

1991 second half-yearly update of seasonal adjustments

The figures in this edition of the Bulletin incorporate the results of the latest update of seasonal adjustments (the monthly Monetary statistics have, since 29 November 1991, also included the results of the latest update). The method of seasonal adjustment used in this update is the same as that used in the previous update. For notes on the method see pages 93–98 of the February 1991 Bulletin and page 397 of the August 1991 Bulletin.

(a) Date ranges

The seasonal adjustments are now derived from the following data periods:

- (i) M0 June 1969 to 2 October 1991;
- (ii) monthly M2, M4 and lending (financial year constrained): July 1982 to September 1991;
- (iii) quarterly M4 and its counterparts (financial year constrained): Q3 1982 to Q3 1991;
- (iv) quarterly M4 and its counterparts (calendar year constrained): Q2 1963 to Q3 1991.

(b) Treatment of outliers

Atypical observations, which may be manifested as 'outliers', possess the potential to distort estimates of the trend and the seasonal pattern within time series. The treatment of such observations has been to investigate them fully before deciding whether it is appropriate to modify them. Where an outlying observation has been modified, appropriate offsetting adjustments need also to be applied to other series in order to preserve the accounting relationships (except for M0).

In addition to those detailed in earlier editions of the *Bulletin*,⁽¹⁾ the following amounts (in £ millions) have been added—with due regard to sign—to the unadjusted data before deriving the new seasonal adjustments on the following monetary series:

M0 (amounts outstanding)

1971 Jan. Notes and coin	-6
1971 Feb. Notes and coin	-127
1971 Mar. Notes and coin	-69
(notes temporarily boosted by the Post Office strike)	
1977 May Notes and coin	-12
1977 June Notes and coin	-62
(notes temporarily boosted by the Bank Holiday for HM the Queen's Silver Jubilee)	

1981 July Notes and coin	-28
(notes temporarily boosted by the Bank Holiday for the royal wedding)	

1988 Sept. Notes and coin	-141
(notes temporarily boosted by the Post Office strike)	

Quarterly M4 and its counterparts (calendar year constrained)

1989 Q4 Changes in banks' sterling lending to individuals: other	+200
Changes in banks' sterling lending to industrial and commercial companies	-200
(impact of a temporary delay in the processing of credit card payments)	

1990 Q1 Changes in banks' sterling lending to individuals: other	-200
Changes in banks' sterling lending to industrial and commercial companies	+200
(impact of a temporary delay in the processing of credit card payments)	

1990 Q1 PCBR	+3,000
CGBR (on own account)	-3,000
(impact of special government grants to public corporations)	

1990 Q3 PCBR	+1,000
CGBR (on own account)	-1,000
(impact of special government grants to public corporations)	

1990 Q4 Changes in banks' sterling lending to individuals: other	-200
Changes in banks' sterling lending to other financial institutions	+200
(resulting from a transfer of lending to the banking sector from the other financial institutions sector)	

(1) For a list of outliers adjusted for in previous updates see the following editions of the *Bulletin*: February 1991 pages 94–95; August 1991 page 397.

1991 Q2 Changes in banks' sterling lending to individuals: other	-200
Changes in banks' sterling lending to other financial institutions	+200
(resulting from a transfer of lending to the banking sector from the other financial institutions sector)	

(c) Comparison of old and new seasonally adjusted series

The table compares new M0, M4 and lending growth rates (one and twelve-month) with the old. Changes to

seasonally adjusted growth rates are mainly the result of adding six months' extra data in the computation of the new seasonal adjustments. While the addition of data has brought about some modest revisions to one-month percentage growth rates, particularly in recent months, twelve-month growth rates are broadly unchanged.

(d) The next half-yearly update

In 1992 the half-yearly updates will be carried out when data to February and August become available, so that the results are promulgated in mid-April and mid-October (rather than mid-May and mid-November, as in 1991).

Revised seasonal adjustments: a comparison of 'old' and 'new' seasonally adjusted series^(a)

Changes (£ millions) and one and twelve-month percentage growth rates

		M0						M4						Sterling lending to M4 private sector					
		Change		Growth rates				Change		Growth rates				Change		Growth rates			
		Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New		
1988	Jan.	82	84	0.5	0.5	4.7	4.7	3,055	3,147	1.0	1.0	15.9	16.0	6,793	6,795	2.0	2.0	20.1	20.1
	Feb.	97	95	0.6	0.6	5.5	5.5	3,209	3,318	1.0	1.1	15.7	15.8	5,307	5,333	1.6	1.6	20.2	20.2
	Mar.	139	140	0.9	0.9	5.8	5.8	5,379	5,214	1.7	1.7	16.8	16.8	6,158	6,152	1.8	1.8	21.1	21.1
	Apr.	150	150	0.9	0.9	6.4	6.4	3,740	3,691	1.2	1.2	16.3	16.3	8,000	7,992	2.3	2.3	22.0	22.0
	May	35	32	0.2	0.2	6.3	6.3	3,414	3,552	1.1	1.1	16.4	16.4	6,491	6,506	1.8	1.8	22.4	22.4
	June	122	120	0.8	0.7	7.1	7.1	4,434	4,295	1.4	1.3	16.9	16.8	7,599	7,591	2.1	2.1	23.2	23.2
	July	150	149	0.9	0.9	7.0	6.9	7,810	7,669	2.4	2.3	17.8	17.8	8,506	8,529	2.3	2.3	23.9	23.9
	Aug.	69	70	0.4	0.4	7.4	7.4	3,707	3,842	1.1	1.2	17.6	17.6	6,306	6,284	1.7	1.6	24.3	24.3
	Sept.	209	258	1.3	1.6	8.3	8.4	5,583	5,508	1.7	1.6	18.6	18.6	6,701	6,788	1.7	1.7	24.3	24.3
	Oct.	21	-24	0.1	-0.1	7.5	7.5	3,925	4,191	1.1	1.2	17.5	17.5	7,508	7,321	1.9	1.9	24.9	24.9
	Nov.	44	45	0.3	0.3	7.5	7.5	3,656	3,852	1.1	1.1	17.6	17.6	6,844	6,674	1.7	1.7	24.9	24.8
	Dec.	89	87	0.5	0.5	7.7	7.7	4,542	4,245	1.3	1.2	17.3	17.3	6,792	6,841	1.7	1.7	24.9	24.8
1989	Jan.	29	23	0.2	0.1	7.3	7.3	4,643	4,806	1.3	1.4	17.7	17.7	7,745	7,809	1.9	1.9	24.7	24.6
	Feb.	14	20	0.1	0.1	6.8	6.8	5,243	5,059	1.5	1.4	18.1	18.1	6,171	6,060	1.5	1.4	24.6	24.5
	Mar.	55	59	0.3	0.4	6.2	6.2	4,846	4,828	1.3	1.3	17.7	17.6	7,135	7,403	1.7	1.7	24.4	24.4
	Apr.	105	115	0.6	0.7	5.8	5.9	4,871	4,194	1.3	1.1	17.8	17.6	7,056	7,107	1.6	1.6	23.6	23.6
	May	46	36	0.3	0.2	5.9	5.9	4,995	4,979	1.3	1.3	18.1	17.8	7,115	7,218	1.6	1.6	23.4	23.4
	June	104	96	0.6	0.6	5.7	5.8	5,237	5,733	1.4	1.5	18.1	18.0	6,647	6,921	1.5	1.5	22.6	22.8
	July	76	80	0.4	0.5	5.2	5.3	4,732	4,664	1.2	1.2	16.8	16.7	7,825	7,761	1.7	1.7	22.0	22.0
	Aug.	189	189	1.1	1.1	6.0	6.0	5,975	6,260	1.5	1.6	17.2	17.2	8,412	8,389	1.8	1.8	22.1	22.2
	Sept.	-21	24	-0.1	0.1	4.5	4.5	5,549	5,496	1.4	1.4	16.9	16.9	8,357	8,375	1.8	1.8	22.2	22.3
	Oct.	147	111	0.8	0.6	5.3	5.3	5,059	5,289	1.3	1.3	17.0	17.0	6,227	6,166	1.3	1.3	21.5	21.6
	Nov.	126	129	0.7	0.7	5.7	5.8	3,751	4,364	0.9	1.1	16.9	17.0	6,061	5,947	1.2	1.2	20.9	21.0
	Dec.	129	127	0.7	0.7	5.9	6.0	9,786	8,944	2.4	2.2	18.1	18.1	9,752	9,724	2.0	2.0	21.3	21.4
1990	Jan.	-19	-30	-0.1	-0.2	5.6	5.7	5,907	6,111	1.4	1.4	18.2	18.2	6,504	6,296	1.3	1.3	20.6	20.6
	Feb.	189	171	1.1	1.0	6.7	6.6	5,073	4,921	1.2	1.1	17.9	17.9	7,763	7,582	1.5	1.5	20.7	20.7
	Mar.	59	49	0.3	0.3	6.7	6.5	4,877	5,011	1.1	1.2	17.7	17.7	7,815	8,047	1.5	1.6	20.5	20.5
	Apr.	260	246	1.4	1.4	7.5	7.2	5,661	4,193	1.3	1.0	17.7	17.5	4,849	5,516	0.9	1.0	19.7	19.8
	May	-65	-28	-0.4	-0.2	6.9	6.8	5,169	4,225	1.2	1.0	17.5	17.1	6,547	6,637	1.2	1.3	19.3	19.4
	June	21	-5	0.1	—	6.3	6.2	4,964	6,237	1.1	1.4	17.2	16.9	5,983	7,192	1.1	1.3	18.8	19.2
	July	-70	-16	-0.4	-0.1	5.5	5.6	2,648	4,185	0.6	0.9	16.4	16.6	4,755	4,863	0.9	0.9	17.8	18.2
	Aug.	72	72	0.4	0.4	4.8	4.9	3,317	3,332	0.7	0.7	15.5	15.6	5,154	4,231	0.9	0.8	16.8	17.0
	Sept.	-62	-5	-0.3	—	4.5	4.7	3,093	3,449	0.7	0.7	14.7	14.9	4,523	4,646	0.8	0.8	15.8	15.9
	Oct.	50	-10	0.3	-0.1	3.9	4.0	3,853	3,415	0.8	0.7	14.2	14.3	5,976	5,626	1.1	1.0	15.5	15.6
	Nov.	-2	-5	—	—	3.2	3.2	4,711	5,678	1.0	1.2	14.3	14.4	6,633	6,219	1.2	1.1	15.4	15.5
	Dec.	43	65	0.2	0.4	2.7	2.8	2,447	1,174	0.5	0.2	12.3	12.3	3,311	3,230	0.6	0.6	13.8	13.9
1991	Jan.	110	80	0.6	0.4	3.4	3.4	2,136	2,243	0.5	0.5	11.2	11.2	4,297	3,819	0.7	0.7	13.2	13.3
	Feb.	82	31	0.4	0.2	2.8	2.6	3,747	3,590	0.8	0.8	10.8	10.8	4,636	4,386	0.8	0.8	12.4	12.4
	Mar.	28	17	0.2	0.1	2.6	2.5	1,288	1,550	0.3	0.3	9.8	9.9	1,633	1,933	0.3	0.3	11.1	11.1
	Apr.	90	75	0.5	0.4	1.6	1.5	6,360	4,126	1.3	0.9	9.9	9.8	3,398	4,417	0.6	0.8	10.7	10.8
	May	-65	-8	-0.3	—	1.6	1.6	4,356	2,807	0.9	0.6	9.6	9.3	2,687	2,805	0.5	0.5	9.9	9.9
	June	89	50	0.5	0.3	2.0	1.9	-2,117	-115	-0.4	—	7.9	7.8	147	2,035	—	0.3	8.7	8.8
	July	-65	25	-0.3	0.1	2.0	2.1	2,012	4,196	0.4	0.9	7.7	7.8	3,193	3,368	0.5	0.6	8.3	8.5
	Aug.	-13	-21	-0.1	-0.1	1.6	1.6	1,169	1,103	0.2	0.2	7.2	7.2	3,619	2,149	0.6	0.4	8.0	8.1
	Sept.	60	131	0.3	0.7	2.2	2.3	-301	268	-0.1	0.1	6.4	6.5	774	943	0.1	0.2	7.2	7.3

(a) In addition to updated seasonal adjustments, the 'new' series included some minor revisions to unadjusted data. Figures elsewhere in this *Bulletin* (eg in the statistical annex) incorporate also any subsequent revisions to the unadjusted data.