

# Revisions to Workforce Jobs

## April 2013

### Abstract

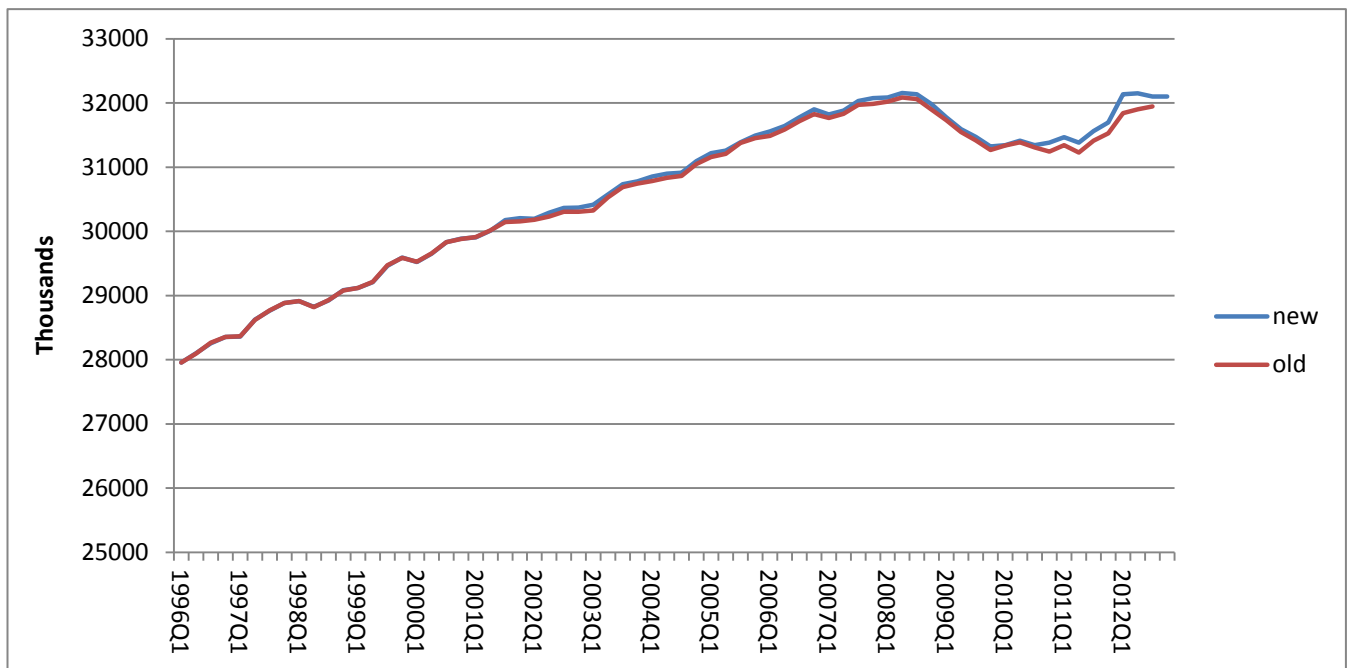
This article explains the improvements and revisions to the Workforce Jobs (WFJ) series, released by the Office for National Statistics (ONS) on 17 April 2013 in the *Labour Market Statistical Bulletin*.

Workforce Jobs is a quarterly measure of the number of jobs in the United Kingdom (UK) and is the preferred measure of the change in jobs by industry. It is a compound source that draws on a range of employer surveys, household surveys and administrative sources. WFJ is the sum of employee jobs (EJ) measured primarily by employer surveys (predominantly the Short-Term Employment Surveys (STES) and the Quarterly Public Sector Employment Survey (QPSES)), self-employment jobs (SEJ) from the Labour Force Survey (LFS), and government-supported trainees (GST) and Her Majesty's Forces (HMF) from administrative sources (see **Annex A**). A variety of outputs by industry, region, gender and full/part-time status are produced for a range of publications and users.

Developments in the methods used to produce estimates of workforce jobs over the period March 2010 to March 2012 can be found in previous articles. This article explains, in detail, the improvements that have been made to WFJ outputs since March 2012 and the revisions that have been made to the WFJ series as a result of:

- benchmarking to the latest estimates from the annual Business Register and Employment Survey (BRES); these revisions will go back to 2008,
- bringing WFJ in line with the BRES in the treatment of directors of limited companies as employees rather than self-employed,
- an improved methodology for linking short-term employment growth onto the latest BRES benchmark,
- bringing the estimates into line with the latest estimates of Public Sector Employment,
- re-weighting of series sourced from the Labour Force Survey (LFS),
- the introduction of estimates for Activities of Households as Employers, etc. (Standard Industrial Classification 2007 (SIC 2007) Section T),
- changes to seasonal parameters following a seasonal adjustment review.

**Figure 1** compares the previously published and revised UK Workforce jobs (seasonally adjusted).

**Figure 1** Previously published versus revised UK seasonally adjusted Workforce jobs

## Benchmarking GB Employee Jobs to the Business Register Employment Survey

Benchmarking is an annual process to align the quarterly GB EJ series to the latest estimates from the Business Register and Employment Survey (BRES). BRES is based on a sample of approximately 80,000 reporting units<sup>1</sup>, a much larger sample than STES, and so generally is considered to produce more accurate and detailed estimates of the level of employment. BRES estimates refer to Q3 of a given year. The private sector element of GB EJ series has been benchmarked to the equivalent from BRES for the periods Q3 2008, Q3 2009, Q3 2010 and Q3 2011 (the latest period available).

### Treatment of directors of limited companies

Changes in the treatment of directors of limited companies in BRES 2011 have led to a discontinuity between the 2010 and 2011 BRES results. As described in a recent [discontinuity article](#)<sup>1</sup>, cognitive testing carried out by ONS has shown that directors of limited companies often consider themselves to be in the working owner category. However, it is clear from HMRC guidance that these should be classified as employees of the company. This has led to an approximate underestimate in BRES private sector EJ of just under 500 thousand (based on 2010 data).

<sup>1</sup> Reporting units hold the mailing address to which survey forms are sent. The form can cover the enterprise as a whole, or parts of the enterprise identified by lists of local units.

Further testing has shown that the estimated number of directors of limited companies from the Labour Force Survey who classify themselves as self-employed is between 400 and 500 thousand. Therefore from Q4 2010 onwards, the SEJ series have been recalculated to remove this element, whilst the revised (higher) BRES figures are used to benchmark EJ. Prior to Q4 2010, the 2010 BRES discontinuity has been adjusted for each respective period ensuring that it changes over time in line with total SEJ. It has then been added to EJ and removed from SEJ. This method was chosen as the required information from LFS was not available for earlier periods, and to avoid revisions to total WFJ back to the start of the series. There is now a slight discontinuity in WFJ and SEJ at Q4 2010 where the source of the 'misclassified directors' changes from BRES to LFS.

## Linking short term growth onto latest BRES benchmark

The way in which STES data are linked on to the latest benchmark at regional level has been improved by linking at the level of region by industry section. Previously, industry level series from STES had been linked onto BRES at GB level and subsequently broken down by region, leading to small level shifts in some region by industry section series at the period after the latest benchmark (Q4 2010). The change in the linking method has removed these shifts, resulting in more accurate and comparable time series. A similar methodology change has improved estimates by gender and working pattern.

## Changes to estimates of Public Sector Employment

Workforce Jobs makes use of ONS's official public sector employment (PSE) estimates for GB. These inputs are not benchmarked as they are the definitive measure of PSE. PSE estimates were revised at Q3 2012 and these revisions have now been applied to WFJ inputs. Revisions go back to 1991, are predominantly in sections O, P and Q, and include an improved method for estimating employment of academies in England. Further information is available in the [Q3 2012 PSE Statistical Bulletin](#)<sup>2</sup> and in the article [Change in Method for Estimating Employment in Education in England](#)<sup>3</sup>

## Re-weighting of LFS estimates

The Labour Force Survey is used to measure SEJ. It is also the source of EJ estimates for agriculture, activities of households as employers (see next section), and construction up to Q3 2010. The LFS was re-weighted in May 2011 with revised series being produced back to 2001 and again in May 2012 with further revisions produced back to 2009. Revisions have been taken on for all domains.

## Introduction of estimates for Activities of Households as Employers, etc.

Workforce Jobs now includes estimates for activities of households as employers, sourced from the LFS. Historically, this category of jobs has been omitted from EJ as they fall out of the scope of business surveys. It is now included with the aim of providing a more complete measure of the UK labour market. Estimates are included from 2001, which is the earliest available period. Previously, section T was included in the SEJ component under the category 'other services'.

## Seasonal Adjustment

Seasonal adjustment is the process of identifying and removing the seasonal components from a series to leave the underlying trend and irregular components. The revised WFJ series have undergone a seasonal adjustment review, by ONS's Time Series Analysis branch, causing revisions back to Q3 1981. As part of this review, an improvement to the seasonal adjustment methodology has also been made. Previously, seasonal parameters were calculated for each industry at UK level and applied to each region. Industry level parameters are now calculated and applied separately for each region. The WFJ system seasonally adjusts using X12 ARIMA.

## Government Supported trainees (GSTs)

The Department for Business, Innovation and Skills (BIS) and the devolved administrations provide the information for these series and small revisions have been taken on.

## Northern Ireland jobs

Employee jobs estimates for Northern Ireland are provided by the Department of Finance and Personnel - Northern Ireland (DFPNI). Data have been revised back to 2009 Q4.

## References

1. Scruton J (2012) 'Working owners discontinuity 2011'  
<http://www.ons.gov.uk/ons/guide-method/method-quality/specific/labour-market/business-register-and-employment-survey--bres-/index.html>
2. 'Public Sector Employment, Q3 2012'  
<http://www.ons.gov.uk/ons/rel/pse/public-sector-employment/q3-2012/stb-pse-2012q3.html>
3. Carless E (2012) 'Change in Method for Estimating Employment in Education in England'  
<http://www.ons.gov.uk/ons/guide-method/method-quality/specific/labour-market/articles-and-reports/index.html>

## Useful links

Quality and Methodology information report for Workforce Jobs. Available at:  
<http://www.ons.gov.uk/ons/guide-method/method-quality/quality/quality-information/labour-market/index.html>

Hess S (2013) 'Estimates of sampling variability for Workforce Jobs'. Available at:  
<http://www.ons.gov.uk/ons/guide-method/method-quality/specific/labour-market/articles-and-reports/index.html>

Matthews D and Hess S (2012) 'Revision to Workforce Jobs - March 2012'. Available at:  
<http://www.ons.gov.uk/ons/guide-method/method-quality/specific/labour-market/articles-and-reports/revisions-to-workforce-jobs-march-2012.pdf>

Barford N (2010) 'Revisions to Workforce Jobs', Economic & Labour Market Review, Vol 4 No 9.  
 Available at:  
<http://www.ons.gov.uk/ons/rel/wfi/workforce-jobs/revisions-to-workforce-jobs---july-2010/revisions-to-workforce-jobs--july-2010.pdf>

## Annex A – Workforce Jobs sources

Component		Source
<b>Employee Jobs</b>		
Great Britain	Private Sector	Short Term Employer Surveys (STES), benchmarked to the Business Register Employment Survey (BRES)
	Public Sector	Public Sector Employment (PSE) from Quarterly Public Sector Employment Surveys (QPSES) and administrative sources from other government departments and devolved administrations
	Agriculture	Labour Force Survey (LFS), benchmarked to BRES
	Construction	Short Term Employer Surveys (STES), benchmarked to the Business Register Employment Survey (BRES)
	Air transport	Civil Aviation Authority (CAA), benchmarked to BRES
Northern Ireland		Department of Finance and Personnel – Northern Ireland (DFPNI)
<b>Self-Employed Jobs</b>		Labour Force Survey (LFS) - main and second jobs by industry by region
<b>Government Supported Trainees</b>		
England		Department for Business, Innovation and Skills (BIS), split by industry using LFS
Wales		Welsh Government (WG), split by industry using LFS
Scotland		Scottish Government (SG), split by industry using LFS
Northern Ireland		Department of Finance and Personnel – Northern Ireland (DFPNI), split by industry using LFS
<b>Her Majesty's Forces</b>		Defence Analytical Services and Advice (DASA)

## Annex B – Revision tables, Workforce Jobs by Component

United Kingdom			Thousands and per cent, seasonally adjusted												
Workforce Jobs			Employee jobs			Self-employment jobs			HM Forces			Government-supported trainees			
	Revised level	Change	Change	Revised level	Change	Change	Revised level	Change	Change	Revised level	Change	Change	Revised level	Change	Change
	(000s)	(000s)	per cent	(000s)	(000s)	per cent	(000s)	(000s)	per cent	(000s)	(000s)	per cent	(000s)	(000s)	per cent
Jun-59	25436	0	0	23006	232	1.02	1835	-233	-11.3	595	0	0	0	0	-
Sep-59	25540	0	0	23129	232	1.01	1834	-232	-11.2	577	0	0	0	0	-
Dec-59	25631	0	0	23250	230	1	1820	-231	-11.3	560	0	0	0	0	-
Mar-60	25784	0	0	23410	231	1	1824	-231	-11.2	550	0	0	0	0	-
Jun-60	25894	0	0	23513	233	1	1840	-233	-11.2	541	0	0	0	0	-
Sep-60	25939	0	0	23563	233	1	1839	-233	-11.2	536	0	0	0	0	-
Dec-60	26123	0	0	23771	232	0.99	1827	-231	-11.2	526	0	0	0	0	-
Mar-61	26222	0	0	23888	232	0.98	1827	-232	-11.3	507	0	0	0	0	-
Jun-61	26189	0	0	23862	233	0.99	1832	-233	-11.3	495	0	0	0	0	-
Sep-61	26251	0	0	23942	232	0.98	1824	-232	-11.3	485	0	0	0	0	-
Dec-61	26177	0	0	23890	230	0.97	1812	-231	-11.3	475	0	0	0	0	-
Mar-62	26326	0	0	24051	230	0.97	1809	-230	-11.3	466	0	0	0	0	-
Jun-62	26382	0	0	24090	232	0.97	1830	-232	-11.3	462	0	0	0	0	-
Sep-62	26360	0	0	24084	232	0.97	1821	-231	-11.3	456	0	0	0	0	-
Dec-62	26291	0	0	24028	230	0.97	1810	-230	-11.3	453	0	0	0	0	-
Mar-63	26205	0	0	23951	229	0.97	1803	-229	-11.3	451	0	0	0	0	-
Jun-63	26417	0	0	24147	233	0.97	1824	-232	-11.3	446	0	0	0	0	-
Sep-63	26440	0	0	24179	231	0.97	1818	-231	-11.3	443	0	0	0	0	-
Dec-63	26582	0	0	24332	229	0.95	1807	-230	-11.3	442	0	0	0	0	-
Mar-64	26633	0	0	24391	228	0.94	1799	-228	-11.2	443	0	0	0	0	-
Jun-64	26735	0	0	24472	231	0.95	1819	-232	-11.3	443	0	0	0	0	-
Sep-64	26857	0	0	24593	232	0.95	1822	-232	-11.3	442	0	0	0	0	-
Dec-64	26934	0	0	24683	230	0.94	1807	-230	-11.3	444	0	0	0	0	-
Mar-65	26989	0	0	24747	229	0.93	1799	-229	-11.3	443	0	0	0	0	-
Jun-65	27018	0	0	24762	231	0.94	1814	-231	-11.3	442	0	0	0	0	-
Sep-65	27038	0	0	24771	233	0.95	1826	-233	-11.3	440	0	0	0	0	-
Dec-65	27157	0	0	24915	231	0.94	1803	-230	-11.3	439	0	0	0	0	-
Mar-66	27203	0	0	24971	229	0.93	1795	-229	-11.3	437	0	0	0	0	-
Jun-66	27195	0	0	24951	231	0.93	1808	-231	-11.3	436	0	0	0	0	-
Sep-66	27202	0	0	24917	237	0.96	1850	-237	-11.4	435	0	0	0	0	-
Dec-66	26956	0	0	24670	237	0.97	1848	-237	-11.4	438	0	0	0	0	-
Mar-67	26806	0	0	24500	239	0.99	1868	-239	-11.3	438	0	0	0	0	-
Jun-67	26832	0	0	24497	243	1	1899	-243	-11.3	436	0	0	0	0	-
Sep-67	26871	0	0	24508	248	1.02	1931	-248	-11.4	432	0	0	0	0	-
Dec-67	26748	0	0	24405	246	1.02	1913	-245	-11.4	431	0	0	0	0	-
Mar-68	26704	0	0	24363	245	1.02	1915	-246	-11.4	425	0	0	0	0	-
Jun-68	26682	0	0	24332	248	1.03	1932	-248	-11.4	418	0	0	0	0	-
Sep-68	26708	0	0	24329	253	1.05	1966	-253	-11.4	413	0	0	0	0	-
Dec-68	26718	0	0	24343	253	1.05	1967	-253	-11.4	408	0	0	0	0	-
Mar-69	26711	0	0	24326	255	1.06	1983	-255	-11.4	401	0	0	0	0	-
Jun-69	26717	0	0	24310	259	1.08	2010	-259	-11.4	397	0	0	0	0	-
Sep-69	26716	0	0	24289	262	1.09	2033	-261	-11.4	394	0	0	0	0	-
Dec-69	26686	0	0	24257	263	1.1	2036	-263	-11.4	393	0	0	0	0	-
Mar-70	26718	0	0	24273	265	1.1	2055	-265	-11.4	391	0	0	0	0	-
Jun-70	26622	0	0	24164	267	1.12	2069	-267	-11.4	389	0	0	0	0	-
Sep-70	26568	0	0	24138	264	1.11	2043	-264	-11.4	387	0	0	0	0	-
Dec-70	26507	0	0	24100	260	1.09	2019	-260	-11.4	388	0	0	0	0	-
Mar-71	26304	0	0	23824	270	1.15	2094	-271	-11.5	386	0	0	0	0	-
Jun-71	26285	0	0	23812	269	1.14	2088	-270	-11.5	385	0	0	0	0	-
Sep-71	26097	0	0	23630	269	1.15	2082	-268	-11.4	385	0	0	0	0	-
Dec-71	26083	0	0	23618	269	1.15	2077	-268	-11.4	389	0	0	0	0	-
Mar-72	26279	0	0	23798	270	1.15	2093	-270	-11.4	388	0	0	0	0	-
Jun-72	26273	0	0	23814	267	1.13	2071	-268	-11.5	388	0	0	0	0	-
Sep-72	26391	0	0	23920	268	1.13	2078	-269	-11.5	392	0	0	0	0	-
Dec-72	26564	0	0	24082	270	1.13	2092	-271	-11.5	389	0	0	0	0	-
Mar-73	26909	0	0	24400	275	1.14	2125	-275	-11.5	384	0	0	0	0	-
Jun-73	26897	0	0	24406	274	1.14	2114	-273	-11.4	377	0	0	0	0	-
Sep-73	26929	0	0	24451	272	1.13	2104	-272	-11.4	374	0	0	0	0	-
Dec-73	26956	0	0	24487	272	1.12	2099	-272	-11.5	370	0	0	0	0	-
Mar-74	26929	0	0	24452	273	1.13	2112	-273	-11.4	365	0	0	0	0	-
Jun-74	26986	0	0	24542	271	1.12	2084	-270	-11.5	361	0	0	0	0	-
Sep-74	27084	0	0	24637	270	1.11	2084	-270	-11.5	363	0	0	0	0	-
Dec-74	27027	0	0	24584	270	1.11	2085	-270	-11.5	359	0	0	0	0	-
Mar-75	26939	0	0	24483	273	1.13	2103	-273	-11.5	353	0	0	0	0	-
Jun-75	26896	0	0	24457	271	1.12	2088	-271	-11.5	351	0	0	0	0	-
Sep-75	26828	0	0	24400	269	1.12	2073	-269	-11.5	355	0	0	0	0	-

Dec-75	26755	0	0	24322	270	1.12	2079	-270	-11.5	354	0	0	0	0	-
Mar-76	26678	0	0	24272	266	1.11	2054	-266	-11.5	352	0	0	0	0	-
Jun-76	26659	0	0	24256	266	1.11	2052	-266	-11.5	351	0	0	0	0	-
Sep-76	26650	0	0	24266	262	1.09	2030	-263	-11.5	353	0	0	0	0	-
Dec-76	26691	0	0	24302	264	1.1	2039	-264	-11.5	349	0	0	0	0	-
Mar-77	26697	0	0	24327	262	1.09	2026	-262	-11.5	345	0	0	0	0	-
Jun-77	26697	0	0	24340	261	1.08	2015	-261	-11.5	342	0	0	0	0	-
Sep-77	26720	0	0	24361	261	1.08	2017	-261	-11.5	343	0	0	0	0	-
Dec-77	26747	0	0	24369	264	1.1	2039	-264	-11.5	339	0	0	0	0	-
Mar-78	26817	0	0	24442	264	1.09	2040	-264	-11.5	336	0	0	0	0	-
Jun-78	26862	0	0	24506	262	1.08	2023	-262	-11.5	332	0	0	0	0	-
Sep-78	26964	0	0	24604	262	1.08	2026	-262	-11.5	335	0	0	0	0	-
Dec-78	27146	0	0	24786	263	1.07	2028	-263	-11.5	331	0	0	0	0	-
Mar-79	27174	0	0	24817	263	1.07	2028	-262	-11.4	329	0	0	0	0	-
Jun-79	27283	0	0	24926	263	1.07	2029	-263	-11.5	328	0	0	0	0	-
Sep-79	27362	0	0	24969	267	1.08	2060	-267	-11.5	333	0	0	0	0	-
Dec-79	27411	0	0	24988	271	1.1	2090	-271	-11.5	333	0	0	0	0	-
Mar-80	27335	0	0	24879	275	1.12	2120	-275	-11.5	336	0	0	0	0	-
Jun-80	27239	0	0	24749	279	1.14	2152	-280	-11.5	338	0	0	0	0	-
Sep-80	26978	0	0	24451	283	1.17	2180	-283	-11.5	347	0	0	0	0	-
Dec-80	26686	0	0	24126	287	1.2	2210	-288	-11.5	349	0	0	0	0	-
Mar-81	26425	0	0	23836	291	1.24	2240	-291	-11.5	349	0	0	0	0	-
Jun-81	26223	0	0	23603	295	1.27	2271	-296	-11.5	349	0	0	0	0	-
Sep-81	26135	3	0.01	23500	299	1.29	2285	-297	-11.5	350	0	0	0	0	-
Dec-81	25920	-1	-0	23275	297	1.29	2298	-298	-11.5	347	0	0	0	0	-
Mar-82	25857	1	0	23203	301	1.31	2311	-300	-11.5	343	0	0	0	0	-
Jun-82	25765	-3	-0.01	23103	299	1.31	2324	-302	-11.5	339	0	0	0	0	-
Sep-82	25674	0	0	23000	304	1.34	2337	-304	-11.5	338	0	0	0	0	-
Dec-82	25465	2	0.01	22780	308	1.37	2350	-305	-11.5	336	0	0	0	0	-
Mar-83	25389	-3	-0.01	22681	304	1.36	2363	-307	-11.5	336	0	0	9	0	0
Jun-83	25459	-4	-0.02	22731	305	1.36	2376	-309	-11.5	337	0	0	16	0	0
Sep-83	25766	3	0.01	22855	323	1.43	2449	-319	-11.5	340	0	0	123	0	0
Dec-83	25918	3	0.01	22879	332	1.47	2523	-329	-11.5	340	0	0	176	0	0
Mar-84	26036	-3	-0.01	22905	337	1.49	2597	-338	-11.5	341	0	0	194	0	0
Jun-84	26160	-7	-0.03	22958	341	1.51	2670	-348	-11.5	341	0	0	191	0	0
Sep-84	26300	4	0.02	23071	357	1.57	2695	-352	-11.6	343	0	0	192	0	0
Dec-84	26379	5	0.02	23118	360	1.58	2720	-355	-11.5	342	0	0	199	0	0
Mar-85	26419	-3	-0.01	23125	356	1.56	2745	-358	-11.5	341	0	0	208	0	0
Jun-85	26472	-8	-0.03	23168	353	1.55	2772	-362	-11.6	341	0	0	191	0	0
Sep-85	26558	5	0.02	23231	367	1.61	2780	-363	-11.5	340	0	0	206	0	0
Dec-85	26525	7	0.03	23189	370	1.62	2789	-364	-11.5	338	0	0	209	0	0
Mar-86	26474	-5	-0.02	23131	360	1.58	2797	-365	-11.5	337	0	0	209	0	0
Jun-86	26518	-6	-0.02	23136	360	1.58	2807	-366	-11.5	336	0	0	239	0	0
Sep-86	26642	5	0.02	23184	378	1.66	2858	-373	-11.5	337	0	0	262	0	0
Dec-86	26688	7	0.03	23173	387	1.7	2909	-380	-11.6	335	0	0	271	0	0
Mar-87	26742	-3	-0.01	23176	384	1.69	2960	-387	-11.6	334	0	0	272	0	0
Jun-87	27048	-8	-0.03	23376	386	1.68	3018	-394	-11.5	333	0	0	321	0	0
Sep-87	27350	4	0.01	23587	405	1.75	3067	-400	-11.5	334	0	0	363	0	0
Dec-87	27598	6	0.02	23789	412	1.76	3115	-407	-11.6	332	0	0	362	0	0
Mar-88	27803	-4	-0.01	23951	409	1.74	3164	-413	-11.5	331	0	0	358	0	0
Jun-88	28015	-8	-0.03	24119	411	1.73	3216	-419	-11.5	330	0	0	350	0	0
Sep-88	28309	5	0.02	24338	435	1.82	3290	-430	-11.6	329	0	0	352	0	0
Dec-88	28503	7	0.02	24406	446	1.86	3365	-439	-11.5	327	0	0	405	0	0
Mar-89	28794	-4	-0.01	24568	445	1.85	3439	-449	-11.5	326	0	0	461	0	0
Jun-89	28899	-8	-0.03	24599	451	1.87	3511	-460	-11.6	322	0	0	467	0	0
Sep-89	29023	7	0.02	24726	468	1.93	3521	-460	-11.6	322	0	0	454	0	0
Dec-89	29121	5	0.02	24822	466	1.91	3530	-462	-11.6	320	0	0	448	0	0
Mar-90	29128	-2	-0.01	24839	461	1.89	3540	-463	-11.6	320	0	0	430	0	0
Jun-90	29216	-8	-0.03	24907	457	1.87	3554	-465	-11.6	317	0	0	438	0	0
Sep-90	29127	7	0.02	24879	466	1.91	3516	-459	-11.5	317	0	0	415	0	0
Dec-90	28899	3	0.01	24700	457	1.89	3478	-454	-11.5	314	0	0	407	0	0
Mar-91	28580	-2	-0.01	24426	447	1.86	3440	-449	-11.5	314	0	0	400	0	0
Jun-91	28297	-4	-0.01	24214	441	1.86	3404	-444	-11.5	311	0	0	369	0	0
Sep-91	28143	3	0.01	24104	445	1.88	3390	-442	-11.5	310	0	0	340	0	0
Dec-91	27989	3	0.01	23961	443	1.88	3375	-440	-11.5	310	0	0	343	0	0
Mar-92	27969	1	0	23944	439	1.87	3361	-438	-11.5	308	0	0	357	0	0
Jun-92	27822	-1	-0	23826	436	1.86	3351	-437	-11.5	304	0	0	340	0	0
Sep-92	27425	1	0	23482	434	1.88	3324	-434	-11.5	300	0	0	319	0	0
Dec-92	27275	-1	-0	23390	424	1.85	3246	-426	-11.6	294	0	0	344	0	0
Mar-93	27390	5	0.02	23407	437	1.9	3345	-432	-11.4	290	0	0	348	0	0
Jun-93	27376	-1	-0	23441	432	1.88	3323	-433	-11.5	285	0	0	326	0	0
Sep-93	27441	-5	-0.02	23520	433	1.88	3334	-438	-11.6	279	0	0	308	0	0
Dec-93	27509	1	0	23528	441	1.91	3392	-440	-11.5	271	0	0	318	0	0
Mar-94	27486	0	0	23489	445	1.93	3412	-444	-11.5	268	0	0	318	0	0
Jun-94	27536	2	0.01	23536	447	1.94	3421	-446	-11.5	262	0	0	317	0	0
Sep-94	27733	-5	-0.02	23732	449	1.93	3454	-454	-11.6	258	0	0	290	0	0
Dec-94	27801	2	0.01	23781	455	1.95	3486	-453	-11.5	249	0	0	286	0	0
Mar-95	27787	2	0.01	23792	456	1.95	3485	-454	-11.5	245	0	0	265	0	0
Jun-95	27902	3	0.01	23924	456	1.94	3497	-453	-11.5	241	0	0	240	0	0
Sep-95	27903	-7	-0.03	23941	451	1.92	3503	-458	-11.6	238	0	0	222	0	0
Dec-95	28047	2	0.01	24112	453	1.92	3482	-450	-11.4	236	0	0	217	0	0
Mar-96	27955	1	0	24065	446	1.89	3442	-446	-11.5	234	0	0	214	0	0

Jun-96	28103	6	0.02	24237	455	1.91	3454	-448	-11.5	230	0	0	182	-1	-0.55
Sep-96	28257	-9	-0.03	24349	446	1.87	3492	-455	-11.5	227	0	0	189	0	0
Dec-96	28357	4	0.01	24472	450	1.87	3470	-447	-11.4	225	0	0	189	0	0
Mar-97	28359	-6	-0.02	24556	436	1.81	3405	-443	-11.5	223	0	0	175	0	0
Jun-97	28624	3	0.01	24841	449	1.84	3403	-446	-11.6	220	0	0	160	0	0
Sep-97	28763	-8	-0.03	24974	437	1.78	3396	-443	-11.5	223	0	0	171	0	0
Dec-97	28885	3	0.01	25132	438	1.77	3371	-435	-11.4	220	0	0	162	0	0
Mar-98	28912	-2	-0.01	25201	427	1.72	3338	-429	-11.4	219	0	0	153	0	0
Jun-98	28822	4	0.01	25197	432	1.74	3283	-429	-11.6	219	0	0	122	0	0
Sep-98	28924	-4	-0.01	25313	422	1.7	3261	-426	-11.6	219	0	0	132	0	0
Dec-98	29084	4	0.01	25449	425	1.7	3290	-421	-11.3	219	0	0	126	0	0
Mar-99	29117	-1	-0	25519	418	1.67	3256	-420	-11.4	218	0	0	124	1	0.81
Jun-99	29207	-4	-0.01	25586	429	1.71	3280	-432	-11.6	218	0	0	124	0	0
Sep-99	29461	-10	-0.03	25855	417	1.64	3257	-427	-11.6	218	0	0	131	0	0
Dec-99	29594	5	0.02	25996	423	1.65	3252	-418	-11.4	217	0	0	128	0	0
Mar-00	29521	-5	-0.02	25975	409	1.6	3206	-415	-11.5	217	0	0	122	0	0
Jun-00	29652	-5	-0.02	26147	410	1.59	3175	-415	-11.6	217	0	0	113	0	0
Sep-00	29829	-2	-0.01	26308	414	1.6	3184	-416	-11.6	215	0	0	121	-1	-0.82
Dec-00	29887	8	0.03	26371	415	1.6	3184	-406	-11.3	216	0	0	118	0	0
Mar-01	29907	-3	-0.01	26399	409	1.57	3183	-412	-11.5	215	0	0	110	0	0
Jun-01	30012	-6	-0.02	26506	412	1.58	3198	-417	-11.5	214	0	0	95	0	0
Sep-01	30176	30	0.1	26680	488	1.86	3193	-457	-12.5	214	0	0	89	-1	-1.11
Dec-01	30203	46	0.15	26702	482	1.84	3197	-436	-12	214	0	0	90	0	0
Mar-02	30195	17	0.06	26701	466	1.78	3191	-450	-12.4	215	0	0	88	0	0
Jun-02	30291	60	0.2	26725	485	1.85	3266	-426	-11.5	214	0	0	86	0	0
Sep-02	30363	59	0.19	26781	491	1.87	3296	-431	-11.6	215	0	0	72	0	0
Dec-02	30369	62	0.2	26799	494	1.88	3282	-431	-11.6	216	0	0	73	1	1.39
Mar-03	30414	87	0.29	26748	502	1.91	3372	-415	-11	221	0	0	74	1	1.37
Jun-03	30576	49	0.16	26842	521	1.98	3441	-473	-12.1	223	0	0	70	0	0
Sep-03	30734	45	0.15	26901	531	2.01	3533	-486	-12.1	222	0	0	79	0	0
Dec-03	30779	34	0.11	26971	523	1.98	3508	-489	-12.2	221	0	0	79	0	0
Mar-04	30852	68	0.22	27043	529	2	3512	-461	-11.6	220	0	0	78	0	0
Jun-04	30897	62	0.2	27096	530	2	3511	-468	-11.8	218	0	0	72	0	0
Sep-04	30915	50	0.16	27149	516	1.94	3479	-465	-11.8	216	0	0	71	0	0
Dec-04	31093	46	0.15	27319	535	2	3487	-490	-12.3	214	0	0	73	1	1.39
Mar-05	31216	59	0.19	27447	505	1.87	3485	-447	-11.4	212	0	0	71	-1	-1.39
Jun-05	31257	48	0.15	27491	521	1.93	3489	-474	-12	210	0	0	67	0	0
Sep-05	31388	11	0.04	27590	523	1.93	3521	-511	-12.7	208	0	0	69	0	0
Dec-05	31492	38	0.12	27653	521	1.92	3564	-483	-11.9	206	0	0	69	0	0
Mar-06	31557	72	0.23	27694	517	1.9	3593	-445	-11	205	0	0	64	0	0
Jun-06	31639	51	0.16	27807	515	1.89	3574	-465	-11.5	204	0	0	54	0	0
Sep-06	31775	57	0.18	27875	533	1.95	3643	-475	-11.5	202	0	0	56	0	0
Dec-06	31899	72	0.23	27964	540	1.97	3677	-468	-11.3	202	0	0	56	0	0
Mar-07	31822	55	0.17	27901	527	1.93	3669	-472	-11.4	199	0	0	53	0	0
Jun-07	31880	51	0.16	27963	529	1.93	3673	-477	-11.5	198	0	0	47	0	0
Sep-07	32030	62	0.19	28083	547	1.99	3702	-485	-11.6	194	0	0	51	0	0
Dec-07	32073	86	0.27	28128	559	2.03	3698	-473	-11.3	195	0	0	53	0	0
Mar-08	32086	67	0.21	28148	544	1.97	3693	-477	-11.4	194	0	0	51	0	0
Jun-08	32154	71	0.22	28215	548	1.98	3696	-477	-11.4	193	0	0	50	0	0
Sep-08	32134	72	0.22	28221	548	1.98	3667	-476	-11.5	194	0	0	52	0	0
Dec-08	31980	83	0.26	28029	561	2.04	3704	-479	-11.5	193	0	0	53	0	0
Mar-09	31776	47	0.15	27810	521	1.91	3714	-474	-11.3	196	0	0	56	0	0
Jun-09	31590	42	0.13	27641	524	1.93	3696	-481	-11.5	197	0	0	57	0	0
Sep-09	31474	59	0.19	27472	553	2.05	3746	-494	-11.7	199	0	0	57	0	0
Dec-09	31324	55	0.18	27338	544	2.03	3728	-491	-11.6	199	1	0.51	59	0	0
Mar-10	31343	7	0.02	27271	486	1.81	3807	-479	-11.2	199	0	0	66	1	1.54
Jun-10	31410	22	0.07	27300	520	1.94	3850	-497	-11.4	197	-1	-0.51	63	-1	-1.56
Sep-10	31342	37	0.12	27239	540	2.02	3854	-503	-11.5	196	0	0	53	0	0
Dec-10	31382	140	0.45	27210	586	2.2	3928	-446	-10.2	195	0	0	50	1	2.04
Mar-11	31465	124	0.4	27317	535	2	3919	-412	-9.51	194	0	0	35	0	0
Jun-11	31384	156	0.5	27233	570	2.14	3928	-413	-9.51	193	0	0	30	-1	-3.23
Sep-11	31563	149	0.47	27261	590	2.21	4090	-440	-9.71	191	-1	-0.52	21	0	0
Dec-11	31696	168	0.53	27446	595	2.22	4038	-430	-9.62	190	1	0.53	22	3	15.8
Mar-12	32137	295	0.93	27820	711	2.62	4109	-421	-9.29	187	0	0	21	5	31.3
Jun-12	32152	249	0.78	27759	667	2.46	4187	-422	-9.16	186	0	0	21	5	31.3
Sep-12	32098	152	0.48	27694	544	2	4204	-393	-8.55	183	0	0	18	2	12.5