

Economic Trends

No 518
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Introduction

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

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

An article on international economic indicators appears monthly and an article on regional economic indicators appears every March, June, September and December. Occasional articles comment on and analyse economic statistics and introduce new series, new analyses and new methodology.

Quarterly articles on the national accounts and the balance of payments appear in a separate supplement to *Economic Trends* entitled *UK Economic Accounts* which is published every January, April, July and October.

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

The section on cyclical indicators shows the movements of four composite indices over 20 years against a reference chronology of business cycles. The indices group together indicators which lead, coincide with and lag behind the business cycle, and a short note describes their most recent movements. The March, June, September and December issues carry further graphs showing separately the movements in all of the 27 indicators which make up the composite indices.

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

Notes on the tables

1. All data in the tables and accompanying charts is current, as far as possible, to 11 December 1996.
2. The four letter identification code at the top of each column of data (eg, DJDD) is ONS's own reference to this series of data on our database. Please quote the relevant code if you contact us requiring any further information about the data.

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

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

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

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

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

8. 'Billion' denotes one thousand million.

9. There is no single correct definition of *money*. The Government has set monitoring ranges for two aggregates:

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

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

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

10. Symbols used:

.. not available

- nil or less than half the final digit shown

+ alongside a heading indicates a series for which measures of variability are given in the table on page T79

† indicates that the data has been revised since the last edition; the period marked is the earliest in the table to have been revised

* average (or total) of five weeks.

If you have any comments or suggestions about *Economic Trends*, please write to Michael Byrne, Technical Editor, Office for National Statistics, Zone D4/16, 1 Drummond Gate, London, SW1V 2QQ.

Marketing and Customer Service Division
Office for National Statistics

December 1996

ONS Databank

The data in this publication can be obtained in computer readable form via the ONS Databank service which provides macro-economic time series data on disc. For more details about the availability of this and other datasets, prices or to place your order please telephone, write or fax the Sales Office, Marketing and Customer Service Division, Office for National Statistics, Zone B1/06, 1 Drummond Gate, London, SW1V 2QQ. Telephone: 0171 533 5678 or fax 0171 533 5689. The ONS does not offer direct on-line access for these data but a list of host bureaux offering such a facility is available on request from the ONS.

In brief

Important change to *Economic Trends* publication date

In response to the findings of the recent customer questionnaire included in *Economic Trends*, it has been decided to change the publication date so that the most timely national accounts data can be included. From the January 1997 edition onwards, *Economic Trends* will now be published at around the end of the first week of each month. The January edition, which previously would have been published at the end of that month, will now be published on **Friday 7th February** (and will be titled 'January/February 1997'). This will be followed by the March edition which will be published early into that month. Customer subscriptions will be extended so that annual subscribers will still receive 12 editions.

Articles

This month three articles feature. Stuart Brown and Tim Jones examine the reasons behind revisions to the UK balance of payments figures. Jim O'Donoghue reviews developments in UK company securities statistics while we also reproduce a paper from Henry Neuburger to the recent 24th General IARIW Conference in Lillehammer, Norway about how far economic theory and economic policy should affect the design of national accounts.

Due to earlier Christmas deadlines the long run of cyclical indicators charts which usually appear in the December *Economic Trends* will be published in the January/February edition instead, together with the regional accounts 1995 part 1 article (see note below), the Budget and recent developments in the economy articles, the effects of taxes and benefits upon household income and an article upon input-output methodology.

Regional Accounts 1995

The December edition of *Economic Trends* normally includes an article on Regional Accounts, which this year would have contained regional data on Gross Domestic Product up to 1995 and Gross Domestic Fixed Capital Formation up to 1994. However, due to late receipt of input data from some of our main sources, it will not be possible to publish the article this December. The figures will now be contained in the January/February 1997 edition of *Economic Trends*. For further information please contact Bob Cooper on 0171-533 5793.

Cyclical indicators for the United Kingdom economy

After the February edition of *Economic Trends*, the Office for National Statistics will cease to compile and publish Cyclical Indicators for the UK Economy. This decision has been taken because of the need to find resources to take forward development work for the changes to the national accounts which take place in 1998 - particularly the new European System of Accounts and the five-yearly rebasing of the accounts. Key users have recently been consulted about their priorities for national accounts products, and their view was that cyclical indicators are the least valuable of these. For more information ring John Bunday on 0171-533 5940.

Change in ONS London address

As from January 2nd 1997, the four ONS offices in London at Great George Street, Millbank Tower, St Catherine's House and Caxton House will be relocating to a new address:

1 Drummond Gate

Pimlico

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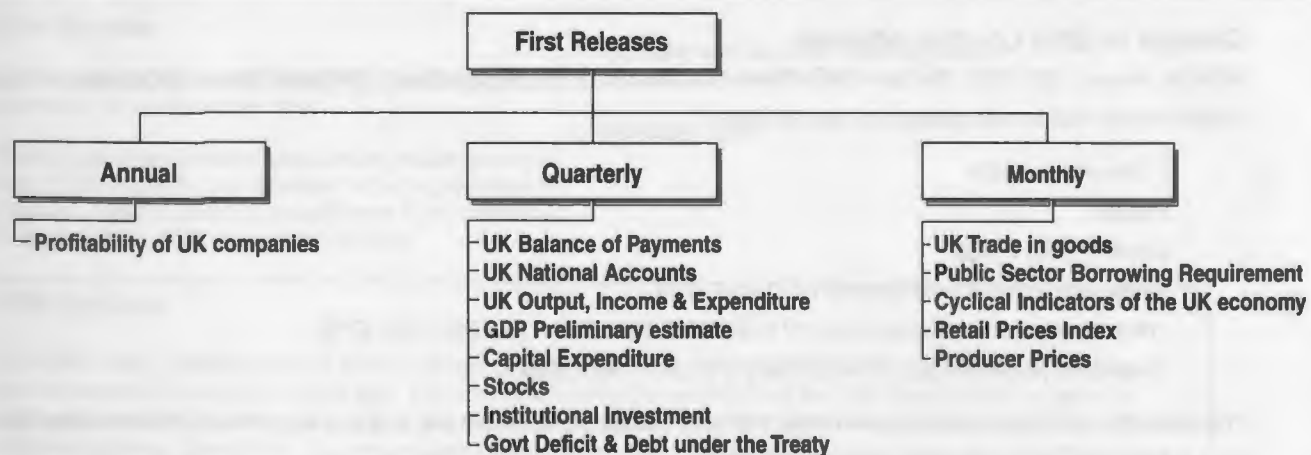
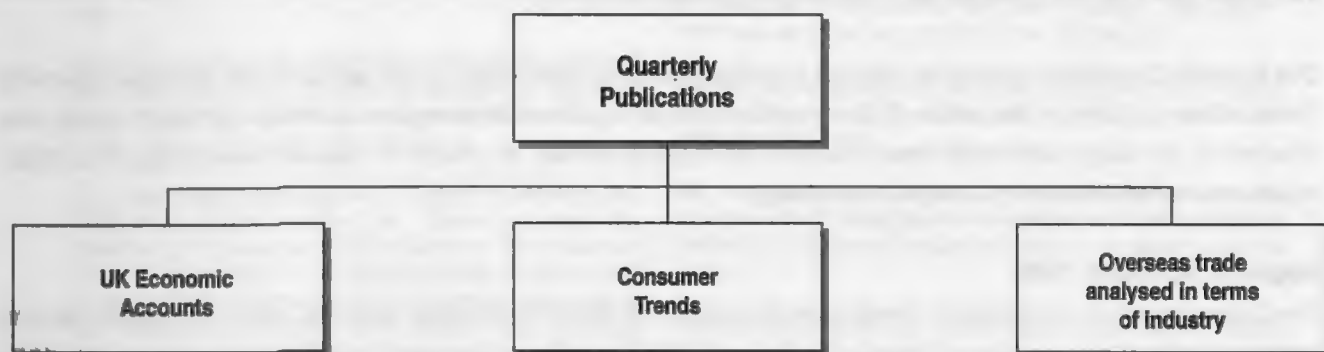
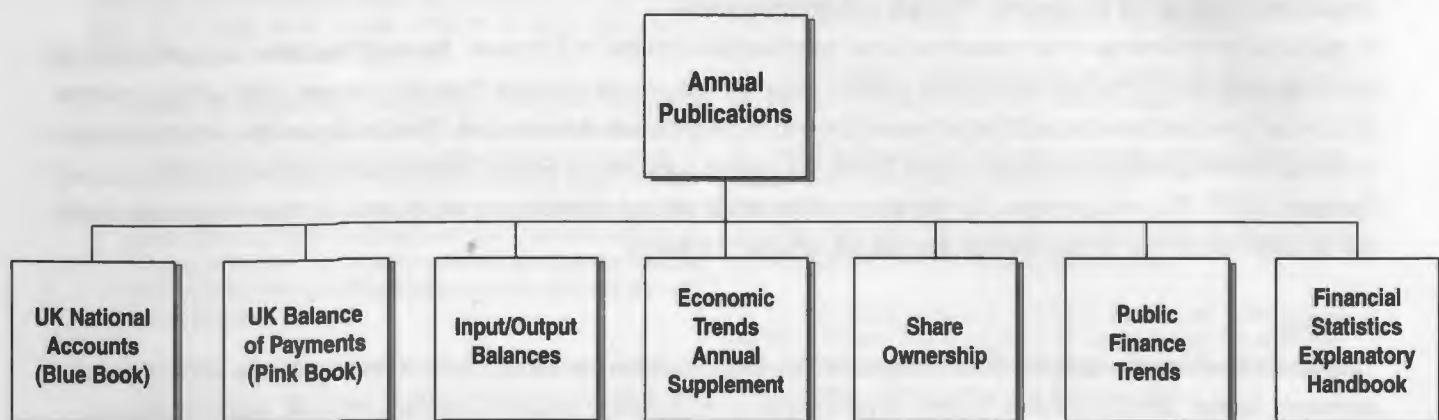
Telephone (central switchboard) 0171-233 9233

Telephone (statistical enquiries) 0171-533 6262/6363/6364. Fax 0171-533 5719.

Telephone (sales office) 0171-533 5678. Fax 0171-533 5689.

The relocation will take place between Friday 27th and Tuesday 31st December and as a result most ONS functions from these sites will be temporarily suspended during this time.

United Kingdom Macro-Economic Statistics Publications



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

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Articles published in *Economic Trends*

Cyclical indicators for the United Kingdom economy. An article showing individual indicators is published every March, June, September and December.

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

Regional economic indicators. Commentary, figures and charts are published every March, June, September and December.

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

Other Articles

1995

<i>February</i>	Measuring the pulse of the market: the Prodcorn initiative.
<i>March</i>	Geographical analysis of the current account of the balance of payments.
<i>April</i>	Testing for bias in initial estimates of economic indicators. Quarterly national accounts in the United Kingdom; overview of UK approach.
<i>May</i>	Regional Accounts 1993; part 2. Changing the Blue Book.
<i>July</i>	Testing for bias in initial estimates of the components of GDP. The National Lottery in the National Accounts.
<i>August</i>	Research and experimental development statistics 1993.
<i>September</i>	Fully reconciled UK national and sector accounts for 1991-1994.
<i>October</i>	Geographical analysis of the current account of the balance of payments. Quarterly GDP - process and issues.
<i>November</i>	Taxes and social security contributions: an international comparison 1983-1993. The inter-departmental business register.
<i>December</i>	The effects of taxes and benefits upon household income 1994-95. Regional Accounts 1994; part 1.

1996

<i>January</i>	The Budget: 28 November 1995. The economy: recent developments and prospects.
<i>February</i>	Employment in the public and private sectors.
<i>March</i>	A vision for ONS. Managing the nation's economy: the conduct of monetary and fiscal policy. A monthly indicator of GDP. Cyclical indicators for the UK economy. Regional Accounts 1994: Part 2.
<i>April</i>	Geographical analysis of the current account of the Balance of Payments. Testing for bias in initial estimates of key economic indicators. Environmental accounts - valuing the depletion of oil and gas reserves.
<i>May</i>	Regional Accounts 1994: Part 3.
<i>June</i>	Measuring real growth; index numbers and chain linking. The United Kingdom's input-output balances.
<i>July</i>	Producer prices for services: development of a new price index. Time use from a national accounts perspective.
<i>August</i>	Research and experimental development (R & D) statistics 1994. The pilot United Kingdom environmental accounts. Testing for bias in initial estimates of the components of GDP.
<i>September</i>	A framework for social accounting matrices.
<i>October</i>	The use of quarterly current price output data in the national accounts. Innovation in small and medium sized enterprises 1995. Geographical analysis of the United Kingdom balance of payments.
<i>November</i>	An international comparison of taxes and social security contributions 1984-1994. Overseas trade in services: development of monthly estimates. Charities' contribution to GDP: the results of the 1996 ONS survey of charities.

For articles published in earlier issues see the list in issue 509 (March 1996) of *Economic Trends*. Copies of articles may be obtained from the Publications Unit, Marketing and Customer Service Division, Office for National Statistics, Zone B1/12, 1 Drummond Gate, London SW1V 2QQ, on payment of £2.00 per copy for articles within the last year, and £4.00 per copy for articles prior to this. The appropriate remittance should accompany each order. Cheques, etc, should be made payable to Office for National Statistics.

Economic update - December 1996

By Adrian Richards and Philip Blackburn, Economic Assessment - Office for National Statistics

Overview

Growth in manufacturing output continued in the three months to October despite production output remaining flat in the economy. Manufacturers have responded to the increased demand from consumers. Although underlying retail prices remained stable in November, there were inflationary signs, however, as underlying costs, shown by factory gate prices, moved upwards, and manufacturers' expectations of rising prices increased. External demand has provided a stimulus to the economy at current prices, but in volume terms underlying net exports have fallen as import growth exceeds that of exports.

Activity

1. The ONS's **coincident cyclical indicator**, based on partial information, edged up in October, because of a rise in the real money supply (M0) and stronger output in the production industries.

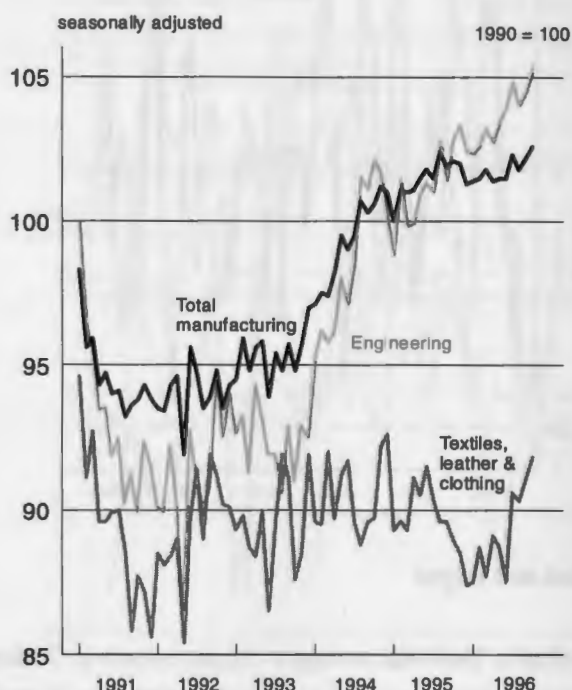
Output and expectations

2. The index of **industrial production**, seasonally adjusted, was flat in the three months to October compared with the previous three months. Within this, **manufacturing output** rose by 0.4%, **mining and quarrying output**, including oil and gas extraction fell sharply by 1.5% as production of coal slowed significantly, and output of the **electricity, gas and water supply** industries fell sharply 1.7%. Production of durable goods decreased by 0.2%, despite increased output of cars, whilst production of non-durables also fell slightly by 0.1%. As Chart 1 shows, increased production in the engineering and textiles, leather and clothing industries has been driving recent growth in manufacturing output.

3. Manufacturers' were less confident of the future, but expectations are still high. The CBI Monthly Trends Enquiry in **manufacturing** reported the output expectations balance in the next 4 months, seasonally adjusted by the ONS, falling from 25% in November to 22% in December.

Chart 1

Output of the Manufacturing Industries by industry sector



4. Demand for construction remains stable. The volume of new **construction orders** in Great Britain, seasonally adjusted, was unchanged in the three months to October compared with the three months to July. Private housing, private industrial and infrastructure orders, were particularly strong over the period, whereas private commercial orders were particularly weak. Overall, as illustrated in Chart 2, total public orders and total private orders both marginally fell over the period.

Indicators of domestic demand

5. Strong demand for personal borrowing continued into October. Total **net personal borrowing**, seasonally adjusted, rose strongly from £7.1 billion in the three months to July to £7.7 billion in the three months to October. **Net borrowing secured on dwellings**, seasonally adjusted, rose from £4.6 billion to £4.8 billion over this period, as the demand for housing continued its upward trend. **Net consumer credit**, seasonally adjusted, continued to rise strongly, up from £2.5 billion to £2.9 billion.

Chart 2
Volume of new orders for
new construction work in GB

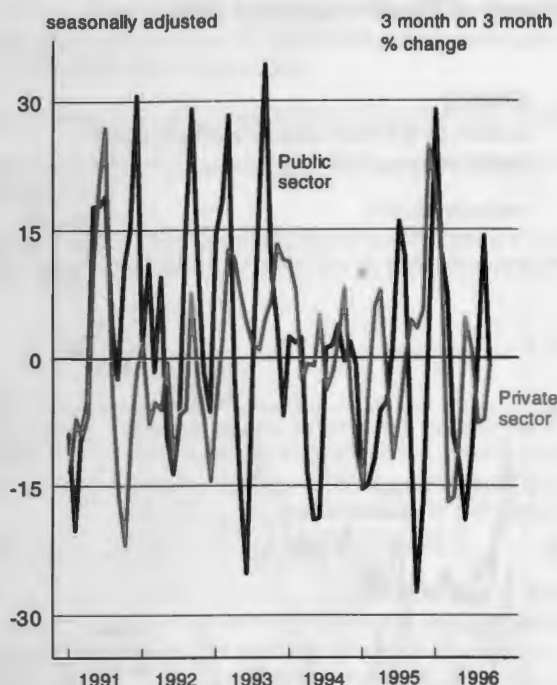
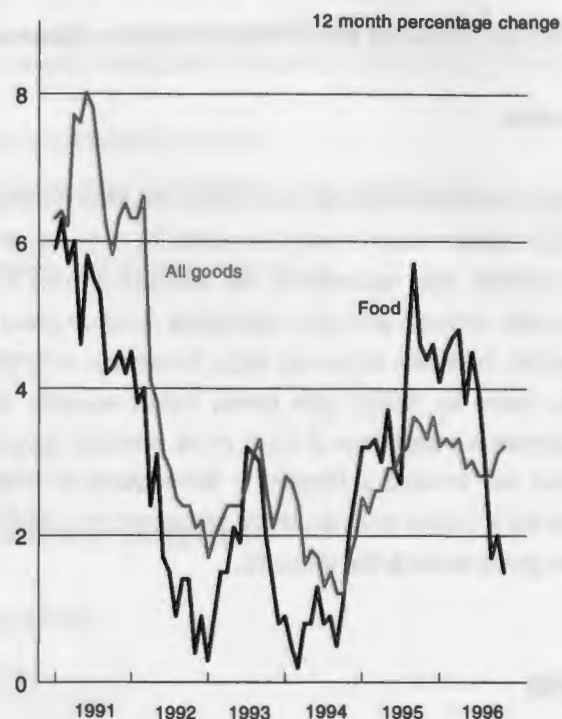


Chart 3
RPI goods index



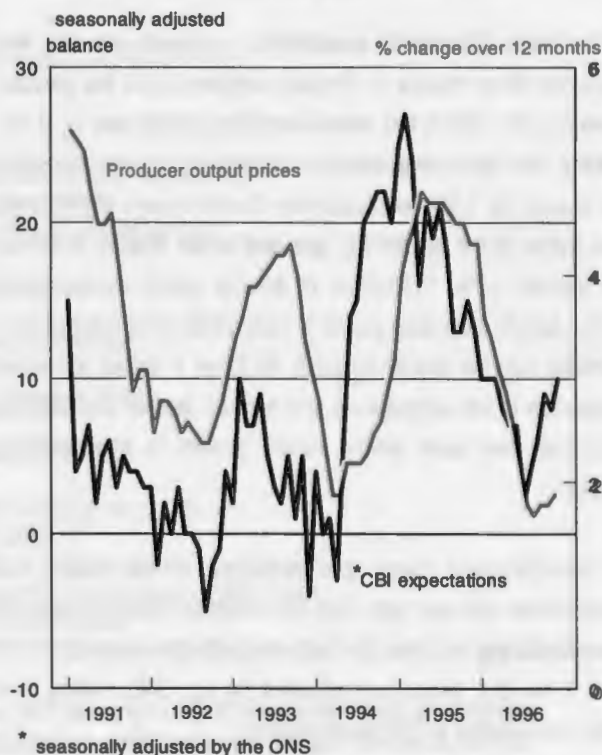
Prices and wages

6. Following the sharp increase in the annual rate in October, underlying inflation remained stable in November. The 12-month rate of increase of the **retail prices index (RPI)** was unchanged at 2.7% in October. Excluding mortgage interest payments (RPIX) and further excluding indirect taxes (RPIY), the 12-month rate also remained 3.3% and 3% respectively. Increased costs of motoring and clothing and footwear over the year were offset by falling prices for food, and fuel and light. Chart 3 shows the major categories within the goods component of the RPI and highlights the downward effect exerted by food prices.

7. Factory gate prices continue to increase steadily, but the downward trend in the price of materials and fuels continues. The three month on three month annualized percentage growth in the **output price** index for manufactured products (home sales), seasonally adjusted and excluding excise duties, rose from 1.6% in October to 2.9% in November. Over the same period the annualized change in **input prices** (all manufacturing), seasonally adjusted, fell from deflation of 2.2% to deflation of 4.4%. Input prices fell across most categories and have been influenced by the rise in sterling.

8. There were renewed **expectations of rising prices** in December. The CBI Monthly Trends Enquiry for manufacturing showed a balance of 10% (up from 8% in November), seasonally

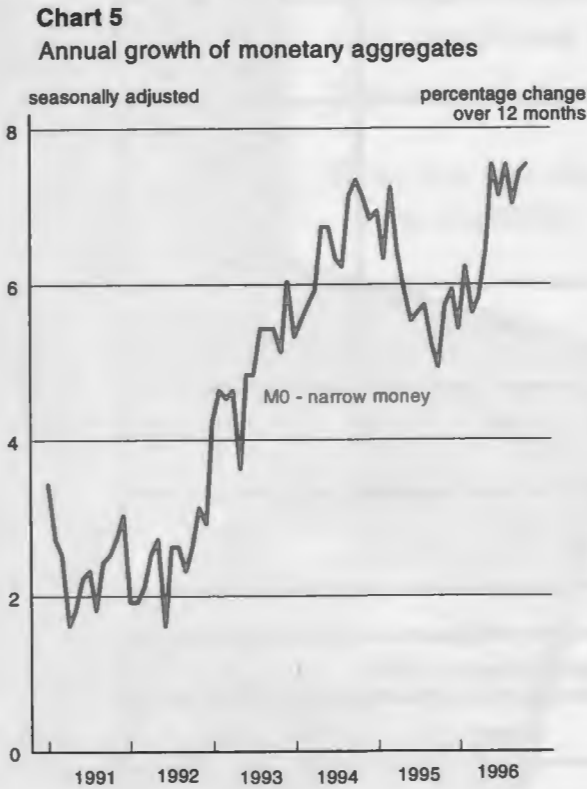
Chart 4
CBI price expectations and output prices



adjusted by the ONS, expecting to raise prices in the next four months. Chart 4 shows that expectations of price rises are in excess of current price rises.

Monetary indicators

8. The annual growth of **narrow money (M0)**, seasonally adjusted, accelerated slightly from 7.4% in October to 7.5% in November. M0 has been at high levels consistently for several months as highlighted by Chart 5.

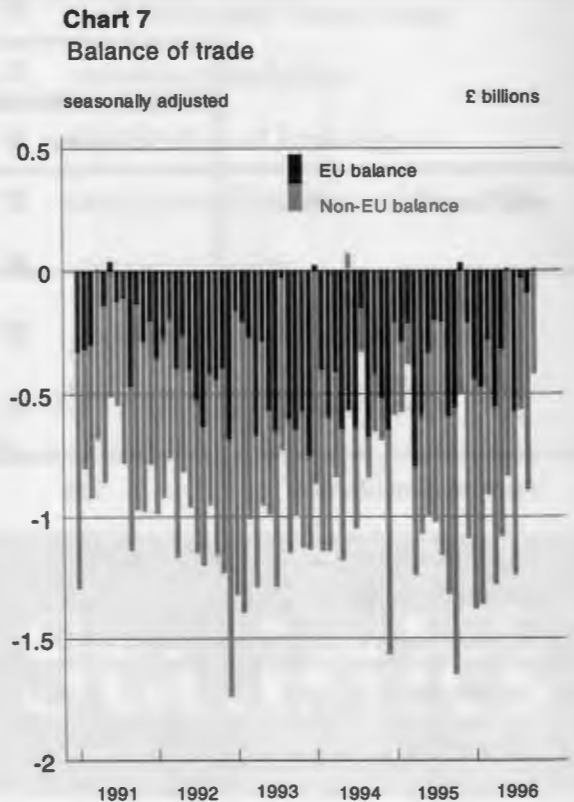
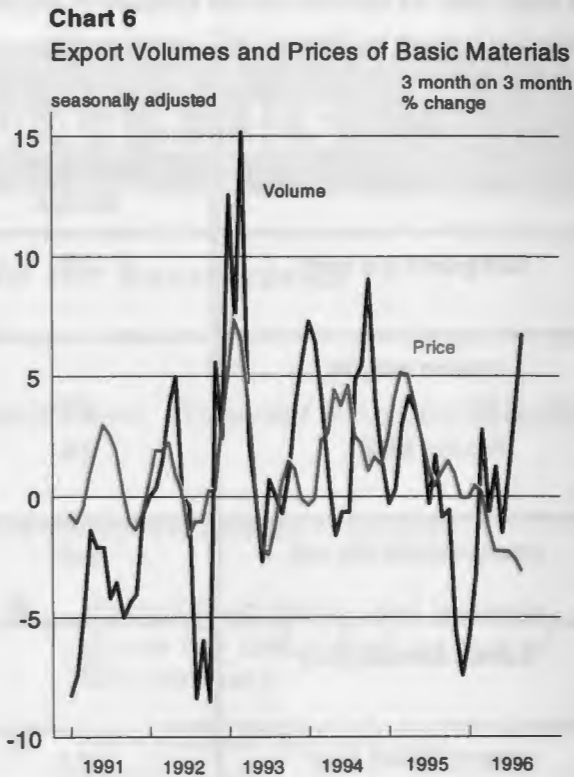


Balance of Trade

9. The deficit on **the balance of UK trade in goods** narrowed from £3.2 billion in the three months to June to £2.7 billion in the three months to September. Over this period the **volume of total exports, excluding oil and erratics**, rose strongly by 3.1%. On the same basis **imports** outperformed exports, rising by 4.2%. Despite this, the overall balance was improved by falling imports of erratics. As Chart 6 shows, falling prices for basic materials coincided with stronger export growth, which has been the main contribution to the UK's strong export growth.

10. More timely data on **trade with non-EU countries** shows that the deficit narrowed from £2.3 billion in the three months to July to £2.0 billion in the three months to October. As highlighted in Chart 7, the deficit has steadily been improving. However, the underlying position has deteriorated. Over this period, **export**

volumes, excluding oil and erratics rose by 1.2% compared with the previous three months. On the same basis **imports** accelerated, by 2.0%. Exports and imports of erratics declined significantly reducing the overall strength of external trade.



Forecast for the UK Economy

A comparison of independent forecasts, November 1996.

(December version not yet released at time of going to print)

The tables below are extracted from HM Treasury's "FORECASTS FOR THE UK ECONOMY" and summarise the average and range of independent forecasts for 1996 and 1997, updated monthly.

	Independent Forecasts for 1996		
	Average	Lowest	Highest
GDP growth (per cent)	2.3	2.1	2.9
Inflation rate (Q4)			
- RPI	2.3	1.8	2.6
- RPI excl MIPS	2.9	2.4	3.2
Unemployment (Q4, mn)	2.05	1.97	2.14
Current Account (£bn)	-2.1	-8.0	1.9
PSBR (1996-97, £bn)	27.6	24.1	30.1

	Independent Forecasts for 1997		
	Average	Lowest	Highest
GDP growth (per cent)	3.3	2.4	4.2
Inflation rate (Q4)			
- RPI	3.4	2.0	5.3
- RPI excl MIPS	2.9	2.0	4.0
Unemployment (Q4, mn)	1.86	1.58	2.0
Current Account (£bn)	-5.0	-10.3	4.0
PSBR (1997-98, £bn)	23.3	17.0	30.0

NOTE: "FORECASTS FOR THE UK ECONOMY" gives more detailed forecasts, covering 24 variables and is published monthly by HM Treasury, available on annual subscription, price £75,. Subscription enquiries should be addressed to Miss Jehal, Publishing Unit, Room 53a, HM Treasury, Parliament Street, London SW1P 3AG (0171 270 5607).

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International Economic Indicators

by Kevin Madden, Economic Assessment - Office for National Statistics

Commentary

Latest estimates of **gross domestic product (GDP) at constant market prices** showed that, on a quarterly basis, activity continued to strengthen in the United Kingdom increasing from 0.4% in 1996 Q2 to 0.7% in 1996 Q3, broadening out from services to manufacturing in the process. In the United States, however, as industrial production slowed and retail sales contracted, the rate of growth slowed by 0.7 percentage points to 0.5%.

2. **Consumer price inflation** among the G7 remained low with little evidence of sustained rises. In the United Kingdom inflation stabilised at 2.7% in November following the pick up in October. In Italy the rate fell - from 3.4% in September to 3.0% in October. Since the start of the year inflation has almost halved as prices at the factory gate declined even more sharply alongside weakening wage pressures. In the United States a small rise in inflation in September reversed the fall of the previous month, while Canadian inflation edged up against a backdrop of zero producer price inflation. However, the Japanese economy which has had the lowest rate throughout 1996 recorded the only fall.

3. **Standardised unemployment rates** (ILO based) rose in September in the United States and Canada to 5.2% and 9.9% respectively. For the latter's series, however, interpretation is cautioned against because of recent volatility.

Notes

4. The series presented here are taken from the Organisation of Economic Co-operation and Development's (OECD) Main Economic Indicators, except for the United Kingdom where several of the series are inclusive of publication up to 18 December 1996. The series shown are for each of the G7 economies (United Kingdom, Germany, France, Italy, United States, Japan and Canada) and for the European Communities (EC) and OECD countries in aggregate. **Data for unified Germany is added to the article as it becomes available.** Footnotes to the tables explain the commencement or otherwise of the data.

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

1 Gross domestic product at constant market prices: index numbers

1990 = 100

	United Kingdom	Germany ¹	France	Italy	EC	United States	Japan ²	Canada	Major 7	OECD
	FNAO	GABI	GABH	GABJ	GAEK	GAEH	GAEI	GAEG	GAEO	GAEJ
1980	76.8	79.9	79.2	80.3	79.0	75.1	67.5	75.1	75.1	75.5
1985	84.9	84.7	85.4	86.1	85.1	86.8	79.7	86.6	85.1	85.2
1986	88.6	86.7	87.6	88.6	87.5	89.4	82.1	89.5	87.6	87.6
1987	92.8	87.9	89.5	91.4	90.1	92.0	85.4	93.2	90.3	90.4
1988	97.5	91.1	93.5	95.3	93.8	95.5	90.7	97.8	94.3	94.1
1989	99.6	94.4	97.5	97.9	97.1	98.7	95.1	100.3	97.7	97.5
1990	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1991	98.0	112.4	100.8	101.1	103.0	99.0	104.0	98.2	101.3	101.3
1992	97.5	114.4	102.0	101.7	103.9	101.7	105.0	99.0	103.1	103.1
1993	99.5	113.1	100.6	100.6	103.3	104.0	105.1	101.1	104.1	104.1
1994	103.4	116.4	103.5	102.7	106.3	107.6	105.7	105.3	107.0	106.9
1995	105.9	118.9	105.8	105.7	108.9	109.8	106.6	107.7	109.1	108.9
1993 Q4	100.6	113.5	100.9	101.0	103.9	105.3	104.9	102.3	104.9	104.8
1994 Q1	101.7	114.8	101.5	101.2	104.7	106.0	105.3	103.4	105.6	105.5
Q2	102.9	116.1	103.2	102.5	106.0	107.2	105.8	104.5	106.8	106.6
Q3	104.0	116.8	104.0	103.3	106.8	108.2	106.5	106.0	107.6	107.5
Q4	104.8	117.9	105.1	103.6	107.7	109.0	105.3	107.3	108.1	108.1
1995 Q1	105.3	118.2	105.7	105.2	108.4	109.2	105.5	107.7	108.4	108.4
Q2	105.7	119.1	105.8	105.4	108.9	109.4	106.1	107.4	108.8	108.6
Q3	106.1	119.2	106.0	106.1	109.3	110.4	106.7	107.8	109.5	109.3
Q4	106.7	119.2	105.5	106.2	109.4	110.5	108.0	108.0	109.7	109.7
1996 Q1	107.3	118.6	106.7	106.6	109.8	111.0	111.1	108.4	110.7	110.7
Q2	107.8	120.4	106.3	106.2	110.3	112.3	110.3	108.7	111.3	111.3
Q3	108.6	..	..	..	..	112.9	..	..	..	..
Percentage change, latest quarter on corresponding quarter of previous year										
1996 Q2	2.0	1.1	0.5	0.8	1.3	2.7	4.0	1.2	2.3	2.5
Q3	2.3	..	..	..	..	2.3	..	..	..	..
Percentage change, latest quarter on previous quarter										
1996 Q2	0.4	1.5	-0.4	-0.4	0.5	1.2	-0.7	0.3	0.5	0.5
Q3	0.7	..	..	..	..	0.5	..	..	..	..

1 Data available for unified Germany since 1991

2 GNP

2 Consumer prices¹ Percentage change on year earlier

	United Kingdom	Germany ²	France	Italy	EC	United States	Japan	Canada	Major 7	OECD ³
	FRAN	HVLL	HXAA	HYAA	HYAB	ILAA	ILAB	ILAC	ILAD	ILAE
1980	18.0	5.6	13.5	21.3	13.3	13.6	8.0	10.2	12.7	14.6
1985	6.1	2.2	5.8	8.6	6.1	3.5	2.0	4.0	4.0	7.0
1986	3.4	-0.1	2.6	6.1	3.7	1.9	0.4	4.2	2.1	5.9
1987	4.2	0.2	3.3	4.6	3.3	3.7	-0.2	4.4	2.9	7.8
1988	4.9	1.3	2.7	5.0	3.7	4.1	0.5	4.0	3.4	8.6
1989	7.8	2.8	3.5	6.6	5.3	4.8	2.2	5.0	4.5	6.3
1990	9.5	2.7	3.5	6.5	5.7	5.4	3.1	4.8	5.0	6.8
1991	5.9	3.5	3.2	6.5	5.2	4.2	3.3	5.6	4.3	6.1
1992	3.7	4.0	2.4	5.3	4.5	3.0	1.6	1.5	3.1	5.0
1993	1.6	0.7	2.1	4.2	3.6	3.0	1.1	1.9	2.7	4.3
1994	2.4	-2.0	1.7	3.9	3.1	2.6	0.5	0.2	2.2	4.4
1995	3.5	1.2	1.8	5.3	3.1	2.8	-0.3	2.2	2.4	5.5
1995 Q4	3.2	1.8	1.9	5.7	3.0	2.6	-0.6	2.0	2.3	5.5
1996 Q1	2.8	1.8	2.1	5.0	2.8	2.8	-0.4	1.4	2.2	5.6
Q2	2.2	1.7	2.3	4.3	2.6	2.8	0.1	1.4	2.3	5.6
Q3	2.1	1.5	1.8	3.5	2.4	3.0	0.2	1.4	2.2	5.0
1995 Dec	3.2	1.8	2.1	5.5	3.1	2.5	-0.4	1.7	2.2	5.4
1996 Jan	2.9	1.7	2.0	5.6	2.9	2.8	-0.6	1.5	2.2	5.6
Feb	2.7	1.7	2.0	5.0	2.8	2.7	-0.4	1.3	2.2	5.5
Mar	2.7	1.9	2.3	4.4	2.8	2.8	-0.2	1.4	2.3	5.6
Apr	2.4	1.8	2.4	4.6	2.7	2.8	0.2	1.4	2.3	5.7
May	2.2	1.8	2.4	4.3	2.6	2.9	0.1	1.5	2.3	5.6
Jun	2.1	1.4	2.2	3.9	2.6	2.8	-	1.4	2.3	5.6
Jul	2.2	1.6	2.3	3.7	2.6	3.0	0.4	1.2	2.3	5.6
Aug	2.1	1.4	1.6	3.4	2.3	2.9	0.2	1.4	2.1	4.7
Sep	2.1	1.4	1.6	3.4	2.3	3.0	-	1.5	2.2	4.6
Oct	2.7	..	..	3.0	..	..	..	..	..	..
Nov	2.7	..	..	..	..	..	..	..	..	..

1 Components and coverage not uniform across countries

2 Data available for Unified Germany from 1991

3 OECD data includes 'higher inflation' countries (Mexico and Turkey)

3 Standardised unemployment rates: percentage of total labour force¹

	United Kingdom	Germany ²	France	Italy	EC ³	United States	Japan	Canada	Major 7	OECD
	GABF	GABD	GABC	GABE	GADR	GADO	GADP	GADN	GAEQ	GADQ
1980	6.4	3.1	6.3	7.5	6.4	7.1	2.0	7.5	5.6	5.9
1985	11.2	7.1	10.3	9.6	10.5	7.1	2.6	10.5	7.2	7.9
1986	11.2	6.4	10.4	10.5	10.5	6.9	2.8	9.5	7.1	7.7
1987	10.3	6.2	10.5	10.9	10.2	6.1	2.9	8.8	6.7	7.3
1988	8.6	6.2	10.0	11.0	9.6	5.4	2.5	7.7	6.1	6.7
1989	7.2	5.6	9.4	10.9	8.7	5.2	2.3	7.5	5.7	6.2
1990	6.9	4.8	8.9	10.3	8.1	5.5	2.1	8.1	5.6	6.1
1991	8.8	4.2	9.5	9.9	8.5	6.8	2.1	10.3	6.4	6.8
1992	10.1	4.6	10.4	10.5	9.3	7.4	2.2	11.3	6.9	7.4
1993	10.4	7.9	11.7	10.2	10.9	6.8	2.5	11.2	7.2	8.0
1994	9.6	8.4	12.3	11.1	11.4	6.0	2.9	10.3	7.0	7.9
1995	8.7	8.2	11.7	12.2	11.0	5.5	3.1	9.5	6.8	7.5
1996 Q1	8.4	8.9	12.1	12.0	10.7	5.6	3.3	9.5	6.8	7.4
Q2	8.3	8.9	12.2	12.0	10.7	5.4	3.5	9.6	6.8	7.3
1995 Oct	8.7	8.4	11.8	12.1	11.1	5.4	3.2	9.4	6.7	7.5
Nov	8.6	8.5	11.9	..	11.1	5.5	3.4	9.4	6.8	7.6
Dec	8.4	8.6	11.6	11.9	10.6	5.6	3.3	9.4	6.8	7.3
1996 Jan	8.3	8.7	12.0	11.9	10.6	5.8	3.4	9.6	6.9	7.4
Feb	8.4	8.9	12.1	12.0	10.7	5.5	3.3	9.6	6.8	7.4
Mar	8.4	9.0	12.1	12.0	10.7	5.6	3.1	9.3	6.8	7.4
Apr	8.4	8.9	12.1	12.0	10.7	5.4	3.4	9.4	6.8	7.3
May	8.3	8.9	12.2	12.0	10.7	5.6	3.6	9.4	6.9	7.4
Jun	8.3	8.9	12.3	12.0	10.6	5.3	3.5	10.0	6.8	7.3
Jul	8.3	8.9	12.3	12.2	10.6	5.4	3.4	9.8	6.9	7.3
Aug	8.2	8.9	12.4	..	10.7	5.1	3.3	9.4	6.7	7.2
Sep	..	..	..	..	..	5.2	3.3	9.9	..	..

1 Uses an ILO based measure of those without work, currently available for work, actively seeking work or waiting to start a job already obtained

2 Data available on Unified Germany from January 1993

3 Excludes Denmark, Greece and Luxembourg

4 Balance of payments current account as percentage of GDP

	United Kingdom	Germany ^{1,2}	France	Italy	United States ¹	Japan ¹	Canada
	ILAZ	ILBA	ILBB	ILBC	ILBD	ILBE	ILBF
1980	1.2	-1.7	-0.6	-2.3	0.1	-0.1	-0.6
1985	0.6	2.7	-0.1	-0.9	-3.1	3.6	-1.3
1986	-0.2	4.5	0.3	0.4	-3.5	4.3	-2.8
1987	-1.1	4.1	-0.6	-0.2	-3.7	3.6	-2.9
1988	-3.5	4.2	-0.5	-0.7	-2.6	2.7	-3.5
1989	-4.3	4.9	-0.5	-1.2	-2.0	2.0	-4.1
1990	-3.4	3.1	-0.8	-1.3	-1.7	1.2	-3.8
1991	-1.4	-1.2	-0.5	-2.1	-0.1	2.1	-4.1
1992	-1.7	-1.2	-0.3	-2.3	-1.1	3.2	-3.9
1993	-1.7	-1.1	0.7	1.1	-1.6	3.1	-4.3
1994	-0.4	-0.9	0.7	1.5	-2.2	2.8	-3.3
1995	-0.4	-0.7	1.1	2.5	-2.1	2.2	-1.7
1995 Q2	-0.5	-0.1	1.3	3.0	-2.5	2.2	-2.6
Q3	-0.6	-1.4	0.3	3.3	2.2	2.1	-0.6
Q4	-0.7	-0.9	0.9	2.6	-1.7	1.9	0.1
1996 Q1	-0.6	-0.1	0.9	0.7	-0.5	0.4	-0.3
Q2	0.3	-0.2	0.4	1.2	-0.5	0.3	0.2

1 Balance as percentage of GNP

2 Data available for Unified Germany from July 1990

5 Total industrial production: index numbers

1990 = 100

	United Kingdom	Germany ¹	France	Italy	EC	United States	Japan ²	Canada ³	Major 7	OECD ⁴
	DVZI	HFGA	HFFZ	HFGB	GACY	HFGD	HFGC	HFFY	GAES	GACX
1980	81.5	83.0	88.0	87.9	83.7	79.3	67.3	81.4	78.7	78.8
1985	88.0	85.6	88.5	84.8	86.5	89.0	79.8	94.5	86.4	86.3
1986	90.1	87.3	89.5	87.9	88.3	89.9	79.6	93.8	87.3	87.1
1987	93.7	87.6	91.3	91.3	90.3	94.3	82.4	98.4	90.5	90.3
1988	98.2	90.7	95.0	96.8	94.2	98.5	90.7	103.6	95.6	95.2
1989	100.3	95.0	98.5	99.8	97.9	100.0	95.9	103.4	98.5	98.3
1990	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1991	96.3	103.6	100.3	99.1	99.8	98.3	101.9	95.8	99.6	99.6
1992	96.2	100.9	100.2	98.9	98.6	101.7	96.1	96.8	99.3	99.5
1993	98.3	93.6	97.6	96.5	95.4	105.2	92.0	101.2	98.8	98.9
1994	103.2	96.9	101.3	101.5	99.8	111.4	93.1	107.8	103.1	103.5
1995	105.9	97.7	103.6	106.9	103.0	115.1	96.2	112.0	106.3	106.6
1995 Q4	106.4	96.4	101.6	109.4	103.2	115.6	97.1	111.7	106.6	107.0
1996 Q1	106.5	97.4	99.1	105.5	102.8	116.4	97.5	112.1	107.0	107.3
Q2	106.8	98.8	99.1	105.2	103.4	118.3	97.3	112.6	107.9	108.3
Q3	107.1	..	..	..	..	119.6	98.5	..	..	..
1995 Oct	105.9	95.6	101.5	106.7	102.2	115.3	96.4	111.8	106.0	106.3
Nov	106.4	96.7	102.0	106.1	102.8	115.6	97.0	111.8	106.4	106.8
Dec	106.8	96.8	101.3	115.3	104.6	115.8	97.8	111.5	107.5	107.8
1996 Jan	106.0	97.8	98.7	103.4	102.6	115.5	98.2	112.4	106.6	107.1
Feb	106.4	96.4	99.1	104.7	102.2	117.1	100.2	112.2	107.7	107.8
Mar	107.1	98.0	99.6	108.4	103.7	116.6	94.2	111.7	106.7	107.1
Apr	106.3	97.9	98.8	103.9	102.5	117.4	97.2	112.4	107.3	107.5
May	107.5	99.0	99.5	104.2	103.6	118.3	99.4	112.6	108.4	108.8
Jun	106.6	99.6	99.1	107.5	104.0	119.2	95.3	112.7	108.1	108.5
Jul	107.3	99.9	101.0	105.0	104.9	119.2	99.6	114.2	109.1	110.0
Aug	106.7	100.5	101.0	104.8	104.7	119.6	97.4	114.4	108.8	109.6
Sep	107.4	..	..	..	..	119.9	98.4	..	..	..
Oct	107.3	..	..	..	..	..	..	..	..	..

Percentage change: average of latest three months on that of corresponding period of previous year

1996 Sep	0.7	..	..	..	..	3.6	3.5	..	..	..
Oct	0.7	..	..	..	..	..	..	..	..	..

Percentage change: average of latest three months on previous three months

1996 Sep	0.3	..	..	..	..	1.1	1.2	..	..	..
Oct	0.0	..	..	..	..	..	..	..	..	..

1 Data available for Unified Germany from 1991

2 Not adjusted for unequal number of working days in a month

3 GDP in industry at factor cost and 1986 prices

4 Some countries excluded from area total

6 Producer prices (manufacturing) Percentage change on a year earlier

	United Kingdom	Germany ¹	France ²	Italy	EC	United States	Japan	Canada	Major 7	OECD
	EUAA	ILAF	ILAG	ILAH	ILAI	ILAJ	ILAK	ILAL	ILAM	ILAN
1980	16.7	7.0	9.4	..	..	13.5	14.9	13.5	..	13.5
1985	5.7	2.1	4.5	7.8	4.9	0.9	-0.8	2.7	1.9	4.9
1986	3.8	-2.4	-2.8	0.2	-1.0	-1.4	-4.7	0.9	-1.5	1.6
1987	4.1	-0.4	0.6	3.0	1.3	2.1	-2.9	2.8	1.1	5.9
1988	4.4	1.6	5.1	3.6	3.4	2.5	-0.3	4.5	2.5	7.3
1989	5.0	3.4	5.5	5.9	4.9	5.1	2.1	1.9	4.4	5.8
1990	5.8	1.5	-1.1	4.1	2.4	5.0	1.6	0.3	3.3	4.7
1991	4.8	2.2	-1.2	3.3	2.2	2.2	1.1	-1.0	1.9	3.3
1992	2.3	1.6	-1.4	1.9	1.3	1.3	-0.9	0.5	0.9	2.3
1993	2.6	-	-2.6	3.8	1.2	1.3	-1.6	3.3	0.7	2.1
1994	2.3	-2.9	1.1	3.7	2.1	0.6	-1.7	5.7	0.8	3.3
1995	4.4	2.2	6.4	7.9	4.7	1.9	-0.6	8.1	2.6	7.1
1996 Q2	2.3	0.1	-3.2	1.4	0.7	2.5	-0.9	0.5	1.2	6.8
Q3	1.2	-0.2	..	..	..	2.8	-0.8	-0.2	..	..
1995 Nov	4.6	1.7	2.6	7.2	3.5	2.1	-0.6	5.6	2.3	7.1
Dec	4.4	1.4	1.7	6.5	3.2	2.3	-0.8	5.1	2.2	7.2
1996 Jan	3.6	0.9	-0.4	5.9	2.3	2.3	-0.8	2.6	1.8	6.9
Feb	3.5	0.7	-1.3	4.9	1.9	2.0	-0.9	2.0	1.4	6.6
Mar	3.4	0.5	-2.0	3.6	1.4	2.4	-0.9	0.6	1.4	6.7
Apr	2.8	0.3	-2.8	2.6	1.1	2.5	-0.9	0.7	1.3	6.8
May	2.3	0.2	-3.6	1.3	0.6	2.2	-0.8	0.9	1.2	6.7
Jun	2.0	-0.1	-3.2	0.2	0.3	2.7	-0.9	-0.2	1.1	6.8
Jul	1.5	-0.2	-3.5	0.2	-	2.5	-0.8	-0.5	0.9	6.8
Aug	1.3	-0.3	-3.7	-	-0.3	3.0	-0.7	-0.1	1.0	7.1
Sep	0.9	-0.2	-3.8	..	..	2.9	-0.8	-	..	..
Oct	1.0	..	..	..	..	..	..	..	..	..
Nov	0.8	..	..	..	..	..	..	..	..	..

1 Data available for Unified Germany from 1991

2 Producer prices in intermediate goods

3 OECD includes 'higher inflation' countries (Mexico and Turkey)

7 Total employment: index numbers¹

1990 = 100

	United Kingdom	Germany ^{2,3}	France ³	Italy	EC	United States ³	Japan	Canada ³	Major 7	OECD
	DMBC	GAAR	GAU	GAAS	GADW	GADT	GADU	GADS	GAEU	GADV
1980	93.5	94.8	96.6	97.0	100.0	84.2	88.6	84.3	89.0	..
1985	91.2	93.1	95.6	97.3	93.1	90.9	92.9	89.1	92.3	92.1
1986	91.4	94.6	96.1	97.9	93.8	92.9	93.7	91.8	93.6	93.4
1987	93.4	95.3	96.5	97.8	94.9	95.4	94.6	94.3	95.2	95.0
1988	96.7	96.1	97.5	99.0	96.8	97.5	96.2	97.3	97.1	97.0
1989	99.4	97.5	99.0	98.6	98.4	99.5	98.1	99.3	98.8	98.8
1990	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1991	97.1	101.9	100.0	101.3	99.9	99.0	102.0	98.1	99.9	99.8
1992	94.6	102.8	99.4	100.7	98.7	100.0	103.0	97.5	100.1	99.7
1993	93.6	100.9	98.2	95.9	96.3	101.0	103.0	98.8	100.1	99.4
1994	94.2	99.3	98.4	94.0	95.9	104.0	104.0	101.0	101.4	100.6
1995	95.0	99.1	99.5	93.9	96.5	106.0	103.0	102.6	102.2	101.6
1996 Q2	95.2	97.8	99.4	94.2	96.8	107.3	104.6	104.3	102.9	102.3
Q3	..	..	..	..	..	108.6	105.1	106.4	..	..
1996 Aug	..	..	..	..	..	108.7	104.7	107.4	..	..
Sep	..	..	..	..	..	108.2	105.1	104.8	..	..
Percentage change, latest quarter on that of corresponding period of previous year										
1996 Q2	0.2	-1.0	-0.1	0.3	0.2	1.2	0.3	1.3	0.4	0.5
Q3	..	..	..	..	..	1.8	0.7	1.1	..	..
Percentage change latest quarter on previous quarter										
1996 Q2	0.1	0.5	-0.5	1.2	0.8	2.1	3.1	3.5	1.8	1.7
Q3	..	..	..	..	..	1.2	0.5	2.0	..	..

1 Not seasonally adjusted except for the United Kingdom

2 Data available for Unified Germany from 1991

3 Excludes members of armed forces

8 Average wage earnings in manufacturing¹ Percentage change on a year earlier

	United Kingdom ²	Germany ³	France	Italy	EC	United States	Japan	Canada	Major 7	OECD
	ILAY	ILAO	ILAP	ILAQ	ILAR	ILAS	ILAT	ILAU	ILAV	ILAW
1980	17.9	6.5	14.8	18.7	11.0	8.7	7.3	10.1	9.7	9.3
1985	9.1	4.2	6.1	11.2	7.1	3.8	3.3	3.7	4.5	4.5
1986	7.7	4.0	4.4	4.9	5.4	2.1	1.7	2.9	3.2	3.2
1987	8.1	3.8	3.1	6.5	5.3	1.8	1.6	3.3	3.1	3.1
1988	8.5	4.6	3.1	6.1	5.4	2.8	4.5	3.9	4.0	4.0
1989	8.8	3.5	3.8	6.0	5.8	2.9	5.5	5.3	4.5	4.6
1990	9.3	5.1	4.4	7.3	6.9	3.3	5.0	4.7	5.1	5.0
1991	8.2	5.7	4.3	9.8	7.1	3.3	3.5	4.7	4.9	4.9
1992	6.6	6.2	3.7	5.5	5.6	2.4	1.3	3.5	3.2	3.2
1993	4.5	-3.6	2.4	3.7	4.5	2.5	0.5	2.1	2.6	2.6
1994	4.8	3.0	1.8	3.4	3.8	2.8	2.3	1.6	3.0	3.0
1995	4.5	3.3	2.3	3.1	3.8	2.5	3.1	1.5	3.0	3.0
1996 Q1	4.4	..	2.6	3.2	..	2.7	1.9	1.7	3.3	3.3
Q2	4.1	..	2.5	2.5	..	3.5	1.3	1.6	2.8	3.0
Q3	4.0	..	2.6	..	..	3.5	..	..	..	..
1995 Oct	4.0	4.1	2.6	3.9	4.2	2.7	2.3	2.4	2.8	2.8
Nov	3.7	..	..	3.9	4.2	2.5	1.2	1.7	2.7	2.7
Dec	4.1	..	..	3.9	4.3	2.7	4.3	2.2	4.1	4.1
1996 Jan	4.0	..	2.6	3.2	..	3.4	-0.1	1.4	2.7	2.7
Feb	4.6	..	..	3.3	..	2.6	3.0	1.8	3.7	3.7
Mar	4.6	..	..	3.2	..	2.2	2.7	1.9	3.6	3.6
Apr	4.0	..	2.5	3.4	..	3.5	2.4	1.6	2.7	2.7
May	4.0	..	..	2.2	..	3.3	1.5	0.9	3.0	3.3
Jun	4.2	..	..	1.8	..	3.6	-0.1	2.4	2.7	3.0
Jul	3.9	..	2.6	2.0	..	3.6	4.1	3.7	3.4	3.4
Aug	3.8	..	..	1.9	..	3.6	3.1	3.1	3.5	4.3
Sep	4.2	..	..	..	..	3.4	..	..	..	..

1 Definitions of coverage and treatment vary among countries

2 Figures for Great Britain refer to weekly earnings; others are hourly

3 Western Germany (Federal Republic of Germany before unification)

9 Retail Sales (volume): index numbers

1990 = 100

	United Kingdom	Germany ¹	France	Italy	EC	United States	Japan	Canada	Major 7	OECD
	EAPS	GADD	GADC	GADE	GADH	GADA	GADB	GACZ	GAEW	GADG
1980	..	83.5	91.5	72.4	80.2	72.2	84.7	74.8	76.7	77.5
1985	..	80.8	90.5	87.0	84.3	85.9	82.0	89.3	85.2	85.2
1986	87.0	83.6	92.6	92.9	88.0	90.7	83.3	93.4	89.1	89.0
1987	91.5	86.9	94.8	97.6	91.5	93.1	87.9	98.6	92.3	92.1
1988	97.3	89.8	98.2	93.9	94.0	96.8	91.4	102.4	95.4	95.2
1989	99.3	92.2	99.4	101.7	97.6	99.3	95.0	102.3	98.3	98.1
1990	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1991	98.7	105.7	100.1	96.6	100.8	97.6	102.0	89.6	99.0	99.2
1992	99.4	103.6	100.3	101.6	100.7	100.9	99.0	90.8	100.3	100.3
1993	102.4	99.3	100.3	99.2	98.9	106.3	94.2	93.5	102.1	101.3
1994	106.2	97.5	100.8	93.4	97.9	112.9	92.9	101.1	105.1	104.0
1995	107.5	98.0	100.2	89.1	98.8	117.5	98.6	101.5	107.9	107.3
1996 Q1	108.7	..	101.6	..	98.6	120.0	101.1	101.6	109.3	108.6
Q2	110.2	99	99.4	..	99.0	119.3	99.0	101.0	109.0	108.0
1996 Feb	108.9	..	103.3	..	97.8	121.0	103.1	102.0	110.0	109.2
Mar	109.1	99	98.7	..	98.0	120.2	100.2	101.4	108.8	108.2
Apr	109.6	99	99.1	..	99.0	119.0	99.0	100.9	109.0	108.0
May	109.6	98	99.2	..	99.0	120.0	99.0	101.0	109.0	108.0
Jun	111.2	99	100.0	..	99.0	119.0	99.0	101.0	109.0	108.0
Jul	110.5	100	100.0	..	99.0	119.0	97.0	102.0	109.0	108.0
Aug	111.5	..	103.0	..	..	..	97.0	101.0	..	..

Percentage change average of latest three months on that of corresponding period of previous year

1996 Jul	2.7	..	-1.4	..	0.0	1.6	0.0	0.0	1.0	0.6
Aug	3.5	..	-0.2	..	..	..	-1.3	-0.5	..	..

Percentage change average of latest three months on previous three months

1996 Jul	1.1	..	-0.6	..	0.7	-0.6	-2.4	-0.1	-0.2	-0.4
Aug	1.6	..	2.0	..	..	..	-1.7	0.2	..	..

1 From 1994 data refers to Unified Germany and is expressed in base 1990 =100 using annual average data for Western Germany

10 World trade¹

1990 = 100

	Export of manufactures			Import of manufactures			Export of goods			Import of goods			World trade	
	World	OECD	Other	World	OECD	Other	World	OECD	Other	World	OECD	Other	manufactures	goods
	GAFE	GAFF	GAFG	GAFH	GAFI	GAFJ	GAFK	GAFI	GAFM	GAFN	GAFO	GAFP	GAFR	GAFO
1990	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1991	103.1	102.3	106.2	104.2	103.4	106.3	103.6	103.3	104.3	103.8	103.1	105.8	103.6	103.7
1992	107.8	107.1	110.7	110.7	109.8	113.0	109.7	108.5	106.8	108.2	109.3	111.3	109.2	108.9
1993	113.3	109.0	129.5	115.0	110.8	126.6	114.7	111.5	122.7	114.7	110.5	126.7	114.3	114.6
1994	124.4	119.4	144.0	127.1	123.5	136.8	124.1	121.2	132.0	124.8	121.1	135.5	125.8	124.5
1995	133.5	128.8	151.9	136.8	134.3	138.7	132.3	129.6	139.4	132.5	129.1	142.1	135.1	132.4
1992 Q1	107.4	107.1	108.5	109.2	109.0	109.9	108.4	108.4	105.3	107.7	108.4	108.6	108.3	108.0
Q2	106.9	106.0	110.4	109.9	109.0	112.5	109.2	107.5	106.6	107.4	108.7	110.9	108.4	108.3
Q3	108.4	107.5	111.7	111.8	110.8	114.3	110.8	109.2	107.5	108.9	110.4	112.5	110.1	109.8
Q4	108.6	107.7	112.4	111.7	110.4	115.2	110.4	109.0	107.9	108.9	109.6	113.2	110.1	109.6
1993 Q1	109.3	107.1	117.9	111.9	109.2	119.3	110.5	109.1	112.2	111.2	108.7	118.2	110.6	110.6
Q2	113.5	109.2	129.9	114.0	109.8	125.6	115.0	111.7	123.8	114.3	109.9	126.8	113.7	114.6
Q3	114.0	108.8	134.2	115.6	110.7	128.9	115.6	111.2	127.4	115.7	110.7	130.0	115.5	115.6
Q4	116.2	111.1	136.1	118.6	113.6	132.5	117.7	114.1	127.5	117.7	112.7	131.8	117.4	117.7
1994 Q1	119.0	113.7	139.2	121.2	116.9	132.8	119.3	116.0	128.2	120.1	115.8	132.4	120.1	119.7
Q2	123.0	118.2	142.1	125.1	121.6	134.7	122.6	119.9	130.0	123.3	119.6	133.8	124.1	123.0
Q3	126.1	120.7	146.8	128.8	124.9	139.3	125.6	122.3	134.6	126.3	122.4	137.7	127.4	126.0
Q4	129.7	125.0	148.0	133.2	130.7	140.1	128.9	126.6	135.2	129.6	126.6	138.1	131.5	129.3
1995 Q1	131.3	127.0	148.0	134.3	132.0	140.4	130.5	128.2	136.6	130.7	127.6	139.4	132.8	130.6
Q2	132.0	127.9	148.1	135.4	133.6	140.1	130.9	128.7	136.8	131.4	128.7	139.3	133.7	131.1
Q3	134.8	129.5	155.6	138.1	135.0	146.7	133.3	130.1	142.0	133.6	129.7	144.8	136.5	133.5
Q4	136.0	130.9	155.7	139.3	136.7	146.6	134.3	131.4	142.1	134.3	130.6	144.7	137.6	134.3
Percentage change, latest quarter on corresponding quarter of previous year														
1995 Q3	6.9	7.3	6.0	7.2	8.1	5.3	6.1	6.4	5.5	5.8	6.0	5.2	7.1	6.0
Q4	4.9	4.7	5.2	4.6	4.6	4.6	4.2	3.8	5.1	3.6	3.2	4.8	4.6	3.9
Percentage change, latest quarter on previous quarter														
1995 Q3	2.1	1.3	5.1	2.0	1.0	4.7	1.8	1.1	3.8	1.7	0.8	3.9	2.1	1.8
Q4	0.9	1.1	0.1	0.9	1.3	-0.1	0.8	1.0	0.1	0.5	0.7	-0.1	0.8	0.6

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

Chart I: Gross domestic product

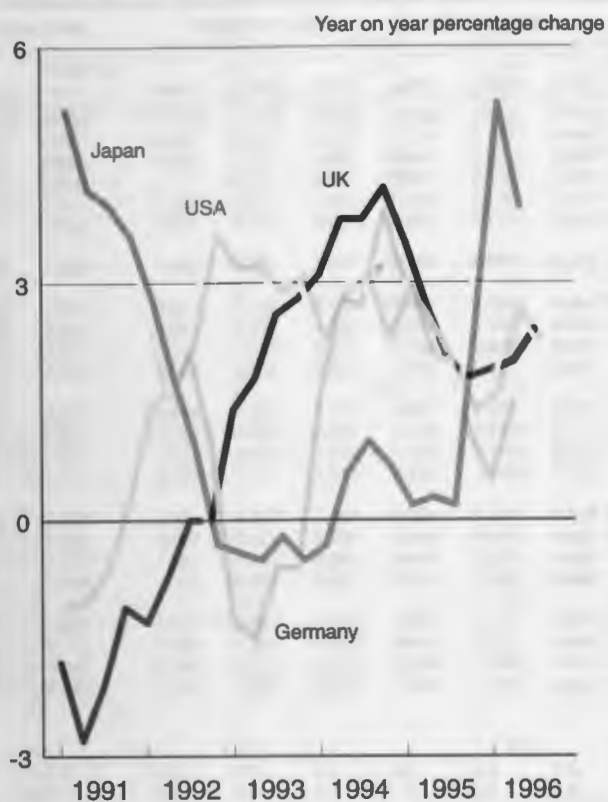


Chart II: Consumer price index



Chart III: Standardised unemployment

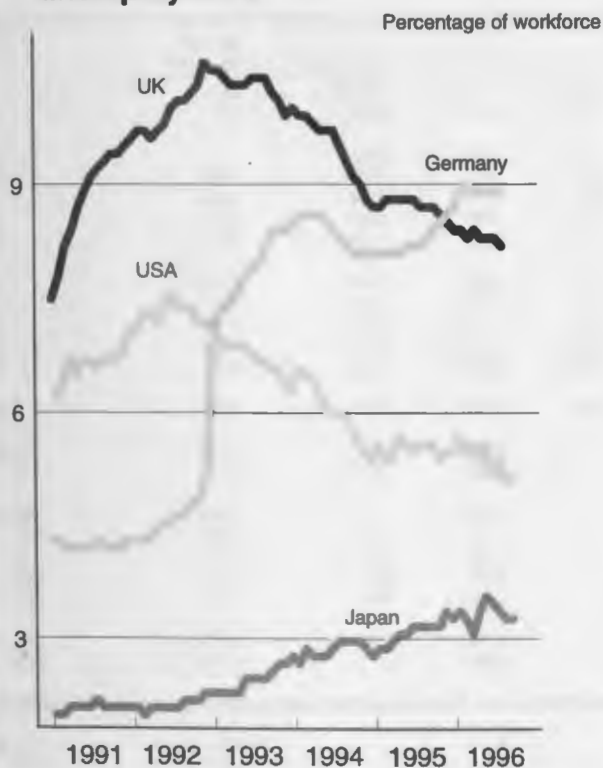


Chart IV: Current account balance

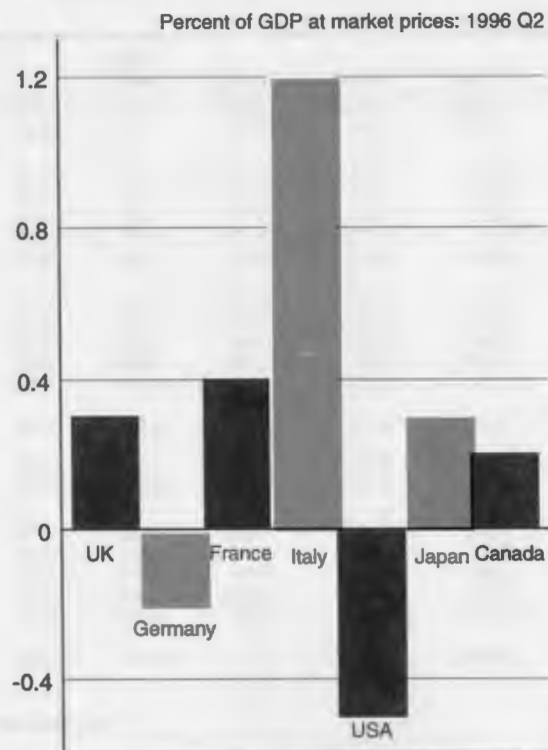


Chart V: Industrial Production

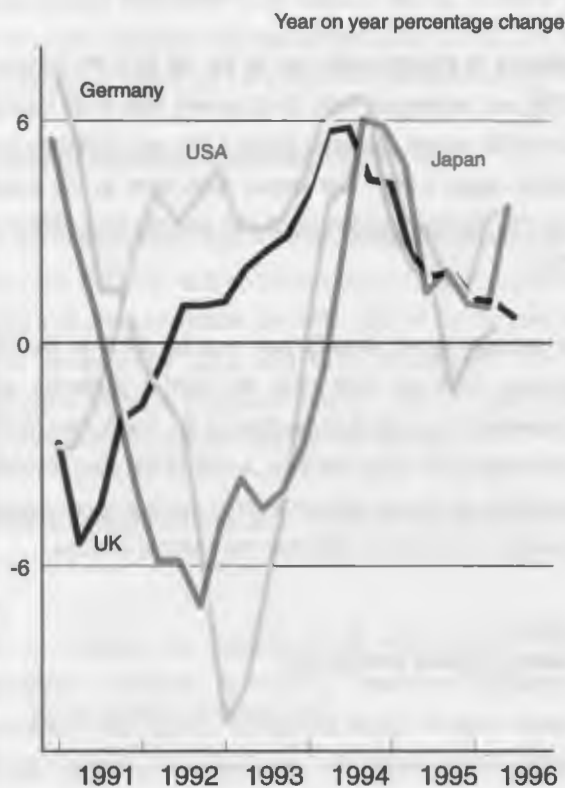


Chart VI: Producer price inflation

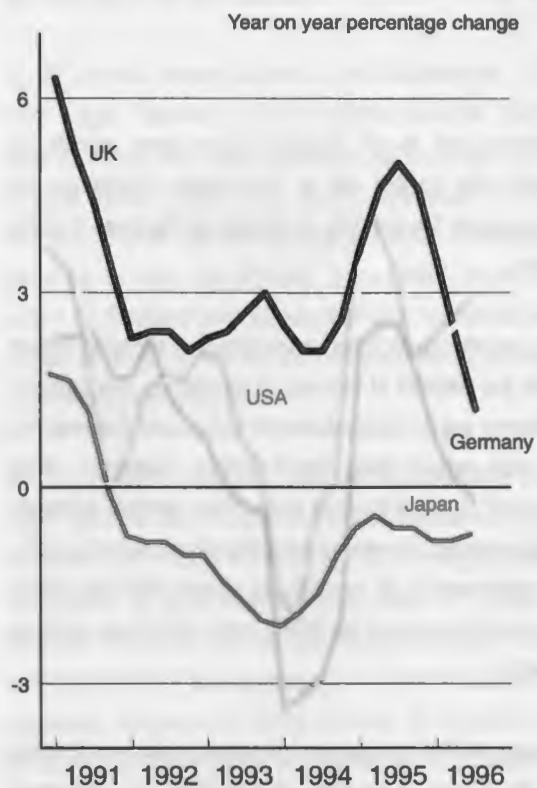


Chart VII: Employment

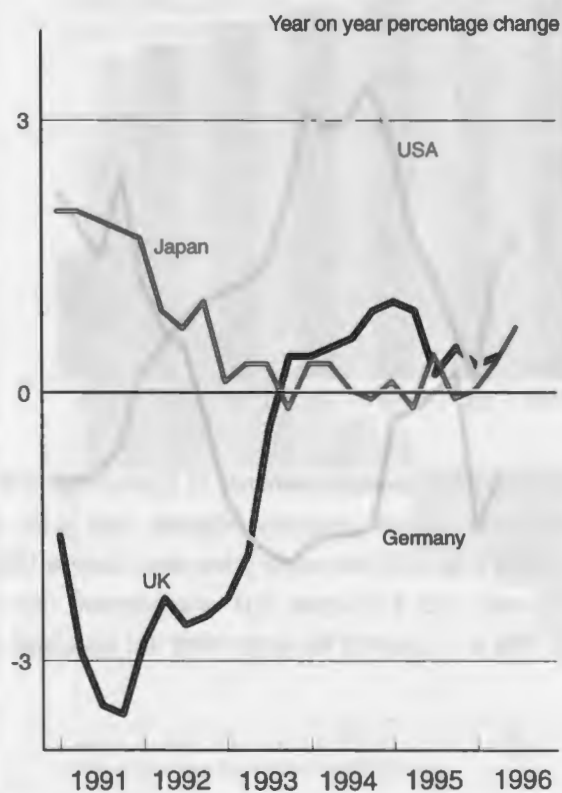
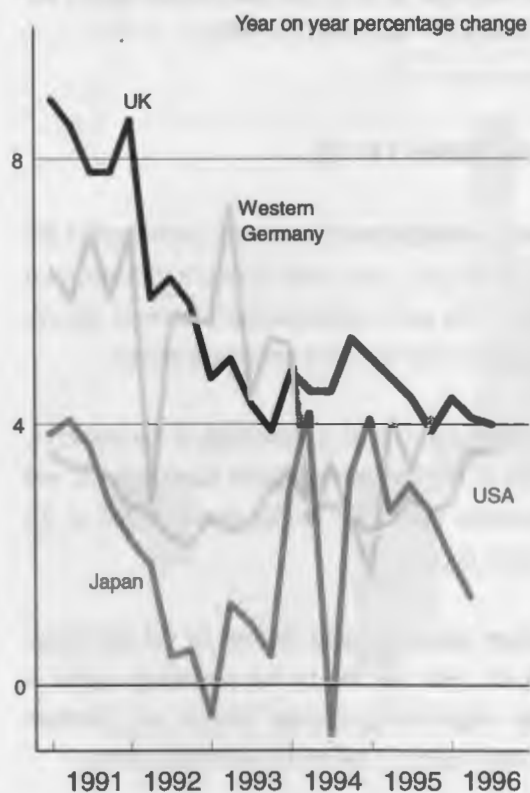


Chart VIII: Wage earnings (manufacturing)



Regional Economic Indicators

by Adrian Richards and Philip Blackburn, Economic Assessment - Office for National Statistics

Overview

- Unemployment fell in all regions in the three months to October, with the largest fall in the North. Employees in employment rose in the majority of regions in the three months to September.

- In the four months to October, manufacturers reported output increasing in the majority of regions. In all regions, the majority of manufacturers expect rising domestic orders and the majority of regions also expect rising export orders. Generally, firms expect domestic demand to grow faster than external demand. As would be expected, in regions reporting strong output growth, more firms were working at capacity; in regions reporting falling output, with the exception of the North, more firms were working below capacity.

- There were signs that the increase in house prices was feeding through to the supply of housing. During 1996 Q3, compared with 1995 Q3, the number of dwellings started rose strongly, by 17.5% overall. The most significant rises were in the East Midlands, the South West and the West Midlands. Recent evidence, also suggests a pick-up in the number of completions. House prices rose strongly in the UK during the year with the largest rises in Northern Ireland and the North.

Labour market (tables 7 to 13)

1. The **claimant unemployment** rate, as a percentage of the workforce, fell in the UK in the three months to October, from 7.6% to 7.2%. In this period, unemployment fell in all regions. The largest fall was in the North (0.6 percentage points).

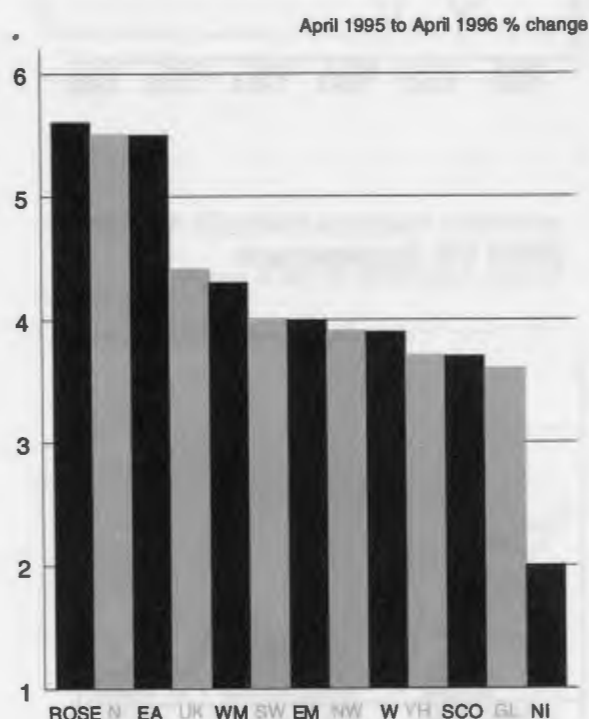
2. The **unemployment** rate as a percentage of the workforce, remains lowest in the Rest of the South East at 5.4%, and highest in Northern Ireland at 10.7%, despite a fall of 0.5 percentage points since July.

3. The **long-term unemployment** rate fell by 0.2 percentage points in the UK. The rate fell by 0.2 percentage points in Yorkshire and Humberside, Greater London and Northern Ireland. In all other regions, it fell by 0.1 percentage points.

4. **Employees in employment** rose in the UK by 0.3% between June 1996 and September 1996. Employment rose in all regions over this period, except Scotland (down 1.2%) and Yorkshire and Humberside (down 0.2%). The largest rises were in the South West (up 1%), Greater London (up 0.8%) and the East Midlands (up 0.7%).

5. Total **average gross weekly pay** rose by 4.4% in the UK between April 1995 and April 1996. As Chart 1 illustrates, the largest increases in pay were in the Rest of the South East (5.6% rise), the North (5.5% rise) and East Anglia (5.5% rise). Greater London still has by far the highest level of average gross weekly pay, although it increased by less than the national average.

Chart 1
Average gross weekly pay



6. Great Britain's **ILO unemployment** rate as a percentage of the economically active, not seasonally adjusted, was 8.1% in Summer 1996, a fall of 0.5 percentage points since Summer 1995. Greater London had the highest ILO unemployment rate in Summer 1996 at 11.5%, and the South West had the lowest at 6.4%.

7. **Total employment**, as measured by the **Labour Force Survey**, not seasonally adjusted, rose in Great Britain between Summer 1995 and Summer 1996 by 0.8%. During this period, employment increased in all regions, except Scotland (down 0.8%) and Yorkshire and Humberside (down 0.4%). The largest rises were in Wales (up 1.8%) and the East Midlands (up 1.6%).

Index of industrial production (table 14)

8. Between 1996 Q1 and 1996 Q2, **industrial production** grew by 0.3% in the UK as a whole. Industrial production rose strongly over this period in Wales by 1.6%, but fell in Northern Ireland and Scotland by 0.6% and 0.3% respectively. The latest available industrial production data for the UK shows continued growth of 0.3% between 1996 Q2 and 1996 Q3.

CBI/BSL regional trends in manufacturing (tables 15 to 19)

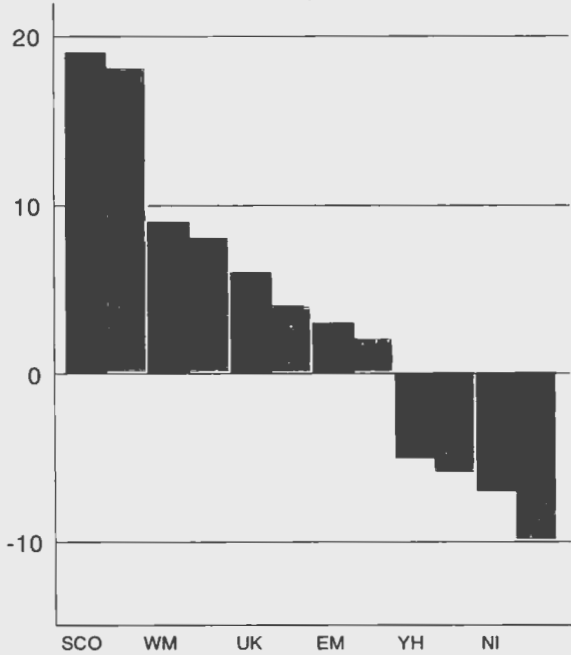
9. In October, the majority of UK manufacturers expected business conditions to improve. **Business Optimism** was positive in all regions, except the North, Northern Ireland and East Midlands. Manufacturers in Northern Ireland, Wales and North West have become significantly less optimistic since July. Northern Ireland went from having the highest optimism balance

of all regions in July, to a negative (pessimistic) balance in October. Optimism was strongest in East Anglia, Scotland and the South West. Improvement in expectations since July has also been strongest in these regions.

10. All regions, except Yorkshire and Humberside, the North and East Anglia, reported positive **output** balances (firms reporting rises in output less those reporting falls) in the four months to October 1996. Despite their lack of optimism, manufacturers in Northern Ireland had the strongest output. Compared with the balances in July, significantly more firms reported increased output in Scotland and Wales, but less manufacturers reported growth in output in the North, Northern Ireland, East Anglia and Yorkshire and Humberside.

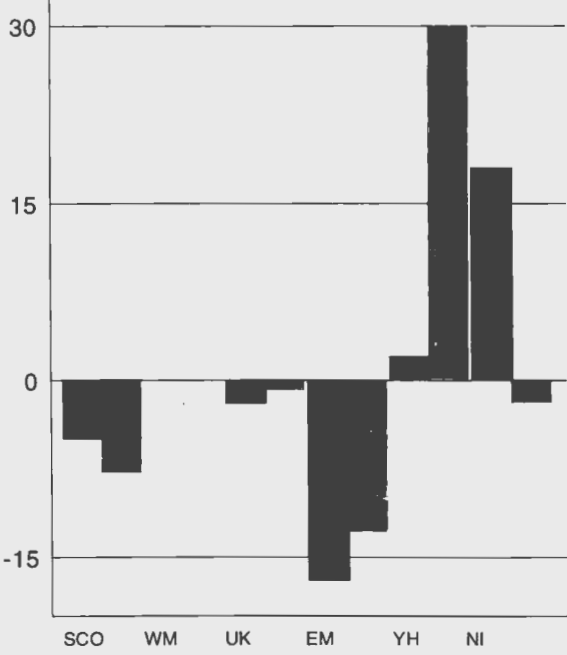
11. There was a small fall of 2 percentage points in the number of **firms working below capacity** in the UK between July 1996 and October 1996. Charts 2 and 3 highlight the significant increase in the number of firms working below capacity in East Anglia and Northern Ireland, consistent with the reduction in firms reporting output growth in these regions in the past 4 months. There were significant increases in firms working *at* capacity in the East Midlands, the South West and Wales, also consistent with more firms reporting output growth in these regions in the past 4 months.

Chart 2
CBI - Manufacturing volume of output for past 4 months
* Balance
July 1996 to October 1996 change



* % of firms reporting rises less those reporting falls

Chart 3
CBI - Manufacturing firms working below capacity
change in percentages
July 1996 to October 1996



12. **Expectations of output** in the coming months were positive in all regions in October, except the North. The strongest expectations of output growing were in Yorkshire and Humberside and East Anglia. Compared with July, the majority of manufacturers have scaled down their expectations of future growth, most significantly in Northern Ireland and the North.

13. **Volumes of new orders** (in 4 months from October) are expected to increase in all regions, with very significant expectations in the Wales and East Anglia. Expectations in October have increased sharply since July in East Anglia. However, Northern Ireland continues to be more downbeat about the future with significantly less manufacturers expecting growth in new orders.

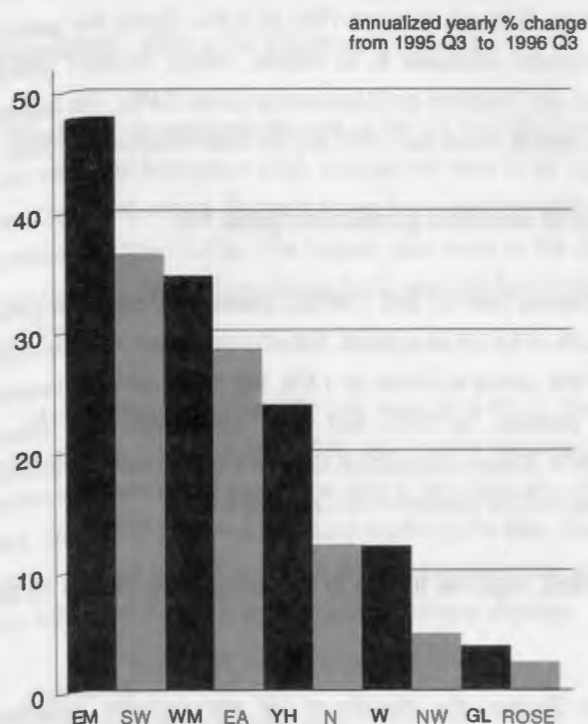
14. The balance for **volumes of new export orders** (next 4 months) showed increased external demand in all regions, except East Anglia, the North and the West Midlands. All regions expect external demand to increase in the next 4 months, with by far the strongest expectation in the South West. Expectations significantly improved in the South West since July, but manufacturers in the North are significantly less optimistic about the strength of export demand. Generally, more firms are optimistic about domestic demand than external demand, although more firms in the South West, the North West, and Northern Ireland expect a stronger external market.

Housing Market (tables 20 to 22)

15. The number of **dwellings started** in England in 1996 Q3 was 17.5% above 1995 Q3, indicating a strong pick-up in future supply of new housing over the year. As illustrated in Chart 4, dwellings started rose in all regions over this period, with demand rising most significantly in East Midlands (up 47.7%), the South West (up 36.4%) and the West Midlands (up 34.5%). The smallest rise was in the Rest of the South East at 2.4%.

16. Housing completions have remained sluggish, reflecting the earlier slowdown in housing starts. Between 1995 Q3 and 1996 Q3 the number of **dwellings completed** in England fell by 2.9%. Significant increases in the North West (up 18.7%) and the North (up 9.8) were offset by significant falls in the South West (down 15.2%), Yorkshire and Humberside (down 14.8%) and Greater London (down 13.4%).

Chart 4
Permanent dwellings started



17. Increased demand for housing has driven up house prices over the year. The Department of the Environment's all dwellings **house prices** index for the UK rose by 4.1% between 1995 Q3 and 1996 Q3. All regions experienced rises over this period, the largest being in Northern Ireland (up 8.3%), and the North (up 6.3%).

1 Gross domestic product at factor cost: current prices

£ million and percentages

	United Kingdom ¹ (£m)	Percentage of the UK ¹											
		North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCIX	DCJF	DCJD	DCJC	DCIZ	LRAD	LRAE	DCJA	DCJB	DCJE	DCJG	DCJH	DCJI
1985	289 912	5.1	8.2	6.8	3.5	14.6	20.2	7.5	8.4	10.6	4.2	8.7	2.2
1986	319 893	4.9	8.2	6.8	3.6	14.8	20.4	7.6	8.4	10.5	4.2	8.5	2.2
1987	351 198	4.9	8.0	6.8	3.5	14.9	20.5	7.6	8.4	10.4	4.3	8.5	2.1
1988	394 712	4.8	7.9	6.7	3.6	14.8	20.9	7.7	8.4	10.4	4.3	8.4	2.1
1989	435 325	4.8	7.9	6.9	3.6	14.8	21.0	7.7	8.4	10.2	4.3	8.3	2.1
1990	472 046	4.7	7.9	6.8	3.6	14.8	21.0	7.7	8.5	10.0	4.3	8.5	2.2
1991	489 905	4.8	7.9	6.8	3.6	14.8	20.9	7.7	8.5	9.9	4.3	8.6	2.3
1992	510 193	4.8	7.8	6.8	3.7	14.8	20.7	7.8	8.5	9.9	4.2	8.7	2.3
1993	539 013	4.7	7.7	6.8	3.6	15.1	20.7	7.8	8.5	9.9	4.1	8.7	2.3
1994	570 386	4.7	7.7	6.8	3.7	15.0	20.8	7.9	8.4	9.9	4.2	8.8	2.3

1 UK less continental shelf and statistical discrepancy.

Source: Office for National Statistics

2 Gross domestic product at factor cost: £ per head

£

	United Kingdom ¹	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCJJ	DCJR	DCJP	DCJO	DCJL	LRAF	LRAG	DCJM	DCJN	DCJQ	DCJS	DCJT	DCJU
1984	4 619	4 284	4 332	4 586	4 740	5 588	5 087	4 367	4 206	4 373	3 954	4 426	3 709
1989	7 590	6 756	6 968	7 471	7 694	9 461	8 577	7 153	7 017	6 951	6 570	7 094	5 842
1990	8 201	7 183	7 472	7 973	8 347	10 222	9 265	7 763	7 661	7 411	7 041	7 856	6 409
1991	8 475	7 541	7 777	8 292	8 539	10 506	9 506	8 037	7 869	7 606	7 241	8 234	6 913
1992	8 795	7 881	7 985	8 548	8 997	10 947	9 772	8 409	8 213	7 905	7 359	8 693	7 167
1993	9 263	8 230	8 330	8 953	9 381	11 711	10 289	8 843	8 621	8 346	7 660	9 166	7 562
1994	9 768	8 675	8 733	9 389	9 961	12 278	10 858	9 351	9 045	8 812	8 173	9 734	8 025

1 UK less continental shelf and statistical discrepancy.

Source: Office for National Statistics

3 Total personal disposable income: £ per head

£

	United Kingdom ¹	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCSD	DCSM	DCSK	DCSJ	DCSG	DCSF	DCWI	DCSH	DCSI	DCSL	DCSN	DCSO	DCSP
1984	3 958	3 633	3 672	3 814	4 000	4 805	4 206	3 919	3 654	3 754	3 535	3 885	3 433
1989	6 141	5 542	5 778	6 031	6 257	7 376	6 675	6 066	5 780	5 753	5 364	5 762	5 296
1990	6 573	5 946	6 182	6 348	6 614	7 853	7 054	6 372	6 241	6 154	5 786	6 509	5 762
1991	7 020	6 484	6 619	6 706	7 118	8 387	7 390	6 827	6 715	6 529	6 322	7 024	6 396
1992	7 497	6 909	7 023	7 015	7 670	8 917	7 875	7 394	7 187	6 979	6 697	7 630	6 853
1993	7 861	7 213	7 309	7 423	7 840	9 553	8 323	7 675	7 514	7 283	6 840	7 921	7 231
1994	8 101	7 423	7 473	7 686	8 190	9 677	8 539	7 942	7 733	7 572	7 245	8 210	7 536

Source: Office for National Statistics

4 Household disposable income: £ per head

£

	United Kingdom ¹	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DEPZ	DEQA	DEQB	DEQC	DEQD	DEQE	DEQF	DEQG	DEQH	DEQI	DEQJ	DEQK	DEQL
1990	6 627	5 992	6 216	6 366	6 806	7 668	7 230	6 720	6 127	6 166	6 018	6 540	5 645
1991	7 053	6 561	6 620	6 740	7 197	8 107	7 571	7 157	6 613	6 571	6 428	7 033	6 211
1992	7 506	6 975	7 068	7 103	7 756	8 556	7 977	7 640	7 012	7 039	6 864	7 705	6 518
1993	7 755	7 213	7 225	7 354	7 906	9 033	8 264	7 773	7 279	7 230	6 977	7 919	6 828
1994	7 983	7 445	7 482	7 672	8 193	9 034	8 388	8 072	7 512	7 543	7 381	8 201	7 241

Source: Office for National Statistics

5 Consumers' expenditure: £ per head

£

	United Kingdom ¹	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCVD	DCVM	DCVK	DCVJ	DCVG	DCVE	DCWD	DCVH	DCVI	DCVL	DCVN	DCVO	DCVP
1984	3 519	3 049	3 146	3 290	3 412	4 405	3 937	3 460	3 235	3 297	3 126	3 399	2 809
1989	5 707	4 908	5 079	5 298	5 704	7 219	6 346	5 781	5 280	5 422	4 993	5 211	4 715
1990	6 038	5 177	5 293	5 748	6 025	7 508	6 670	6 174	5 578	5 724	5 406	5 597	5 122
1991	6 314	5 531	5 603	5 943	6 343	7 681	6 991	6 475	5 815	5 999	5 736	5 843	5 461
1992	6 581	5 872	6 036	6 106	6 599	7 997	7 345	6 601	5 914	6 217	5 968	6 141	5 696
1993	6 968	6 313	6 529	6 480	6 797	8 469	7 747	6 810	6 291	6 618	6 148	6 655	5 920
1994	7 331	6 569	6 856	6 864	7 121	8 792	8 128	7 135	6 878	7 023	6 352	6 970	6 264

Source: Office for National Statistics

6 Average weekly household disposable income and expenditure

£

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
Average weekly disposable household income													
	DCXQ	DCXR	DCXS	DCXT	DCXU	DCXV	DCXW	DCXX	DCXY	DCXZ	DCYA	DCYB	DCYC
1994-95	298.43	253.73	282.21	297.34	282.35	341.57	344.03	309.02	264.91	277.09	241.51	292.86	280.16
Average weekly household expenditure													
	DCYD	DCYE	DCYF	DCYG	DCYH	DCYI	DCYJ	DCYK	DCYL	DCYM	DCYN	DCYO	DCYP
1994-95	283.58	239.64	274.23	296.07	257.08	316.25	321.00	276.80	259.93	271.87	230.73	280.53	295.33

Source: Family Expenditure Survey, Office for National Statistics

7 Total average gross weekly pay¹

£

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DEOG	DCQK	DCQI	DCQH	DCQE	DCPI	DEOH	DCQF	DCQG	DCQJ	DCQL	DCQM	DCQN
1991 Apr	283.80	258.00	257.90	261.30	268.90	361.10	295.30	265.60	261.10	267.10	252.20	265.30	245.90
1992 Apr	303.80	282.30	277.30	276.10	288.40	385.30	315.60	283.10	279.90	285.50	270.90	286.70	269.60
1993 Apr	316.00	288.60	287.40	285.70	292.20	408.00	328.70	298.40	291.90	298.80	281.20	296.80	282.40
1994 Apr	324.70	297.00	298.60	293.50	302.70	415.50	339.10	308.70	301.40	307.50	291.40	300.80	286.50
1995 Apr	335.30	299.10	305.00	305.50	308.60	439.50	346.40	313.80	311.00	317.50	301.30	313.40	300.20
1996 Apr	350.20	315.60	316.40	317.80	325.50	455.50	365.60	326.50	324.30	330.00	313.00	324.90	306.20

¹ Average gross weekly earnings of full-time employees on adult rates whose pay for the survey pay-period was not affected by absence.

Sources: New Earnings Survey, Office for National Statistics; Department of Economic Development, Northern Ireland

8 Claimant unemployed as a percentage of total workforce

Seasonally adjusted

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCKH	DCKP	DCKN	DCKM	DCKJ	DCRA	DEOB	DCKK	DCKL	DCKO	DCKQ	DCKR	DCPL
1991	8.0	10.3	8.7	7.2	5.8	8.0	5.9	6.9	8.4	9.3	9.0	8.8	12.9
1992	9.7	11.1	9.9	9.0	7.6	10.5	8.2	9.2	10.3	10.6	10.0	9.4	13.8
1993	10.3	11.9	10.2	9.5	8.1	11.6	9.0	9.5	10.8	10.7	10.3	9.7	13.7
1994	9.4	11.6	9.6	8.7	7.1	10.7	7.7	7.1	9.9	10.0	9.3	9.3	12.6
1995	8.2	10.6	8.8	7.7	6.2	9.7	6.5	7.0	8.4	8.8	8.5	8.2	11.4
1995 Nov	8.0	10.3	8.6	7.5	6.1	9.5	6.2	6.7	8.1	8.5	8.3	8.0	11.2
Dec	8.0	10.3	8.5	7.5	6.1	9.4	6.2	6.7	8.1	8.5	8.3	8.0	11.2
1996 Jan	7.9	10.2	8.5	7.4	6.0	9.3	6.0	6.6	7.9	8.4	8.2	8.0	11.1
Feb	7.9	10.1	8.5	7.4	5.9	9.3	6.0	6.6	8.0	8.5	8.4	8.0	11.1
Mar	7.8	10.1	8.4	7.3	5.8	9.2	6.0	6.5	7.9	8.4	8.3	8.0	11.0
Apr	7.8	10.1	8.4	7.3	5.8	9.1	5.9	6.5	7.8	8.4	8.4	8.1	11.1
May	7.7	10.0	8.3	7.2	5.8	9.0	5.9	6.4	7.8	8.3	8.3	8.1	11.1
Jun	7.7	9.8	8.2	7.1	5.8	9.0	5.8	6.4	7.7	8.3	8.2	8.1	11.2
Jul	7.6	9.7	8.1	7.0	5.8	8.9	5.7	6.3	7.6	8.2	8.1	8.0	11.2
Aug	7.5	9.6	8.1	6.9	5.8	8.8	5.6	6.2	7.5	8.2	8.1	8.0	11.3
Sep	7.4	9.4	7.9	6.8	5.7	8.7	5.5	6.1	7.4	8.0	8.0	7.9	11.1
Oct ¹	7.2	9.1	7.8	6.6	5.5	8.5	5.4	5.9	7.2	7.9	7.9	7.8	10.7

¹ Provisional

Source: Office for National Statistics

9 Long-term claimant unemployed as a percentage of total workforce (those out of work for 12 months or more)

Percentages

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCKS	DCLA	DCKY	DCKX	DCKU	DCRB	DCKT	DCKV	DCKW	DCKZ	DCLB	DCLC	DCLD
1996 Jan	2.9	3.9	3.0	2.6	1.8	4.0	2.0	2.1	3.1	2.9	2.7	2.6	6.1
Apr	2.9	3.9	3.0	2.5	1.8	4.0	2.0	2.1	3.1	2.9	2.7	2.6	6.0
Jul	2.8	3.7	2.9	2.4	1.8	3.9	1.9	2.0	2.9	2.8	2.7	2.5	5.8
Oct	2.6	3.6	2.7	2.3	1.7	3.7	1.8	1.9	2.8	2.7	2.6	2.4	5.6

Source: Office for National Statistics

10 ILO unemployed as a percentage of the economically active, not seasonally adjusted

Percentages

	United Kingdom ¹	North	Yorks & Humberside	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	LRAH	LRAI	LRAJ	LRAK	LRAL	LRAM	LRAN	LRAO	LRAP	LRAQ	LRAR	LRAS	LRAT
Spring 1993	10.3	11.3	10.0	9.1	8.4	13.2	8.5	9.2	11.8	11.1	9.6	10.2	12.5
Summer 1993	10.6	12.7	11.1	9.0	9.0	13.8	8.8	8.4	11.6	10.8	10.0	10.4	..
Autumn 1993	10.3	12.0	10.0	8.3	8.1	14.4	8.4	8.6	11.4	10.6	9.8	9.7	..
Winter 1993	10.2	11.8	10.0	8.0	8.8	19.4	8.0	8.3	11.0	11.0	10.3	10.3	..
Spring 1994	9.6	11.8	9.9	8.3	7.4	13.1	7.6	7.5	10.0	10.4	9.3	10.0	11.7
Summer 1994	9.8	11.6	10.4	9.1	7.9	13.0	7.6	8.1	9.8	10.9	9.9	9.9	..
Autumn 1994	9.1	11.2	9.0	8.1	8.0	12.0	7.1	7.9	9.1	9.7	9.9	8.9	..
Winter 1994	8.9	11.6	8.8	7.5	7.4	11.7	7.3	7.7	8.6	9.2	9.6	8.5	11.4
Spring 1995	8.6	10.8	8.6	7.4	7.1	11.5	6.8	7.8	9.0	9.1	8.8	8.3	11.0
Summer 1995	8.9	11.0	9.1	7.1	7.0	12.3	7.1	7.3	8.9	9.6	8.4	9.2	11.2
Autumn 1995	8.6	10.5	8.2	6.9	7.2	11.8	6.7	7.5	8.7	9.3	8.3	9.1	10.7
Winter 1995	8.3	10.5	7.9	7.4	6.8	11.0	6.5	7.2	8.5	8.5	8.9	8.9	9.7
Spring 1996	8.2	10.2	8.1	7.4	6.5	11.3	6.0	6.3	9.2	8.5	8.3	8.7	9.7
Summer 1996	..	10.1	8.5	7.1	6.7	11.5	6.5	6.4	9.0	8.6	8.5	8.6	..

1 Prior to Winter 1994, data for Northern Ireland were only collected annually, in the Spring quarters. Figures shown for non-Spring quarters prior to Winter 1994 therefore include the Spring estimates for Northern Ireland.

Source: Labour Force Survey, Office for National Statistics

11 Total in employment¹, not seasonally adjusted

Thousands

	United Kingdom ²	North	Yorks & Humberside	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	LRAU	LRAV	LRAW	LRAX	LRAY	LRAZ	LRBA	LRBB	LRBC	LRBD	LRBE	LRBF	LRBG
Spring 1993	25 511	1 283	2 203	1 865	976	3 052	5 068	2 126	2 274	2 676	1 155	2 229	604
Summer 1993	25 689	1 276	2 205	1 882	966	3 027	5 107	2 174	2 307	2 722	1 172	2 247	..
Autumn 1993	25 679	1 281	2 208	1 877	981	3 000	5 115	2 142	2 318	2 716	1 183	2 254	..
Winter 1993	25 532	1 263	2 194	1 856	978	2 990	5 104	2 137	2 318	2 686	1 151	2 252	..
Spring 1994	25 697	1 264	2 180	1 858	994	3 013	5 137	2 180	2 343	2 681	1 177	2 266	604
Summer 1994	25 945	1 272	2 191	1 858	999	3 047	5 186	2 199	2 378	2 716	1 200	2 293	..
Autumn 1994	25 963	1 272	2 215	1 874	996	3 076	5 190	2 199	2 359	2 711	1 191	2 277	..
Winter 1994	25 831	1 249	2 202	1 890	996	3 074	5 133	2 174	2 362	2 692	1 176	2 272	609
Spring 1995	25 973	1 264	2 224	1 896	1 004	3 076	5 205	2 188	2 347	2 672	1 189	2 285	623
Summer 1995	26 272	1 283	2 240	1 930	1 016	3 100	5 260	2 229	2 373	2 703	1 203	2 307	628
Autumn 1995	26 265	1 292	2 247	1 935	1 014	3 112	5 268	2 222	2 385	2 676	1 192	2 282	640
Winter 1995	26 179	1 285	2 239	1 926	1 001	3 111	5 243	2 209	2 383	2 702	1 180	2 252	650
Spring 1996	26 219	1 282	2 223	1 926	1 005	3 110	5 294	2 216	2 348	2 728	1 195	2 252	641
Summer 1996	..	1 301	2 230	1 961	1 018	3 122	5 325	2 252	2 388	2 742	1 225	2 289	..

1 Includes employees, the self-employed, participants on Government-supported employment and training schemes and unpaid family-workers.

2 Prior to Winter 1994, data for Northern Ireland were only collected annually, in the Spring quarters. Figures shown for non-Spring quarters prior to Winter 1994 therefore include the Spring estimate for Northern Ireland.

Source: Labour Force Survey, Office for National Statistics

12 Redundancies

Rates¹

	Great Britain	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland
	DCXD	DCXE	DCXF	DCXG	DCXH	DCXI	DCXJ	DCXK	DCXL	DCXM	DCXN	DCXO
Spring 1993	12.3	16.5	13.1	13.9	— ²	11.2	11.2	12.5	13.9	12.4	11.4	11.3
Summer 1993	11.2	14.1	12.4	11.9	— ²	12.6	10.1	10.7	11.3	10.6	15.6	8.5
Autumn 1993	9.6	13.8	9.1	8.3	— ²	11.0	9.4	7.2	10.4	7.5	12.0	10.9
Winter 1993	10.6	13.1	11.2	11.1	14.1	10.2	8.3	11.5	10.6	11.2	12.1	10.7
Spring 1994	9.6	12.7	11.0	9.7	— ²	9.3	9.1	8.8	10.7	8.9	10.8	9.5
Summer 1994	9.0	11.4	10.4	10.2	— ²	7.7	8.9	7.9	7.9	9.6	— ²	9.5
Autumn 1994	8.8	11.6	8.5	12.6	— ²	8.0	7.2	7.9	8.3	9.7	— ²	8.6
Winter 1994	5.5	— ²	5.6	7.4	— ²	4.6	6.7	— ²	— ²	5.4	— ²	— ²
Spring 1995	10.2	9.8	10.1	11.5	13.7	9.9	8.2	9.6	11.1	10.9	14.7	9.2
Summer 1995	9.7	15.4	9.2	11.6	— ²	11.7	8.1	7.6	9.6	9.8	10.1	8.0
Autumn 1995	9.7	13.0	8.4	10.9	— ²	9.5	10.2	7.7	9.6	9.0	11.2	10.0
Winter 1995	10.2	14.2	9.8	9.5	15.1	11.3	8.9	9.1	8.1	9.8	9.6	12.5
Spring 1996	9.4	9.9	8.1	7.8	— ²	8.1	8.7	9.6	10.7	10.8	11.3	10.6

¹ Redundancies per 1,000 employees.

² Sample size too small to provide a reliable estimate.

Source: Labour Force Survey, Office for National Statistics

13 Employees in employment (all industries)

June 1990 = 100

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCLF	DCLM	DCLK	DCLJ	DCLG	DCRC	DCLF	DCLH	DCLJ	DCLL	DCLN	DCLO	DCLP
1996	97.2	94.1	96.5	97.0	97.5	90.3	93.4	96.4	93.8	94.9	96.2	99.4	104.1
1995	98.4	94.4	97.5	98.7	98.2	91.6	94.9	97.9	95.8	95.3	95.5	99.9	106.4
1995 Dec	99.3	95.4	98.4	100.4	99.8	92.6	95.7	98.8	97.1	96.2	95.8	100.0	107.6
1996 Mar	98.3	94.6	97.6	98.8	98.4	91.4	95.0	98.0	96.2	95.5	95.3	98.3	106.6
Jun	99.2	96.1	98.7	98.9	99.5	91.9	95.6	100.6	97.0	95.8	97.6	99.3	106.4
Sep	99.5	96.2	98.5	99.6	99.8	92.6	96.0	101.6	97.4	96.3	98.1	98.1	106.5

Source: Office for National Statistics

14 Index of industrial production

Seasonally adjusted 1990 = 100

	United Kingdom	Wales	Scotland	Northern Ireland
	DVZI	DEOL	DEOM	DEPY
1987	90.1	92.3	90.2	86.1
1988	93.7	98.5	98.9	86.5
1989	98.2	104.8	95.4	91.8
1990	100.3	102.8	97.6	97.5
1991	100.0	100.0	100.0	100.0
1992	96.3	96.4	99.0	98.8
1993	96.2	98.1	100.7	99.5
1994	98.3	100.2	103.7	102.2
1995	103.2	104.9	106.5	109.0
1996	105.9	111.1	110.1	113.2
1995 Q3	106.4	111.9	110.7	113.7
Q4	106.4	110.5	111.7	113.7
1996 Q1	106.5	109.5	111.1	114.3
Q2	106.8	111.2	110.8	113.6
Q3	107.1	..	..	..

Sources: Office for National Statistics; Welsh Office; The Scottish Office; Department of Economic Development, Northern Ireland

15 Manufacturing industry: optimism about business situation

	Balance ¹											
	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCMO	DCMW	DCMU	DCMT	DCMQ	DCMP	DCMR	DCMS	DCMV	DCMX	DCMY	DCMZ
1996 Jan	-6	-5	-21	8	9	-6	-3	-5	-7	-6	8	30
Apr	-3	-33	-15	-2	-16	5	-31	-14	4	-8	-2	10
Jul	8	-6	7	9	-9	4	-	-2	19	22	-2	26
Oct	8	-9	4	-	29	5	17	4	3	5	23	-4

1 Balance in percentage of firms reporting rises *less* those reporting falls.

Source: CBI/BSL Regional Trends Survey ISSN:0960 7781

16 Manufacturing industry: volume of output

	Balance ¹											
	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
Past 4 months	DCLQ	DCLY	DCLW	DCLV	DCLS	DCLR	DCLT	DCLU	DCLX	DCLZ	DCMA	DCMB
1996 Jan	6	4	-3	16	-17	4	20	5	6	12	8	20
Apr	-	-20	-5	32	3	3	6	-9	3	-15	10	24
Jul	6	2	-5	5	4	9	1	-5	10	-1	-6	34
Oct	12	-8	-10	8	-2	17	3	4	14	17	13	27
Next 4 months	DCMC	DCMK	DCMI	DCMH	DCME	DCMD	DCMF	DCMG	DCMJ	DCML	DCMM	DCMN
1996 Oct	20	-7	25	12	25	23	12	18	14	23	21	6

1 Balance in percentage of firms reporting rises *less* those reporting falls.

Source: CBI/BSL Regional Trends Survey ISSN:0960 7781

17 Manufacturing industry: volume of new orders

	Balance ¹											
	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
Past 4 months	DCNA	DCNI	DCNG	DCNF	DCNC	DCNB	DCND	DCNE	DCNH	DCNJ	DCNK	DCNL
1996 Jan	-1	-15	-16	13	-26	-	17	-3	-	14	17	9
Apr	-	-6	-25	37	-9	1	-1	-8	-3	-30	10	-7
Jul	8	-6	-10	22	4	9	21	-3	15	-9	-21	51
Oct	15	5	-3	-3	12	6	-1	8	9	35	11	34
Next 4 months	DCNM	DCNU	DCNS	DCNR	DCNO	DCNN	DCNP	DCNQ	DCNT	DCNV	DCNW	DCNX
1996 Oct	27	4	17	15	35	30	30	12	11	40	23	14

1 Balance in percentage of firms reporting rises *less* those reporting falls.

Source: CBI/BSL Regional Trends Survey ISSN:0960 7781

18 Manufacturing industry: volume of new export orders

	Balance ¹											
	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
Past 4 months	DCNY	DCOG	DCOE	DCOD	DCOA	DCNZ	DCOB	DCOC	DCOF	DCOH	DCOI	DCOJ
1996 Jan	4	-11	-21	-3	-15	7	15	-	8	2	11	8
Apr	1	-14	-23	24	18	-1	7	2	3	-18	16	3
Jul	3	-10	-19	9	4	23	8	-2	4	-5	-14	28
Oct	3	-8	4	3	-23	3	19	-6	10	6	5	32
Next 4 months	DCOK	DCOS	DCOQ	DCOP	DCOM	DCOL	DCON	DCOO	DCOR	DCOT	DCOU	DCOV
1996 Oct	15	2	9	15	7	20	35	8	20	22	15	22

1 Balance in percentage of firms reporting rises *less* those reporting falls.

Source: CBI/BSL Regional Trends Survey ISSN:0960 7781

19 Manufacturing industry: firms working below capacity

	Percentages											
	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCOW	DCPE	DCPC	DCPB	DCOY	DCOX	DCOZ	DCPA	DCPD	DCPF	DCPG	DCPH
1996 Jan	49	54	44	50	48	51	52	54	47	59	38	68
Apr	52	68	53	47	62	55	43	56	51	65	49	39
Jul	53	60	52	53	22	54	58	59	49	63	55	40
Oct	51	58	54	36	52	54	45	59	48	55	50	58

Source: CBI/BSL Regional Trends Survey ISSN:0960 7781

20 Permanent dwellings started

Numbers

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DEOI	DCRZ	DCRX	DCRW	DCRT	DCRR	DCWL	DCRU	DCRV	DCRY	BLIA	BLFA	BLGA
1994	210 312	9 616	15 690	16 674	9 877	16 966	40 845	18 255	17 251	19 908	10 589	24 954	9 687
1995	177 776	7 536	13 772	13 290	8 498	11 433	35 265	14 806	13 166	18 173	9 222	22 836	9 779
1995 Q2	51 462	2 257	3 821	4 187	2 707	3 511	10 583	4 313	4 095	5 220	2 751	5 004	3 013
Q3	44 330	1 859	3 456	3 101	2 128	2 815	9 644	3 554	2 671	4 332	2 271	5 958	2 541
Q4	34 550	1 461	2 842	2 659	1 684	1 994	6 232	2 647	2 652	3 772	1 987	4 626	1 994
1996 Q1	..	1 938	3 462	3 476	2 092	2 295	7 761	3 511	3 180	4 114	1 871	..	2 364
Q2	..	1 968	3 194	3 904	2 596	2 826	10 134	3 795	3 903	4 279	2 418	..	2 761
Q3	..	2 086	4 274	4 579	2 735	2 915	9 878	4 849	3 593	4 539	2 543	..	..

Sources: Department of the Environment; Welsh Office; The Scottish Office; Department of the Environment, Northern Ireland

21 Permanent dwellings completed

Numbers

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DEOJ	DCVZ	DCVX	DCVW	DCVT	DCVR	DCWM	DCVU	DCVV	DCVY	BLII	BLFI	BLGI
1994	192 782	8 430	14 364	16 715	9 252	15 266	39 315	16 189	16 328	18 802	9 947	21 217	6 977
1995	197 997	8 988	15 242	16 517	9 239	16 278	38 765	17 097	15 554	18 832	8 952	24 095	8 438
1995 Q2	50 749	2 429	3 925	4 377	2 277	4 157	10 058	4 196	3 727	4 932	2 071	6 624	1 976
Q3	49 072	1 975	3 872	3 705	2 223	4 113	9 255	4 415	3 772	4 202	2 179	7 215	2 146
Q4	49 586	2 142	3 861	4 199	2 379	4 073	9 726	4 308	3 738	4 984	2 610	4 834	2 732
1996 Q1	..	1 831	3 323	4 021	2 279	3 321	9 278	3 955	3 599	4 709	2 201	..	2 186
Q2	..	2 114	3 426	3 641	2 165	2 828	8 700	3 472	3 170	4 541	2 497	..	..
Q3	..	2 168	3 298	3 743	2 307	3 561	8 967	3 743	3 686	4 986	2 211 ¹	..	..

Sources: Department of the Environment; Welsh Office; The Scottish Office; Department of the Environment, Northern Ireland

22 House prices¹

1993 = 100

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	LRBH	LRBI	LRBJ	LRBK	LRBL	LRBM	LRBN	LRBO	LRBP	LRBQ	LRBR	LRBS	LRBT
1994	102.5	104.5	98.4	102.2	101.4	105.2	103.3	103.1	100.5	101.7	101.3	101.1	103.9
1995	103.2	99.2	98.6	102.4	104.0	106.2	104.2	104.1	103.2	100.8	99.4	102.2	116.0
1995 Q3	104.2	98.7	102.3	105.7	102.1	106.0	105.0	105.7	102.1	101.8	99.9	105.6	116.4
Q4	102.8	100.5	98.6	102.7	106.9	105.0	103.5	102.9	102.4	99.5	96.2	103.6	118.2
1996 Q1	104.3	101.5	95.3	102.5	105.1	104.3	106.7	109.4	102.8	98.1	105.0	108.1	118.7
Q2	104.4	100.4	103.1	106.2	101.8	103.5	106.5	105.2	106.8	98.7	102.9	101.6	126.3
Q3	108.5	104.9	104.2	111.6	106.9	110.2	110.9	109.7	105.5	105.8	102.0	105.8	126.1

1 These indices adjust for the mix of dwellings (by size and type, whether new or second-hand) and exclude those bought at non-market prices and are based on a sample of mortgage completions by all lenders.

Source: Department of the Environment

23 VAT registrations and deregistrations¹: net change²

Thousands

	United Kingdom	North	Yorks & Humber	East Midlands	East Anglia	Greater London	Rest of South East	South West	West Midlands	North West	Wales	Scotland	Northern Ireland
	DCYQ	DCYS	DCYT	DCYU	DCYV	DEON	DEOK	DCYX	DCYY	DCYZ	DCZA	DCZB	DCZC
1994	-1.3	-0.5	-0.8	-	-0.2	3.7	-0.4	-1.3	-0.2	-1.1	-1.3	0.2	0.7
1995	-9.3	-1.3	-2.2	-0.9	-0.3	4.1	-1.5	-2.8	-1.3	-1.9	-1.2	-0.7	0.7

1 Figures published in 1996 relating to 1994 and 1995 for VAT registrations and deregistrations are for VAT based enterprises. These replace estimates using VAT legal units previously published.

2 Registrations less deregistrations.

Source: Department of Trade and Industry

Revisions to the UK balance of payments

by Stuart Brown and Tim Jones

Introduction

1. Figures on the current balance in the UK Balance of Payments accounts are published every quarter within twelve weeks of the end of the previous period. First estimates for the latest calendar year are thus published in March. Revisions to these estimates are published in June (and in the Pink Book). This year the June (Pink Book) figures showed a revised current balance of -£2.9bn for 1995, compared with a first estimate in March of -£6.7bn.

2. These were large revisions. Why did they occur? Why can we not get it right first time? This article discusses the source of the revisions and what can be done about them. First, some of the main features of the Balance of Payments accounts are set out. Then, the way the figures are compiled is explained and the types of revisions that can occur are presented. The article goes on to describe the measures being taken to ensure revisions are kept to a minimum.

Balance of payments overview

The current account

3. The current balance in the Balance of Payments accounts is the difference between two very large aggregates in the current account: total credits and total debits.

4. The current account consists of four main categories:

- trade in goods
- trade in services
- investment income
- transfers

Table 1 shows the estimated size of these flows in this account in 1995, the latest year.

Table 1 – Balance of Payments: current account, 1995

	£ billion		
	Credits	Debits	Balance
Trade in goods	152	164	-12
Trade in services	45	39	6
Investment income	93	84	10
Transfers	6	13	-7
Total	297	300	-3

Source Pink Book 1996

5. At -£3bn, the balance was about 1 per cent of the total credits. Relatively small revisions to credits and debits, in percentage terms, can therefore have a major effect on the balance. It is important to remember that credits and debits have to be estimated separately. The balance can only be calculated from these estimates; it is not measured directly.

6. However, despite these uncertainties, the data provide important indications of changes and trends in the UK's relative position over time vis-a-vis the rest of the world. As figure 1 shows, the balance has varied over the last twenty years, between a maximum of around +6 per cent of credits in 1981 and a low point of -11 per cent in 1989.

The capital account

7. The Balance of Payments current account is mirrored by the capital account, which comprises transactions in the external assets and liabilities of the UK. Statistics are also compiled on these transactions, the net total of which provides an alternative measure of the current balance. The capital account figures are considered less reliable than those of the current account because of the scale of the transactions and difficulty in collecting complete statistics. Figure 2 illustrates the current balance implied by the capital account data alongside the current account. The discrepancy represents the minimum amount of errors and omissions in the accounts as a whole.

Figure 1 Current balance 1974-95

as a percentage of total credits

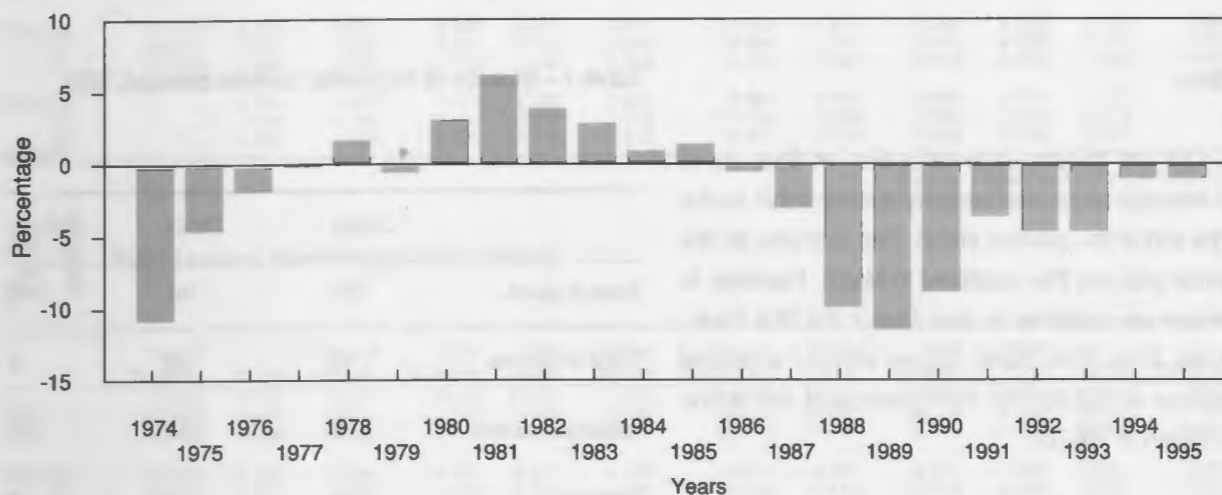
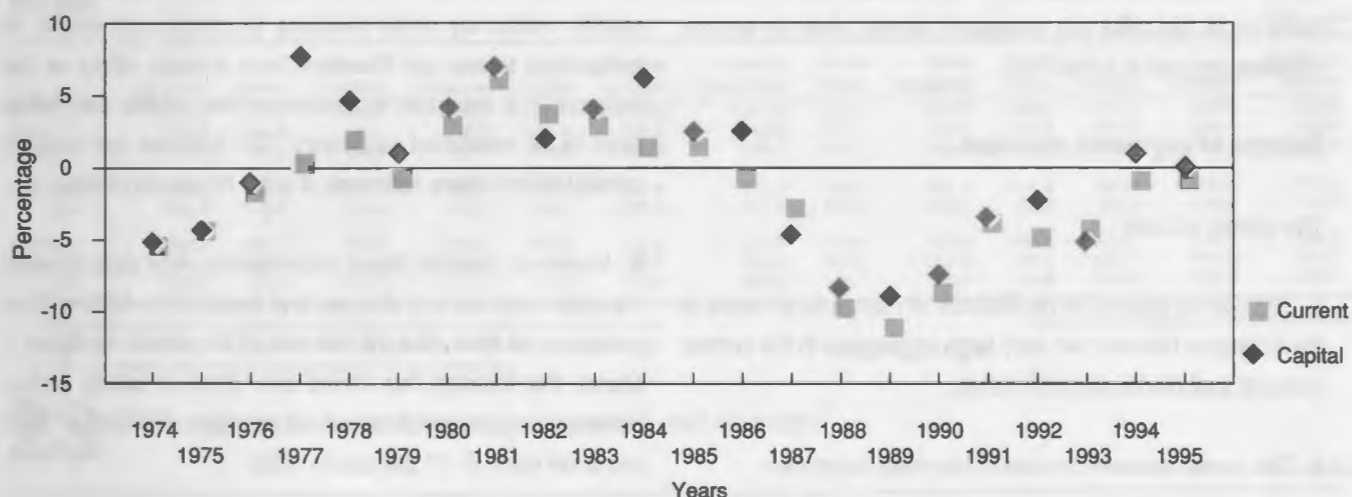


Figure 2 Current and capital balances 1974-95

as a percentage of total credits



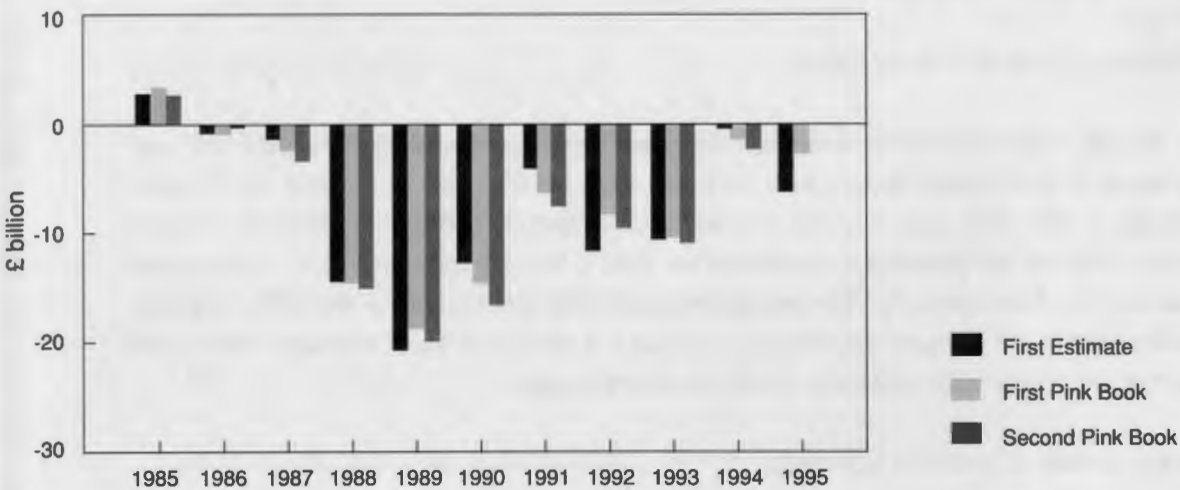
Revisions

8. The revisions to the 1995 current balance published between March and June 1996 amounted to £3.8bn in all, or 57% of the first estimate. This was the net effect of revisions to the credits and debits as shown in Table 2. Relatively small revisions to the estimates of total credits and debits (1.7% and 0.3% respectively) meant a large percentage revision to the balance.

Table 2 – Revisions to the current account, 1995

	£ billion		
	Credits	Debits	Balance
Published in March 1996 (£bn)	292.1	298.7	-6.7
Published in June 1996 (£bn)	296.9	299.8	-2.9
Revision (£bn)	+4.8	+1.0	+3.8
Percentage revision	1.7%	0.3%	57%

Figure 3 Current balance 1985-95



9. How does this compare with previous years? Figure 3 illustrates the data as published in March of each year and in the two subsequent Pink Books for the last ten years.

How the figures are compiled

10. In the UK, the Balance of Payments figures are compiled from a number of different sources, with varying degrees of precision, using a system of sample surveys together with administrative data. The UK system:

- adheres to current international standards
- is an integrated part of the wider National Accounts
- provides some disaggregated detail (eg product, geographical)
- minimises the burden on business and other data providers, consistent with the statistical needs.

11. The ONS collects much of the data directly from enterprises engaged in trade in services or direct investment for example. The Office also depends heavily upon the Bank of England, other Government Departments and Agencies, as well as private sector bodies to compile the figures, sometimes as a by-product of an administrative system. The methods are briefly described in the box opposite. Further details are given in the Pink Book.

12. Obviously, the information is not sufficiently robust for these figures to be accurate to the nearest million pounds. A number of assumptions have to be made to compile the estimates, for example on interest rates used to derive interest flows from balance sheet levels, or on the value of private transfers.

How the figures are compiled

Trade in goods (over 50% of total credits)

13. The data are based on the *Overseas Trade Statistics (OTS)* compiled by HM Customs and Excise. Until the advent of the European single market in January 1993, the OTS were all compiled from Customs declarations. Since then, trade within the European Union is measured through a system of returns called *Intrastat*, linked to VAT declarations. Adjustments are made to bring the figures to a Balance of Payments basis (see Pink Book Chapter 8). The largest adjustment is to bring the valuation of imports from the "cost, insurance and freight" (cif) basis used for Customs purposes to the "free on board" (fob) basis. The amounts deducted are included in the transport and insurance services categories.

Trade in services (about 15% of total credits)

14. Trade in services are collated under five main headings.

- General government (1% of total trade in services credits)
- Sea transport (10%)
- Civil aviation (nearly 15%)
- Travel (over 25%)
- Financial and other business services (nearly 50%)

15. The general government data are derived from government accounting systems, but most of the other data are based on a combination of surveys and administrative data.

16. In the freight transport sector, data are collected from UK operators by the Chamber of Shipping and by the Civil Aviation Authority. Information on relevant transactions by foreign operators with UK residents is compiled from a range of sources. Until recently, these figures were put together by the Department of Transport, on behalf of the ONS. The work has now transferred to the ONS, thereby helping to concentrate the expertise in Balance of Payments compilation in one place.

17. The passenger transport and the travel figures are based mostly on the numbers of passengers flowing through the ports, together with estimates of expenditure per head obtained from the International Passenger Survey. Figures for travel to and from Ireland are however based on annual data supplied by Ireland's Central Statistics Office in Cork.

18. Services provided by UK financial institutions and other businesses to overseas customers are generally obtained from targeted sample surveys covering the appropriate sectors. The imports of such services are obtained where appropriate from the principal importers and through surveys of businesses. Coverage is nonetheless a problem, especially as such transactions may not be identified separately in businesses accounting systems.

Investment income (over 30% of total credits)

19. There are five main categories

- Direct investment earnings (over 25% of total investment income credits)
- Portfolio investment earnings (20%)
- UK banks' interest on overseas lending/borrowing (over 40%)
- Non-bank interest flows (nearly 10%)
- General government earnings (2%)

20. A system of quarterly and annual surveys cover direct investment by UK enterprises abroad (outward) and by overseas enterprises in the UK (inward). The surveys cover banks, insurance companies and other large companies known to be involved in direct investment. The annual surveys supplement the quarterly surveys which obtain provisional data from the major players.

21. Portfolio earnings from abroad are collected directly for major banks and other financial institutions. Otherwise they depend largely on assumed rates of return applied to financial and other large-scale enterprises' holdings of overseas securities. (The calculations also have to take account of exchange rate movements.) Payments of dividends abroad depend largely on ONS and Bank of England portfolio investment inquiries on transactions by non-residents in UK shares, and the results of a triennial share register survey which determines the value of UK company shares held by non-residents. Payments of other portfolio income abroad depend on applying rates of return to levels derived from stock registers, estimates of custody holdings, and residual holdings estimated as the difference between net issues and identified domestic transactions.

22. The Bank of England collects comprehensive information on UK banks' borrowing and lending, although only the larger banks supply data on interest flows every quarter. Until annual figures are received, estimates have to be made for the remainder. The method of doing this was improved two years ago.

23. The Bank for International Settlements obtains data from central banks around the world, including each country's banks' borrowing and lending to non-banks in foreign countries. This provides a source of information on foreign banks' transactions with UK non-bank enterprises, etc. Once again appropriate rates of return are applied to the balance sheet information.

Current transfers (2% of total credits)

24. These comprise mainly transfers to and from government (obtained from the government accounts) and also include private transfers (for which there is little reliable information). Some use is made of data from other countries, and from charities, etc. An attempt to identify private transactions in a household survey was not cost-effective: they occur too infrequently to be properly measurable.

Recent improvements

25. There have been a number of initiatives in recent years designed to improve the quality of the estimates and to reduce revisions. (In the short term, of course, quality improvements may lead to revisions.) In particular a substantial programme of work was undertaken following the Eason report produced in 1991. This is described in the methodological notes of the Pink Book. Measures that have been taken include, for example:

- Several of the quarterly inquiries (which had been voluntary) were expanded and made statutory, and new sources of data identified and introduced.
- Stratified random sampling was introduced for some inquiries and coverage improved using filter questions on more general inquiries.
- Improvements were made to the procedure for imputing banks' quarterly income and expenditure flows. These reduced the size of the revisions to the gross flows substantially,
- Obtaining information on overseas transfers by the personal sector through household surveys was tried, but proved impracticable.

Alternative methods

26. In some countries, especially those with a more recent legacy of exchange control systems, information is obtained on the purpose of every foreign exchange transaction, at least those of more than a certain value. This system has a particular advantage in terms of coherence, since the overall coverage is potentially more complete. However there are difficulties for example in reconciling such data with the external trade statistics and in covering transactions which take place outside the country. The system is also very expensive for banks and enterprises to comply with. The accuracy of the classification by purpose may not be high.

27. This approach is unsuitable in the UK, in particular because the extremely high volume of purely financial transactions in external assets and liabilities means that the current account generates only a small proportion of foreign exchange transactions. The survey based approach described above, while far from perfect, captures the main developments in the UK position, and the same compilation system is used across National Accounts, improving coherence. However the initial

estimates are prone to revision for reasons discussed in the next section.

Types of revision

28. The reasons why revisions occur can be grouped into four main categories:

- the current design of the compilation process
- late response and misreporting
- the discovery of errors in processing
- the introduction of methodological changes.

These are discussed in turn below. First, however, it is worth discussing briefly the relationship between revisions, accuracy and the performance of the ONS.

29. Clearly, the existence of revisions demonstrates that the earlier figures were considered by ONS to have been inaccurate to some extent. Hence the revisions can provide an indicator of the performance of the compilers in getting the figures "right first time". There are three points to note about this.

30. First, there is a trade off between revisions and timeliness. The earlier we start compiling for publication the greater the non-response at that time.

31. The second point is that the absence of revisions does not necessarily imply complete accuracy. It depends on the system of compilation being used. For example, some of the figures are based on a sample of international travellers. These data are available within five weeks, and not subsequently revised. Nonetheless they are inevitably subject to sampling and response error which cannot be eliminated.

32. Thirdly, there is a tendency to regard revisions as an indicator of current performance. However, because revisions correct earlier data, the indicator effectively measures **past** performance, which may or may not be a good guide to the present.

The current design of the compilation system

33. As indicated above, many figures are compiled using a combination of quarterly and annual inquiries or returns, while for some items only annual figures are available, which have to be interpolated and projected quarterly.

34. Quarterly returns are generally targeted towards the largest businesses for the following reasons:

- the need to keep down the cost to businesses of complying with statistical requirements
- the need to keep collection and processing costs to a minimum given the tight timetable
- this is a statistically efficient design for data collection

35. Even so, some quarterly data are not scheduled to arrive in time for the first release, although the possibility of bringing the dates forward is being actively pursued.

36. Generally speaking, figures collected annually are not available in time for the First Release in March each year, and in a number of cases not in time for the Pink Book either (second release, first revision of annual data), for example the annual inquiries into earnings from direct investment abroad. This implies of course that the initial Pink Book figures are by no means the last word. Certain categories of data are liable to further revision later in the year (generally in time for the Budget in November). These delays generally reflect the time required by many of the respondents to finalise their accounts. At the same time the Office continues to chase up late responses, which are then checked thoroughly, as well as following up queries.

37.

Revisions of this type also arise from the adjustments that are made to the trade in goods data, based on ex-post assessments of coverage and accuracy, which help to ensure that the systems for producing rapid results are kept on track.

It is usual practice to review these adjustments at the time of the Pink Book.

Late response and misreporting

38. At a certain time in the quarterly "round", the inclusion of late responses has to stop, and the results run, in order to provide time for further checking and assessment in the context of the whole Balance of Payments and National Accounting framework. Targets are set for the number of forms received by this date, which vary according to the inquiry. For example, the Overseas Trade in Services inquiry has a target response rate of 77% each quarter at first publication, representing about 425 completed forms; for Overseas Direct Investment (non-oil

companies) the targets are 85% for inward investment (470 forms) and 74% for outward investment (225 forms). Efforts are made to ensure that the very largest operators comply, since they may have a significant effect on the outcome. Sometimes, however, despite best efforts, some key companies fail to respond in time.

39. In all cases the missing data are accounted for by processes of imputation, with the aim of including an estimate of the figures that the business will eventually supply. Revisions arise when the imputed values are replaced by actual data.

40. Methods of imputation vary, from simple grossing up to more sophisticated models based on movements in the data of those that have responded. The accuracy (in terms of closeness to final estimate) obviously depends on the size and pattern of variation of the variables being measured.

41. Finally, data suppliers may get it wrong for any number of reasons, for example by misunderstanding what is required or through arithmetic errors. Whilst the returns are carefully checked for plausibility it is not possible to identify all such errors. If and when these subsequently come to light, they can imply revisions which could extend back over several periods. In the case of banking returns, persistent mis-reporting can result in the institution concerned being invited to a meeting at the Bank of England, during which it is made clear that improvements are expected.

The discovery of errors in processing

42. Before the advent of spreadsheets, much of the processing for the supply and central compilation of the Balance of Payments data was carried out manually, using hand calculators. Of course, there were mainframe computer systems to compile survey results and to manipulate, aggregate and tabulate the timeseries, but in between these processes manual systems were operated by suppliers and compilers alike.

43. About ten years ago, spreadsheets began to be used extensively to replace both these manual systems and some of the mainframe ones. These offered many advantages, particularly as they could be relied upon to do any specified calculations accurately. On the other hand, there is a great deal more scope for the mis-specification or corruption of formulae, which if unnoticed can lead to systematic and possibly cumulative error. This type of error is likely to be more serious than the occasional manual error, because the erroneous formula may be copied several times before the mistake is detected.

44. The more traditional computer systems are not exempt from mis-specification, though they are in general subject to more rigorous control. In the course of investigating one system, it was found that a new subroutine had been installed but not properly activated. Happily the effect of this was small, but the risk remains.

45. The sign convention in the Balance of Payments is another potential source of systematic error. This is more likely to occur in the capital account where treating the acquisition of external assets as a negative flow (debit) may seem counter-intuitive to some, although this is standard accounting practice.

46. Errors may of course occur in data capture, when data are passed to suppliers or to the ONS, despite routine checking. Unless they are picked up immediately by the plausibility checks, they will probably remain undetected for some time.

47. Finally, where reliance is placed on administrative systems to obtain statistics as a by-product, it is vital that the operators of the system understand the importance of the statistical requirements.

The introduction of methodological changes.

48. The final category of revisions are those that result from introducing methodological improvements. A new method may be found to provide more reliable data. The scope of a survey may be extended. Assumptions may be reviewed and found to require adjustment. In each case it may be that the new method results in a quite different assessment of the values involved. If such new figures were introduced without revising any previous data, there could be a substantial step change in the series which would not reflect any actual change in the real world. It is therefore usual good practice to revise previous figures to reflect the new methodology and avoid discontinuities.

The revisions to the 1995 current balance

49. As stated earlier, the figures for the 1995 current balance were revised by £3.8bn between the March and the June (Pink Book) releases. On this occasion, most of the revisions were in the same direction. Typically revisions can affect the balance in either direction. Table 3 shows the overall effect of revisions in earlier years.

Table 3 – Revisions (between estimates made in March and June) to the latest year in the 1992-1996 Pink Books

Pink Book year	Latest year in Pink Book	Credits	Debits	Balance
1992	1991	-1500	+400	-1900
1993	1992	+4800	+1500	+3300
1994	1993	+1800	+1500	+300
1995	1994	-500	+1000	-1500
1996	1995	+4800	+1000	+3800

50. The net revisions affecting the main flows in 1995 are shown in Table 4. This shows that investment income was the most affected category, following the pattern of recent years.

Table 4 – Net revisions to the current account, 1995

£ million

	Credits	Debits	Balance
Trade in goods	-300	-200	-100
Trade in services	+1900	+1400	+400
Investment income	+2800	-100	+2900
Transfers	+400	-100	+500
Total	+4800	+1000	+3800

51. Classified broadly according to type, the revisions to the 1995 current balance were as follows:

£ million

a. The current design of the compilation system	
annual replacing quarterly	+470
annual replacing projections	+870
b. Late response and misreporting by respondents	
late response	+760
misreporting	+130
c. The discovery of errors in data supplier and ONS compilation processing	+1130
d. The introduction of methodological changes	+420
Total	+3780

This table demonstrates that the figures have been affected by the whole range of causes, which on this occasion did not offset each other.

Measures being taken

52. What measures are being taken therefore to improve the quality of the estimates and to reduce revisions? Although revisions had a greater effect than usual this year, the search for greater accuracy and smaller revisions has always been a driving force. In considering what further measures should be given priority, it has been useful to keep in mind the categories of revision by type outlined above. Information on revisions is compiled and analysed. This can give an indication of likely biases in the estimates and what may be causing them.

The current design of the compilation process

53. Wherever possible, the collection systems should be designed to deliver data in time for them to be processed and included in the first estimates each quarter. In most cases this already happens. But there remain some systems for which the timetables need to be brought forward if possible. In addition, where annual data are available, improvement in the timeliness of the information (respondents willing) could pay dividends.

54. In some cases, the absence of quarterly data may be unavoidable. However, where the annual flows are hard to predict, the feasibility of collecting quarterly data is being investigated. Good estimates of quarterly totals particularly from a few large players would help to inform our estimates.

55. A crucial need, particularly where other organisations are involved in compiling figures on our behalf, is to maintain regular contact with them, to encourage them to adopt best statistical practice, and to make them fully aware of the role they play in the process. Lack of awareness of the use to which the data is put can lead to disaster. We have a system of Firm Agreements in place with major data suppliers, which cover data delivery, quality, use, etc. This system provides a good basis on which to build mutual understanding and awareness.

Late response and misreporting

56. Several measures can be used to reduce the effects of late response. These include:

- determining the most effective method of obtaining returns from potentially late responders;
- targeting those likely to have the most significant effect on the estimates;

- impressing on important respondents the crucial nature of their returns;
- if no estimate is forthcoming, feeding back to the respondent the imputed value for comment;
- improving the imputation procedures, eg separately for large respondents.

Some of these techniques have always been employed and are being revisited; others are being developed. For example the Bank of England run periodic seminars for the staff of banks engaged in the completion of its returns.

57. Setting too early a deadline for respondents risks decreasing the number of responses returned in time for inclusion. The quality of data which are received early could benefit from extra time in which to achieve greater coverage. This possibility is being investigated where feasible.

58. There is a particular risk of misunderstanding where respondents are offered alternative bases on which to provide their data (for example financial or calendar years, single period or cumulative reporting). The scope for reducing this risk is being considered.

Processing errors

59. The risk of processing errors has been described above, and is well understood. Continual vigilance is needed to track down these errors which often remain elusive. The greatest danger arises when staff change. Systems may be regarded as "black boxes" and the new operator may not be able to tell if it is working as it should.

60. Processing errors can occur in the systems of data suppliers as well as in the compilation systems. Suppliers are encouraged to keep their systems under continual review. If significant errors are identified they are discussed jointly with ONS and agreed remedial action is taken.

61. A major review of the systems used to process the economic accounts was carried out earlier this year. It recommended a move towards a more centralised system wherever possible, away from the use of spreadsheets in the compilation process, and this is being implemented over the next two years.

62. Meanwhile further errors may come to light. For the future, it is necessary to take steps to make sure that newly created spreadsheets or other systems are fully tested and documented, that procedures are in place to ensure this is done and that staff are properly trained. All current spreadsheets need to be scrutinized. A programme of audit review of such systems is in place in ONS.

Methodological changes

63. Methodological changes also lead to revisions. Given the variable quality of the components, some such changes are to be expected as better ways of compiling the figures are found. These changes are planned, and usually introduced together at the time of the Pink Book, when revisions over a longer period than usual are incorporated if necessary.

64. New sources of data require careful evaluation before they are used to replace existing figures. An attempt to obtain better data on private transfers was made recently, but the results were not considered sufficiently robust to be adopted.

Conclusion

65. Are revisions here to stay? Yes, for sure. Our timely system of Balance of Payments statistics is such that early estimates are inevitably based on partial, incomplete data. Nonetheless we believe that the latter enable us to provide a coherent early indication of the UK's position.

66. Can we reduce the revisions? Yes, there is every prospect of relative reductions especially in the longer term. As the rapid developments in information technology continue, we can look forward to incremental improvements in both the timeliness and the accuracy with which the data can be provided to us, assembled and then disseminated. However, as this happens, we may be expected by our customers to bring forward the timetable, which may limit our scope to reduce further the risk of revisions! The aim, as always, will be to determine users' needs and to ensure fitness for purpose of the statistics.

Developments in UK Company Securities Statistics

by Jim O'Donoghue

Summary

Separate figures for shares and bonds, within the UK company securities totals for financial transactions and balance sheets, were published by ONS for the first time in the 1996 Blue Book. This followed a major methodological review of the way the previous estimates had been compiled. The review identified a number of weaknesses in both sources and methods and recommended ways in which both could be improved. Of particular importance was the need to take account of the requirements of the new 1995 European System of Accounts (ESA95) under which securities are treated as two separate financial instruments: securities other than shares and shares.

The financial balance sheets and transactions accounts show the distribution and redistribution of financial wealth in the economy using a classification of financial instruments that includes UK company securities as a major component. The financial accounts are compiled as part of the quarterly national accounts process. UK company securities comprise ordinary shares (quoted and unquoted), preference shares, and bonds with an initial maturity of at least one year issued by UK registered companies. The figures now published split UK company securities into the three following financial instruments:

- quoted ordinary shares
- unquoted ordinary shares
- bonds and preference shares

As far as possible, the sources now used for transactions are consistent with those used for balance sheets and income flows. Implementing the recommendations of the review involved the introduction of new sources for issues of quoted securities, based on data from the London Stock Exchange; further development of existing sources, and elimination of some errors and omissions; closer matching of assets and liabilities for particular types of investments; closer matching of flows and balance sheet levels; and the introduction of a revised methodology for estimating interest flows for bonds. Estimates for the new financial instruments have been compiled back to the start of 1990. They were first published in Blue Book 1996

and have been published since in Financial Statistics. There have been substantial revisions, affecting most sectors, compared with previously published estimates. Overall, these changes have helped improve the consistency and coherence of the sector accounts.

Background

A review of UK company securities was conducted by a small team in the then CSO during 1993 and 1994. The aims of the review were to examine and document the sources and methods used in compiling estimates of UK company securities; and to make recommendations on how the estimates could be improved, taking into account the requirements of ESA95, in particular the need to compile securities, other than shares, and shares as two separate financial instruments. Community members are required under regulation to implement the requirements of ESA95 by 1999. The UK is committed to meeting that deadline a year earlier and publishing draft accounts on the new basis in 1997.

UK company securities comprise ordinary shares (quoted and unquoted), preference shares and bonds with an initial maturity of at least one year issued by UK registered companies. They also includes issues of bonds by building societies and by non-profit making bodies, such as housing associations and universities. Bonds are taken to include debentures & loan stock, Eurobonds, medium term notes and other fixed, floating and variable rate notes. Bonds with an initial maturity of 1-5 years which are issued by banks and building societies are treated as money market instruments in the UK financial account, rather than as UK company securities (see section on *Money market instruments* below). UK company securities also include inward direct investment transactions involving the share and loan capital of UK companies and acquisitions of UK companies by overseas companies. Comparable balance sheet figures for direct investment are recorded elsewhere in the financial account.

The review found the following problems with the previous methodology used for compiling UK company securities:

- it was not compatible with ESA95: the totals could not be split between shares and other securities

- inconsistent sources were used in the transactions and balance sheets for issues of securities by industrial & commercial companies, banks and other financial institutions
- balance sheets were compiled at a different level of detail to the transactions accounts
- interest payments on bonds were not based on liabilities in the balance sheets

The main recommendations of the review were as follows:

- UK company securities should be compiled as three separate sub-instruments:
 - quoted ordinary shares
 - unquoted ordinary shares
 - bonds & preferences shares

This structure is compatible with the requirements of ESA95. The split of ordinary shares between quoted and unquoted is optional under ESA but is thought to be useful because quoted shares are a clearly defined class, generally with good quality data. Quoted ordinary shares in this context covers all shares with a full listing, together with companies on the Unlisted Securities Market (until end-1996 when it closes) and the Alternative Investment Market (from the middle of 1995). Preference shares were included with bonds because they were considered to be more like bonds in their characteristics, in that the majority are non-participating. It would not have been practical, in terms of data collection, to include participating preference shares with ordinary shares and non-participating preference shares with bonds.

- Flows and market values of quoted securities should be sourced from the London Stock Exchange
- The Bank of England's Capital Issues Database should continue to be used as the main source for issues of securities not listed on the London Stock Exchange but should also be developed to provide balance sheet levels for bonds
- Interest payments should be derived from the same sources used to produce balance sheet

levels and receipts should be based on balance sheet levels

Money market instruments

Money market instruments issued by banks and building societies are securities which contribute to the money supply (M4). They include short term securities, such as certificates of deposit and commercial paper, as well as bonds with an initial maturity of between 1 and 5 years. Bank and building society money market instruments are currently shown in the UK financial account as part of bank and building society deposits. This presentation allows the components of the money supply to be readily identified from published figures.

Longer term bonds issued by banks and building societies, with an initial maturity in excess of 5 years, are included within UK company securities. It can be useful to compare the total value of bonds of all maturities issued by each sector and, later in this article, some results are presented which combine the value of bonds in money market instruments with those in UK company securities.

Because bank and building society bonds are included in two places in the financial account, the review of UK company securities also involved a review of money market instruments. This found that overseas holdings of bank and building society 1-5 year bonds were treated as UK company securities while holdings by other sectors were counted as money market instruments. The different treatment of the overseas sector was most probably linked to the fact that their holdings do not contribute to the money supply. It was recommended that these securities should be treated in a consistent fashion. The review also found some double-counting, and some other areas where the data could be improved. These are discussed in more detail later on.

The new figures

The new estimates for UK company securities balance sheets and transactions are shown in Tables 1 and 2. Data have been compiled on the new basis back to the start of 1990. This date was a compromise between the desire to provide a long run of consistent data and the need to take account of data quality – many surveys were enhanced, and some new ones introduced around 1990 to improve the quality of the National Accounts. Because of the differences in the methods used, these deficiencies are more significant for transactions than they are for interest payments, so revised estimates of interest for bonds

were compiled back to 1984. The new estimates for bond interest are shown in Table 5.

The new data were published as part of the 1996 Blue Book and Pink Book data sets on 28 June 1996. Tables showing the new instrument detail were introduced into *Blue Book* (Tables 11.16 and 12.13) and *Financial Statistics* (Tables 8.2A-8.2C and 9.2A).

Balance sheet levels (Table 1 and Charts 1-3)

The total value of UK company securities at end 1995 was £1,268 billion, with over 70 per cent being quoted ordinary shares. Charts 1-3 illustrate the sectoral breakdown of the balance sheet liabilities and assets. In order to get the full picture for bonds & preference shares, Charts 3a and 3b also show the bond assets and liabilities recorded under bank and building society money market instruments in the financial account. At the end of 1995, the value of these securities totalled £38 billion.

Charts 1a-3a show that for each class of security industrial & commercial companies have the greatest level of liabilities. This is most pronounced for ordinary shares (both quoted and unquoted) where they make up around 80 per cent of total liabilities. With bonds & preference shares, industrial & commercial companies' liabilities are just over one-third of the total (including money market instruments), with banks and other financial institutions each accounting for about one-quarter. For both banks and building societies, a majority of their liabilities are recorded under money market instruments.

Charts 1b-3b illustrate the distribution of asset holders. Chart 1b shows that life assurance and pension funds hold almost half the shares quoted on the London Stock Exchange. The other major holders of quoted shares, with over 20 per cent of the total, are the personal sector, comprising individuals and private trusts as well as non-profit making bodies such as charities; overseas institutions and residents; and other financial institutions, mainly comprising unit trusts and investment trusts.

For unquoted ordinary shares (Chart 2b), 60 per cent of shares are held by the personal sector. This largely represents the estimated value of equity owned by individuals in their own businesses. Industrial & commercial companies' holdings are next largest, at 16 per cent of the total, and represent their minority holdings of unquoted shares in other companies. Despite the improved methods used for unquoted ordinary shares (both transactions and levels), the data still involve a substantial degree of estimation and may be subject to large error margins.

Chart 3b shows that overseas residents and institutions are the largest holders of bonds and preference shares, accounting for over half the total. Banks and life assurance & pension funds also have substantial holdings.

Transactions (Table 2)

A number of patterns can be discerned in the transactions figures. Industrial & commercial companies are large net purchasers of both quoted and unquoted ordinary shares. This is related to takeover activity. They are also substantial issuers of quoted shares, some of which will also be linked to takeover activity. The overseas sector is a large net purchaser of all classes of company security. Their figures include inward direct investment, in the form of injections of share and loan capital (mainly in unquoted ordinary shares) and acquisitions (both quoted and unquoted shares), as well as portfolio transactions.

Life assurance and pension funds are also substantial net investors in company securities, particularly quoted shares. The reduction in the value of their shareholdings in 1995 is most likely due to sales of shares in companies being taken over; and pension funds rebalancing their portfolios in anticipation of the minimum funding requirements and as pension funds mature.

The largest net disinvestors in UK company securities are central government and the personal sector. The central government figures reflect privatisations and the sales of debentures in privatised companies. The personal sector figures indicate they are selling more ordinary shares than they are acquiring. One possible reason is that the figures include sales of shareholdings by the owners of private businesses, either on flotation on the London Stock Exchange or as a result of takeovers. They also include the realisation of gains as a result of the execution of share options or as a consequence of privatised companies being sold to private investors at a discount.

The new sources and methods

In order to produce the new estimates for UK securities, a variety of changes had to be made to the sources and methods used in compiling the data. The main changes involved the estimates for liabilities, interest paid on bonds, and balance sheet asset levels for quoted ordinary shares. These and some other significant changes are considered below. The annex provides a more comprehensive overview of the main sources used.

Figure 1a Quoted share liabilities end 1995

Balance sheet levels

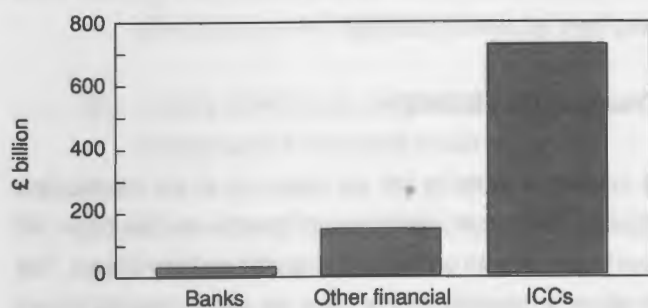


Figure 1b Quoted share assets end 1995

Balance sheet levels

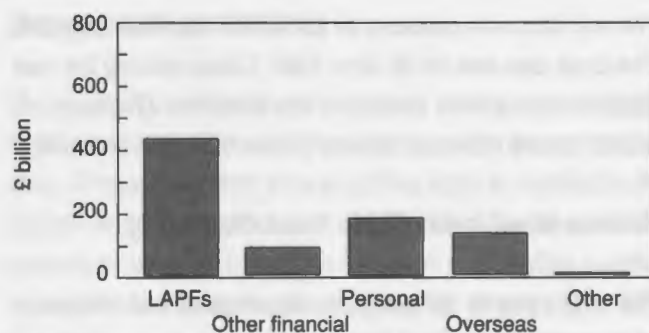


Figure 2a Unquoted share liabilities end 1995

Balance sheet levels

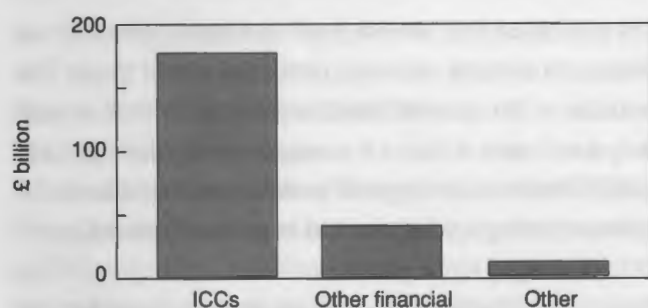


Figure 2b Unquoted share assets end 1995

Balance sheet levels

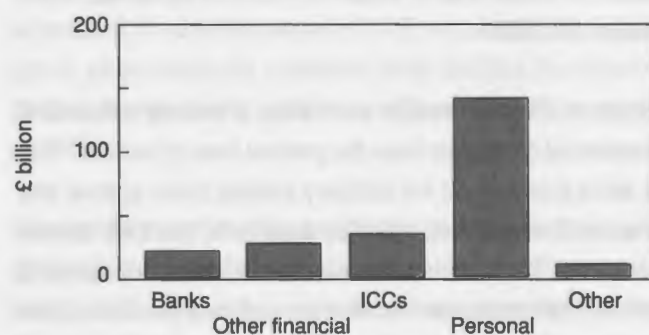


Figure 3a Bond & preference share liabilities end 1995

Balance sheet levels

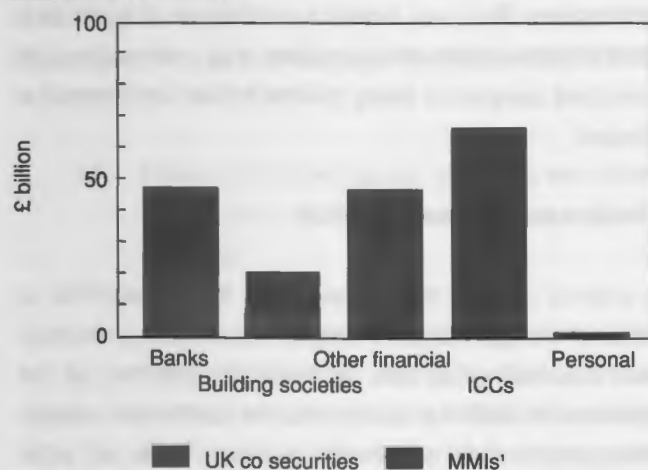
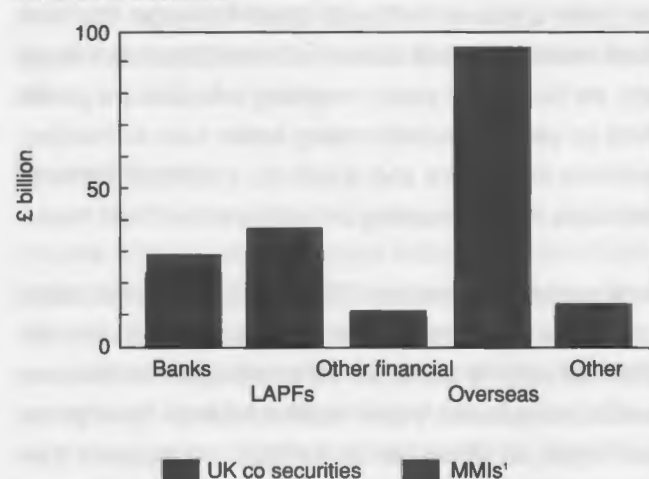


Figure 3b Bond & preference share asset end 1995

Balance sheet levels



¹ Bank and building society money market instruments

Liability sources

For liabilities, transactions involving market capital issues had previously been sourced from the Bank of England's Capital Issues Database with non-market issues coming from a variety of sources. Balance sheet levels were generally derived from different sources.

Information on the balance sheet liabilities of listed securities is now obtained from an ONS database which has been set up to analyse quarterly data provided by the London Stock Exchange. The database also provides information on new issues and interest paid on listed bonds, helping to ensure consistency in the estimates of flows, levels and interest for these securities. Information for other new market issues continues to be sourced from the Bank of England who now also provide levels for unlisted bonds. Further development of the Capital Issues Database is taking place so that it can provide estimates of interest paid on unlisted bonds; currently, this has to be estimated using average interest rates derived from the stock exchange data.

Transactions in liabilities for non-market issues, mainly unquoted shares and preference shares, continue to be sourced much as before. However, there has been a major change in the way the balance sheet levels of unquoted share liabilities for industrial and commercial companies have been estimated. These had not previously been estimated explicitly. They are now calculated as a fixed proportion (23 per cent) of the market value of quoted industrial & commercial companies. The proportion used was derived from an analysis of the company accounts of a sample of independent UK companies over the period 1986-88 (later data were not available). This found a stable relationship between the total value of shareholders funds in unquoted and quoted companies, implying a similar relationship between total market values. This method of valuing unquoted shares is suggested by ESA95.

Interest on bonds

For bonds, payments of interest are now based on the nominal value of stock outstanding and the rate of interest paid on each bond. Previously, payments of interest on debentures & loan stock had been derived from Inland Revenue tax data; while payments on Eurobonds were derived from estimates of the amount of interest overseas residents received, distributed across paying sectors pro rata to levels accumulated from net new issues. There have also been changes to the way in which interest is distributed across the receiving sectors with domestic

sectors now receiving interest on all bonds, including Eurobonds, not just debentures & loan stock. Previously, only overseas residents had been assumed to receive interest on Eurobonds.

Balance sheet asset levels for quoted ordinary shares

Prior to the review of UK company securities, the annual share ownership surveys conducted by ONS between 1989 and 1994 had been used as the basis for benchmarking the value of quoted ordinary shares held by insurance companies, pension funds and the overseas sector. Its use has now been extended so that it is the basis for estimating the value of shareholdings for industrial & commercial companies and the personal sector, as well as being a check on the values for other sectors.

Other changes to sources and methods

Other changes included closer matching of assets with liabilities, in particular for issues of unquoted securities during managements buyouts and as part of other venture capital investments. Some errors and omissions were also removed. The errors mainly involved the double-counting of issues of money market instruments by banks and building societies and some double-counting of these holdings by banks. There were a number of omissions including building societies' investments in financial companies and holdings of bonds, and privatised ICCs' redemptions of debentures held by central government.

Changes were also made with the aim of presenting a clearer or more consistent picture of transactions and balance sheets. The two areas where this was most significant were in the presentation of takeover activity and in the allocation of assets and liabilities between UK company securities and bank and building society money market instruments.

In many acquisitions, some of the value paid to buy shares in the company being taken over is paid in the shares of the acquiring company. Previously, these had been netted off and only the value of cash paid was recorded in the financial accounts. The figures are now shown gross, as recommended by ESA95, with the full value of the shares acquired being counted as a transaction in assets and the value of shares issued by the acquiring company recorded as a transaction in liabilities.

With money market instruments, the main change has been to switch overseas holdings out of UK company securities and into money market instruments in line with the practice for other

sectors. This means that issues of 1-5 year bonds by banks and building societies are now recorded in one place in the financial account rather than being distributed across two financial instruments. There have also been some changes to the allocation of LAPF and other financial institutions' assets between the two sets of financial instruments although sectoral totals across the two financial instruments have not changed.

Revisions to previously published data

The new sources and methods resulted in substantial revisions to financial flows, financial balance sheet levels, and interest paid on bonds. The flows and levels revisions mainly date back to 1990; bond interest revisions go back to 1984 for most sectors but from 1990 for the overseas sector. Tables 3-5 show how the overall figures for UK company securities published in Blue Book 1996 compare with those published in the previous quarter. The revisions are net of any changes involving switching of assets and liabilities between money market instruments and UK company securities. They also include revisions to inquiry sources as a result of late returns or incorporation of information from annual inquiries. The commentary below highlights those changes which are mainly due to the new sources and methods.

Transactions (Table 3)

Some of the reasons for revisions to transactions have been discussed above: the increases for ICCs in both the value of assets acquired and the value of shares issued reflects the changed treatment of acquisitions; while the removal of double-counting largely accounts for the revisions to banks and building societies. The revisions to other financial institutions' liabilities are mainly due to the inclusion of estimates for banks' and building societies' investments in subsidiaries. The personal sector's transactions are calculated as the difference between issues of quoted and unquoted ordinary shares and identified transactions in those shares. Their revisions therefore reflect changes in the figures for other sectors. These were largest in 1995 when the revisions reduced the personal sector's net sales by £8.8 billion.

Balance sheets (Table 4)

The reductions in the levels of industrial & commercial companies liabilities, which reached £81 billion by the end of 1995, are largely due to changes in the way the bonds & preference share levels are estimated. Industrial & commercial companies' liabilities had previously been derived as the

difference between identified assets and the liabilities for other sectors. They are now derived from the new sources described above. Other financial institutions total liabilities were revised in the opposite direction by a similar amount, with about half attributable to increases in bond & preference share liabilities.

The largest changes to assets were for industrial & commercial companies and the personal sector. In 1995, industrial & commercial companies assets were revised down by £79 billion while the personal sector's assets were increased by £110 billion. This reflects a change in the previous implicit assumption about the proportion of unquoted shares held by industrial & commercial companies. It is now assumed that the majority of shares in unquoted companies belong to the personal sector, with industrial & commercial companies holding 20 per cent of the value of unquoted industrial & commercial companies. This is, roughly, a reversal of the previous assumption. It means that the relative values of the personal sector's holdings of quoted and unquoted shares are now much closer to wealth estimates produced by the Inland Revenue based on inheritance tax returns.

Interest on bonds (Table 5)

Table 5 includes interest on money market instruments to allow the full extent of the revisions to the bonds interest figures to be shown: no figures had previously been included in the sector accounts for interest paid to domestic sectors on their holdings of money market instruments.

The revisions to payments are generally due to the introduction of new data sources and methods for estimating interest payments. The revisions to receipts reflect changes in the way receipts are distributed across the receiving sectors, as well as changes in the values of bonds held.

The table shows that no separate estimates had previously been included for payments or receipts by building societies. Both had been included within other financial institutions. It also shows that payments by banks had been substantially underestimated (peaking at £1.8 billion in 1995) and payments by ICCs overestimated (£1.6 billion in 1992). The largest revisions to receipts were for banks in 1994 and 1995 (+£0.8 billion and £1.1 billion respectively) and overseas in 1994 (+£1.0 billion).

The distribution of total payments and receipts is similar to that for bond & preference share levels shown in Charts 3a and 3b, as might be expected.

Further information

For further information please contact the author on 0171-533 6019. A more detailed description of the sources and methods used for each sector split by liabilities and assets and by each of the three types of security is also available on request.

Annex: Summary of data sources and methods

Capital issues by UK companies

Figures for building societies are obtained from statistical inquiries. Figures for issues of Eurobonds, medium term notes and other bonds listed on the London Stock Exchange for other sectors are obtained directly from the Stock Exchange. Estimates for other market issues, including issues of ordinary and preference shares listed on the Stock Exchange, and bonds issued elsewhere, are compiled by the Bank of England from their Capital Issues Database (CIDB). All figures are net of redemptions and share buy-backs.

Issues by listed UK companies relate to new money raised through ordinary shares, preference shares and bonds (public issues, offers for sale, issues by tender, placing and issues to shareholders and employees). Issues to shareholders are included only if the sole or principal share register is maintained in the United Kingdom. Estimates of issues are based on the prices at which securities are offered on the market.

The figures for non-market issues are based on information from various sources and include an element of estimation. The sources include returns by financial institutions, investments by venture capitalists (largely from the University of Nottingham's Centre for Management Buyout Research) and securities issued as part of the consideration during takeovers, sourced from the ONS's acquisition and mergers inquiries. Investment in the share and loan capital of UK subsidiaries by overseas parent companies is also included, based on information from the ONS direct investment inquiries.

Transactions in assets

Transactions by the public sector are taken from inquiries to local authorities and public corporations and the accounts of central government and public corporations. They include privatisations.

Figures for banks, building societies and other financial institutions are net transactions in both listed and unlisted securities.

Those for other financial institutions are, from 1968, adjusted for estimated costs incurred in share transactions and are based on quarterly returns of cash transactions. The main sources are inquiries run by the Bank of England, the Building Societies Commission and the ONS. The figures for other financial institutions also include estimated flows in assets by venture capitalists.

Transactions by industrial & commercial companies includes their estimated expenditure on acquiring independent companies and subsidiaries from other sectors. It also includes their transactions in current assets (estimated from the ONS Financial Assets and Liabilities Survey) and acquisitions by overseas companies (net of disposals) of UK company securities from vendors who are industrial & commercial companies (from ONS statistics of Cross Border Acquisitions and Mergers).

Figures for overseas portfolio transactions in shares come from inquiries run by the Bank of England and the ONS and are constrained so that they accord with information from the share register surveys which were run annually from 1989 to 1994. Portfolio transactions in bonds & preference shares are derived as a residual and are obtained as the difference between total UK net capital issues and the aggregate of the identified transactions of all other sectors. Because of this they are subject to a substantial margin of error. Direct investment transactions are sourced from inquiries run by the Bank of England and ONS.

The estimates of transactions in quoted and unquoted ordinary shares by the personal sector are derived as a residual and are subject to a wide margin of error.

Balance sheets

In constructing UK national and sector balance sheets, issues and holdings of securities are, as far as possible, recorded at market values. Changes in these values can reflect capital gains or losses, exchange rate movements, and coverage changes as well as transactions.

The market values for securities listed on the London Stock Exchange are sourced directly from the Stock Exchange. The values of other market issues are obtained from the Bank of England. The figures for non-market issues are based on similar sources to transactions. The most important difference is that the value of independent unquoted industrial & commercial companies is estimated as a proportion of the value of quoted

industrial & commercial companies. The value of companies which are UK subsidiaries of overseas parents is recorded as part of direct investment.

The value of holdings of UK company securities is generally derived from inquiry sources. ONS surveys of share ownership, covering all shares with a full listing on the London Stock Exchange, have also provided an important cross-check and, where appropriate, have been used to adjust the data on both balance sheets and flows by sector.

Dividends

Inland Revenue provide gross and net payments of interest by sector based on tax returns. Overseas receipts on portfolio investments are calculated as a proportion of total interest paid on quoted shares, based on their holdings of shares. Overseas receipts from direct investment are sourced from the direct

investment inquiries. The remaining receipts are distributed across the other non-paying sectors pro rata to their total holdings of quoted and unquoted shares.

Interest flows on bonds

Payments by sector on listed bonds are calculated from the nominal value and coupon for each bond on issue. For other bonds, an average interest rate is calculated based on the listed bonds and applied to the nominal value of bonds outstanding. For listed domestic debentures and loan stock, receipts of interest are distributed across private domestic sectors according to the total value of all bonds held. For other bonds, overseas receipts are calculated pro rata to their holdings and the remaining interest paid is distributed across the recipient private domestic sectors in a similar way to debentures and loan stock.

Table 1
United Kingdom Company Securities
Levels

£ billion

		1990	1991	1992	1993	1994	1995
Quoted ordinary shares							
Liabilities							
Banks	RSAI	12.9	17.3	21.3	31.0	28.7	31.0
Other financial institutions	RSAB	55.6	62.4	77.4	122.5	109.1	147.9
Industrial & commercial companies	RSBB	381.2	456.9	522.2	650.0	620.5	720.4
Total liabilities	RJZG	449.6	536.6	620.9	803.6	758.3	899.3
Assets							
Central Government	RRZT	8.9	10.5	10.7	9.4	5.3	0.9
Local authorities	RRZW	0.3	0.3	0.3	0.4	0.4	0.4
Public corporations	RRZZ	0.0	0.0	0.0	0.0	0.0	0.0
Banks	RSAF	1.6	1.8	2.1	2.6	3.4	4.6
Life assurance & pension funds	RSAP	221.7	273.1	322.0	414.2	375.9	442.2
Remaining financial institutions	RSAS	43.4	47.4	53.2	77.0	72.6	94.7
Industrial & commercial companies	RSAY	14.9	15.2	12.3	7.9	11.7	11.4
Personal sector	RSBE	103.5	121.5	132.0	163.7	168.9	199.6
Overseas sector	RSBH	55.3	66.7	88.3	128.5	120.0	145.5
Total assets	RJZK	449.6	536.6	620.9	803.6	758.3	899.3
Unquoted ordinary shares							
Liabilities							
Public corporations	RSAD	0.5	0.5	0.4	0.4	0.4	0.4
Banks	RSAB	6.7	8.0	8.1	8.4	8.5	8.7
Other financial institutions	RSAB	7.0	8.7	10.5	12.7	30.6	39.6
Industrial & commercial companies	RSBC	84.8	104.1	120.8	153.1	147.8	172.7
Total liabilities	RJZM	99.0	121.2	139.9	174.5	187.4	221.4
Assets							
Central Government	RRZU	0.1	0.1	0.1	0.1	0.1	0.1
Local authorities	RRZX	0.5	0.5	0.4	0.4	0.4	0.4
Public corporations	RSAA	0.3	0.2	0.2	0.3	0.2	0.1
Banks	RSAG	7.6	8.2	9.2	10.8	15.1	19.9
Building societies	RSAM	0.8	1.2	1.9	2.9	1.9	1.6
Life assurance & pension funds	RSAP	1.5	2.4	2.4	3.4	2.7	2.7
Remaining financial institutions	RSAT	6.0	6.9	8.7	13.5	17.9	21.9
Industrial & commercial companies	RSAB	16.8	20.6	24.2	30.6	29.6	34.5
Personal sector	RSBF	61.6	77.2	88.3	107.4	113.4	132.1
Overseas sector	RJYS	3.8	3.8	4.5	5.2	6.1	8.0
Total assets	RKWP	99.0	121.2	139.9	174.5	187.4	221.4
Bonds and preference shares¹							
Liabilities							
Banks	RSAB	10.4	7.6	10.2	16.3	19.5	20.7
Building societies	RSAB	7.3	7.5	10.4	11.4	9.2	9.6
Other financial institutions	RSAB	24.4	26.2	31.2	40.8	45.3	48.4
Industrial & commercial companies	RSBD	29.2	42.6	48.0	58.6	56.7	66.7
Personal sector	RJYX	0.2	0.3	0.5	1.2	1.2	1.7
Total liabilities	RKWP	71.5	84.2	100.4	128.1	131.9	147.0
Assets							
Central Government	RRZV	5.0	5.8	4.5	3.2	1.4	1.4
Public corporations	RSAB	0.0	0.0	0.0	0.0	0.0	0.0
Banks	RSAB	13.9	16.6	16.2	19.9	21.0	23.0
Building societies	RJYV	0.0	0.0	1.3	1.6	1.9	1.7
Life assurance & pension funds	RSAB	14.3	20.6	24.9	35.1	26.8	30.6
Remaining financial institutions	RSAB	4.1	3.9	6.1	11.4	10.1	7.9
Industrial & commercial companies	RSBA	2.5	2.7	2.7	3.5	3.4	4.3
Personal sector	RSBG	3.4	2.1	2.3	2.5	2.7	2.9
Overseas sector	RSBJ	28.3	32.5	42.3	50.8	64.6	75.2
Total assets	RYCM	71.5	84.2	100.4	128.1	131.9	147.0

¹ Excludes bonds with an initial maturity of between 1 and 5 years issued by banks and building societies.

These are counted as part of bank and building society money market instruments.

This affects banks and building society liabilities and assets for all sectors except the personal sector.

Table 2 United Kingdom Company Securities Transactions

		£ million					
		1990	1991	1992	1993	1994	1995
Quoted ordinary shares							
Liabilities							
Banks	DYXM	(1,198)	(1,088)	(546)	(1,036)	(526)	(925)
Other financial institutions	DYXZ	(544)	(895)	(1,295)	(3,985)	(5,400)	(907)
Industrial & commercial companies	DYF	(4,555)	(12,898)	(7,615)	(15,946)	(11,950)	(10,962)
Assets							
Central Government	DYWX	(3,690)	(7,212)	(6,858)	(4,563)	(3,654)	(2,380)
Local authorities	DYXA	46	-14	-17	-17	-1	-5
Public corporations	DYXD	0	0	0	0	0	2
Banks	DYXJ	(55)	65	54	15	167	228
Life assurance & pension funds	DYXT	12,942	15,204	3,344	7,096	8,531	(2,298)
Remaining financial institutions	DYXW	974	340	(1,121)	7,745	6,583	4,902
Industrial & commercial companies	DYYC	3,928	7,480	2,213	1,571	2,912	16,844
Personal sector	DYYI	(10,810)	(4,820)	1,095	(8,396)	(1,013)	(10,407)
Overseas sector	DYYL	2,962	3,838	10,746	17,516	4,351	5,908
Unquoted ordinary shares							
Liabilities							
Public corporations	DYXH	(35)	(5)	(12)	(16)	(18)	(22)
Banks	DYXN	(282)	(261)	(116)	(197)	(109)	(148)
Other financial institutions	DYYA	(2,865)	(1,670)	(1,445)	(1,973)	(3,300)	(5,659)
Industrial & commercial companies	DYYG	(5,249)	(3,870)	(5,058)	(4,534)	(2,147)	(7,168)
Assets							
Central Government	DYWY	(280)	(155)	(126)	0	(724)	(104)
Local authorities	DYXB	35	5	12	16	18	22
Public corporations	DYXE	(75)	(15)	2	(1)	(63)	(241)
Banks	DYXK	1,507	1,646	1,116	969	1,454	3,013
Building societies	DYXQ	39	157	149	968	465	(170)
Life assurance & pension funds	DYXU	(18)	472	169	158	104	(397)
Remaining financial institutions	DYXX	(1,050)	504	83	(328)	(589)	(773)
Industrial & commercial companies	DYXD	(8)	310	1,035	1,449	3,766	4,511
Personal sector	DYYJ	(595)	(919)	(1,469)	(1,725)	(2,220)	(3,186)
Overseas sector	DYYM	8,876	3,801	5,660	5,214	3,363	10,322
Bonds and preference shares¹							
Liabilities							
Banks	DYXO	(1,188)	(852)	(3,507)	(4,654)	(1,237)	(2,064)
Building societies	DYXS	(705)	(138)	(50)	(948)	837	444
Other financial institutions	DYYB	(3,018)	(2,671)	(2,164)	(6,515)	(8,151)	(4,778)
Industrial & commercial companies	DYYH	(5,445)	(5,854)	(3,359)	(6,180)	(8,670)	(13,158)
Personal sector	-RYVW	0	0	(83)	(290)	(131)	(347)
Assets							
Central Government	DYWZ	(492)	(1,558)	(596)	(837)	(2,276)	0
Public corporations	DYXF	0	0	0	0	0	0
Banks	DYXL	1,234	1,997	1,204	4,132	2,600	4,271
Building societies	RHRH	0	0	156	282	321	(38)
Life assurance & pension funds	DYXV	506	3,262	2,471	2,556	1,430	1,784
Remaining financial institutions	DYXY	(120)	511	876	3,686	(995)	342
Industrial & commercial companies	DYYE	321	494	78	836	341	1,132
Personal sector	DYYK	200	200	200	200	200	200
Overseas sector	DYYN	8,707	4,609	4,774	7,732	15,731	12,212

¹ Excludes bonds with an initial maturity of between 1 and 5 years issued by banks and building societies. These are counted as part of bank and building society money market instruments. This affects banks and building society liabilities and assets for all sectors except the personal sector.

Table 3:
Annual flows in UK company securities

£ million																
Liabilities						Assets										
	Public corporations	Banks	Building societies	Remaining financial institutions	Industrial & commercial companies	Personal sector	Central Government	Local authorities	Public corporations	Banks	Building societies	Remaining financial institutions	Industrial & commercial companies	Life assurance & pension funds	Personal sector	Overseas
	DYXH	AKAC	- AQOM	AQYG	AKAG	RYVZ	AADI	ADNR	RHQO	AKAD	RHZX	AQYY	AICC	CJGS	AAPV	AARU
Flows published in Blue Book 1996 in June 1996																
1990	-35	-2,668	-705	-6,427	-15,249	0	-4,462	81	-75	2,686	39	-196	4,241	13,430	-11,205	20,545
1991	-5	-2,201	-138	-5,236	-22,622	0	-8,925	-9	-15	3,708	157	1,355	8,284	18,938	-5,539	12,248
1992	-12	-4,169	-50	-4,904	-16,032	-83	-7,580	-5	2	2,374	305	-162	3,326	5,984	-174	21,180
1993	-16	-5,887	-948	-12,473	-26,660	-290	-5,400	-1	-1	5,116	1,250	11,103	3,856	9,810	-9,921	30,462
1994	-18	-1,872	837	-16,851	-22,767	-131	-6,654	17	-63	4,221	786	4,999	7,019	10,065	-3,033	23,445
1995	-22	-3,137	444	-11,344	-31,288	-347	-2,484	17	-239	7,512	-208	4,471	22,487	-911	-13,393	28,442
Revisions compared with results published in March 1996																
1990	-70	1,226	1,936	-2,214	-2,170	0	0	0	0	-572	0	-402	1,927	14	630	-305
1991	-10	5	850	-1,112	-1,625	0	0	0	0	-817	0	80	3,153	45	-143	-426
1992	-24	-1,285	822	995	-1,072	-83	0	199	0	-1,058	0	-457	2,179	-8	1,764	-1,972
1993	-32	1,063	756	-3,419	-2,239	-290	0	705	0	-346	0	-408	1,426	342	3,476	-1,034
1994	-36	4,400	1,801	-3,770	-7,994	-131	-118	487	6	-1,250	0	-2,954	2,784	-196	6,652	319
1995	-38	1,240	899	-4,634	-9,468	-347	-26	43	-75	-57	0	-2,107	4,979	332	8,788	471

Table 4: End-year balance sheets for all UK company securities

£ billion

	Liabilities						Assets									
	Public corporations	Banks	Building societies	Remaining financial institutions	Industrial & commercial companies	Personal sector	Central Government	Local authorities	Public corporations	Banks	Building societies	Remaining financial institutions	Industrial & commercial companies	Life assurance & pension funds	Personal sector	Overseas
	REYZ	REZA	REZB	REZC	REZD	RMKI	REYP	REYS	REYT	REYU	RMHI	ASKO	AMWA	REYW	REYX	REYY
Levels published in Blue Book 1996																
1990	0.5	29.9	7.3	87.0	495.2	0.2	14.0	0.8	0.3	23.1	0.8	237.4	53.5	34.3	168.6	87.4
1991	0.5	32.8	7.5	97.3	603.6	0.3	16.4	0.7	0.3	26.6	1.2	296.1	58.3	38.6	200.8	102.9
1992	0.4	39.6	10.4	119.2	691.0	0.5	15.2	0.7	0.3	27.5	3.3	349.3	68.0	39.2	222.6	135.1
1993	0.4	55.6	11.4	176.0	861.7	1.2	12.7	0.8	0.3	33.2	4.5	452.7	101.8	42.0	273.7	184.5
1994	0.4	56.7	9.2	185.0	825.0	1.2	6.7	0.8	0.2	39.5	3.9	405.4	100.6	44.7	285.0	190.7
1995	0.4	60.3	9.6	235.9	959.8	1.7	2.3	0.8	0.1	47.6	3.3	475.4	124.5	50.3	334.6	228.7
Revisions compared with results published in March 1996																
1990	0.4	-13.2	-3.8	16.0	-3.2	0.2	0.7	0.0	0.0	1.1	0.3	0.0	-4.2	-36.0	42.5	-8.0
1991	0.4	-16.0	-4.6	28.8	-6.8	0.3	0.4	0.0	0.0	0.7	0.5	0.0	-5.4	-43.7	59.8	-10.1
1992	0.4	-8.5	-2.7	34.1	-18.2	0.5	0.0	0.5	0.0	-3.3	2.4	0.0	-2.3	-55.0	73.8	-10.5
1993	0.4	7.1	-2.5	41.3	-53.9	1.2	0.0	0.5	0.0	-4.1	3.1	-0.9	-3.5	-74.8	83.0	-9.8
1994	0.4	8.8	-3.5	67.4	-66.1	1.2	0.0	0.5	0.0	-3.8	2.2	0.0	-4.9	-67.6	94.8	-12.9
1995	0.4	10.7	-4.3	79.9	-80.5	1.7	0.0	0.5	0.1	-3.8	1.9	0.3	-5.3	-79.4	110.3	-16.6

Table 5: Interest payments and receipts on bonds: UK company securities and money market instruments

£million

	Payments Banks	Receipts Building societies	Other financial institutions	Industrial & commercial companies	Personal sector	Central Government	Banks	Building societies	Other financial institutions	Industrial & commercial companies	Life assurance & pension funds	Personal sector	Overseas
Published in Blue Book 1996													
1984	385	56	80	401	0	53	115	0	48	108	473	31	94
1985	420	71	79	679	0	340	152	0	62	91	408	29	167
1986	633	282	128	900	0	332	428	0	84	130	493	47	429
1987	707	376	201	1,308	8	542	497	0	95	149	593	57	667
1988	718	568	307	1,521	15	497	470	0	111	159	697	59	1,136
1989	1,414	979	704	2,349	16	452	702	0	263	247	1,274	105	2,419
1990	1,612	1,326	1,095	3,032	16	386	1,120	0	364	246	1,524	146	3,295
1991	1,321	1,555	1,498	3,140	20	491	1,154	0	324	205	1,661	132	3,567
1992	1,269	1,665	1,966	3,684	26	690	1,207	70	351	184	1,735	135	4,238
1993	1,496	1,373	1,879	3,743	49	453	1,090	141	419	178	1,653	113	4,493
1994	2,349	1,344	2,386	4,281	78	385	1,305	210	537	186	1,735	153	5,927
1995	2,919	1,565	2,894	4,533	95	157	1,558	276	571	260	2,104	184	6,896
Revisions compared with results published in March 1996													
1984	365	56	-61	-6	0	0	33	0	-33	89	234	31	0
1985	408	71	-204	-238	0	0	-81	0	-163	54	198	29	0
1986	585	282	-481	-495	0	0	25	0	-205	80	-56	47	0
1987	605	376	-763	-645	8	0	-14	0	-218	75	-319	57	0
1988	485	568	-941	-587	15	0	-5	0	-230	48	-332	59	0
1989	919	979	-1,427	-804	16	0	47	0	-260	124	-333	105	0
1990	890	1,326	-1,865	-489	16	0	353	0	-219	68	-17	146	-453
1991	482	1,555	-1,724	-985	20	0	345	0	-370	42	-59	132	-742
1992	491	1,665	-1,459	-1,607	26	0	175	70	-610	-9	-594	135	-51
1993	753	1,373	-1,181	-264	49	0	418	141	-340	29	-39	113	408
1994	1,498	1,344	-714	326	78	0	821	210	-23	72	302	153	997
1995	1,798	1,565	-853	22	95	0	1,127	276	51	161	570	184	258

How far should economic theory and economic policy affect the design of national accounts?¹

Henry Neuburger

1. NATIONAL ACCOUNTS – TOOL OR RAW MATERIAL?

National accounts have a history stretching over about fifty years in the UK. During this period, theories about the operation of the economy, objectives of economic policy and policies designed to achieve them have undergone several major changes. Yet few modern national accounts statisticians would have difficulty in following the very earliest national accounts publications. Nor would the founders of national accounts have any difficulty following current publications – neither substantive statistics nor methodological volumes. The average policy maker or their economic advisers might not find it so easy. National accounts is very little taught on economics courses in the UK, and there is little scope for acquiring the knowledge except for the relatively few directly involved in formal policy analysis. Partly as a result of this, national accounts magnitudes are often used in a way which suggests little awareness of the gap which sometimes exists between these measures and the concepts in economic theory.

Underlying much of the argument of this paper is the variety of uses for GDP. All national accountants are taught very early in their career that it is not a measure of welfare. If pressed they will usually say that it is a measure of economic activity contributing to welfare. There is a tendency in debates on economic policy making to believe that GDP aims, possibly unsuccessfully, to measure welfare, and that it also measures the use of resources. Policy analysts tend to regard national accounts as tools, which are given to them by tool makers. Compilers of accounts on the other hand tend to look on the products more as raw materials. In manufacturing establishments toolmakers work alongside those using the tools. Raw materials producers work in separate establishments. The relations between compilers and policy users have been driven by a range of technical and organisational factors. A search for independence on one side

and security of policy discussions on the other are examples. National accounts – whether tool or raw material are provided by one set of professionals for the use of another. National accountants typically defer to economists or economic policy makers both about the use to which their products are put, and the theory underlying their compilations. Economists and economic policy makers in the UK do not typically look to national accounts to develop concepts, while they assume that these accounts measure accurately their theoretical concepts.

Policy makers' influence on the design of accounts is limited by the setting of international standards. These have the aim of ensuring international comparability of statistics and the effect of limiting interventions by policy makers. There is a danger that in preventing unwarranted political interference in the compilation of statistics, such rules and procedures will also result in developments which are not those which would most usefully serve the aims for which the system was designed. In the UK few policy makers have been directly involved in the current process of designing the SNA 93 and the ESA95.

It should be emphasised that this is a paper about UK experience, which is unusual if only because of the unusual professional organisation of these activities in Britain; the main work of compilation and co-ordination has involved professional statisticians, albeit often with economic training, rather than economists. As Sir Samuel Brittan recently remarked of macro-economists and economic statisticians

They have more in common with each other than with fellow economists and statisticians working in different fields. Yet they are in separate compartments, with separate career structures.

Brittan (1996)

¹ I should like to acknowledge the help of many colleagues and friends including David Caplan, Shirley Carter, Peter Collinson, Margaret Dolling, Chris Groom, Sir Bryan Hopkin, Anne Harrison, Sir Jack Hibbert, Marta Howarth, David Hughes, Graham Jenkinson, Chris Kelly, John Kidgell, Andrew Kilpatrick, Robin Lynch, Stephen Pickford, Lord Roll of Ipsden, Adrian Richards, Uzair Rizki, Prashant Vaze, Pam Walker and David Wroe. In spite of their efforts, errors remain for which I am wholly responsible.

The story told here is of cycles of close and less close linkage between development of accounts and their policy use, with relations on a convergent trend since the late 1980s. In telling this story, however, it is important not to lose sight of the central role of national accounts in economic policy making. The fluctuations since their introduction are trivial compared with the revolution in policy making ushered in by the original development of accounts. Those who have experience of economic analysis before and after the introduction of national accounts would reject most of the comments in this paper as trivial carping. Not only did the national accounts, as the quotation from Sir Alec Cairncross below shows, promote a previously undreamt of comprehensiveness in accounts, but the act of measuring previously abstract concepts, made major contributions to theory.

The paper is set out in seven sections. Section 2 reviews the policy use of national accounts tracing it through formal publications and more discursive description. The evolution is seen as one where national accounts were originally viewed with some suspicion and incomprehension, were then perceived to be a vital tool, until, in the end, they came to be taken for granted. Section 3 looks at the mirror image, national accounts role in policy. Section 4 looks at other links between economic policy and accounts. Section 5 looks at the role of theory and section 6 at some notorious cases of unreliability in compiling national accounts and their consequences. Section 7 concludes that the links between economic policy making and the design of the accounts in the UK are in need of regular review.

2. NATIONAL ACCOUNTS IN POLICY STATEMENTS.

National Accounts in the UK, based on an integrated system of accounts, give a framework and basis for measuring economic activity and an assurance that numbers are consistent and reasonably accurate. Early National Accounts in the UK were designed for policy. Even though national accounts are still compiled primarily for policy purposes, the influences of policy requirements on conceptual design, as opposed to resourcing, timeliness or reliability has, for most of the recent past been relatively small. This paper is not about the development of the SNA or any other international standards, but about the role of UK policy makers and national accountants within the framework of the SNA. The UK already had before the SNA 93 a highly articulated sequence of accounts which was arguably

more elaborate and complete than most other countries. The UK example showed the practical possibilities and limitations of an integrated sequence of accounts of the kind provided for in the SNA93. Integration refers both to top-to-bottom accounts and to quarterly and annual accounts.

In the historical analysis of the use of national accounts material in policy making I shall use sources which have remained fairly consistent in their role over the period, The National Accounts White Paper which accompanied almost every Budget from 1941 until 1978,² the Financial Statement and Budget Report, which began in 1969, and Budget speeches. Only on very rare occasions do these make any explicit reference to the role played by national accounts. Normally the use made of national accounts suggests that their role appears obvious and interpretation unproblematical. Occasionally policy analysts or policy makers describe the process of making policy; some of them are also referred to.

This section will look at statements of policy practice for 1941 and 1995. It will then go on to look at the more general history of approaches to the accounts, before tracing the history more formally through regular official publications.

Keynes's "How to Pay for the War" is often seen as the first attempt to put together national accounts for the UK and use them in a policy context. The most recent statement of policy practice is Sir Terence Burns's lecture "Managing the Nation's Economy – the Conduct of Monetary and Fiscal Policy." The most obvious contrast between these two documents lies in the policy objectives and constraints they describe. There is also a marked difference in the approach to data. Keynes spends considerable amount of scarce paper belabouring governments for their failure to provide national accounts, and also to the compilation of figures which corresponded with the problems he wanted to address. It is a measure of the degree to which government have responded to Keynes's complaints that Sir Terence Burns writes without any reference to measurement of the economy. Nonetheless, reference to national accounts magnitudes occur throughout his account of policy making.

The different uses of GDP are well illustrated in Sir Terence's lecture. He explains that the mission of the Treasury is "to promote rising prosperity based on economic growth." In describing the setting of policy he explains that "experience

² Ironically, in introducing the first White Paper, Sir Kingsley Wood the then Chancellor of the Exchequer made a point of emphasising that the publication should not be seen as a precedent for annual publication.

shows that inflation will be reasonably stable if we keep output growing in line with the supply potential." GDP thus serves the dual purpose of measuring prosperity and acting as a leading indicator of inflation. The Government produces routine publications in support of economic policy. These included the Treasury's Monthly Monetary Report (now replaced by Internet publication), the minutes of the monthly meeting between the Chancellor of the Exchequer and the Governor of the Bank of England, and the Financial Statement and Budget Report (FSBR). In addition the Bank of England publishes a quarterly inflation report. All but the FSBR are relatively recent and illustrate only the current phase of policy. By contrast, the FSBR which accompanies each Budget Statement has existed in something like its present form for thirty years, and predecessors can be traced back another twenty five. In addition to these published statements we can look at the Treasury economic forecasting model, which is one of the links between national accounts data and policy analysis.

The last number of the Monthly Monetary Report, December 1995, is characteristic of the short term monitoring of the economy. It was designed to present the factual background to monthly discussions between the Chancellor of the Exchequer and the Governor of the Bank of England on monetary policy. Of the 24 series illustrated in the report, the majority concern developments in inflation, finance and labour markets and are not drawn primarily from National Accounts Sources. However, when it comes to the actual discussion between the Chancellor and the Governor as reported in the published minutes, it is striking that as much as a third of the data analysed is drawn from the national accounts,

When we look at the Treasury's own macroeconomic model, there is a larger role for National Accounts data. The Treasury has maintained a formal model of the economy used for forecasting and policy analysis for the last thirty years or so. In that period it has expanded in size and scope and then contracted in size. The latest version of the Treasury model described in Chan, Savage and Whittaker (1995) describes the UK economy in 357 variables. There are 30 key behavioural relationships. These are described in Chan Savage and Whittaker using just under 100 variables. Of these the largest group comprising about a half are taken directly from the national accounts. Next are two groups of about 15 variables each, one covering finance, some of which appear in UK national accounts, but which are usually compiled by the Bank of England and one group covering the labour market. Prices not drawn from the national accounts and international indicators are represented by five variables each. The rest

cover surveys of business etc. The role of national accounts probably declined a little as the scope of the model expanded to include the monetary sector. When the model was larger – over a thousand variables at its peak – the significance of national accounts was probably similar, but with greater detail in all parts.

The historical evolution of the policy use of national accounts data can be illustrated from the Financial Statement and Budget Report (FSBR) usually referred to as the Red Book. A Red Book has been published with each Budget for about the last thirty years. It contains a statement of economic policy and the history and projections underlying it. Because this document is so comprehensive and has maintained its role over a period when both economic policy and economic theory have gone through many dramatic changes, its evolution is described in Appendix B. The most recent number, November 1995, consists of six chapters, the first of which is a summary of measures introduced in the associated Budget and the thinking which lay behind it. Of the other five chapters, only one giving the detail of changes in taxation is not dominated by figures from the National accounts.

In summary it can be said that in the period of the Red book, national accounting concepts have played a varied and dominant role in the formulation and exposition of economic policy. The form in which those concepts have been used has changed hardly at all in a quarter of a century. Looking at official uses suggests a strong analytical role for the National Accounts.

3. POLICY AS SEEN FROM A NATIONAL ACCOUNTS PERSPECTIVE

In the previous section we looked at how policy documents referred to the national accounts. In this section we look at the mirror image – how National Accounts documents saw their role in policy analysis.

Keynes's "How to pay for the War" is usually regarded the first policy use of National Accounts. The assumption usually made by those looking back on it was that the problem Keynes was trying to solve was how to find the resources to fight the war. While the national accounts analysis performed this function, this was not Keynes's problem. He had no doubt that the resource constraints on trying to fight a war and maintain a tolerable standard of living would enforce themselves, whatever the policy. His aim was to find a means of eliciting the required resources without any more than necessary coercion, hardship

or inflation. The National accounts were therefore required to yield not just an estimate of the available resources, but also to provide a basis for assessing taxable capacity. It was Keynes also, writing the introduction of the White Paper on National Income, who underlined his belief in the value of national accounts in peacetime as well as wartime planning.

Keynes's original initiative was taken up by the Government with Keynes's active involvement. The first white paper was published in 1941 only a year after Keynes had belaboured the Government for its failure to produce national accounts estimates. The publication itself focused much more on finance than on resources. The only prose was a series of largely technical notes. Its very dryness serves to underline the unusual birth of the National accounts. One example captures the flavour.

During 1940 the resources devoted to personal consumption and to the demands of the central government and local authorities together exceed the resources available from the net national income and are supplemented by the resources made available by disinvestment of capital assets at home and abroad

Sir Kingsley Wood the Chancellor of the Exchequer announced the publication in the following terms:

Nor do I believe that the difference between total expenditure and Budget Revenue has so far introduced inflationary dangers into our system my judgement seems to be fortified by the results of a number of difficult and complicated statistical calculations tables of national income and expenditure, which are the very valuable first fruits of our new Central Statistical Office.

The trepidation with which national accounts were introduced is perhaps not surprising. It is noteworthy however that one of the main concerns at this stage of economic policy appears to have been inflation.

In April 1945 the Government published a document still called "An Analysis of the Sources of War Finance and Estimates of the National Income and Expenditure in the Years 1938 to 1944." Its introduction, however, already looked forward to the peace.

It is generally understood that the increase in the resources at the disposal of the Government for war purposes has been made possible by bringing into play resources

previously unused, by diverting resources from other uses, by allowing capital equipment to run down and by borrowing and selling assets abroad. The need for following throughout the economy the implications of any large increase in war expenditure is accepted as a corollary to this.

But there is nothing in this method which limits its application to war-time. In peace-time, too, such an approach to any large change in expenditure whether public or private, on armaments, for example, or capital equipment is both possible, and in view of the government's employment policy necessary. For, as is pointed out in Cmd. 6527, the Government's white paper on employment, the problem of maintaining employment is very largely the problem of maintaining total expenditure, public and private, and in an economy where this is accepted as one of the prime aims of government policy it becomes peculiarly important to have not only statistics adequate to measure that expenditure, but a method of bringing them together and of classifying them which makes possible the necessary comparisons with the immediate past and with the present position in other countries.

That characterisation of economic problems was to remain dominant in UK economic policy for the following thirty years. In the five years immediately following the war the fundamental economic problem changed little. When economic recovery had reduced the absolute shortages of wartime, the rearmament embarked on in the context of the Korean War served to impose the same constraints on policy makers. It was only with the return of a conservative government in 1951 that individual well-being was placed at the centre of the stage. During the 1950s the role of GDP as a measure of welfare came to the fore.

In the national accounts a generation of analysts and policy makers felt that they had found an instrument to avoid the economic chaos of previous post-war periods and of the 1930s. Not only did this reflect the triumph of Keynes's analysis of the economy, but of the technocratic approach to economic policy. The approach to the economy which saw it as a complicated machine was not, of course new. But Keynes and his followers had a particularly strong sense of the power of the intellect to solve economic problems which had appeared to their predecessors to be insoluble or mired in political conflict.

A quotation from Richard Stone writing nearly twenty years later is just one of many examples of this kind of optimism.

He and Alan Brown open their series "A programme for growth" with a quotation from Samuel Johnson.

Nothing amuses more harmlessly than computation, and nothing is oftener applicable to real business or speculative enquiries. A thousand stories which the ignorant tell, and believe, die away at once when the computist take them in his grip.

Later they explain how they see economic growth as the cure for all economic problems and analysis the clue to solving its problems.

Whether we are interested in our own standard of living and that of our descendants, in our ability to help the poorer countries of the world to break the poverty barrier which has always enclosed them, or in the grosser forms of power politics, we cannot be indifferent to Britain's economic growth.

Even those who are not indifferent may think that economic growth is more a matter for hope and prayer than something about which positive action can be taken. We disagree. While we certainly do not claim to know all the answers, we believe that there are certain definite steps that are needed. The first is to try to understand the economic system whose growth we are talking about. We should approach the economic system as an engineer approaches a complicated piece of machinery or as a doctor approaches his patient.

The first paragraph may be compared with Maudling's 1963 Budget speech made about a year later and quoted in appendix A, which expressed very similar views about the fruits of economic growth. At this stage national accounts and policy makers held similar views about their roles.

The founders of National accounting designed them predominantly for policy purposes. Before Keynes, Kuznets in the 1930s came to national accounts from a concern with the distribution of income. He does not seem to have seen accounting per se as an important aspect of the accounts. He argued that the point at which one made measurements in the circular flow of income depended on the policy which was being examined. He argued that there should not be a single set of accounts, but that different accounts need to be designed for different policy purposes. This position is described explicitly in Aukrust's account of Ohlsson's work in the early post-war period. As Aukrust says, this view became unpopular even in Scandinavia where it originated.

There were others in this earlier period who saw National accounts in a more ideological light. The official history of the CSO quotes "The Economist" in July 1945.

Good statistics are far more important to a country whose economic policy proceeds by guiding and assisting industries and firms whose decisions are free, than one that operates through an imposed plan, just as an accurate chart is more necessary for ship sailing the free seas than to a car driving down a concrete highway. The businessman, who will have to provide the facts asked for, can rightly insist that he should not be troubled unnecessarily or by too many overlapping departments. But if he is wise, he will regard the efficient collection of statistical information as one of the chief safeguards against the totalitarian state.

Ward and Doggett (1991) p 51

National accounts were also to change the style of decision making in Government. They played a key role in introducing more quantification and accompanied an enhanced role for economists. Commenting on the Annual National income white papers in the early post war period Cairncross says:

All this meant a great advance, not only in public understanding in the workings of the economy, but in the approach of officials to economic problems. They became accustomed to a more quantitative treatment of these problems and to bringing to bear on the statistical information that was now more readily available and more easily digested; they also developed a nodding acquaintance with economic concepts to which at last definite magnitudes could be assigned.

Cairncross (1985) p 57

An important development in the national accounts was from the 1959 enquiry into the monetary system, usually known as the Radcliffe Report. The Committee identified a need to monitor the evolution of credit in the economy. This led them to propose the compilation of top-to-bottom accounts for the public sector. The linking of fiscal policy, government finance and monetary developments was laid out in the Report's Table 7. The Report's call for the regular production of financial accounts was a major stimulus to the early development of financial accounts in the UK. The subsequent development of the Public Sector Borrowing Requirement is traced in the next section.

Statistical style and approaches to economic policy were again brought into focus during the 1960s. The influence of Richard

Stone was felt mostly in the early period when the National Economic Development Office was set up. His development of Social Accounting Matrices (SAMs) contributed to the development of policy mainly at this very early stage. The more active phase of economic planning came with the establishment of the Department of Economic Affairs in 1964, and the associated development of the National Plan. In the National Plan document and in the account given of its compilation in the House of Commons Select Committee of Enquiry into Government Statistics – House of Commons (1966), this work receives very little discussion. The strongest concern expressed is the difficulty of building the plan on out of date input output tables. Far more emphasis in presentation is given in the plan to the direct enquiry into the intentions of companies than into modelling demand and output through SAMs, although it is clear that the latter did indeed play an important role. The style of indicative planning gave more emphasis to the autonomous intentions of entrepreneurs than the scientific analysis of their responses to demand and cost. So although the Economist in 1945 had seen economic statistics as a bastion of economic independence, twenty years later, the national accounts had already begun to be associated with state intervention in the economy. This went a stage further when Keynesian analysis and policy itself came under scrutiny. This section has tried to show the evolution of various national accounts concepts in relation to the development of economic policy. The history shows no clear pattern with attitudes within economic policy and national accounts changing but not always in step with each other.

4. ECONOMIC POLICY AND ECONOMIC STATISTICS

Appendix A illustrates from policy speeches the evolution of economic policy in the last fifty years. It shows that for much of this period economic growth was seen as unsustainably rapid, so that policy was concerned with the problems of excess capacity utilisation. For UK policy purposes, therefore, the indicator of capacity function tended to be important. Only in those periods where rapid growth was in itself expected to lead to increased capacity – such as the late 1960s – is rapid GDP growth seen predominantly as a benefit rather than a source of concern.

The history of three concepts, the PSBR, Real National Disposable Income and money GDP can usefully be contrasted. The PSBR is a measure of Government cash flow. It played a role in radically different theories over the period. For years it had merely been one of the many lines in the Financial Statement, a set of financial accounts for the Government which

now appear in Chapter 4 of the Red Book. Its main function was to provide a link between fiscal policy and the funding operations of the Bank of England as presented in the Radcliffe Report.

In the early years of the FSBR it was part of the analysis of domestic credit. It appears to have originated the Committee on the Working of the Monetary System – the Radcliffe Report (HMSO 1959). This report gave the impetus to UK to develop financial accounts linked to the national accounts and to monetary aggregates.

In the early seventies, an analysis from Kaldor and Godley from Cambridge argued that the financial surplus of the domestic private sector was stable and that any changes in the public sector deficit had an equal impact on the overseas deficit. The PSBR, while strictly not relevant to an argument which bore more on the national accounts equivalent, public sector net acquisition of financial assets, was pressed into service. Later in the decade, after an enormous growth in the nominal public sector deficit, the PSBR served as a monitoring target following the IMF crisis of 1976. Here it served as an indication of fiscal caution.

By 1980, the PSBR had taken a different role. The chosen monetary target was M3. One of the counterparts of M3 was the PSBR. The first Medium Term Financial Strategy (MTFS) argued that, because private sector counterparts to M3 were sensitive to interest rates, a low PSBR was needed to restrain monetary growth without high interest rates. By the mid 1980s the PSBR had become negative and, since then, targeting it became an independent ambition; the aim being to reach balance in the medium term. Throughout this period the concept and definition of the PSBR has been the subject of vigorous debate, with policy makers anxious to stay in line with internationally agreed standards for the definition of the public sector.

A contrast may be drawn between it and Real National Disposable Income (RNDI), a concept introduced in the 1970s, designed to complement the concept of GDP. When the exchange rate became more volatile during the 1970s, it was clear that the capacity of the economy to sustain welfare was affected by shifts in the terms of trade, and the concept of RNDI was designed to reflect that and provide a better measure of real national income than GDP. It continues to be shown prominently in ONS publications, but has not achieved a great deal of salience in the discussion of policy either by policy makers or commentators.

One innovation introduced in association with the MTFS in the early 1980s was the use of current price GDP as an indicator. Until the 1980s policy attention focused mainly on output volumes and prices. As theories such as the natural or non-accelerating inflation rate of unemployment become increasingly influential, current price (money) GDP came to the fore as a medium-term policy objective. Monetary and fiscal policy were set so as to achieve a gradually declining path for money GDP growth, thereby squeezing out inflation consistent with sustainable growth of real GDP. The theories suggested that output would revert to trend in the long run, while microeconomic policies were aimed at improving the trend rate of growth. Thus money GDP, which had hitherto been a relatively neglected statistic, became more prominent

Of the three concepts discussed here only the second and third are rooted in national accounts. The PSBR, while describable in national accounts, and displayed in UK accounts, is not widely recognised outside the UK or by national accountants generally. Its origins in the Radcliffe Committee came before the national accounts were sufficiently developed to integrate it with broader economic measurement. It is a significant achievement of the integrated UK national accounts that a concept considered to be of such central policy relevance can now be set in an overall framework. The use of current price GDP shows that the accounts can generate concepts which serve previously unanticipated policy needs.

Policy itself has an impact on the way in which national accounts are viewed. In the short run higher than expected economic growth may, under certain policy configurations, depress markets. The analysis on which current policy is based suggests that an acceleration in economic activity is likely to lead to increased inflationary pressure, but only if the economy is already operating close to (or above) potential or the acceleration is particularly sharp. Under the current policy regime it is also more likely to lead to increased expectation of a tightening of monetary policy in response to this threat. Markets are therefore likely to react adversely to a perceived upturn in activity that threatens to take the level of GDP above its potential. The perceived threat of higher inflation is reinforced by an expectation of interest rate rises. When, by contrast, the rate of growth in activity is reviewed over a longer period, the opposite effect is likely. If the rate of growth of productive potential appears to have been understated, then the threat of

inflation and the likelihood of an interest rate rise will diminish. Increasingly public reaction to announcement of national accounts statistics is conditioned by market expectations. While there are still many occasions when GDP is taken as a measure of economic performance, particularly in the construction of the rather suspect league tables of GDP per head, there are many occasions when they are also taken as indicators of policy or market reaction.

5. THE ROLE OF THEORY

Because National accounts are accounts of the economy, theories about what the economy is and does are central to their development. Given that what the economy is and what it does are themselves matters of debate, it would be surprising if there were a unique set of accounts to which everyone subscribed. Early compilers like Kuznets and Ohlsson resisted the idea that there should be a single set of accounts and argued for different accounts for different purposes. They might well have resolved the tension between the role of accounts in measuring capacity and welfare by drawing different measures from the same accounts, rather than coming up with a single figure for GDP. This view has largely been replaced by the pressure for international standards.

We have already seen in looking at the FSBR some of the history of theory in the development of economic policy. The natural rate theories which came to play an increasing role in policy since the 1970s had no obvious direct role on the development of the accounts but brought to prominence money GDP, a concept which had up till then played little role. The PSBR was associated with a range of theories. Discussing the broad sweep of theoretical problems associated with the accounts is beyond the scope of this paper. Instead I give two further very different examples of how economic theory has played a role in the design of accounts.

One example is the treatment of interest payment in the national income. In the early days of national accounts there were two traditions, one of which Aukrust identifies as Anglo American and the other as Scandinavian. The Anglo American tradition treated interest receipts as income and interest payments as payment for a service.³ The interest paid is on the finance, not on the asset acquired with the use of the finance. The asset itself attracts a different factor income, profit or rent.

³ An odd but revealing exception was made by Keynes for interest on the national debt which he excluded on the grounds – true then but probably not now – that the debts on which interest was paid were mainly incurred during the fighting of wars and therefore the payments did not represent any visible assets. Apart from the difficulties this then creates for the inclusion of military expenditure in national account, it is an odd doctrine.

Interest is a reward for the subscription of finance, irrespective of whether the funds finance consumption or investment.

The Scandinavian view associated particularly with Lindahl, but also with Frisch, was that interest payments were a transfer. This, again according to Aukrust, was justified on the grounds that value added could only arise from the use of real factors of production. He also described his own concept of requited transfers which he attributes to Meade. The concept of requital seems the stronger of the two, although it raises the possibility of production which is not paid for, as for example imputed rent on assets might be. The payment of interest does not have to be unrequited. It is certainly true that there are conditions attached to the payment of interest, and interest itself is demanded as a payment for making a loan. The payment of interest can therefore only be regarded as a transfer, if finance is not regarded as a factor of production.

Certainly the majority of economic theorists in the century or so up to Frisch's writing regarded land, labour and capital as the only factors of production. It is not clear, nor indeed was it entirely clear even then, that the conditions under which rewards to factors of production would exactly correspond to total output normally held. For such a condition to hold, there had to be no economies or diseconomies of scale.⁴ Where economies of scale prevailed, the total product would exceed the sum of the productivities of all real factors of production. Their combination yielded more than the sum of their parts. The Lindahl requirement that only real factors could produce output was therefore, in these circumstances, not relevant to national accounting.

It could also be argued that, in practice, finance is a factor of production as important as land or physical capital. Of course some of it is intermediate input which leads to the production of physical capital, but that does not mean that its return – interest – should be automatically excluded from total income. Countries where access to finance is difficult, especially third world countries, certainly suffer from lack of it. Excluding it understates the difference between industrialised and third world countries, the relative income levels of countries like the UK and the US with large financial sectors, and the growth rate of most industrial countries. This is an example where theory, taken largely for granted at the time, entered into the doctrine for compiling the accounts and developed a life of its own.

Another good example of the role of theory in the design of accounts is given by Arvay in his account of the Material Product System (MPS) for centrally planned economies. He points out that the central feature of this system is the exclusion from production of all services. This is rooted in the doctrine that only physical goods constituted output, a doctrine originating with Adam Smith and reinforced by Marx. As he points out this doctrine was less ludicrous in an era where large parts of the population lacked sufficient material goods to survive. Unlike in modern industrial countries, not only did many suffer an absolute shortage of goods, but services were not, as they now might do, able to substitute for goods. It was also a doctrine which was more appropriate to countries which were concerned, as was eighteenth century Britain or early Soviet Russia, with the economy as the basis for military or diplomatic power, and where the objectives of the state were expected to over-ride the concerns of individual welfare.

It is hard to dissent from Arvay's judgement that other systems would have served centrally planned economies as well as the MPS, but that the MPS would have been little use for Western economies. The difference between the MPS and the SNA was rooted in political and policy differences largely because of the political weight given by Soviet theorists to what was a largely incidental aspect of Marxist theory. It is not clear that the doctrine of the over-riding importance of goods was a central feature of Classical economics or Marxism. It was just that Western economists managed to shed it earlier than Soviet economists. Here we have an example where economic theory weakened the development of accounts, even though the policy aims which might at one time have underpinned the theory had nearly disappeared.

While the doctrine of prioritising goods over services is easy to ridicule, it is one which is probably still shared by many who are not professional economists and national accountants, and still makes its appearance in public debate. The Frisch/Lindahl doctrine is in some ways a more complicated version of the doctrine underlying MPS, which implies that only things like labour, land and capital are capable of generating value, while finance is not. The question of which factors of production are or are not capable of generating value is probably fairly sterile. What causes trouble is when pieces of economic theory enter into arguments about the national accounts detached from the policy context which originally gave rise to them. The examples

⁴ Of course, if factors of production were not paid their marginal product, then there was no theoretical basis for using prices to value factor inputs.

of the PSBR and money GDP, show, nonetheless, the flexibility of the national accounts in responding in developments in economic theory.

6. UNRELIABILITY AND ITS CONSEQUENCES

Looking at unreliability in national accounts and the reaction to it is one way of assessing the importance of the accounts themselves. I begin with the Pickford Report (Cabinet Office (1989)) on the problems with the accounts in the late 1980s and then go on to look at other cases of unreliability.

6.1 The Pickford Report

I begin with what has probably been the most significant incident of recent years in the relationship between economic policy makers and national accountants in the UK – the Pickford Report – Cabinet Office (1989). Revisions and perceived unreliability in the national accounts led the Government to establish this scrutiny of Government economic statistics. It was a key stage in the rebuilding of effective communication between users and compilers of national accounts, and is widely regarded as a highly effective move in remedying problems which had become increasingly apparent to both. The implementation of the recommendations of the report brought an enhancement of the resources devoted to compiling the accounts and a renewal of the focus, on the part of the Central Statistical Office, on user needs. Apart from the changes in practice, the tensions to which the unsatisfactory nature of the accounts in 1987 and 1988 gave rise shed interesting light on the uses made of the data.

In the Pickford Report, the Treasury explicitly described, in Annex G to the Report, how they saw the damage which arose from unreliability in compiling the accounts. They explained that the particular way in which the Government used data was affected by the Medium Term Financial Strategy which is the structure in which the Government designs its economic policy – described in Chapter 2 of the Red Book. They pointed out, however, that an “equivalent story could be told about other approaches.” Although policy is set in a medium term context, the annual Budget adjusts fiscal policy to keep it on track, and more recently the monthly meetings between the Chancellor of the Exchequer and the Governor of the Bank of England make adjustments to keep monetary conditions on track. Annex G draws particular attention to money GDP and the growth rate of real GDP as the statistics whose unreliability caused problems. It also expressed concern at the damage that incoherence between different measures of GDP did to the possibility of

interpreting saving and sectoral balances. The unreliability of GDP over a long period hampered the Treasury’s attempts to assess the productive potential of the economy and consequently the degree of capacity utilisation. More generally economic forecasting which underlies Budget judgements was hampered by unreliable data. Finally, markets could react to inaccurate data in such a way as to complicate policy formation.

The Pickford report in general, and Annex G in particular, accepted the form of the accounts as they stood. The complaint was not that the framework did not usefully serve to support policy, but only that wrong numbers did harm. The annex did refer to a range of more timely indicators which were used to monitor monetary conditions, but then added that “...the faster availability of accurate data on money GDP would clearly assist monitoring of outturn against the Government’s objectives.”

While Pickford does accord a central role to the national accounts, other indicators in his list are not only more timely but closer to ultimate policy objectives. Giving national accounts indicators a supporting role is, I would argue, not peculiar to the policies of the current government but can be illustrated through the evolution of economic policy since national accounts began. Although inflation is sometimes described as itself an intermediate target on the way to a more generalised prosperity, it is also seen as a final objective. In the same way the objective of sustainable public finances is seen as an end in itself and as underpinning a more general stability. While there are indicators of inflation and public finance which arise in national accounts, the measures mostly used, variants on the retail prices index and the Public sector borrowing requirement did not originate with the national accounts, and in the case of retail prices remain largely independent. The same can be said of most of the key monitoring indicators mentioned in annex G, the targeted monetary aggregate – then M0 – the exchange rate and asset prices.

The fact, however, that some policy objectives, the instruments with which they are achieved and the indicators by which they are monitored are only indirectly related to the national accounts, gives a misleading indication of the role of national accounts. The Pickford Report itself captures the flavour:

The Treasury and other users were unable to quantify for us the potential economic cost if policy was set inappropriately, either as a direct response to unreliable statistics or as a reaction to market pressures. Instead most of the evidence we received was qualitative or anecdotal. Nevertheless we are convinced that improving the reliability of macro-

economic statistics would make it more likely that policy would be set appropriately, and less likely that markets would react perversely.

In retrospect, the implication of Pickford's conclusions was that the economic problems of the late 1980s (ie the tolerance of the boom and its consequences) was at least partly the result of the cuts in the resourcing for economic statistics which had followed the Rayner review of the early 1980s. This review had reduced statistical activity on the grounds that compiling statistics should serve only the needs of the Government in making policy. The Pickford moral was that the long term interests of public policy had not been served by the reductions.

On the CSO side compilers priorities were objectivity and transparency. Partly as a result, a large divergence between different measures of GDP growth was exposed. On its side the divergence in the measures reduced the Treasury confidence in any messages from the data, reinforced where there were new data sources introduced, as with the Single administrative document for trade in goods. As well as changing the direction of resourcing for national accounts statistics, the Pickford Report ushered an era of improving communication between compilers and policy. Substantial steps were taken to improve the resourcing of the National accounts directly on the initiative of the Chancellor of the Exchequer. A particularly important development was the reinforcement of Input-Output as the foundation of balancing the accounts. The establishment of the Central Statistical Office into an independent agency rather than a Government Department fostered a greater focus on users of data. More recently informal links between economic policy makers and compilers, have been underpinned by regular meetings on the interpretation of accounts publications.

6.2 OTHER CASES OF UNRELIABILITY

In this section I look more closely at this and other events for the light they might shed on the role of national accounts. There are two main kinds of misjudgement which can arise from unreliability in the national accounts, those which mislead us about where the economy is in relation to its long run evolution and those which mislead as to the nature of that evolution itself.

The errors of 1988 were identified as of the first kind. The failure to give sufficient weight to the output indicator of GDP which showed very strong growth led the government to overestimate the amount of spare capacity in the economy and so continue with an expansionary policy. The need for an accurate picture of the current conjuncture has long been a feature of policy

makers needs. It was summed up during the 1950s by Harold Macmillan when Chancellor of the Exchequer. He was introducing quarterly national accounts, whose absence he said was "like trying to catch a train with last year's Bradshaw". Bradshaw was then the British railway timetable

The second kind of data unreliability may lead to short term policy mistakes, but can also give rise to strategies which are likely to be regretted and to undermine public faith in statistics. The statistical or less formal analysis of statistics is often designed to develop theories. Those theories can then lead to the development of policies. If the statistics turn out to be wrong, then theories and policies based on them will be also.

A notorious case was the discovery in the early 1970s of a case of serious under-recording of exports and consequent unreliability in the UK balance of payments which stretched back many years. Throughout the 1960s and for much of the preceding decade, the balance of payments had been seen as the main constraint on the expansion of the UK economy, as can be seen from quotations from Budget speeches in Appendix A. It was then discovered that the apparent chronic deficit did not in fact exist. There was a widespread feeling that if the statisticians had discovered this in the first place, then a great deal of needless hardship could have been avoided. In particular, the notorious stop-go cycle of the British economy could have had more go with possibly beneficial effects on the investment levels and productivity. A different perspective comes from the realisation that the error was well within the margin of error which the CSO declared to exist round the estimates. The problem was therefore the basing of policy on fine judgements which the figures could not justly bear.

A more complicated example comes from the work of David Hendry on the consumption function. During the late 1970s, Hendry and his collaborators successfully established a systematic explanation for the behaviour of the saving ratio after the collapse of the traditional Keynesian consumption function. It analysed changes in consumption in terms of a model of disposable income and wealth in an error correction framework, and so involved the introduction of dynamic notions of integral control to explain the paradox of rising saving in the face of rising inflation. The model had been highly influential, with DSHY or HUS (the initials of their inventors) equations as they were known forming one of the key behavioural relations of the Treasury and other macroeconomic models.

In 1992 Hendry re-examined this work and found, not only that the relationship had broken down, but that the data on which it

had been originally estimated had been so revised that the model would never have been established in the first place. Hendry argues that his analysis suggests that the revised data may be worse than the original. It is difficult to assess the value of his evidence since it depends to some extent on the general form of his model being appropriate. He also cites the reworked fully balanced accounts of Sefton and Weale in his support. Here we have a case where data errors either led to a situation where either twenty years of policy makers have made use of an incorrect model for ten years, or that the current generation is likely to. It is likely that, as with the earlier export case, the data revisions were also within the stated margin of error.

While analysts and policy makers are ready to blame data unreliability for incorrect theories, there must be some doubt about how far data is the sole cause. While it is flattering for national accountants to feel that they have such power, there are many data inconsistent theories which gain enormous influence. Almost any fashionable economic theory, whether it be the Keynesian consumption function, the stability of the demand for money, the influence of interest rates on investment in fixed assets or stocks or the Phillips curve have at some time in their existence, and often throughout it, had little support from data. While the Hendry example cited above may have looked like a piece of pure data analysis, its conclusions were more in tune with the increasingly important role that inflation was playing in theories of personal sector behaviour. Conversely data can sometimes support unlikely theories. A plausible argument could be made for the proposition that with today's data, the notorious National Plan of 1964-7 actually fulfilled all of its targets except those for consumption. I have yet to come across anyone who would therefore wish to revive economic planning in this form. The rise of monetarism, the decline of the accelerator and the stop-go policies of the UK economy, had roots in theoretical and political factors upon which erroneous national accounts data only poured the water. Unreliability in data nourished error in analysis but did not create it.

I conclude this section with the reflections of Sir Alec Cairncross on the problems national accounts unreliability pose for historians.

A second difficulty has lain in the shifting sands of statistical revision. Our knowledge of the past is necessarily incomplete and tentative; but we are often inclined to put a trust in official statistics of past events that we rightly deny to other non-quantitative information. When the Central Statistical Office revises its estimates, even after thirty years

or more, it is a little more difficult to accord to the latest figures the simple trust that we gave to their predecessors.

Cairncross 1985 p xvii

This is more than a mere academic complaint. Cairncross was, of course primarily a policy adviser in a career which culminated in his becoming Chief Economic Adviser. He describes a long run threat to the use of national accounts. For users of statistics it is often hard to distinguish between revisions which arise from new information and those which arise from a new definition or concept like rebasing or chain linking. Compilers have a duty to maintain the distinction between tools and raw material in mind when making changes. Cairncross's analysis of British economic policy and others like him will, in the long run, shape the way in which compilers design concepts.

7. CONCLUSION

The roles of economic theory and of economic policy in the evolution of national accounts have been very different. A co-operative development of economic theory policy and statistics should result in concepts which are measurable and measurements which relate to policy objectives. It is not clear how far in the UK this has been achieved. What is clear is that the situation has improved dramatically since the Pickford Report, and that communication is steadily improving. Further progress is still needed, and there is a continuing effort to do so. It remains true at present that most compilers believe themselves to be measuring something called the economy, but the rules they use to do so have often been constructed using economic theories of which they are only vaguely aware. It is clearly impossible to construct accounts without some theory. What is important is that compilers and users are aware of the theories used to compile accounts. In this way they can have some coherent original principles to which to refer difficult decisions, and can know how to modify accounts in the face of changes in the fashion in economic theory.

The role of policy is even more difficult. While the Ohlsson/Kuznets position seems a reasonable one, it is easy to see how it became unpopular in the context of international standard setting. International standards enable meaningful comparisons between countries and ensure the independence of statisticians. Neither of these can be achieved, if politicians are to be allowed to respecify the accounts every time there is a new twist to policy. The international standards inhibit such interference. They provide a code which enables statisticians to provide authoritative adjudications on such issues as

classification. They have been successful at underpinning independence, but at the cost of a perspective from policy makers at certain stages of conceptual development. As we have seen there are cases like the definition of the public sector where national accountants have been put almost into the unwelcome position of making policy. There has been little opportunity for the users of national accounts to influence their form or content. The agenda of SNA reviews etc has been used with limited success in the UK to bring policy makers into the debate. That any interventions by policy makers and analysts in this process needs to be open and codified is clear. What is

less clear is how far any such intervention would compromise the independence, both actual and perceived of national accountants.

This paper has largely failed to answer the questions it posed for itself. The evolution of economic policy has had not had a direct and immediate impact on the design of accounts, with the possibly significant exception of the Radcliffe Report. On the other hand policy makers seem to have found something in the accounts to use for their purposes. Theory has had an impact which is hard to trace, describe systematically or evaluate.

APPENDIX A

Policy: A selective chronology

Policy priorities and styles in the fifty years since the introduction of national accounts have changed enormously. The following quotations from Budget speeches tell their own tale:

1944 Sir John Anderson in the war time Churchill Government

For the purposes of full employment it will be necessary, year by year, to bring under review the income and expenditure not only of the Exchequer, but of the country as a whole and not only its income but its capital expenditure and its savings.

During most of the period of the 1945-51 Labour Government under Attlee as Prime Minister, presentation of the economic situation was more dispersed with a full discussion in the Annual Economic Survey. A typical Budget speech was that by Stafford Cripps in 1948 who combined the presentation of the Finance Bill and the Economic Survey. In it he talked in terms of claims on national income, inflationary pressure from excess demand and internal and external balance – continuing the tradition of wartime economic planning.

A change came in 1951 with Gaitskell the last Chancellor of the Labour Government presenting problems of re-armament:

Our objectives in this situation have been stated several times.. To carry through the defence programme as swiftly as possible, and to maintain a level of export sufficient .. to pay for our import needs..Because the direct impact of the defence programme falls mainly on the engineering industries, we must, I fear, accept some check to home investment...

Butler's 1952 was the first of thirteen Conservative Budgets

To meet the overriding needs of the balance of payments and in the light of the probable trend of production, we have adjusted our defence programme, reduced our civil expenditures and have taken a series of steps to bring about a major decline in our investment at home.

Solvency, security, duty and incentive are our themes. Restriction and austerity are not enough. We want a system which offers us both more realism and more hope..we shall gain our solvency and with it our national greatness.

1954 Butler

Moreover the man in the street knows well that the real value of the Budget lies in its contribution to those things which are really important to him – full employment, stable prices, a steady growth of production.

1963 Maudling under the Prime Ministership of Macmillan

The theme of this Budget is expansion, expansion without inflation expansion that can be maintained. Of the need for economic expansion, there can be little question. If we are to play our full part in this dangerous world, if we are to build for our own people the standard of life they desire, if we are to increase our aid to the peoples of Africa and Asia.. Then we must have more rapid and steady expansion."

1964 Maudling

... The purpose of this Budget is to achieve a smooth transition from the recent exceptionally rapid rate of growth to a long term rate of 4%.

Callaghan's 1964 Budget, the first of the Labour Government under Wilson, like Butler's of 1952 illustrated the concern of incoming Governments with the Balance of Payments in this period.

The immediate object of this Budget statement.. is to improve the unsatisfactory balance of payments. It came as a shock to me on the day of assuming office to learn that the prospective overseas deficit for 1964 might be as large as £800m.

1965 Callaghan

The strategy of this Budget is to achieve a state of balance on our current and long term capital account.

1966 Callaghan

Our mandate is to achieve three separate objectives all at the same time. They are a strong pound, a steadily growing industrial strength and full employment.

1969 Jenkins the last of this Wilson Labour Government

...we should continue to do everything necessary to put our balance of payments on a secure and healthy basis – not because a balance of payments surplus is an end in itself, but because it is an essential means to sustained growth and prosperity we all want.

1971 Barber under the Premiership of the Conservative Heath, broke with the precedent of incoming Governments and set tax reform as his main objective. In 1972 he added faster growth and preparing for entry into the European Economic Community. In 1973 he said

The central objective of the Government's economic strategy is to maintain a faster rate of growth of national output.."

He also referred to the containment of inflation.

In his first 1974 Budget under the second Wilson Government, Healey referred to four objectives, full employment, balance of payments, inflation and social unity

By 1975 full employment had receded, but in 1976

This is above all a Budget about jobs and about inflation which is the main threat to jobs.

In 1977

...two aims...getting inflation down to the level of our main competitors, and improving the performance of our manufacturing industry.

In 1979 Howe, setting out the first Budget of the incoming Conservative Government under Thatcher, enunciated four principles:

We need to strengthen incentives, to allow people to keep more of what they earn.. We need to enlarge freedom of choice for the individual by reducing the role of the state. We need to reduce the burden of financing the public sector, so as to leave room for commerce and industry to prosper. We need to ensure... that those who take part in collective bargaining understand the consequences of their actions.

It is largely from its omissions that one can see this as a return to the microeconomic reform agenda of Barber in 1971. Howe's 1980 Budget set out the radically new approach more

systematically. The strategy.. Is concerned with those things – a very few of them – that the Government actually have within their power to control.

The strategy sets out a path for public finance over the next few years. At its heart is a target for steadily declining growth of the money supply. That is set alongside policy for Government spending and taxation, which will underpin that objective.

1983 Howe

These proposals will be consistent with our medium term strategy for effective control of money supply, for lower public borrowing, and for further progress on inflation.

1989 Lawson

The Government's first ten years in office have seen a transformation both in the way in which economic policy is conducted, and in the results that have been achieved.

Inflation is a disease of money , and monetary policy is its cure.

Lawson also articulated his theory more fully in his 1984 Mais lecture. A characteristic passage is:

...there is indeed a proper distinction between the objectives of macroeconomic and microeconomic policy, and a need to be concerned with both of them. But the proper role of each is precisely the opposite of that assigned to it by the conventional post-war wisdom. It is the conquest of inflation, and not the pursuit of growth and employment, which is or should be the objective of macroeconomic policy.

1993 Lamont

Above all the Budget has two objectives; first to support the recovery in the year ahead; and secondly, to set out a clear medium term strategy for bringing the borrowing requirement back to balance.

The story told by these extracts is of one persistent change, with different objectives coming into focus and the same objectives recurring under different aspects. The particular lesson I want to draw is Lawson's, that in 1979 there was a fundamental change in the way in which economic policy was made as significant as that which accompanied the introduction

and peacetime use of national accounts. The incoming Government consciously rejected the Keynesian economic theories and the technocratic confidence in fining tuning demand in the economy, which had largely underpinned policy in the thirty years since the war.

The Government's rejection of Keynesian economics was not a rejection of the Keynesian model itself, but a rejection of the Keynesian policy framework. The Government believed that the Keynesian model was too simplistic and that it did not take account of the complexities of the real world.

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APPENDIX B

The development of the financial statement and budget report

This Appendix describes the present structure and evolution of the Red Book (Financial Statement and Budget Report).

The first chapter is a summary. Chapter 2 describes the Medium Term Financial Strategy (MTFS). This was first introduced in the 1980 Red Book as inflation took a more central place among policy objectives and monetary targeting became one of the chief instruments of policy. The first MTFS in 1980 explained:

To maintain a progressive reduction in monetary growth in these circumstances it may be necessary to change policy... including changes in interest rates, taxes and public expenditure. But there would be no question of departing from the money supply policy...

As its name implies, the MTFS aimed to set the measures of the current Budget into a longer term context. The chapter itself reviews, in sequence, developments in underlying inflation, the stock and velocity of circulation of money and the public sector borrowing requirement and other measures of public sector finance. While the arrangement of this chapter has changed considerably since its beginning with parts of the original being distributed over other chapters, the general approach has changed relatively little.

Chapter 3 is the largest chapter in the book. It begins with a review of recent developments and short term prospects. These follow a largely traditional sequence of reviewing world developments, the evolution of expenditure components of GDP, labour markets, finance and inflation. The summary table reviews domestic demand, output, balance of payments, inflation, money GDP and the Public Sector Borrowing Requirement (PSBR). Of the 16 indicators used, thirteen come from traditional national accounts, two others are price indicators, while the PSBR is derived from the UK accounts, but does not usually feature so prominently in the accounts of other countries.

The short term forecast and review of recent economic events has changed relatively little since the first Financial Statement published with the 1968 Budget. The table of components of demand at constant prices shown there survived in an identical form.. The 1968 summary and forecast concentrated entirely on demand, output and the balance of payments. In 1969 the

survey of economic developments included a substantial section on monetary developments, both domestic and overseas, although there was no forecast. The PSBR is referred to in passing in the discussion of financial developments, but mainly in the context of looking at the wider evolution of credit. Inflation is first mentioned in 1971, but largely as a factor in the newly introduced table showing the personal sector account rather than a policy objective – even though it had by then reached the almost unprecedented post war level of 6%. By 1973 there was a separate section on pay and prices, but the rate of inflation was not discussed. Nor was a forecast of inflation given until 1977 when the summary table took very largely its present form.

The most striking feature of this history is the persistence of the forecast table, a projection over half years of a national accounting table showing expenditure components of GDP. When the table was first produced it represented the centrepiece of the economic forecast. Policy and analysis based on Keynesian theories of demand and balancing demand was the main objective of policy. This changed at least fifteen years ago, and yet the table continued to be published. While policy analysts had radically changed their objectives and analysis, the form of national accounts continued to shape the way in which their analyses was undertaken. The 1975 Industry Act which prescribed the form of the forecast played some role in preserving the table in its original form.

The forecasts presented in Chapter 3 and its forerunners continued to follow the structure of expenditure components. Even though supply side factors were given a more equal weight in determining output and factor use, the way in which recent developments and forecasts were described continued to devote considerable space to the evolution of demand components.

Chapter 4 deals with public finances. While this chapter has become rather more analytical over the years, the fundamental accounting tables are little changed not only from the first Red Book, but from the Financial Statements which accompanied preceding Budgets for a considerable period before. The tables have, since it was possible, been based on national accounts magnitudes, and differences between public spending and National Accounts conventions analysed.

Chapter 5 describes the detail of tax measures and makes little direct use of national accounts data. The effects of Budget measures on tax yield are, nonetheless partly based on analysis from the Treasury model. Chapter 6 describes Public Expenditure plans and outturns. It has only formed part of the Red Book since the taxation and public spending policy statements were brought together in the Budget of November 1994. This chapter is therefore the successor to a range of publications which accompanied the statements on public spending. As such it has changed form and content considerably over the years. Those changes, however reflect more the changing practice of planning public spending rather than changes in the use of the national accounts. In the past both measures of public sector activity and methods of deflation were largely independent of national accounts practice. In recent years there has been a tendency to align the concepts used with national accounts concepts. This has had the effect, in practice of giving the interpretation of National Accounting rules a policy significance, since those making policy for public spending control wish to use definitions also used by national accountants. In a period when movement between the public and private sector has been considerable, this has, in effect, meant national accountants offering interpretations which affect policy on spending control. In particular of the criteria set down for convergence in the Maastricht treaty give additional importance to national accounting concepts.

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