates for industries A02, B and P, all of which are relatively small.

The latest regional estimates of GDP are consistent with estimates published for the UK in *United Kingdom National Accounts: The Blue Book* 1999 and are therefore consistent with ESA95. These estimates were last published in the August 2000 edition of *Economic Trends*. Revised figures will be published in late February 2001 consistent with *Blue Book 2000* and will then be published annually each spring.

ESA95 is based on the *System of National Accounts 1993* (SNA93) which was sponsored by all major international organisations and is being adopted world wide. The European System, which is being adopted by EU member states, is consistent with SNA93 but is more specific and prescriptive in certain parts.

Regional GDP for the UK is calculated at current basic prices using the income approach. This approach:

"Adds up all income earned by resident individuals or corporations in the production of goods and services and is therefore the sum of uses in the generation of income account for the total economy (or alternatively the sum of primary incomes distributed by resident producer units)" National Accounts Concepts, Sources and Methods p206.

The income approach is used as a basis for calculating regional GDP in preference over the output and expenditure methods because regional income data in the UK is more readily available than regional data for the other approaches.

Using this approach, GDP is constructed from the following components of income; Compensation of Employees, Mixed Incomes, Gross Trading Profits and Surpluses, Non-market Capital Consumption, Rental Income, Holding Gains, Financial Intermediation Services Indirectly Measured & Taxes *less* subsidies

on Production. The inclusion of taxes on production converts the estimates from a factor cost basis to basic prices. Each of these components are calculated separately by region and by industry in line with the estimates for the UK published in *The Blue Book*.

The detailed calculation of these components is discussed later in this article but in principle there are two ways of deriving the regional estimates, both of which are used within the accounts:

- *Bottom-up*, by calculating national totals from the regional estimates. This is not the way that the national accounts are calculated in the UK, but in practice, where the same data source is used to calculate both the national and regional estimates, the process is considered to be bottom-up.

- *Top-down*, by calculating regional estimates by sharing out national totals proportionately to a relevant indicator dataset. This method of calculation is used where the data source used at national level is not available regionally.

Under ESA95, GDP at basic prices is known as Gross Value Added (GVA). The term GDP is used to describe GVA plus taxes less subsidies on products, i.e. at market prices. Due to the difficulties associated with regionalising taxes and subsidies on products, regional shares of GVA at basic prices are used to estimate regional GDP at market prices. For this reason, GDP is used synonymously with the term GVA throughout this article.

Regional GDP is measured in current prices, which means that increases over time reflect inflation as well as real growth. Trends in total or per head GDP cannot be analysed easily without deflating the data. However, there are no regional price indices that could be used to remove the effect of inflation from the figures. Comparison of trends can therefore be based either on the difference between regional increases at current prices or on movements in the amount relative to the UK average. Both approaches would be misleading if the rate of inflation in any region were different from the UK average.

Concept of residence

The regional GDP estimates discussed in this article are calculated on a residence basis. That is, Compensation of Employees (CoE) of commuters is attributed to their region of residence rather than to their workplace in those cases where the two are different. ONS also publishes estimates of regional GDP for which CoE of commuters is attributed to their workplace. Work is currently being undertaken to study the differences between these two sets of estimates.

Compensation of Employees (CoE)

Compensation of Employees is the largest single component of UK GDP at basic prices, accounting for approximately 60% of the total and is defined as:

"*The total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period*". National Accounts Concepts, Sources and Methods p287

It comprises wages & salaries plus employers' social contributions and is calculated regionally in two parts; CoE of civilian employees and CoE of UK armed forces.

CoE of civilian workers at all-industry level is calculated using the results of the Inland Revenue 1% sample of tax records, a consistent approach to that used at national level that makes use of the same source. The relatively small number of tax records that cannot be allocated to a region by Inland Revenue are allocated pro-rata to the rest of the data. The one industry that is not calculated using Inland Revenue data is the agricultural industry (A01) for which wages and salaries data compiled by the Ministry of Agriculture, Fisheries and Food (MAFF) are used rather than tax records.

Inland Revenue data are usually available for all but the latest year for which regional GDP estimates are published. Due to problems with the National Insurance Recording System, managed by the Department of Social Security (DSS) for Inland Revenue, no data has yet been supplied for years after 1996. This means that for the latest two years, estimates have been forecast using growth rates from employment and earnings surveys. GDP estimates for years where this process is applied are always marked as provisional.

The industrial breakdown of the CoE estimates is calculated using data from a number of sources. The calculation of these estimates, which are also used as an indicator of national insurance contributions by industry is detailed in table 3 on the following page.

The Short Term Employment Survey (STES) and New Earnings Survey (NES) data shown in table 3 are used at a disaggregate level. Regional estimates are calculated separately for male and female employees and for full time and part time working patterns. The NES data are adjusted at this level to compensate for small sample sizes in some industries and regions. Where data are missing or sample sizes are considered too small, these figures are adjusted to reflect the average pay for the relevant industry across all regions and the average pay for that region across all industries.

Table 3: Sources of wages and salaries first estimates

Industries	*Sources*
A01	Administrative data from MAFF
A02, B, CA, CB, E-O	Employee estimates from the Short Term Employment Survey (STES) multiplied by earnings estimates from the New Earnings Survey (NES)
DA-DN	Estimates of wages and salaries from the Annual Business Inquiry (ABI)[1]
P	Wages and salaries estimates from the Labour Force Survey (LFS)[2]

1. Previously the Annual Census of Production. For years where data are not available, the structure of the latest year is used.
2. The LFS is used to calculate industry P because this industry is not covered by other ONS surveys.

Since both NES and STES data are workplace-based, an adjustment is made to the London, South East and East regions to create residence-based estimates. Commuting into and out of all other regions is considered to net to zero in monetary terms.

Finally, an adjustment is made to the STES and NES data to compensate for wages and salaries lost due to strikes. This adjustment is made for each individual industry. The resulting wages and salaries estimates by industry are then placed in a matrix that fixes the results both to the regional all-industry totals from Inland Revenue and to the national industry controls consistent with the latest input-output results.

Estimates of CoE for UK armed forces are not included within the Inland Revenue tax estimates and are calculated separately using information on regional distribution of UK armed forces supplied by Ministry of Defence (MoD). CoE generated by UK armed forces based abroad is assigned to Extra-regio, as is CoE of employees based in UK embassies abroad and workers on the continental shelf.

Gross Operating Surplus / Mixed Income

Gross operating surplus combined with mixed income accounts for approximately 37% of UK GDP at basic prices and is defined as:

"*The balance of the generation of income account. Households also have a mixed income balance. It may be seen as the surplus arising from the production of goods and services before taking into account flows of property income*". National Accounts Concepts, Sources and Methods p626

The total Gross Operating Surplus / Mixed income component can be split into a number of sub-components, each of which are regionalised separately. These can be broadly categorised as; Mixed Income, Gross Trading Profits and Surpluses, Rental Incomes, Non-market capital consumption and Holding Gains, each of which is discussed separately below.

Mixed Income

Mixed income is defined as:

"The balancing item on the generation of income account for unincorporated businesses owned by households. The owner or members of the same household often provide unpaid labour inputs to the business. The surplus is therefore a mixture of remuneration for such labour and return to the owner as entrepreneur." National Accounts Concepts, Sources and Methods p626

The regional breakdown of the mixed income component for the agricultural industry is based on data supplied by MAFF. These data are constrained directly to the UK input-output estimates for agriculture.

Estimates for the remaining industries are derived from data compiled by Inland Revenue from self-assessment tax forms covering sole traders by region and industry. These are then fixed to UK input-output industry estimates. Self-assessment was introduced in the 1996/7 financial year. Before this, the regional estimates came from the Survey of Personal Incomes (SPI), also carried out by Inland Revenue. The income of firms classified as partnerships is *excluded* from these data sources since, under ESA95, partnerships are now part of the corporations sector.

The Inland Revenue data are used at aggregate level for the manufacturing industries. Estimates for individual industries within manufacturing are produced using wages and salaries estimates from the Annual Business Inquiry constrained both to the Inland Revenue data and to UK input-output estimates.

Profits and Surpluses

The gross operating surplus includes both the Gross Trading Profits (GTP) of corporations and the Gross Trading Surpluses (GTS) of public corporations and market trading bodies within the central and local government sectors. Regional estimates are calculated in three distinct parts.

- Gross trading profits of corporations *excluding* partnerships

Regional estimates of the Gross Trading Profits of corporations in the manufacturing industries are produced using estimates of Gross Value Added *less* CoE from the ABI, constrained to UK input-output controls.

The equivalent regional GTP for agriculture is calculated using data for profits in that industry supplied by MAFF. The UK estimate for GTP in input-output group 5 (extraction of oil and gas) is allocated to Extra-regio.

Regional estimates for the remaining non-manufacturing industries are calculated according to agreed European guidelines using regional wages and salaries estimates calculated from the STES and the NES to split the national profits totals for these industries.

- Gross trading profits of partnerships

Partnerships are owned by households but are classed as quasi-corporations whose trading profits appear in the financial or non-financial corporations sectors as appropriate. Information on income of partnerships is available from the Inland Revenue analysis of self-assessment forms.

Estimates for non-manufacturing industries are calculated using the regional Inland Revenue data. The regional split of the GTP of partnerships for manufacturing industries, however, is calculated in the same way as for other corporations, using ABI data as explained above.

- Gross trading surpluses of government market bodies

The GTS of public corporations and market enterprises within central and local government are included within this component and each of these items is calculated separately although their overall contribution to total GDP is very small.

GTS of public corporations and of Local Authorities is assumed to be proportional to the results of the regional calculation of total GTP. Regional GTS of central government is calculated using data supplied directly by the market bodies classified within this sector.

Non-Market Capital Consumption

The capital consumption, or depreciation of market bodies is included within their estimates of profits. There are, however, a number of non-market bodies within the economy which do not generate a profit or surplus but which do consume capital.

In order to arrive at total GDP for a region, the capital consumption of these non-market bodies therefore needs to be added into the accounts. The activities of non-market producers fall exclusively into SIC92 industries J-O and regional estimates are calculated using the following regional data sources:

Table 4: Non-market capital consumption data sources

Type of non-market capital consumption	*Data source used to calculate regional estimate*
Defence related	Number of UK armed forces by region
Education related	Capital expenditure on universities by region
Health related	Number of hospital beds by region
Roads related	Total road length by region
Finance related	Employment in SIC92 industries J and K
Public Administration and Defence (other)	Number of civil servants by region

Holding Gains

Holding gains are a subtraction from the gross operating surplus and are defined as:

"Profit or loss obtained by virtue of the changing price of assets being held. Holding Gains or losses may arise from either physical or financial assets." National Accounts Concepts, Sources and Methods p624

Any profit or loss made from the changing value of assets being held does not result from the production process and must therefore be removed from estimates of profits.

Regional holding gains for the agricultural industry are calculated using administrative data for agricultural profits supplied by MAFF. The UK estimate for holding gains in input-output group 5 (extraction of oil and gas) is allocated to Extra-regio.

The remainder of holding gains is calculated by sector and industry. Holding gains in the household and Non-profit Institutions Serving Households (NPISH) sector are calculated proportionately to the results of regional mixed income calculations while those in the corporations sector are calculated proportionately to the results of regional gross trading profits and surpluses.

Financial Intermediation Services Indirectly Measured (FISIM)

FISIM is subtracted from the gross operating surplus and is defined as:

" *...The imputed charge for the output of many financial intermediation services paid for not by charges, but by an interest rate differential...*" National Accounts Concepts, Sources and Methods p623

This adjustment therefore represents net receipts of interest by banks and building societies that are not regarded as payments for services and must therefore be subtracted from profits. FISIM is not allocated to an industry but is subtracted at an all industry level from regional GDP. Regional estimates of FISIM are calculated using employment in the financial intermediation industry as an indicator.

Rental Incomes

Rental income is a part of the gross operating surplus. This component of income is calculated separately by industry for each sector of the economy.

- Rental income of local authorities

Many local authorities in England, Wales and Scotland receive rental income from the provision of housing services. Each local authority is required to supply accounts for this service to the Department of the Environment, Transport and the Regions (DETR). It is these Housing Revenue Accounts which are used to produce a regional split of the England total. The England figure, along with Scotland and Wales totals for this item are produced separately as part of our national accounts.

The Northern Ireland Housing Executive, classified as a public corporation, and included within that sector, provides equivalent housing services in Northern Ireland.

- Rental income of central government

A small amount of rental income was accrued by central government for years up to 1995 through property owned by Crown Estate Commissioners (CEC). This item is therefore calculated regionally using estimates of property owned by the CEC by region taken from their annual reports.

The CEC was reclassified in 1995 to the public corporations sector and for later years is included within that sector.

- Rental income of public corporations

An estimate of rental income is available for each corporation within this sector. Where a corporation operates entirely within one region, its rental income is allocated to that region.

Rental income by region of the Crown Estate Commissioners, reclassified to this sector from central government in 1995, is calculated using estimates of the amount of property owned by the CEC by region.

Regional estimates of rental income of public corporations that operate in more than one region are calculated pro-rata to population estimates of those regions.

- Rental income of financial and non-financial corporations

Regional estimates of these items are calculated for all industries except agriculture using estimates of regional income from business rates supplied by DETR. Estimates for the agricultural industry are calculated from data for the rental income in that industry supplied by MAFF.

- Rental income of households

This component includes estimates of household income resulting from the private renting of dwellings. It also includes an imputed value for rental incomes of owner-occupiers to cover the rental value of their properties.

Regional estimates are calculated using estimates of average property prices by region multiplied by the regional dwelling stock.

Taxes *less* subsidies on production

Taxes on production account for approximately 2% of UK GDP at basic prices and their addition converts estimates of GDP from factor cost to basic prices. For the period 1989-1998, there are no subsidies on production within the UK. Taxes on production are defined as:

"...Taxes levied by general government or by institutions of the EU relating to the production and import of goods and services, the employment of labour, the ownership or use of land, buildings or other assets in production". National Accounts Concepts, Sources and Methods p289

Detail of the taxes levied over the period 1989-1998 are listed in

table 5 below. Each tax is estimated regionally using the most appropriate indicator available and this indicator is also shown in the table.

Table 5: Taxes on production data sources

Tax on production	*Data source used as regional indicator*
Local authority (LA) rates[1]	LA business rates receipts by region
National non-domestic rates[2]	NNDR receipts by region
Vehicle excise duty	See notes
ITC franchise payments[3]	Employment broadcasting industries
Consumer credit act fees	Employment in the finance industry
Other licence fees	Employment in the relevant industries

1. Paid by sectors other than households: Northern Ireland only from 1991
2. (NNDR), England, Wales and Scotland from 1991
3. Replaced the IBA levy in 1993

Vehicle excise duty is not calculated using a single indicator. The vehicle excise duty payable by type of vehicle is multiplied by the number of vehicles of those types currently licensed. This total is then multiplied by the proportion of each type of vehicle that are considered to be used in production rather than for another use. It is the resulting estimate that is used as an indicator of regional vehicle excise duty.

Accuracy of the estimates

As with the national accounts, the regional estimates, although calculated as reliably as possible, cannot be considered accurate to the last digit shown. The overall margin of error of the estimates, however, is very difficult to judge. For each item, the national control is provided by the corresponding item in the national accounts. In addition to the errors in the national estimates, errors are introduced by their allocation by region.

The use of information based on samples suggests that the proportional size of the errors is likely to be inversely related to the size of the individual regions. The largest region, the South East has a population of about 13.5 million; the smallest, Northern Ireland, has a population of less than 3 million. Where sample survey data are used, the sample sizes will reflect regional population size and, other things being equal, the estimates will be less reliable for the smaller regions.

An assessment of the quality of the regional and county estimates was published in *Economic Trends*, November 1990.

Forthcoming changes to methodology and terminology

The methodologies used to compile the regional accounts are regularly reviewed and as a result of this process, one methodological improvement will be implemented when the next regional estimates are published early in 2001.

This change relates to the imputed rental income of households. The existing data currently used to estimate house prices by region will be replaced with a new series which weights prices according to the type of property. This change is likely to cause some revision to the regional estimates, both at an all-industry level and for industry K, Real Estate, Renting and Business Activities.

Work is also currently being taken forward to improve the quality of ONS employment data used in the Regional Accounts. The STES is benchmarked to a larger point-in-time survey, the Annual Employment Survey (AES). The AES itself is now in the process of being replaced by the ABI and results are due to be released in April 2001. This process will improve the quality of the estimates but may lead to revisions in regional employment shares, which will be reflected in regional estimates of GDP published in Spring 2002.

Some methodological changes are planned for the national accounts published in *Blue Book* 2001 and these changes will also be reflected in the regional estimates planned for Spring 2002.

Readers are invited to supply any comments or questions regarding the methodologies discussed in the article to the author at the address shown.

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