



OECD SHORT-TERM ECONOMIC STATISTICS WORKING PARTY
(STESWP)

Annex 1

Revision Indicators

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Submitted to the Working Party under item 3 of the draft agenda

Meeting:
26 – 28 June 2006

Franqueville Room
OECD Headquarters, Paris
Starting at 9:30 a.m. on the first day



EUROPEAN CENTRAL BANK

DIRECTORATE GENERAL STATISTICS

20 APRIL 2006
S/EAE/GES/2006/107

ANNEX 1

REVISION INDICATORS¹

Indicators

A) Total revisions

Total revisions are calculated as the absolute difference between the current data and the first release of the statistic concerned. This is an important measure of reliability as it provides information on the overall stability of the first release. For example, a low absolute average of total revisions points to an almost unrevised first release.

Average revisions

Average of the difference between the latest available value and the first release for each observation period. This measure indicates a possible **bias of the first release**.

Average absolute revisions

Average of the absolute difference between the latest available value and the first release for each observation period, regardless of their sign. This measure indicates the **stability of the first release**. As a relative measure, the ratio of average absolute revisions and average growth rate is provided (where a value of 100% indicates average absolute revisions of the growth rates of the same magnitude as the average growth rate of the indicator).

Range of revisions

Highest and lowest total revisions to the first release for all observation periods. This range indicates the **volatility of the first release**. The total range covers all the revisions and may include outliers; the 90% range discards the largest 10% of the revisions.

¹ By Linda Kezber, Euro Area Accounts and Economic Statistics Division

B) Successive Revisions

Successive revisions are calculated by accumulating all revisions to the first release and provide complementary information on the fluctuations of the first release caused by revisions.

Average cumulative absolute revisions

For each observation period, the sum of revisions, regardless of their sign, is accumulated. The average for all observation periods may then be a useful supplementary indicator for the **volatility of the first release** as some euro area statistics are revised several times a month and “latest to first” comparison may hide revisions carried out in the meantime.

C) Memorandum item: Average quarterly/monthly/annual growth rate

The average growth rates are helpful when assessing the impact of average revisions of the economic indicator, since the size of the acceptable revisions is likely to depend on the trend growth of the underlying series.

Data sources

From June 2001 onwards, all underlying data for the euro area and the EU countries are taken from the **ECB/DG-S internal revisions database**, in which all incoming vintages of data from Eurostat have been recorded. This also includes the data revised between the official releases (e.g. for industrial production and retail sales turnover this may amount to up to 5-6 euro area data vintages per month.). While every effort has been made to ensure revisions due to incorrect data transmissions or other technical errors have been eliminated from the analysis the volume of data involved may mean that this data validation process is not totally perfect.

For earlier periods, the euro area data have been taken from the published versions of the ECB’s Monthly Bulletin. The latter, however, is a less suitable source as it does not reflect the intermediate revisions occurring between Monthly Bulletin cut-off dates, and as there may be cases where the Monthly Bulletin contains already a revised second release rather than the initial first release. Euro area data prior to 2002 exclude Greece.

Vintages of data for **the US, Japan and the first releases of the GDP data before 2002 for the EU countries** have been received from the OECD, derived from databases used for the production of the (monthly) Main Economic Indicators publication (MEI).

Revisions available up to mid-March 2006 are reported. For data received from the OECD revisions up to December 2005 are included.

Gross domestic product – revision indicators

Seasonally (and partly working day) adjusted, quarter-on-quarter volume change, in percentage points

Observations	Total revisions <i>(latest minus first release)</i>				Successive revisions	Memo item: Average quarterly growth
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	
			Total	90%		
Euro area						
05Q1 - 05Q4	0.00	0.10 (24%)	-0.2 to 0.1	-0.2 to 0.1	0.10	0.41
02Q1 - 04Q4	0.04	0.09 (29%)	-0.1 to 0.2	-0.1 to 0.2	0.41	0.31
99Q1 - 05Q4	0.09	0.16 (36%)	-0.3 to 0.6	-0.2 to 0.5	-	0.45
Belgium						
05Q1 - 05Q4	0.03	0.03 (8%)	0.0 to 0.1	0.0 to 0.1	0.08	0.36
02Q1 - 04Q4	0.07	0.18 (37%)	-0.3 to 0.6	-0.3 to 0.4	0.43	0.49
99Q1 - 05Q4	0.06	0.34 (64%)	-1.2 to 1.0	-0.9 to 0.9	-	0.53
Germany						
05Q1 - 05Q4	-0.03	0.18 (46%)	-0.4 to 0.3	-0.4 to 0.3	0.18	0.39
02Q1 - 04Q4	-0.08	0.23 (328%)	-0.5 to 0.4	-0.5 to 0.2	0.36	0.07
99Q1 - 05Q4	0.05	0.27 (81%)	-0.6 to 0.6	-0.5 to 0.6	-	0.33
Spain						
05Q1 - 05Q4	-0.03	0.08 (9%)	-0.1 to 0.1	-0.1 to 0.1	0.08	0.87
02Q1 - 04Q4	0.11	0.18 (25%)	-0.2 to 0.6	-0.2 to 0.2	0.48	0.72
99Q1 - 05Q4	0.16	0.29 (33%)	-0.4 to 0.9	-0.4 to 0.7	-	0.89
France						
05Q1 - 05Q4	0.00	0.05 (17%)	-0.1 to 0.1	-0.1 to 0.1	0.10	0.30
02Q1 - 04Q4	0.05	0.18 (42%)	-0.3 to 0.6	-0.3 to 0.6	0.88	0.43
99Q1 - 05Q4	0.07	0.20 (38%)	-0.5 to 0.6	-0.3 to 0.6	-	0.52
Italy						
05Q1 - 05Q3	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	0.15
02Q1 - 04Q4	-0.03	0.07 (47%)	-0.2 to 0.1	-0.2 to 0.1	0.13	0.15
99Q1 - 05Q3	0.03	0.14 (45%)	-0.4 to 0.7	-0.2 to 0.4	-	0.31
Netherlands						
05Q1 - 05Q4	-0.08	0.28 (55%)	-0.7 to 0.4	-0.7 to 0.4	0.33	0.51
02Q1 - 04Q4	0.14	0.26 (173%)	-0.4 to 0.5	-0.4 to 0.5	1.19	0.15
99Q1 - 05Q4	0.04	0.26 (63%)	-0.7 to 0.7	-0.6 to 0.5	-	0.41
United Kingdom						
05Q1 - 05Q4	-0.03	0.13 (29%)	-0.3 to 0.1	-0.3 to 0.1	0.13	0.45
02Q1 - 04Q4	0.08	0.19 (29%)	-0.4 to 0.4	-0.4 to 0.4	0.66	0.65
99Q1 - 05Q4	0.12	0.23 (35%)	-0.4 to 0.9	-0.3 to 0.6	-	0.65
United States						
05Q1 - 05Q3	0.03	0.03 (3%)	0.0 to 0.2	0.0 to 0.2	0.11	0.94
02Q1 - 04Q4	-0.02	0.17 (22%)	-0.7 to 0.3	-0.2 to 0.3	0.42	0.79
99Q1 - 05Q3	-0.07	0.25 (35%)	-1.0 to 0.4	-0.8 to 0.3	-	0.72
Japan						
05Q1 - 05Q3	0.23	0.23 (25%)	0.2 to 0.5	0.2 to 0.5	0.33	0.92
02Q1 - 04Q4	-0.28	0.42 (111%)	-1.9 to 0.7	-0.9 to 0.2	1.75	0.38
99Q1 - 05Q3	-0.17	0.60 (188%)	-2.6 to 1.8	-1.9 to 0.8	-	0.32

Sources: ECB calculations based on data from Eurostat and the OECD.

Euro area - gross domestic product expenditure components – revision indicators

Seasonally (and partly working day) adjusted, quarter-on-quarter volume change, in percentage points

Observations	Total revisions (latest minus first release)				Successive revisions	Memo item:
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	Average quarterly growth
			Total	90%		
<i>Private consumption</i>						
05Q1 - 05Q4	0.10	0.20 (105%)	-0.2 to 0.4	-0.2 to 0.4	0.20	0.19
02Q1 - 04Q4	0.07	0.17 (52%)	-0.2 to 0.4	-0.2 to 0.4	1.00	0.33
99Q1 - 05Q4	0.09	0.21 (49%)	-0.3 to 0.8	-0.2 to 0.6	-	0.43
<i>Government consumption</i>						
05Q1 - 05Q4	0.25	0.25 (60%)	0.0 to 0.5	0.0 to 0.5	0.50	0.42
02Q1 - 04Q4	-0.02	0.22 (56%)	-0.4 to 0.6	-0.4 to 0.3	1.78	0.39
99Q1 - 05Q4	0.10	0.24 (50%)	-0.4 to 0.6	-0.3 to 0.5	-	0.48
<i>Gross fixed capital formation</i>						
05Q1 - 05Q4	0.30	0.55 (71%)	-0.5 to 0.9	-0.5 to 0.9	0.55	0.78
02Q1 - 04Q4	0.43	0.60 (300%)	-0.4 to 1.2	-0.4 to 1.1	2.10	0.24
99Q1 - 05Q4	0.36	0.56 (104%)	-0.5 to 1.7	-0.4 to 1.2	-	0.54
<i>Changes in inventories¹</i>						
05Q1 - 05Q4	-0.03	0.08	-0.2 to 0.1	-0.2 to 0.1	-	-
02Q1 - 04Q4	-0.05	0.15	-0.4 to 0.2	-0.2 to 0.2	-	-
99Q1 - 05Q4	-0.03	0.17	-0.4 to 0.5	-0.4 to 0.4	-	-
<i>Exports</i>						
05Q1 - 05Q4	-0.30	0.30 (22%)	-1.1 to 0.0	-1.1 to 0.0	0.70	1.24
02Q1 - 04Q4	-0.23	0.48 (55%)	-1.2 to 0.5	-1.2 to 0.5	2.28	0.88
99Q1 - 05Q4	0.11	0.65 (52%)	-1.4 to 2.4	-1.2 to 1.8	-	1.26
<i>Imports</i>						
05Q1 - 05Q4	0.03	0.23 (19%)	-0.4 to 0.3	-0.4 to 0.3	0.58	1.22
02Q1 - 04Q4	0.03	0.64 (52%)	-1.2 to 1.3	-1.2 to 1.3	3.14	1.15
99Q1 - 05Q4	0.09	0.71 (57%)	-1.7 to 2.5	-1.4 to 1.3	-	1.24

Sources: ECB calculations based on data from Eurostat.

¹ Revisions to contributions of changes of inventories to GDP quarterly growth. Changes in inventories excluding acquisitions of valuables

Employment – revision indicators

Seasonally adjusted, quarter-on-quarter growth rate, in percentage points

Observations	Total revisions <i>(latest minus first release)</i>				Successive revisions	Memo item: Average quarterly growth rate
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	
			Total	90%		
Euro area						
05Q1 - 05Q3	-0.07	0.07 (44%)	-0.1 to 0.0	-0.1 to 0.0	0.40	0.16
02Q1 - 04Q4	0.07	0.08 (57%)	-0.1 to 0.2	-0.1 to 0.2	0.50	0.14
Belgium						
05Q1 - 05Q3	0.03	0.03 (14%)	0.0 to 0.1	0.0 to 0.1	0.03	0.21
02Q1 - 04Q4	0.02	0.07 (140%)	-0.1 to 0.3	-0.1 to 0.1	0.17	0.05
Germany						
05Q1 - 05Q3	-0.27	0.27 (-245%)	-0.4 to -0.0	-0.4 to -0.1	0.27	-0.11
02Q1 - 04Q4	0.11	0.18 (-225%)	-0.2 to 0.4	-0.2 to 0.3	0.44	-0.08
Spain						
05Q1 - 05Q3	0.13	0.13 (14%)	0.1 to 0.2	0.1 to 0.2	0.13	0.94
02Q1 - 04Q4	0.22	0.27 (42%)	-0.3 to 0.5	-0.3 to 0.4	0.48	0.64
France						
05Q1 - 05Q3	-0.03	0.03 (75%)	-0.1 to 0.0	-0.1 to 0.0	0.17	0.04
02Q1 - 04Q4	-0.05	0.05 (250%)	-0.2 to 0.0	-0.2 to 0.0	0.28	0.02
Italy						
05Q1 - 05Q3	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.07	0.07
02Q1 - 04Q4	0.05	0.13 (43%)	-0.2 to 0.4	-0.2 to 0.3	0.53	0.30
Netherlands (non-adjusted data)						
05Q1 - 05Q3	-0.10	0.30 (103%)	-0.6 to 0.3	-0.6 to 0.3	0.30	0.29
02Q1 - 04Q4	-0.04	0.58 (-304%)	-0.9 to 0.9	-0.9 to 0.9	0.93	-0.18
United Kingdom						
05Q1 - 05Q2	0.05	0.05 (29%)	0.0 to 0.1	0.0 to 0.1	0.05	0.17
02Q1 - 04Q4	0.10	0.20 (83%)	-0.2 to 0.5	-0.2 to 0.4	0.87	0.24
United States						
05Q1 - 05Q3	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	0.53
02Q1 - 04Q4	0.02	0.21 (91%)	-0.8 to 1.0	-0.2 to 0.2	0.28	0.23
Japan						
05Q1 - 05Q3	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	0.47
02Q1 - 04Q4	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	-0.09

Sources: ECB calculations based on data from the ECB (euro area), from Eurostat (EU countries) and from the OECD (US, JP).

Unemployment rate – revision indicators

Seasonally adjusted, monthly change, in percentage points

Observations	Total revisions (latest minus first release)				Successive revisions	Memo item:
	Average revision	Average absolute revision (relative to monthly rate)	Range of revisions		Average cumulative absolute revision	Average monthly rate
			Total	90%		
Euro area						
Jan05 - Dec05	-0.08	0.10 (1%)	-0.2 to 0.1	-0.2 to 0.0	0.13	8.55
Jan02 - Dec04	-0.06	0.11(1%)	-0.4 to 0.1	-0.4 to 0.1	0.53	8.63
Jan99 - Dec05	-0.42	0.44 (5%)	-1.2 to 0.1	-1.1 to 0.1	-	8.50
Belgium						
Jan05 - Dec05	0.26	0.29 (3%)	-0.1 to 0.5	-0.1 to 0.4	0.36	8.41
Jan02 - Dec04	0.27	0.40 (5%)	-0.7 to 1.1	-0.7 to 0.6	0.93	8.03
Germany						
Jan05 - Dec05	0.02	0.05 (0%)	-0.1 to 0.2	-0.1 to 0.1	0.10	9.48
Jan02 - Dec04	-0.14	0.23 (3%)	-0.5 to 0.3	-0.5 to 0.1	0.98	8.92
Spain						
Jan05 - Dec05	-0.30	0.33 (4%)	-0.5 to 0.1	-0.5 to 0.1	0.75	9.21
Jan02 - Dec04	-0.16	0.27 (2%)	-1.7 to 0.3	-1.7 to 0.2	0.90	11.29
France						
Jan05 - Dec05	-0.08	0.10 (1%)	-0.2 to 0.1	-0.2 to 0.0	0.22	9.50
Jan02 - Dec04	0.04	0.19 (2%)	-0.5 to 0.3	-0.5 to 0.3	0.37	9.31
Italy						
Jan05 - Sep05	-0.03	0.03 (0%)	-0.1 to 0.0	-0.1 to 0.0	0.03	7.63
Jan02 - Dec04	-0.18	0.26 (3%)	-0.4 to 0.4	-0.4 to 0.1	0.37	8.36
Netherlands						
Jan05 - Dec05	-0.09	0.09 (2%)	-0.2 to 0.0	-0.2 to 0.0	0.26	4.74
Jan02 - Dec04	-0.15	0.19 (5%)	-0.5 to 0.2	-0.5 to 0.1	0.43	3.67
United Kingdom						
Jan05 - Nov05	0.00	0.02 (0%)	-0.1 to 0.1	-0.1 to 0.0	0.02	4.70
Jan02 - Dec04	0.01	0.02 (0%)	-0.1 to 0.1	-0.1 to 0.1	0.07	4.90
United States						
Jan05 - Nov05	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	5.10
Jan02 - Dec04	0.00	0.03 (1%)	-0.1 to 0.2	-0.1 to 0.1	0.04	5.77
Jan99 - Nov05	-0.01	0.03 (1%)	-0.1 to 0.2	-0.1 to 0.1	-	5.05
Japan						
Jan05 - Nov05	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	4.43
Jan02 - Dec04	0.00	0.01 (0%)	-0.1 to 0.1	0.0 to 0.0	0.02	5.11
Jan99 - Nov05	0.00	0.02 (0%)	-0.2 to 0.1	-0.1 to 0.1	-	4.89

Sources: ECB calculations based on data from Eurostat (euro area and EU countries) and from the OECD (US, JP).

Compensation per employee – revision indicators

Seasonally (and partly working day) adjusted, quarter-on-quarter growth rate, in percentage points

Observations	Total revisions (latest minus first release)				Successive revisions	Memo item: Average quarterly growth rate
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	
			Total	90%		
<i>Euro area</i>						
05Q1 - 05Q3	-0.10	0.23 (64%)	-0.5 to 0.1	-0.5 to 0.1	0.43	0.36
02Q1 - 04Q4	-0.06	0.18 (35%)	-0.4 to 0.3	-0.4 to 0.2	1.24	0.52
<i>Belgium</i>						
05Q1 - 05Q3	0.03	0.03 (8%)	0.0 to 0.1	0.0 to 0.1	0.03	0.37
02Q1 - 04Q4	-0.02	0.13 (56%)	-0.6 to 0.4	-0.6 to 0.2	0.80	0.54
<i>Germany</i>						
05Q1 - 05Q3	0.27	0.27 (208%)	0.2 to 0.3	0.2 to 0.3	0.40	0.13
02Q1 - 04Q4	-0.13	0.4 (222%)	-1.5 to 0.6	-1.5 to 0.4	1.00	0.18
<i>Spain</i>						
05Q1 - 05Q3	-0.27	0.27 (66%)	-0.5 to -0.1	-0.5 to -0.1	0.80	0.41
02Q1 - 04Q4	-0.16	0.26 (33%)	-0.6 to 0.3	-0.6 to 0.1	0.98	0.78
<i>France</i>						
05Q1 - 05Q3	0.00	0.07 (9%)	-0.1 to 0.1	-0.1 to 0.1	0.13	0.74
02Q1 - 04Q4	0.10	0.17 (24%)	-0.2 to 0.4	-0.2 to 0.3	0.72	0.72
<i>Italy</i>						
05Q1 - 05Q3	-0.20	0.20 (45%)	-0.4 to 0.0	-0.4 to 0.0	0.20	0.44
02Q1 - 04Q4	0.03	0.28 (47%)	-0.6 to 0.7	-0.6 to 0.5	0.82	0.59
<i>Netherlands (non-adjusted data)</i>						
05Q1 - 05Q3	-0.30	0.30 (120%)	-0.6 to -0.1	-0.6 to -0.1	0.37	0.25
02Q1 - 04Q4	0.23	0.35 (37%)	-0.4 to 1.0	-0.4 to 0.8	0.92	0.95
<i>United Kingdom (only available up to 03Q2)</i>						
02Q1 - 03Q2	0.18	0.35 (29%)	-0.3 to 0.8	-0.3 to 0.6	0.92	1.22

Source: ECB calculations based on data from Eurostat

Labour cost index – revision indicators

Seasonally and working day adjusted, quarter-on-quarter growth rate, in percentage points

Observations	Total revisions <i>(latest minus first release)</i>				Successive revisions	Memo item: Average quarterly growth rate
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	
			Total	90%		
Euro area						
05Q1 - 05Q3	0.00	0.07 (12%)	-0.1 to 0.1	-0.1 to 0.1	0.07	0.60
02Q1 - 04Q4	0.01	0.08 (11%)	-0.1 to 0.2	-0.1 to 0.1	0.86	0.72
<i>Belgium (data available up to 02Q4 only)</i>						
Germany						
05Q1 - 05Q3	0.13	0.13 (38%)	0.0 to 0.4	0.0 to 0.4	0.13	0.34
02Q1 - 04Q4	-0.13	0.29 (67%)	-0.6 to 0.5	-0.6 to 0.2	1.31	0.43
Spain¹						
05Q1 - 05Q3	-0.13	0.13 (18%)	-0.2 to 0.0	-0.2 to 0.0	0.20	0.74
02Q1 - 04Q4	-0.05	1.12 (102%)	-2.8 to 5.6	-1.4 to 0.4	2.50	1.10
France						
05Q1 - 05Q3	0.03	0.10 (16%)	-0.1 to 0.2	-0.1 to 0.2	0.10	0.62
02Q1 - 04Q4	0.04	0.28 (37%)	-0.5 to 0.7	-0.5 to 0.6	0.63	0.76
<i>Italy (data confidential)</i>						
Netherlands						
05Q1 - 05Q1	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	2.05
02Q1 - 04Q4	-0.01	0.64 (74%)	-2.7 to 1.1	-0.6 to 0.9	1.74	0.87
United Kingdom						
02Q1 - 04Q4	0.01	0.16 (18%)	-0.5 to 0.4	-0.5 to 0.2	0.26	0.91

Source: ECB calculations based on data from Eurostat

¹ Wide ranges and high cumulative absolute revisions for Spain are caused by the introduction of a new data source (replacing the former estimations).

Industrial production – revision indicators

Seasonally and working day adjusted, month-on-month growth rate, in percentage points

Observations	Total revisions <i>(latest minus first release)</i>				Successive revisions	Memo item: Average monthly growth rate
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	
			Total	90%		
Euro area						
Jan05 - Dec05	0.06	0.13 (68%)	-0.2 to 0.4	-0.2 to 0.2	0.54	0.19
Jan02 - Dec04	0.10	0.32 (320%)	-0.7 to 0.9	-0.7 to 0.6	2.98	0.10
Jan99 - Dec05	0.08	0.37 (247%)	-1.2 to 1.2	-0.7 to 0.8	-	0.15
Belgium						
Jan05 - Dec05	0.71	1.66 (1106%)	-4.0 to 6.5	-4.0 to 2.2	4.96	0.15
Jan02 - Dec04	0.40	1.28 (853%)	-2.6 to 5.1	-2.6 to 1.8	7.46	0.15
Germany						
Jan05 - Dec05	0.06	0.38 (119%)	-1.7 to 0.7	-1.7 to 0.7	0.73	0.32
Jan02 - Dec04	0.21	0.59 (369%)	-1.2 to 1.9	-1.2 to 0.9	2.36	0.16
Spain						
Jan05 - Dec05	0.08	0.16 (53%)	-0.2 to 0.6	-0.2 to 0.2	0.29	0.30
Jan02 - Dec04	-0.04	0.55 (423%)	-1.6 to 1.3	-1.6 to 0.7	1.60	0.13
France						
Jan05 - Dec05	-0.02	0.22 (-733%)	-0.4 to 0.5	-0.4 to 0.4	0.42	-0.03
Jan02 - Dec04	0.00	0.77 (963%)	-1.9 to 1.7	-1.9 to 1.4	2.43	0.08
Italy						
Jan05 - Dec05	0.09	0.29 (171%)	-0.4 to 0.8	-0.4 to 0.4	0.59	0.17
Jan02 - Dec04	0.04	0.37 (-529%)	-1.6 to 1.3	-1.6 to 0.6	1.65	-0.07
Netherlands						
Jan05 - Dec05	-0.25	1.27 (12700%)	-1.8 to 1.9	-1.8 to 1.6	2.12	0.01
Jan02 - Dec04	0.26	1.66 (8300%)	-4.6 to 7.9	-4.6 to 2.0	3.89	0.02
United Kingdom						
Jan05 - Dec05	-0.08	0.15 (-65%)	-0.7 to 0.2	-0.7 to 0.1	0.43	-0.23
Jan02 - Dec04	0.06	0.48 (4800%)	-1.1 to 1.2	-1.1 to 0.8	1.44	0.01
United States						
Jan05 - Oct05	-0.03	0.13 (118%)	-0.3 to 0.2	-0.2 to 0.1	0.31	0.11
Jan02 - Dec04	0.00	0.20 (83%)	-0.5 to 0.7	-0.4 to 0.3	0.67	0.24
Jan99 - Oct05	0.01	0.24 (185%)	-0.8 to 0.7	-0.6 to 0.6	-	0.13
Japan						
Jan05 - Oct05	0.07	0.23 (92%)	-0.4 to 1.1	-0.2 to 0.2	0.27	0.25
Jan02 - Dec04	0.10	0.53 (171%)	-1.1 to 1.5	-1.0 to 1.0	0.83	0.31
Jan99 - Oct05	0.02	0.83 (692%)	-3.8 to 2.5	-2.5 to 1.9	-	0.12

Sources: ECB calculations based on data from Eurostat (euro area and EU countries) and from the OECD (US, JP).

Retail trade turnover – revision indicators

Seasonally and working day adjusted, month-on-month volume change, in percentage points

Observations	Total revisions <i>(latest minus first release)</i>				Successive revisions	Memo item: Average monthly growth rate
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	
			Total	90%		
<i>Euro area</i>						
Jan05 - Dec05	-0.10	0.20 (500%)	-0.5 to 0.2	-0.5 to 0.1	1.07	0.04
Jan02 - Dec04	-0.01	0.63 (1260%)	-2.4 to 2.1	-2.4 to 0.8	9.63	0.05
May99 - Dec05	-0.03	0.46 (418%)	-2.4 to 2.1	-0.8 to 0.8	-	0.11
<i>Belgium</i>						
Jan05 - Dec05	0.10	1.20 (1333%)	-2.3 to 2.9	-2.3 to 2.0	4.92	0.09
Jan02 - Dec04	-0.10	1.03 (2575%)	-3.4 to 2.6	-3.4 to 1.2	7.70	0.04
<i>Germany</i>						
Jan05 - Dec05	0.05	0.83 (-1186%)	-1.6 to 2.3	-1.6 to 0.8	2.73	-0.07
Jan02 - Dec04	0.04	1.56 (3900%)	-6.5 to 3.6	-6.5 to 1.9	8.75	0.04
<i>Spain</i>						
Jan05 - Dec05	-0.08	0.29 (-1450%)	-0.9 to 0.5	-0.9 to 0.3	0.51	-0.02
Jan02 - Dec04	-0.08	0.67 (223%)	-2.3 to 1.6	-2.3 to 1.0	2.57	0.30
<i>France</i>						
Jan05 - Dec05	-0.58	0.58 (-1450%)	-1.0 to -0.1	-1.0 to -0.1	0.70	-0.04
Jan02 - Dec04	-0.13	1.11 (1233%)	-3.5 to 2.4	-3.5 to 1.6	1.83	0.09
<i>Italy</i>						
Jan05 - Dec05	0.08	0.12 (600%)	-0.1 to 0.4	-0.1 to 0.2	0.17	0.02
Jan02 - Dec04	-0.06	0.43 (-391%)	-1.0 to 1.0	-1.0 to 0.5	3.50	-0.11
<i>Netherlands</i>						
Jan05 - Dec05	0.29	0.46 (153%)	-1.0 to 2.0	-1.0 to 0.6	0.68	0.30
Jan02 - Dec04	0.12	0.64 (-582%)	-1.8 to 1.7	-1.8 to 1.0	7.87	-0.11
<i>United Kingdom</i>						
Jan05 - Dec05	-0.05	0.18 (51%)	-0.6 to 0.7	-0.6 to 0.1	1.07	0.35
Jan02 - Dec04	-0.07	0.41 (124%)	-1.2 to 1.4	-1.2 to 0.4	5.02	0.33
<i>United States</i>						
Jan05 - Oct05	0.18	0.18 (47%)	0.0 to 0.4	0.0 to 0.3	0.29	0.38
Jan02 - Dec04	0.10	0.54 (115%)	-1.3 to 2.1	-1.1 to 1.1	1.60	0.47
Jan99 - Oct05	0.00	0.50 (116%)	-2.0 to 2.1	-1.1 to 1.0	-	0.43
<i>Japan</i>						
Jan05 - Oct05	-0.17	0.19 (9500%)	-1.2 to 0.1	-0.3 to 0.1	0.22	0.02
Jan02 - Dec04	-0.16	1.03 (-1030%)	-4.0 to 4.3	-2.5 to 1.3	1.35	-0.10
Jan99 - Oct05	-0.06	0.90 (-1000%)	-4.0 to 4.3	-2.3 to 1.5	-	-0.09

Sources: ECB calculations based on data from Eurostat (euro area and EU countries) and from the OECD (US, JP).

HICP – revision indicators

Non-adjusted, year-on-year growth rate, in percentage points

Observations	Total revisions <i>(latest minus first release)</i>				Successive revisions	Memo item: Average annual rate
	Average revision	Average absolute revision (relative to average growth)	Range of revisions		Average cumulative absolute revision	
			Total	90%		
Euro area						
Jan05 - Dec05	0.00	0.05 (2%)	-0.2 to 0.1	-0.2 to 0.1	0.07	2.19
Jan02 - Dec04	0.01	0.06 (3%)	-0.1 to 0.2	-0.1 to 0.1	0.09	2.16
Jan99 - Dec05	-0.07	0.11 (5%)	-0.7 to 0.2	-0.4 to 0.1	-	2.03
Belgium						
Jan05 - Dec05	0.00	0.02 (1%)	-0.1 to 0.1	-0.1 to 0.0	0.02	2.54
Jan02 - Dec04	0.01	0.01 (1%)	0.0 to 0.1	0.0 to 0.0	0.01	1.65
Germany						
Jan05 - Dec05	-0.03	0.09 (5%)	-0.3 to 0.2	-0.3 to 0.1	0.14	1.89
Jan02 - Dec04	0.02	0.11 (8%)	-0.2 to 0.3	-0.2 to 0.2	0.21	1.40
Spain						
Jan05 - Dec05	0.00	0.02 (1%)	-0.1 to 0.1	-0.1 to 0.0	0.03	3.38
Jan02 - Dec04	0.04	0.04 (1%)	0.0 to 0.6	0.0 to 0.1	0.05	3.25
France						
Jan05 - Dec05	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	1.91
Jan02 - Dec04	0.01	0.02 (1%)	-0.1 to 0.1	-0.1 to 0.0	0.02	2.16
Italy						
Jan05 - Dec05	-0.03	0.06 (3%)	-0.3 to 0.1	-0.3 to 0.1	0.11	2.18
Jan02 - Dec04	0.00	0.06 (2%)	-0.3 to 0.2	-0.3 to 0.1	0.08	2.56
Netherlands						
Jan05 - Dec05	-0.01	0.01 (1%)	-0.1 to 0.0	-0.1 to 0.0	0.03	1.51
Jan02 - Dec04	-0.07	0.09 (4%)	-0.4 to 0.1	-0.4 to 0.0	0.09	2.50
United Kingdom						
Jan05 - Dec05	0.00	0.02 (1%)	-0.1 to 0.1	-0.1 to 0.0	0.02	2.04
Jan02 - Dec04	-0.01	0.02 (2%)	-0.1 to 0.1	-0.1 to 0.0	0.02	1.32
United States						
Jan05 - Dec05	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	3.40
Jan02 - Dec04	0.00	0.03 (1%)	-0.1 to 0.1	-0.1 to 0.1	0.03	2.18
Jan99 - Dec05	0.01	0.04 (2%)	-0.1 to 0.3	-0.1 to 0.1	-	2.61
Japan						
Jan05 - Dec05	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	-0.30
Jan02 - Dec04	0.00	0.00 (0%)	0.0 to 0.0	0.0 to 0.0	0.00	-0.39
Jan99 - Dec05	-0.02	0.04 (-9%)	-0.4 to 0.3	-0.2 to 0.1	-	-0.46

Sources: ECB calculations based on data from Eurostat (euro area and EU countries) and from the OECD (US, JP).