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**STD/CSTAT/WPNA(2007)15  
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**Working Party on National Accounts**

**REVISIONS IN QUARTERLY GDP OF OECD COUNTRIES:  
AN UPDATE**

**To be held on 3-5 October 2007  
Tour Europe, Paris la Défense  
Beginning at 9:30 a.m. on the first day**

*This document has been prepared by R. McKenzie and Z. Adam, Statistics Directorate and will be presented under item 16 of the draft agenda*

For further information please contact:  
Richard McKenzie  
E-mail: [Richard.MCKENZIE@oecd.org](mailto:Richard.MCKENZIE@oecd.org)

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**English - Or. English**

## REVISIONS IN QUARTERLY GDP OF OECD COUNTRIES: AN UPDATE

### 1. Introduction

This paper examines the revisions histories of eighteen OECD countries for the first estimates of seasonally adjusted quarter-on-previous-quarter (QoQ) and year-on-year (YoY) growth rates for GDP volume as published in successive monthly issues of the OECD publication: *Main Economic Indicators* (MEI) from May 1995<sup>1</sup> to June 2007.

This paper updates the paper presented at the OECD Working Party on National Accounts in October 2006 (Tosetto and Lequiller) which followed from the original work presented at the 2005 meeting by Di Fonzo (2005b).

A number of changes have been made to the information presented in the previous paper and the associated data are now available through the OECD *Main Economic Indicators Original Release Data and Revisions Database* interface at: <http://stats.oecd.org/mei/default.asp?rev=1>. This database interface encourages the development of revisions analysis on an internationally comparable basis for quarterly national accounts and a range of other important short-term economic statistics.

The main additional information compared to the previous GDP revisions analyses which are now available through this interface and referred to in this paper are listed below. In particular, key results from this new work are presented in sections 3.2 and 3.3 of this paper for which country's comments are invited.

- Data from recent publications of Main Economic Indicators (from June 2006 to June 2007 have been added to the previous ones in the database. The analysis of revisions has been extended to 1994Q4 – 2006Q3 (while last year it was 1995Q1 – 2004Q4).
- Additional analysis has been included in the spreadsheets available in the OECD revisions database update for this year. Most importantly, an analysis of short-term revisions is now provided, assessed 5 months after the first published data. Also, (YoY) growth rates have been included in the revisions analysis to complement the existing information on QoQ growth rates.
- As assessment of the statistical significance of the mean revision for both QoQ and YoY growth rates for different revision intervals.

The revisions analysis for quarterly GDP is focused on those countries for which the revisions record is long enough to permit sensible statistical analysis. They are Australia, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Spain, Switzerland, United Kingdom and USA. The available revisions database enables analysis of the size and direction of the revisions for each country, and to perform comparisons across countries. For full organizational and methodological aspects readers can refer to Di Fonzo (2005a, 2005b).

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<sup>1</sup> Data availability in vintage publications of the monthly MEI start later for Germany (Nov 95), Portugal (Nov 96), Belgium (Mar 97) and Korea (Dec 99).

This paper is organized as follows. Section 2 contains some brief information about the organization of the database and the main statistics computed for revisions analysis. Main results are presented in graphical form and explained in section 3. Section 4 includes country's comments on reasons for revisions as provided in response to the 2006 paper<sup>2</sup>, and Section 5 presents more detailed comparisons across countries in tabular form. Further information on the revision process and the organization of the database are presented in the Annex.

## 2. Organization of the database

The detailed results of this analysis are available as a series of three spreadsheets for each country on the OECD website at :

[http://www.oecd.org/document/21/0,2340,en\\_2825\\_495684\\_37047509\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/21/0,2340,en_2825_495684_37047509_1_1_1_1,00.html)

The data have been organized as required for the revisions analysis, as shown in the Annex using the Australian example. The main statistics which are presented in Section 3 of the paper are outlined below, with the additional statistics available in the database being described in detail in Di Fonzo (2005a).

- *Mean absolute revision*

$$MAR = \frac{1}{n} \sum_{t=1}^n |L_t - P_t| = \frac{1}{n} \sum_{t=1}^n |R_t|$$

where  $L_t$  is the later estimate,  $P_t$  is the earlier estimate,  $R_t = L_t - P_t$  is the revision and  $n$  is the number of observations. This statistic measures the average absolute size of the revision  $R_t$ .

- *Relative mean absolute revision*

$$RMAR = \frac{\sum_{t=1}^n |L_t - P_t|}{\sum_{t=1}^n |L_t|} = \frac{\sum_{t=1}^n |R_t|}{\sum_{t=1}^n |L_t|}$$

This indicator allows to assess the relative robustness of two estimates. It measures the proportion of  $P_t$  revised in  $L_t$ . It is also useful for making comparisons of the relative size of revisions across countries, as it adjusts the mean absolute revision for the mean absolute size of growth rates over the analysis period.

- *Mean revision*

$$\bar{R} = \frac{1}{n} \sum_{t=1}^n (L_t - P_t) = \frac{1}{n} \sum_{t=1}^n R_t$$

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<sup>2</sup> Countries are invited to provide further reasons for revisions in response to this paper, which would subsequently be included in a revised version of this document.

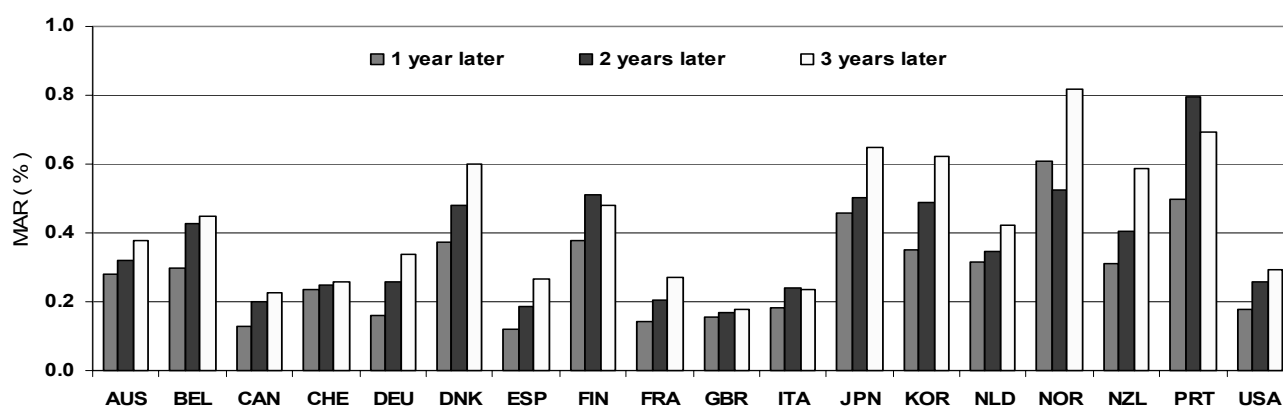
We use a simple and robust approach based on the Heteroskedasticity Autocorrelation consistent estimate's variance proposed by Newey and West (1987) to evaluate the statistical significance of the mean revision and to test the hypothesis that it is equal to zero.

### 3. Main results

#### 3.1 Relative size of revisions to GDP QoQ growth rates across countries

Figure 1 below presents the mean absolute revision (MAR) to first published estimates of GDP QoQ growth rates assessed after 1 year, 2 years and 3 years respectively. It is apparent in most countries<sup>3</sup> that the mean absolute revision increases the longer the interval from the first published estimate. Assessing across the three intervals, it is evident that revisions as measured by the MAR are of a different magnitude across countries. Smaller revisions are noted for Canada, Switzerland, Germany, Spain, France, United Kingdom, Italy and the United States. Australia, Belgium and the Netherlands have medium size revisions relative to other countries whilst those with higher revisions are Denmark, Finland, Japan, Korea, New Zealand and in particular Norway and Portugal. The relative size of revisions across countries should be considered in conjunction with the reasons for revisions as explained by some countries and listed in Section 4.

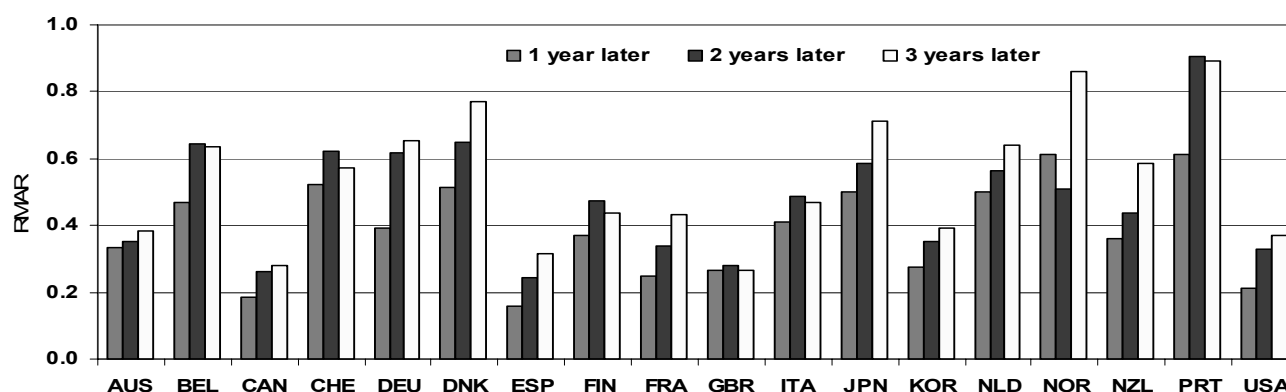
**Figure 1: Mean absolute revision (%) to first published estimates of QoQ growth rates for GDP**



The relative mean absolute revision (RMAR) is perhaps more suited for comparing the size of revisions across countries as it adjusts the MAR for the average absolute size of the relevant growth rate over the analysis period. Figure 2 replicates the above comparison using the RMAR. Analysing the RMAR leads to a slightly different interpretation on the relative size of revisions across countries compared to the MAR. Most noticeably, Switzerland and Germany which were noted as being in the group of countries with low revisions based on MAR would now be categorized to the list of countries with higher revisions based on RMAR. Conversely, Korea moves from the high revision to the low revision group.

<sup>3</sup> The key for country acronyms included in the graphs is: AUS = Australia; AUT = Austria; BEL = Belgium; CAN = Canada; CHE = Switzerland; DEU = Germany; DNK = Denmark; ESP = Spain; FIN = Finland; FRA = France; GBR = United Kingdom; ITA = Italy; JPN = Japan; KOR = Korea; NLD = Netherlands; NOR = Norway; NZL = New Zealand; PRT = Portugal; USA = United States.

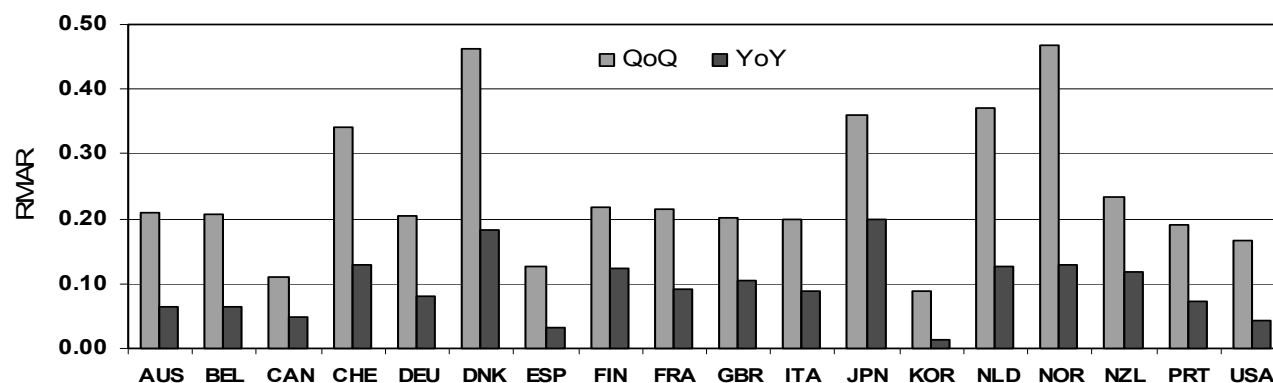
**Figure 2: Relative mean absolute revision to first published QoQ growth rates for GDP**



**3.2 A comparison of short-term revisions for GDP QoQ and YoY growth rates**

As outlined in the introduction, a measure of short-term revisions has been added to the database together with revisions analysis for year-on-year growth rates. Short-term revisions have been defined as the revision between first published data and that published five months later in the MEI. The period of five months was chosen to ensure as best possible that at least the first revision is captured in all cases. Figure 3 compares the RMAR across countries for both QoQ and YoY growth rates. The data can also be interpreted as a measure of robustness for the first published data, as it shows the proportion of the first published growth rate that on average is revised in the subsequent release. If this is high, it implies that users should be wary about basing decisions on the first published data. Furthermore, where the RMAR is high for the QoQ growth rate but relatively lower<sup>4</sup> for the YoY growth rate, this may imply that the YoY growth rate is more suitable for short-term analysis.

**Figure 3: Relative mean absolute revision five months after first published estimates for GDP QoQ and YoY growth rates**



<sup>4</sup> Assuming an upward trend over time for GDP, one would expect the absolute size of YoY growth rates to be larger than that for QoQ growth rates, thus influencing the comparison of RMAR due to the larger denominator for YoY. Across all countries the average absolute value of first published estimates of QoQ growth rates was 0.7% for whereas for YoY the value is 2.4%.

The graph shows that the revision to first published QoQ growth rates relative to the size of its subsequent release is high for Switzerland, Denmark, Japan, the Netherlands and Norway. In the case of the Netherlands and in particular Norway the first published YoY growth rate seems relatively more robust in this respect.

### 3.3 Mean revision and assessment of statistical significance

Ideally, revisions should have a tendency to be random; that is, equally likely to be positive or negative and centred around zero. Therefore an important output of a revisions analysis study are the tests to determine whether mean revisions (calculated at a range of different time lengths from the first estimate) are statistically significantly different from zero. In the case where mean revisions are statistically significant, this implies that data have a significant tendency to be revised in a particular direction (i.e. up or down). This may prompt sophisticated users to consider that revisions are ‘predictable’ and possibly use this information within their models for forecasting the true value of GDP from first published data ((e.g. see Faust et al (2005)).

In the case of GDP, revisions made in the short term (e.g. within one year of the first published estimates) should be random and not exhibit any bias. However, in the longer term, it may be unreasonable to expect that ongoing revisions have a random impact, particularly those due to improvements in compilation methods or definitional changes (e.g. implementing various aspects of SNA 93). If this is the case, it is important that users understand this, rather than assuming the existence of a bias.

Table 1 below shows the mean revision to QoQ and YoY growth rates for some different intervals and an assessment of whether this is statistically significantly different from zero at the 10% (\*), 5% (\*\*) or 1% (\*\*\*) level. The intervals presented are: revision between first published data and that published one year later (Y1\_P); revision between first published data and latest published data at June 2007, provided these are at least three years after the first published data (L\_P); revision between data published one year after first published data and L (L\_Y1).

**Table 1: Mean revision and assessment of statistical significance at different revision intervals for GDP QoQ and YoY growth rates**

Country	Y1_P		L_P		L_Y1	
	QoQ	YoY	QoQ	YoY	QoQ	YoY
AUS	-0.004	0.13	0.07	0.24	0.10 **	0.17
BEL	0.05	0.07	0.07	0.07	0.02	0.02
CAN	-0.01	0.09	0.12 **	0.47 **	0.13 **	0.40 **
CHE	-0.002	0.07	0.07	0.39 **	0.10	0.36 **
DEU	-0.02	-0.03	0.01	-0.03	0.02	0.01
DNK	0.13 **	0.19 *	0.21 **	0.16	0.06	-0.11
ESP	0.01	0.12 **	0.16 **	0.70 ***	0.16 **	0.61 ***
FIN	0.16 **	0.50 **	0.15	0.53 **	0.03	0.19
FRA	0.01	0.13 *	0.05	0.23 *	0.02	0.01
GBR	0.04	0.09	0.17 ***	0.59 ***	0.11 **	0.45 **
ITA	0.001	0.001	0.07	0.17	0.07 *	0.16
JPN	-0.04	-0.13	0.06	0.19	0.08	0.23
KOR	-0.01	0.08 *	0.13	0.35	0.13	0.18
NLD	0.05	0.25 **	0.14 *	0.64 **	0.13	0.55 *
NOR	0.01	0.24 **	0.15	0.74 ***	0.13 *	0.47 **
NZL	0.03	0.13	0.27 **	0.91 ***	0.20	0.73 **
PRT	-0.04	0.06	0.14	0.65 ***	0.23 *	0.64 ***
USA	0.05	-0.002	-0.01	-0.02	-0.04	-0.03
<b>Average</b>	<b>0.02</b>	<b>0.11</b>	<b>0.11</b>	<b>0.39</b>	<b>0.09</b>	<b>0.28</b>

The main findings from this table could be summarized as:

- Revisions to first published estimates of QoQ growth rates within one year (Y1\_P) appear to be random for almost all countries (the exceptions being Denmark and Finland). The mean revision across all countries is very close to zero (0.02) with seven countries having a negative mean revision and eleven positive. For YoY growth rates there seems to be a greater tendency for revisions to be positive, which is the case in fifteen of the eighteen countries and this is statistically significant for seven countries.
- There is a clear tendency that revisions to first published estimates of QoQ and YoY will be revised upwards in the longer term (i.e. where the longer term (L\_P) is assessed as the latest estimate at June 2007 at least 3 years after the first published estimate). Almost all countries have a positive mean revision for L\_P, and this is statistically significant for one third of countries for QoQ growth rates and 55% of countries for YoY growth rates.
- Given that revisions in the shorter term (i.e. within one year as shown by Y1\_P) seem to be centred around zero for most countries (at least for QoQ growth rates), it is clear that the occurrence of positive mean revisions in L\_P for most countries is caused by ongoing positive revisions at later intervals, as shown by the significant tendency for revisions assessed between data published one year after the first published estimates and latest data at June 2007 (L\_P) to be positive.

The statistically significant mean revision within one year for first published QoQ growth rates observed for Denmark and Finland could be an area of concern for these countries. In addition, the occurrence of statistically significant mean revisions within one year for first published YoY growth rates for a large number of countries is perhaps a surprising result for which further investigation by the countries concerned could be warranted.

In regards to the significant tendency for revisions to GDP growth rates in the longer term to be positive, communication of this anomaly with users is warranted. Where these effects arise from revisions due to changes in compilation methodology<sup>5</sup>, it should be made clear to users that this does not imply a bias in early estimates. Rather these revisions reflect the evolving state of the art for measuring the economy in the future, rather than that which applies at the point in time related to first published data and which analysts and policy makers should be using as input to their decision making processes.

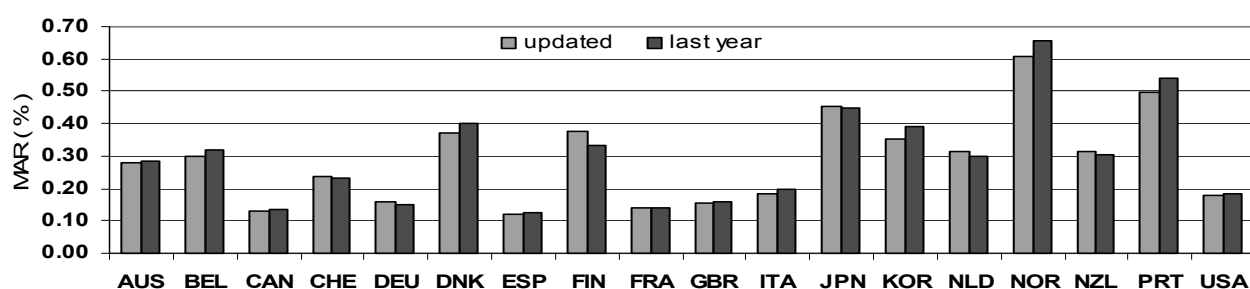
### **3.4 Comparison with results presented at the 2006 meeting**

Figure 4 compares the results presented last year to the WPNA to results of this year, which includes an extra years worth of data. As expected there are only slight changes given that the averages for most countries are now taken over a ten year period. However, a noticeable increase of the MAR for the updated study occurs for Finland (up 0.05%) due to large revisions in first published data for Q1 and Q2 of 2005. Conversely, the MAR has fallen for Norway (0.05%), Korea (0.04%) and Portugal (0.04%) due to relatively lower revisions to first published data for all quarters of 2005.

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<sup>5</sup> For example, backcasting of data due to the implementation of: capitalisation of software as prescribed in SNA 93; hedonic price indexes as ICT deflators and; better estimation of volumes in the services sector rather than relying on input methods which previously assumed zero productivity growth would all be likely to lead to upward revisions to historical growth rate series in GDP.

**Figure 4: Mean absolute revision (%) after one year for first published estimates of GDP QoQ growth rates: comparison of results with those presented last year**



#### 4. Comments provided by countries on reasons for revisions (in response to 2006 paper)

- Australia

The results are similar to those calculated internally by the ABS. There appear to be slight differences in the results below the 1 and 2 decimal point level, but this could be the result of rounding differences, slight data variations that were observed or some other reason.

In terms of reasons for the revisions there are a range of possibilities including updated source data, seasonal reanalysis and the application of improved concepts and methods. Work is currently underway within the Australian National Accounts program to decompose the GDP revisions by component of GDP to isolate the key drivers.

The paper focuses almost exclusively on the mean absolute revision. While this gives a useful indicator of the size and dispersion of the revisions it does not give an indication of whether the revisions tend in a particular direction. This may be of most interest to compilers and forecasters.

One thing not clear from any of the previous papers or from the revisions database itself, is what the respective countries 'GDP' measure actually represents. For Australia the measure used is an average of the Expenditure, Income and Production/Output approaches to measuring GDP. Other countries' headline measures are likely to be different. Our internal research suggests that the different measures are subject to different amounts of revision and hence international comparability through comparing headline GDP may not be as comparable as one might think.

- Belgium

1. Our own analysis of the revisions in the published Belgian quarterly national accounts produces quite similar results, but nevertheless smaller:

- figure 1: revision between 3 years later estimates and the first published estimates of q-o-q GDP growth rates (mean absolute revision on the period 1997.2-2002.4): 0.469%;
- figure 2: successive revisions to the first published estimates of q-o-q GDP growth rates (mean absolute revision on the period 1997.2-2002.4): 0.332% for year t+1, 0.389% for year t+2 and 0.469% for year t+3;
- figure 3: revisions to successive estimates of q-o-q GDP growth rates (mean absolute revision on the period 1997.2-2002.4): 0.332% for year t+1, 0.244% for year t+2 and 0.174% for year t+3.

2. The results of the analysis are perturbed by two major methodological changes introduced during the observed period:
- the introduction in 1999 of the ESA 1995 methodology in the quarterly and yearly national accounts, which concerns all the European countries;
  - the introduction in 2001 of a correction of the calendar effects in the Belgian quarterly accounts; before 2001, the Belgian accounts were only corrected for the seasonal patterns.

This second methodological change, which represents a major step forward in the quality of the Belgian quarterly results, is a determining factor in the analysis of the revisions in Belgian GDP because it introduced a break in the series.

From 2001, the statistics of the revisions are much smaller:

figure 1: 0.275% (against 0.469%);

figure 2: 0.105% (against 0.332%), 0.253% (against 0.389%) and 0.275% (against 0.469%).

- Canada
- Denmark
- Finland
- France
- Germany
- Italy
- Japan

The following points should be considered in revisions analyses on Japan's quarterly national accounts.

1. It should be taken into account in comparative analyses that differences of the frequency, timing, and impact of benchmark revisions among countries must, in general, affect the magnitude of revisions.
2. During the analyzed period, we have held some benchmark revisions in every five years\* (2000Q3, 2005Q3), transition to the 1993 SNA (2000Q3), introduction of the new estimation method (2002Q2), and introduction of the chain-linking method (2004Q3)) -in Japan's national accounts. These factors could account for relatively large revisions.

\* In Japan, benchmark Input-Output Tables are revised every five years, and benchmark revisions of national accounts are conducted incorporating renewed I-O Tables. This could be a factor which makes the impact of benchmark revisions more significant.

3. Especially, we should note the influence of the methodological changes in compiling quarterly national accounts from 2002Q2 forward. In contrast to annual estimation based on supply-side statistics, quarterly national accounts had conventionally been compiled using only demand-side data, and this was thought to be a factor in large revisions in annual estimation. Under the new method, efforts are made to reduce the size of revisions in annual estimation by using more supply-side statistics, and by enhancing

methodological consistency between quarterly and annual estimation. Therefore, the following two points could be argued:

- In this paper, the analysis is given over the periods before and after the introduction of the new method. Therefore, it should be taken into account that the size of revisions is affected by the methodological changes.
  - On the other hand, the size of revisions is expected to be smaller during the period after the introduction of the new method. The values of the mean absolute revision in the period from 2002Q2 up to the last quarters for which data are available are as follows: 0.41 (Y1\_P), 0.37 (Y2\_P), and 0.33 (Y3\_P), which are smaller than the corrected results in the paper (0.57, 0.64, and 0.79, respectively).
4. We incorporate as much information available from source data as possible in quarterly national accounts. In light of transparency, we compile quarterly accounts by the previously published method without any artificial judgments. So, revisions to source data lead straight to GDP revisions.

- Korea

This paper mainly compares the size of revisions across OECD countries using mean absolute revision. We suggest that the relative mean absolute revision is also a good indicator for international comparison. Korea belongs to the high growth rate countries (the mean absolute estimates of Y3 is 1.8% from 1999 Q3 to 2002 Q4). This may be one of reasons that make the magnitude of mean absolute revision large. From our study, we found that the size of relative mean absolute revision (Y3\_P) of our country is moderate compared to other OECD countries.

- Netherlands

Revision analysis should distinguish between conceptual or methodological revisions and revisions due to the normal cycle of calculation of quarterly national accounts.

- New Zealand
- Norway
- Portugal
- Spain
- Switzerland
- United Kingdom
- USA

## 5. Revisions analysis of GDP for OECD countries

Summary statistics describing the revisions to first published estimates of QoQ growth rates for the longest period possible under analysis for each country are presented in Tables 2-6 below for the intervals of revision after five months (M5\_P), one year (Y1\_P), two years (Y2\_P), three years (Y3\_P) and in comparison to latest published data at June 2007, provided these are at least three years after the first published data (L\_P). For more detail on the exact interpretation of the summary statistics presented in each row of the table, please refer to Di Fonzo (2005a).

**Table 2: Revisions after five months to first published estimates of QoQ growth rates**

QoQ-M5_P																		
Summary statistics	AUS	BEL	CAN	CHE	DEU	DNK	ESP	FIN	FRA	GBR	ITA	JPN	KOR	NLD	NOR	NZL	PRT	USA
sample	94Q4-06Q2	96Q3-06Q3	94Q4-06Q3	94Q4-06Q3	95Q2-06Q3	94Q4-06Q3	94Q4-06Q3	94Q4-06Q2	94Q4-06Q3	94Q4-06Q3	94Q4-06Q3	94Q4-06Q3	99Q4-06Q3	94Q4-06Q1	94Q4-06Q2	94Q4-06Q2	96Q1-06Q2	95Q1-06Q3
n	47	41	48	48	46	48	48	47	48	48	48	48	28	46	47	47	42	47
mean absolute revision	0.18	0.13	0.08	0.14	0.10	0.35	0.09	0.25	0.12	0.12	0.09	0.30	0.11	0.21	0.38	0.19	0.17	0.14
mean revision (Rbar)	0.03	0.03	0.01	-0.01	0.02	0.21	-0.01	0.09	0.00	0.04	0.05	-0.02	-0.01	-0.07	-0.03	0.06	0.09	0.04
st. dev(Rbar) - HAC formula	0.03	0.03	0.01	0.03	0.02	0.06	0.02	0.06	0.02	0.02	0.02	0.05	0.04	0.04	0.07	0.04	0.04	0.02
mean squared revision	0.05	0.04	0.01	0.04	0.02	0.19	0.02	0.16	0.02	0.02	0.03	0.17	0.05	0.11	0.29	0.06	0.07	0.03
relative mean absolute revision	0.21	0.21	0.11	0.34	0.20	0.46	0.13	0.22	0.22	0.20	0.20	0.36	0.09	0.37	0.47	0.23	0.19	0.17
t-stat	0.99	0.97	0.73	-0.37	1.06	3.61	-0.56	1.59	-0.24	2.01	2.10	-0.46	-0.34	-1.80	-0.38	1.48	2.48	1.74
t-crit 1%	3.51	3.55	3.51	3.51	3.52	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.69	3.52	3.51	3.51	3.54	3.51
t-crit 5%	2.01	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.05	2.01	2.01	2.01	2.02	2.01
t-crit 10%	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.70	1.68	1.68	1.68	1.68	1.68
1% significant?	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5% significant?	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES	NO
10% significant?	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES	NO	NO	YES	NO	NO	YES	YES
Correlation	0.90	0.93	0.97	0.87	0.95	0.85	0.79	0.94	0.93	0.84	0.95	0.92	0.97	0.84	0.82	0.95	0.97	0.94
Min Revision	-0.49	-0.60	-0.30	-0.53	-0.29	-0.72	-0.34	-1.02	-0.30	-0.30	-0.17	-1.19	-0.97	-1.20	-1.60	-0.65	-0.64	-0.25
Max Revision	0.48	0.88	0.24	0.62	0.49	1.11	0.65	1.66	0.32	0.30	1.01	0.95	0.50	0.43	1.24	0.58	0.91	0.35
Range	0.97	1.48	0.54	1.15	0.78	1.83	0.99	2.67	0.62	0.61	1.17	2.14	1.47	1.63	2.84	1.23	1.55	0.60
% Later > Earlier	51.06	56.10	54.17	45.83	47.83	75.00	45.83	53.19	43.75	60.42	50.00	54.17	46.43	45.65	51.06	57.45	61.90	57.45
% Sign(Later) = Sign(Earlier)	100	98	98	90	98	85	100	96	96	98	92	88	100	87	83	91	98	100
Variance of Later estimate	0.26	0.28	0.16	0.14	0.22	0.52	0.06	1.35	0.15	0.06	0.26	1.00	0.72	0.28	0.80	0.59	1.03	0.21
Variance of Earlier estimate	0.22	0.30	0.17	0.10	0.20	0.46	0.06	1.19	0.14	0.06	0.27	1.12	0.85	0.35	0.84	0.57	1.01	0.18
UM %	1.88	2.40	0.79	0.40	2.54	23.62	0.64	5.32	0.12	7.05	7.31	0.29	0.41	4.49	0.22	5.07	11.05	5.56
UR %	0.42	5.70	6.16	0.52	0.00	1.72	8.58	0.02	0.24	7.30	4.41	11.51	18.97	18.83	10.78	1.10	0.67	0.51
UD %	97.70	91.90	93.05	99.08	97.45	74.66	90.78	94.67	99.64	85.65	88.28	88.20	80.61	76.88	89.00	93.84	88.28	93.94
total non-zero revisions	47	38	46	46	42	48	44	41	48	48	45	48	24	44	45	45	35	47

**Table 3: Revisions after one year to first published estimates of QoQ growth rates**

QoQ-Y1\_P

<i>Summary statistics</i>	AUS	BEL	CAN	CHE	DEU	DNK	ESP	FIN	FRA	GBR	ITA	JPN	KOR	NLD	NOR	NZL	PRT	USA
sample	94Q4-05Q4	96Q3-06Q1	94Q4-05Q4	94Q4-05Q4	95Q2-05Q4	94Q4-05Q4	94Q4-05Q4	94Q4-05Q4	94Q4-05Q4	94Q4-05Q4	94Q4-05Q4	94Q4-05Q4	99Q4-06Q1	94Q4-05Q4	94Q4-05Q4	94Q4-05Q4	96Q1-05Q4	95Q1-06Q1
n	45	39	45	45	43	45	45	45	45	45	45	45	26	45	45	45	40	45
mean absolute revision	0.28	0.30	0.13	0.24	0.16	0.37	0.12	0.38	0.14	0.16	0.18	0.46	0.35	0.31	0.61	0.31	0.50	0.18
mean revision (Rbar)	0.00	0.05	-0.01	0.00	-0.02	0.13	0.01	0.16	0.01	0.04	0.00	-0.04	-0.01	0.05	0.01	0.03	-0.04	0.05
st. dev(Rbar) - HAC formula	0.04	0.05	0.03	0.06	0.03	0.06	0.02	0.07	0.03	0.03	0.03	0.07	0.08	0.06	0.10	0.06	0.11	0.03
mean squared revision	0.14	0.24	0.04	0.09	0.04	0.27	0.03	0.27	0.04	0.04	0.10	0.34	0.21	0.21	0.64	0.14	0.58	0.05
relative mean absolute revision	0.33	0.47	0.18	0.52	0.39	0.51	0.16	0.37	0.25	0.26	0.41	0.50	0.27	0.50	0.61	0.36	0.61	0.21
t-stat	-0.10	0.96	-0.22	-0.04	-0.63	2.11	0.65	2.36	0.50	1.43	0.10	-0.53	-0.10	0.79	0.08	0.43	-0.40	1.61
t-crit 1%	3.53	3.57	3.53	3.53	3.54	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.73	3.53	3.53	3.53	3.56	3.53
t-crit 5%	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.06	2.02	2.02	2.02	2.02	2.02
t-crit 10%	1.68	1.69	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.71	1.68	1.68	1.68	1.68	1.68
1% significant?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5% significant?	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
10% significant?	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Correlation	0.72	0.62	0.90	0.76	0.89	0.73	0.75	0.89	0.90	0.70	0.80	0.86	0.88	0.65	0.71	0.89	0.71	0.88
Min Revision	-1.19	-2.11	-0.72	-0.98	-0.56	-1.13	-0.34	-0.96	-0.53	-0.54	-1.35	-1.37	-0.98	-1.32	-2.07	-0.64	-2.52	-0.54
Max Revision	1.00	0.94	0.43	0.60	0.35	1.46	0.76	1.63	0.63	0.51	1.22	1.22	0.91	1.63	1.81	0.85	1.54	0.62
Range	2.19	3.04	1.15	1.58	0.91	2.59	1.09	2.59	1.16	1.05	2.56	2.60	1.89	2.95	3.88	1.49	4.07	1.17
% Later > Earlier	62.22	66.67	60.00	48.89	46.51	55.56	53.33	60.00	48.89	62.22	48.89	55.56	50.00	57.78	55.56	48.89	55.00	68.89
% Sign(Later) = Sign(Earlier)	98	92	98	82	93	76	100	84	93	98	82	89	100	89	82	84	85	100
Variance of Later estimate	0.28	0.31	0.18	0.22	0.20	0.49	0.06	0.91	0.19	0.06	0.23	1.18	0.88	0.21	1.29	0.67	0.92	0.22
Variance of Earlier estimate	0.22	0.31	0.17	0.09	0.21	0.44	0.06	1.21	0.13	0.07	0.29	1.20	0.91	0.36	0.87	0.60	1.05	0.18
UM %	0.01	1.10	0.09	0.01	0.59	6.80	0.70	9.09	0.58	4.31	0.01	0.44	0.03	1.11	0.01	0.48	0.34	3.85
UR %	6.03	19.06	4.21	3.17	8.11	7.76	7.71	23.12	3.27	18.26	21.84	7.65	7.47	41.64	2.41	1.09	20.73	0.24
UD %	93.95	79.84	95.70	96.82	91.29	85.45	91.59	67.79	96.15	77.43	78.15	91.91	92.50	57.25	97.58	98.43	78.93	95.91
total non-zero revisions	45	38	45	45	43	45	45	45	45	45	45	45	26	45	45	45	38	45

**Table 4: Revisions after two years to first published estimates of QoQ growth rates**

**QoQ-Y2\_P**

<i>Summary statistics</i>	AUS	BEL	CAN	CHE	DEU	DNK	ESP	FIN	FRA	GBR	ITA	JPN	KOR	NLD	NOR	NZL	PRT	USA
sample	94Q4-04Q4	96Q3-05Q1	94Q4-04Q4	94Q4-04Q4	95Q2-04Q4	94Q4-04Q4	94Q4-04Q4	94Q4-04Q4	94Q4-04Q4	94Q4-04Q4	94Q4-04Q4	94Q4-04Q4	99Q4-04Q4	94Q4-04Q4	94Q4-04Q4	94Q4-04Q4	96Q1-04Q4	95Q1-05Q1
n	41	35	41	41	39	41	41	41	41	41	41	41	21	41	41	41	36	41
mean absolute revision	0.32	0.43	0.20	0.25	0.26	0.48	0.19	0.51	0.20	0.17	0.24	0.50	0.49	0.35	0.53	0.40	0.79	0.26
mean revision (Rbar)	0.05	0.03	0.05	0.01	-0.02	0.19	0.05	0.14	0.04	0.04	0.03	0.01	0.08	0.04	0.06	0.07	0.04	-0.02
st. dev(Rbar) - HAC formula	0.05	0.08	0.03	0.06	0.04	0.08	0.04	0.07	0.04	0.03	0.04	0.08	0.11	0.06	0.08	0.08	0.14	0.05
mean squared revision	0.17	0.33	0.06	0.09	0.10	0.45	0.06	0.39	0.07	0.05	0.15	0.41	0.44	0.25	0.41	0.28	1.32	0.11
relative mean absolute revision	0.35	0.64	0.26	0.62	0.62	0.65	0.24	0.47	0.34	0.28	0.49	0.58	0.35	0.56	0.51	0.44	0.90	0.33
t-stat	0.97	0.39	1.51	0.16	-0.57	2.49	1.38	2.05	1.10	1.50	0.68	0.16	0.77	0.66	0.68	0.88	0.30	-0.50
t-crit 1%	3.55	3.60	3.55	3.55	3.57	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.85	3.55	3.55	3.55	3.59	3.55
t-crit 5%	2.02	2.03	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.09	2.02	2.02	2.02	2.03	2.02
t-crit 10%	1.68	1.69	1.68	1.68	1.69	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.72	1.68	1.68	1.68	1.69	1.68
1% significant?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5% significant?	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
10% significant?	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Correlation	0.68	0.56	0.87	0.70	0.77	0.59	0.66	0.82	0.82	0.70	0.73	0.82	0.81	0.60	0.83	0.80	0.39	0.77
Min Revision	-0.71	-1.62	-0.46	-0.76	-0.60	-1.53	-0.34	-0.97	-0.49	-0.55	-1.54	-1.98	-1.36	-1.17	-1.43	-1.13	-3.35	-0.74
Max Revision	1.18	1.35	0.51	0.55	0.53	2.15	0.67	1.44	0.67	0.43	1.30	1.31	1.50	1.55	1.02	1.73	2.65	0.63
Range	1.89	2.97	0.96	1.32	1.12	3.68	1.01	2.41	1.16	0.98	2.83	3.29	2.86	2.72	2.45	2.87	6.00	1.37
% Later > Earlier	51.22	54.29	58.54	48.78	53.85	60.98	60.98	56.10	56.10	56.10	53.66	53.66	66.67	56.10	56.10	46.34	47.22	48.78
% Sign(Later) = Sign(Earlier)	100	80	98	78	79	76	100	78	95	98	95	80	95	88	78	90	69	95
Variance of Later estimate	0.28	0.41	0.23	0.18	0.23	0.57	0.09	0.87	0.20	0.07	0.27	1.07	1.22	0.23	1.34	0.71	1.05	0.26
Variance of Earlier estimate	0.23	0.34	0.19	0.08	0.21	0.41	0.06	1.16	0.14	0.07	0.30	1.26	1.05	0.36	0.94	0.62	1.10	0.19
UM %	1.72	0.28	4.68	0.10	0.61	7.99	4.99	5.10	2.39	4.33	0.51	0.04	1.52	0.62	0.78	1.80	0.14	0.57
UR %	7.97	14.99	0.50	0.20	7.22	9.14	3.73	24.23	0.00	15.30	17.98	17.48	3.86	40.97	0.01	4.88	32.36	1.48
UD %	90.31	84.73	94.82	99.70	92.17	82.87	91.28	70.66	97.61	80.37	81.50	82.48	94.62	58.41	99.21	93.32	67.50	97.95
total non-zero revisions	41	35	41	41	39	41	41	41	41	41	41	41	21	41	41	41	36	41

**Table 5: Revisions after three years to first published estimates of QoQ growth rates**

**QoQ-Y3\_P**

<i>Summary statistics</i>	AUS	BEL	CAN	CHE	DEU	DNK	ESP	FIN	FRA	GBR	ITA	JPN	KOR	NLD	NOR	NZL	PRT	USA
sample	94Q4-03Q4	96Q3-04Q1	94Q4-03Q4	94Q4-03Q4	95Q2-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	99Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	96Q1-03Q4	95Q1-04Q1
n	37	31	37	37	35	37	37	37	37	37	37	37	17	37	37	37	32	37
mean absolute revision	0.38	0.45	0.23	0.26	0.34	0.60	0.26	0.48	0.27	0.18	0.24	0.65	0.62	0.42	0.82	0.59	0.69	0.29
mean revision (Rbar)	0.09	0.07	0.09	0.05	-0.05	0.26	0.10	0.16	0.07	0.12	0.09	0.20	0.20	0.08	0.13	0.21	0.04	-0.02
st. dev(Rbar) - HAC formula	0.06	0.09	0.05	0.06	0.06	0.10	0.06	0.07	0.05	0.03	0.05	0.11	0.14	0.09	0.11	0.10	0.14	0.06
mean squared revision	0.23	0.35	0.08	0.11	0.15	0.59	0.13	0.37	0.11	0.05	0.14	0.78	0.68	0.38	0.96	0.59	0.83	0.12
relative mean absolute revision	0.38	0.63	0.28	0.57	0.65	0.77	0.32	0.44	0.43	0.27	0.47	0.71	0.39	0.64	0.86	0.58	0.94	0.37
t-stat	1.52	0.77	2.03	0.77	-0.82	2.73	1.59	2.14	1.58	3.68	1.99	1.78	1.41	0.89	1.21	2.22	0.27	-0.35
t-crit 1%	3.58	3.65	3.58	3.58	3.60	3.58	3.58	3.58	3.58	3.58	3.58	3.58	4.01	3.58	3.58	3.58	3.63	3.58
t-crit 5%	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.12	2.03	2.03	2.03	2.04	2.03
t-crit 10%	1.69	1.70	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.75	1.69	1.69	1.69	1.70	1.69
1% significant?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
5% significant?	NO	NO	YES	NO	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	NO	NO
10% significant?	NO	NO	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES	NO	NO	NO	YES	NO	NO
Correlation	0.67	0.58	0.85	0.69	0.75	0.52	0.52	0.85	0.76	0.74	0.77	0.70	0.76	0.40	0.54	0.66	0.53	0.76
Min Revision	-0.89	-1.47	-0.53	-0.74	-0.68	-1.67	-0.48	-1.00	-0.58	-0.25	-1.33	-2.93	-1.37	-1.69	-1.70	-1.65	-2.28	-0.69
Max Revision	1.30	1.12	0.69	0.82	0.74	2.23	1.07	1.41	0.66	0.64	1.30	1.83	1.82	1.80	2.10	2.15	2.34	0.90
Range	2.19	2.59	1.21	1.56	1.42	3.91	1.55	2.41	1.24	0.89	2.63	4.76	3.19	3.49	3.80	3.81	4.62	1.59
% Later > Earlier	54.05	54.84	67.57	59.46	40.00	62.16	48.65	54.05	59.46	72.97	62.16	56.76	64.71	64.86	59.46	64.86	56.25	45.95
% Sign(Later) = Sign(Earlier)	95	84	97	78	83	68	100	81	92	97	89	73	94	78	70	84	66	95
Variance of Later estimate	0.39	0.44	0.26	0.21	0.34	0.61	0.16	0.98	0.24	0.07	0.27	1.06	1.37	0.23	1.11	0.91	0.55	0.28
Variance of Earlier estimate	0.22	0.37	0.20	0.09	0.22	0.45	0.06	1.28	0.14	0.07	0.32	1.34	1.24	0.38	0.94	0.64	1.12	0.21
UM %	3.33	1.28	10.86	2.21	1.48	11.52	7.94	6.53	4.85	26.62	5.71	4.92	5.62	1.77	1.69	7.61	0.16	0.32
UR %	0.92	14.21	0.41	0.34	0.79	12.12	1.83	22.29	0.01	11.48	18.10	25.14	7.73	47.80	16.66	4.69	52.20	2.29
UD %	95.75	84.51	88.73	97.45	97.74	76.35	90.23	71.18	95.13	61.90	76.19	69.94	86.65	50.43	81.64	87.70	47.63	97.39
total non-zero revisions	37	31	37	37	35	37	37	37	37	37	37	37	17	37	37	37	32	37

**Table 6: Revisions between latest data (June 2007) and first published estimates of QoQ growth rates**

QoQ-L\_P

<i>Summary statistics</i>	AUS	BEL	CAN	CHE	DEU	DNK	ESP	FIN	FRA	GBR	ITA	JPN	KOR	NLD	NOR	NZL	PRT	USA
sample	94Q4-03Q4	96Q3-04Q1	94Q4-03Q4	94Q4-03Q4	95Q2-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	99Q4-03Q4	94Q4-03Q4	94Q4-03Q4	94Q4-03Q4	96Q1-03Q4	95Q1-04Q1
n	37	31	37	37	35	37	37	37	37	37	37	37	17	37	37	37	32	37
mean absolute revision	0.37	0.54	0.27	0.46	0.31	0.57	0.37	0.73	0.27	0.26	0.34	0.76	0.78	0.55	0.75	0.65	0.69	0.34
mean revision (Rbar)	0.07	0.07	0.12	0.07	0.01	0.21	0.16	0.15	0.05	0.17	0.07	0.06	0.13	0.14	0.15	0.27	0.14	-0.01
st. dev(Rbar) - HAC formula	0.05	0.09	0.05	0.09	0.06	0.09	0.05	0.10	0.04	0.05	0.06	0.12	0.20	0.11	0.11	0.11	0.13	0.06
mean squared revision	0.24	0.45	0.11	0.34	0.14	0.60	0.20	0.83	0.10	0.10	0.24	1.03	1.08	0.52	0.89	0.70	0.89	0.17
relative mean absolute revision	0.37	0.81	0.33	0.77	0.57	0.78	0.41	0.72	0.47	0.37	0.64	1.14	0.51	0.73	0.68	0.64	0.84	0.42
t-stat	1.27	0.72	2.33	0.73	0.21	2.30	2.96	1.48	1.13	3.71	1.22	0.49	0.63	1.34	1.32	2.42	1.06	-0.13
t-crit 1%	3.58	3.65	3.58	3.58	3.60	3.58	3.58	3.58	3.58	3.58	3.58	3.58	4.01	3.58	3.58	3.58	3.63	3.58
t-crit 5%	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.12	2.03	2.03	2.03	2.04	2.03
t-crit 10%	1.69	1.70	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.75	1.69	1.69	1.69	1.70	1.69
1% significant?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
5% significant?	NO	NO	YES	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	NO	YES	NO	NO
10% significant?	NO	NO	YES	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	NO	NO	YES	NO	NO
Correlation	0.63	0.32	0.81	0.48	0.77	0.47	0.53	0.61	0.70	0.49	0.58	0.51	0.63	0.27	0.63	0.56	0.51	0.65
Min Revision	-1.07	-1.83	-0.55	-1.34	-0.78	-1.78	-0.55	-2.15	-0.62	-0.38	-1.33	-2.79	-1.73	-0.98	-1.23	-1.63	-1.80	-1.07
Max Revision	1.39	1.16	0.75	1.04	0.64	1.78	0.89	1.81	0.58	0.67	1.47	2.11	1.93	1.89	2.98	1.88	3.13	0.98
Range	2.46	2.99	1.30	2.38	1.41	3.56	1.44	3.96	1.20	1.05	2.80	4.90	3.66	2.87	4.21	3.51	4.93	2.05
% Later > Earlier	51.35	61.29	64.86	59.46	54.29	59.46	56.76	59.46	56.76	70.27	43.24	56.76	64.71	51.35	56.76	59.46	56.25	56.76
% Sign(Later) = Sign(Earlier)	97	68	97	73	77	73	97	76	86	97	84	76	94	78	78	84	78	95
Variance of Later estimate	0.38	0.27	0.27	0.43	0.35	0.60	0.24	0.47	0.17	0.07	0.25	0.60	1.56	0.30	1.35	0.76	0.58	0.28
Variance of Earlier estimate	0.22	0.37	0.20	0.09	0.22	0.45	0.06	1.28	0.14	0.07	0.32	1.34	1.24	0.38	0.94	0.64	1.12	0.21
UM %	1.99	0.99	12.72	1.26	0.11	7.16	12.82	2.56	2.51	28.25	2.25	0.35	1.47	4.06	2.42	10.64	2.28	0.04
UR %	2.55	43.68	0.77	0.11	0.04	15.35	0.00	61.64	7.32	21.44	30.29	56.69	10.25	41.89	6.39	14.17	49.43	6.74
UD %	95.45	55.32	86.51	98.63	99.85	77.49	87.17	35.80	90.17	50.31	67.47	42.95	88.28	54.05	91.19	75.19	48.29	93.22
total non-zero revisions	37	31	37	37	35	37	37	37	37	37	37	37	17	37	37	37	32	37

## Annex: Organization of the database

Each country has three files: the basic revision spreadsheet, called country\_triangle\_GDP and two revisions analysis spreadsheets where statistics are calculated, called country\_QoQ\_revisions\_analysis\_GDP and country\_YoY\_revisions\_analysis\_GDP.

Using the Australian triangle dataset as an example, the database of GDP in levels (Table A1) is used to obtain the QoQ rates of change (Table A2), based on which one obtains the revisions to QoQ rates of change triangle (Table A3). The top section of Table A3 is then transferred to a new spreadsheet (see Table A7) and used as a basis for the revisions analysis worksheets in which the summary statistics are calculated, as shown in Table A8. The same process as shown for QoQ rates of change is replicated for YoY rates of change.

**Table A1: An excerpt from the QNA-MEI revisions database: level estimates<sup>6</sup>**

### OECD MEI revisions dataset

#### Australia- GDP\_sa

#### Levels

Relating to period	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4
First estimate	412.9	414.3	417.3	417.8	423.1	426.1	433.3	437.2	441.9	446.9	450.7	452.2	455.7	464.2	473.3	476.8	571.6	578.0
5 months later	412.0	413.5	414.6	417.1	424.1	428.6	436.1	436.7	443.3	446.8	446.8	457.0	462.2	465.3	472.4	565.7	572.0	588.7
1 year later	412.4	416.2	416.7	418.2	425.2	431.1	437.7	438.8	443.1	450.2	450.1	457.7	544.6	552.3	560.3	575.0	580.2	589.5
2 years later	412.3	418.6	419.0	420.9	430.2	434.8	440.0	441.2	524.9	526.5	532.0	549.8	555.2	562.8	569.9	574.9	584.4	593.4
3 years later	415.1	422.0	421.9	425.0	433.6	510.9	519.8	526.0	534.6	536.0	540.6	549.6	554.5	561.6	569.4	575.4	592.1	602.4
Latest estimate	154.2	154.7	155.8	157.4	159.6	160.7	163.3	164.0	165.8	167.6	167.6	172.0	172.7	174.8	177.3	178.6	181.4	184.8
May-05	139.2	139.5	140.3	141.9	144.2	145.2	147.4	148.1	149.7	150.9	151.6	154.9	155.4	157.4	159.9	161.4	163.9	166.8
Jun-05	<b>139.2</b>	<b>139.5</b>	<b>140.3</b>	<b>141.9</b>	<b>144.1</b>	<b>145.2</b>	<b>147.4</b>	<b>148.1</b>	<b>149.7</b>	<b>150.9</b>	<b>151.6</b>	<b>154.9</b>	<b>155.4</b>	<b>157.4</b>	<b>159.9</b>	<b>161.4</b>	<b>163.9</b>	<b>166.8</b>
Jul-05	139.2	139.5	140.3	141.9	144.1	145.2	147.4	148.1	149.7	150.9	151.6	154.9	155.4	157.4	159.9	161.4	163.9	166.8
Aug-05	139.2	139.5	140.3	141.9	144.1	145.2	147.4	148.1	149.7	150.9	151.6	154.9	155.4	157.4	159.9	161.4	163.9	166.8
Sep-05	139.2	139.5	140.3	141.9	144.1	145.2	147.4	148.1	149.7	150.9	151.6	154.9	155.4	157.4	159.9	161.4	163.9	166.8
Oct-05	<b>143.3</b>	<b>143.7</b>	<b>144.5</b>	<b>146.0</b>	<b>148.2</b>	<b>149.4</b>	<b>151.5</b>	<b>152.2</b>	<b>153.8</b>	<b>155.2</b>	<b>155.8</b>	<b>159.3</b>	<b>159.7</b>	<b>161.9</b>	<b>164.7</b>	<b>166.0</b>	<b>168.4</b>	<b>171.6</b>
Nov-05	143.3	143.7	144.5	146.0	148.2	149.4	151.5	152.2	153.8	155.2	155.8	159.3	159.7	161.9	164.7	166.0	168.4	171.6
Dec-05	143.3	143.7	144.5	146.0	148.2	149.4	151.5	152.2	153.8	155.2	155.8	159.3	159.7	161.9	164.7	166.0	168.4	171.6
Jan-06	<b>148.0</b>	<b>148.5</b>	<b>149.6</b>	<b>150.9</b>	<b>153.1</b>	<b>154.2</b>	<b>156.7</b>	<b>157.6</b>	<b>159.1</b>	<b>160.9</b>	<b>161.0</b>	<b>165.0</b>	<b>165.8</b>	<b>167.7</b>	<b>170.1</b>	<b>171.4</b>	<b>174.1</b>	<b>177.2</b>
Feb-06	148.0	148.5	149.6	150.9	153.1	154.2	156.7	157.6	159.1	160.9	161.0	165.0	165.8	167.7	170.1	171.4	174.1	177.2
Mar-06	<b>148.0</b>	<b>148.4</b>	<b>149.5</b>	<b>151.0</b>	<b>153.1</b>	<b>154.2</b>	<b>156.7</b>	<b>157.5</b>	<b>159.1</b>	<b>160.9</b>	<b>161.0</b>	<b>165.0</b>	<b>165.8</b>	<b>167.7</b>	<b>170.1</b>	<b>171.4</b>	<b>174.1</b>	<b>177.2</b>
Apr-06	148.0	148.4	149.5	151.0	153.1	154.2	156.7	157.5	159.1	160.9	161.0	165.0	165.8	167.7	170.1	171.4	174.1	177.2
May-06	148.0	148.4	149.5	151.0	153.1	154.2	156.7	157.5	159.1	160.9	161.0	165.0	165.8	167.7	170.1	171.4	174.1	177.2
Jun-06	148.0	148.4	149.5	151.0	153.1	154.2	156.7	157.5	159.1	160.9	161.0	165.0	165.8	167.7	170.1	171.4	174.1	177.2
Jul-06	<b>148.0</b>	<b>148.4</b>	<b>149.5</b>	<b>151.0</b>	<b>153.1</b>	<b>154.2</b>	156.7	<b>157.5</b>	<b>159.1</b>	<b>160.9</b>	<b>161.0</b>	<b>165.0</b>	<b>165.8</b>	<b>167.7</b>	<b>170.1</b>	<b>171.4</b>	<b>174.1</b>	<b>177.2</b>
Aug-06	148.0	148.4	149.5	151.0	153.1	154.2	156.7	157.5	159.1	160.9	161.0	165.0	165.8	167.7	170.1	171.4	174.1	177.2
Sep-06	<b>153.9</b>	<b>154.4</b>	<b>155.5</b>	<b>157.0</b>	<b>159.2</b>	<b>160.4</b>	<b>163.0</b>	<b>163.7</b>	<b>165.4</b>	<b>167.4</b>	<b>167.4</b>	<b>171.6</b>	<b>172.4</b>	<b>174.4</b>	<b>176.9</b>	<b>178.2</b>	<b>181.0</b>	<b>184.3</b>
Oct-06	153.9	154.4	155.5	157.0	159.2	160.4	163.0	163.7	165.4	167.4	167.4	171.6	172.4	174.4	176.9	178.2	181.0	184.3
Nov-06	153.9	154.4	155.5	157.0	159.2	160.4	163.0	163.7	165.4	167.4	167.4	171.6	172.4	174.4	176.9	178.2	181.0	184.3
Dec-06	153.9	154.4	155.5	157.0	159.2	160.4	163.0	163.7	165.4	167.4	167.4	171.6	172.4	174.4	176.9	178.2	181.0	184.3
Jan-07	<b>154.2</b>	<b>154.6</b>	<b>155.8</b>	<b>157.4</b>	<b>159.6</b>	<b>160.6</b>	<b>163.4</b>	<b>164.0</b>	<b>165.8</b>	<b>167.7</b>	<b>167.6</b>	<b>172.0</b>	<b>172.7</b>	<b>174.8</b>	<b>177.2</b>	<b>178.6</b>	<b>181.5</b>	<b>184.7</b>
Feb-07	154.2	154.6	155.8	157.4	159.6	160.6	163.4	164.0	165.8	167.7	167.6	172.0	172.7	174.8	177.2	178.6	181.5	184.7
Mar-07	154.2	154.6	155.8	157.4	159.6	160.6	163.4	164.0	165.8	167.7	167.6	172.0	172.7	174.8	177.2	178.6	181.5	184.7
Apr-07	<b>154.2</b>	<b>154.7</b>	<b>155.8</b>	<b>157.4</b>	<b>159.6</b>	<b>160.7</b>	<b>163.3</b>	<b>164.0</b>	<b>165.8</b>	<b>167.6</b>	<b>167.6</b>	<b>172.0</b>	<b>172.7</b>	<b>174.8</b>	<b>177.3</b>	<b>178.6</b>	<b>181.4</b>	<b>184.8</b>
May-07	154.2	154.7	155.8	157.4	159.6	160.7	163.3	164.0	165.8	167.6	167.6	172.0	172.7	174.8	177.3	178.6	181.4	184.8

<sup>6</sup>The excel sheet contains values with different precision. When possible, values have been taken from the QNA-MEI database, where more precision is available. Numbers with less precision have been taken from MEI paper editions.

Table A2: An excerpt from the QNA-MEI revisions database: QoQ growth rates

## OECD MEI revisions dataset

## Australia, GDP\_sa

## QoQ rates of changes (%)

Relating to period	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1	1999 Q2	1999 Q3
First estimate	0.4	0.7	0.7	1.4	0.5	1.9	0.3	1.2	0.8	0.9	1.2	1.1	0.4	1.7	0.9	1.0	1.1	1.1	0.2	1.6
5 months later	0.4	0.3	0.6	1.3	0.8	1.7	0.1	1.0	0.9	0.4	1.7	1.1	0.5	1.7	0.9	1.0	1.5	1.4	0.1	1.7
1 year later	0.9	0.1	0.2	1.7	0.6	1.5	0.3	1.3	0.7	-0.3	1.9	0.4	1.4	1.1	0.7	0.9	1.4	0.9	0.5	1.3
2 years later	1.5	0.1	0.5	1.8	0.3	1.2	0.2	1.2	0.3	0.5	1.6	1.0	1.4	1.2	0.9	1.6	1.6	1.2	0.4	1.4
3 years later	1.7	0.0	0.8	2.0	0.4	1.5	0.0	1.6	0.3	0.7	1.9	0.9	1.3	1.4	1.1	1.6	1.7	0.8	0.6	1.5
Latest estimate	0.3	0.7	1.0	1.4	0.7	1.7	0.4	1.1	1.1	0.0	2.6	0.4	1.2	1.4	0.7	1.6	1.9	0.5	1.0	0.5
Jun-03	<b>0.2</b>	<b>0.5</b>	<b>1.3</b>	<b>1.5</b>	<b>0.7</b>	<b>1.6</b>	<b>0.3</b>	<b>1.4</b>	<b>0.8</b>	<b>0.4</b>	<b>1.6</b>	<b>0.8</b>	<b>1.4</b>	<b>1.4</b>	<b>0.9</b>	<b>1.5</b>	<b>2.3</b>	<b>0.1</b>	<b>0.8</b>	<b>1.4</b>
Jul-03	0.2	0.5	1.3	1.5	0.7	1.6	0.3	1.4	0.8	0.4	1.6	0.8	1.4	1.4	0.9	1.5	2.3	0.1	0.8	1.4
Aug-03	0.2	0.5	1.3	1.5	0.7	1.6	0.3	1.4	0.8	0.4	1.6	0.8	1.4	1.4	0.9	1.5	2.3	0.1	0.8	1.4
Sep-03	0.2	0.5	1.3	1.5	0.7	1.6	0.3	1.4	0.8	0.4	1.6	0.8	1.4	1.4	0.9	1.5	2.3	0.1	0.8	1.4
Oct-03	<b>0.3</b>	<b>0.5</b>	<b>1.2</b>	<b>1.6</b>	<b>0.7</b>	<b>1.6</b>	<b>0.3</b>	<b>1.3</b>	<b>0.8</b>	<b>0.4</b>	<b>1.6</b>	<b>0.8</b>	<b>1.5</b>	<b>1.3</b>	<b>0.9</b>	<b>1.5</b>	<b>2.2</b>	<b>0.1</b>	<b>0.9</b>	<b>1.4</b>
Nov-03	0.3	0.5	1.2	1.6	0.7	1.6	0.3	1.3	0.8	0.4	1.6	0.8	1.5	1.3	0.9	1.5	2.2	0.1	0.9	1.4
Dec-03	0.3	0.5	1.2	1.6	0.7	1.6	0.3	1.3	0.8	0.4	1.6	0.8	1.5	1.3	0.9	1.5	2.2	0.1	0.9	1.4
Jan-04	<b>0.3</b>	<b>0.6</b>	<b>1.1</b>	<b>1.6</b>	<b>0.8</b>	<b>1.4</b>	<b>0.5</b>	<b>1.1</b>	<b>0.8</b>	<b>0.4</b>	<b>1.9</b>	<b>0.5</b>	<b>1.6</b>	<b>1.2</b>	<b>1.2</b>	<b>1.5</b>	<b>1.7</b>	<b>0.6</b>	<b>0.9</b>	<b>0.6</b>
Feb-04	0.3	0.6	1.1	1.6	0.8	1.4	0.5	1.1	0.8	0.4	1.9	0.5	1.6	1.2	1.2	1.5	1.7	0.6	0.9	0.6
Mar-04	0.3	0.6	1.1	1.6	0.8	1.4	0.5	1.1	0.8	0.4	1.9	0.5	1.6	1.2	1.2	1.5	1.7	0.6	0.9	0.6
Apr-04	<b>0.3</b>	<b>0.6</b>	<b>1.1</b>	<b>1.6</b>	<b>0.7</b>	<b>1.5</b>	<b>0.4</b>	<b>1.1</b>	<b>0.8</b>	<b>0.5</b>	<b>1.9</b>	<b>0.5</b>	<b>1.5</b>	<b>1.3</b>	<b>1.1</b>	<b>1.5</b>	<b>1.7</b>	<b>0.7</b>	<b>0.9</b>	<b>0.5</b>
May-04	0.3	0.6	1.1	1.6	0.7	1.5	0.4	1.1	0.8	0.5	1.9	0.5	1.5	1.3	1.1	1.5	1.7	0.7	0.9	0.5
Jun-04	<b>0.3</b>	<b>0.6</b>	<b>1.1</b>	<b>1.6</b>	<b>0.7</b>	<b>1.5</b>	<b>0.5</b>	<b>1.1</b>	<b>0.8</b>	<b>0.5</b>	<b>1.9</b>	<b>0.4</b>	<b>1.5</b>	<b>1.2</b>	<b>1.2</b>	<b>1.5</b>	<b>1.7</b>	<b>0.7</b>	<b>0.9</b>	<b>0.5</b>
Jul-04	0.3	0.6	1.1	1.6	0.7	1.5	0.5	1.1	0.8	0.5	1.9	0.4	1.5	1.2	1.2	1.5	1.7	0.7	0.9	0.5
Aug-04	0.3	0.6	1.1	1.6	0.7	1.5	0.5	1.1	0.8	0.5	1.9	0.4	1.5	1.2	1.2	1.5	1.7	0.7	0.9	0.5
Sep-04	<b>0.2</b>	<b>0.6</b>	<b>1.1</b>	<b>1.6</b>	<b>0.6</b>	<b>1.6</b>	<b>0.5</b>	<b>1.1</b>	<b>0.7</b>	<b>0.6</b>	<b>1.9</b>	<b>0.4</b>	<b>1.5</b>	<b>1.3</b>	<b>1.2</b>	<b>1.5</b>	<b>1.6</b>	<b>0.8</b>	<b>1.0</b>	<b>0.5</b>
Oct-04	0.2	0.6	1.1	1.6	0.6	1.6	0.5	1.1	0.7	0.6	1.9	0.4	1.5	1.3	1.2	1.5	1.6	0.8	1.0	0.5
Nov-04	0.2	0.6	1.1	1.6	0.6	1.6	0.5	1.1	0.7	0.6	1.9	0.4	1.5	1.3	1.2	1.5	1.6	0.8	1.0	0.5
Dec-04	<b>0.2</b>	<b>0.6</b>	<b>1.2</b>	<b>1.6</b>	<b>0.7</b>	<b>1.6</b>	<b>0.5</b>	<b>1.1</b>	<b>0.7</b>	<b>0.5</b>	<b>2.1</b>	<b>0.4</b>	<b>1.4</b>	<b>1.5</b>	<b>1.0</b>	<b>1.6</b>	<b>1.7</b>	<b>0.6</b>	<b>0.9</b>	<b>0.6</b>
Jan-05	0.2	0.6	1.2	1.6	0.7	1.6	0.5	1.1	0.7	0.5	2.1	0.4	1.4	1.5	1.0	1.6	1.7	0.6	0.9	0.6
Feb-05	0.2	0.6	1.2	1.6	0.7	1.6	0.5	1.1	0.7	0.5	2.1	0.4	1.4	1.5	1.0	1.6	1.7	0.6	0.9	0.6
Mar-05	<b>0.2</b>	<b>0.5</b>	<b>1.1</b>	<b>1.6</b>	<b>0.7</b>	<b>1.5</b>	<b>0.5</b>	<b>1.1</b>	<b>0.8</b>	<b>0.5</b>	<b>2.2</b>	<b>0.3</b>	<b>1.3</b>	<b>1.5</b>	<b>1.0</b>	<b>1.5</b>	<b>1.8</b>	<b>0.5</b>	<b>1.0</b>	<b>0.6</b>
Apr-05	0.2	0.5	1.1	1.6	0.7	1.5	0.5	1.1	0.8	0.5	2.2	0.3	1.3	1.5	1.0	1.5	1.8	0.5	1.0	0.6
May-05	0.2	0.5	1.1	1.6	0.7	1.5	0.5	1.1	0.8	0.5	2.2	0.3	1.3	1.5	1.0	1.5	1.8	0.5	1.0	0.6
Jun-05	<b>0.3</b>	<b>0.5</b>	<b>1.1</b>	<b>1.6</b>	<b>0.7</b>	<b>1.5</b>	<b>0.5</b>	<b>1.1</b>	<b>0.8</b>	<b>0.5</b>	<b>2.2</b>	<b>0.3</b>	<b>1.3</b>	<b>1.6</b>	<b>1.0</b>	<b>1.5</b>	<b>1.8</b>	<b>0.5</b>	<b>1.0</b>	<b>0.6</b>
Jul-05	0.3	0.5	1.1	1.6	0.7	1.5	0.5	1.1	0.8	0.5	2.2	0.3	1.3	1.6	1.0	1.5	1.8	0.5	1.0	0.6
Aug-05	0.3	0.5	1.1	1.6	0.7	1.5	0.5	1.1	0.8	0.5	2.2	0.3	1.3	1.6	1.0	1.5	1.8	0.5	1.0	0.6
Sep-05	0.3	0.5	1.1	1.6	0.7	1.5	0.5	1.1	0.8	0.5	2.2	0.3	1.3	1.6	1.0	1.5	1.8	0.5	1.0	0.6
Oct-05	<b>0.3</b>	<b>0.5</b>	<b>1.1</b>	<b>1.5</b>	<b>0.8</b>	<b>1.4</b>	<b>0.5</b>	<b>1.1</b>	<b>0.9</b>	<b>0.4</b>	<b>2.3</b>	<b>0.2</b>	<b>1.4</b>	<b>1.7</b>	<b>0.8</b>	<b>1.5</b>	<b>1.9</b>	<b>0.5</b>	<b>1.0</b>	<b>0.5</b>
Nov-05	0.3	0.5	1.1	1.5	0.8	1.4	0.5	1.1	0.9	0.4	2.3	0.2	1.4	1.7	0.8	1.5	1.9	0.5	1.0	0.5
Dec-05	0.3	0.5	1.1	1.5	0.8	1.4	0.5	1.1	0.9	0.4	2.3	0.2	1.4	1.7	0.8	1.5	1.9	0.5	1.0	0.5
Jan-06	<b>0.4</b>	<b>0.7</b>	<b>0.9</b>	<b>1.5</b>	<b>0.7</b>	<b>1.7</b>	<b>0.6</b>	<b>1.0</b>	<b>1.1</b>	<b>0.1</b>	<b>2.5</b>	<b>0.4</b>	<b>1.2</b>	<b>1.4</b>	<b>0.8</b>	<b>1.6</b>	<b>1.8</b>	<b>0.6</b>	<b>1.1</b>	<b>0.4</b>
Feb-06	0.4	0.7	0.9	1.5	0.7	1.7	0.6	1.0	1.1	0.1	2.5	0.4	1.2	1.4	0.8	1.6	1.8	0.6	1.1	0.4
Mar-06	<b>0.3</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>0.5</b>	<b>1.0</b>	<b>1.1</b>	<b>0.1</b>	<b>2.5</b>	<b>0.5</b>	<b>1.2</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>1.8</b>	<b>0.6</b>	<b>1.1</b>	<b>0.4</b>
Apr-06	0.3	0.7	1.0	1.4	0.7	1.6	0.5	1.0	1.1	0.1	2.5	0.5	1.2	1.4	0.7	1.6	1.8	0.6	1.1	0.4
May-06	0.3	0.7	1.0	1.4	0.7	1.6	0.5	1.0	1.1	0.1	2.5	0.5	1.2	1.4	0.7	1.6	1.8	0.6	1.1	0.4
Jun-06	<b>0.3</b>	<b>0.7</b>	1.0	1.4	<b>0.7</b>	<b>1.6</b>	0.5	1.0	1.1	0.1	2.5	0.5	1.2	1.4	0.7	1.6	1.8	<b>0.6</b>	1.1	0.4
Jul-06	<b>0.3</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>0.5</b>	<b>1.0</b>	<b>1.1</b>	<b>0.1</b>	<b>2.5</b>	<b>0.5</b>	<b>1.2</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>1.8</b>	<b>0.6</b>	<b>1.1</b>	<b>0.4</b>
Aug-06	0.3	0.7	1.0	1.4	0.7	1.6	0.5	1.0	1.1	0.1	2.5	0.5	1.2	1.4	0.7	1.6	1.8	0.6	1.1	0.4
Sep-06	<b>0.3</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>0.5</b>	<b>1.0</b>	<b>1.2</b>	<b>0.0</b>	<b>2.5</b>	<b>0.4</b>	<b>1.2</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>1.8</b>	<b>0.6</b>	<b>1.0</b>	<b>0.4</b>
Oct-06	0.3	0.7	1.0	1.4	0.7	1.6	0.5	1.0	1.2	0.0	2.5	0.4	1.2	1.4	0.7	1.6	1.8	0.6	1.0	0.4
Nov-06	0.3	0.7	1.0	1.4	0.7	1.6	0.5	1.0	1.2	0.0	2.5	0.4	1.2	1.4	0.7	1.6	1.8	0.6	1.0	0.4
Dec-06	0.3	0.7	1.0	1.4	0.7	1.6	0.5	1.0	1.2	0.0	2.5	0.4	1.2	1.4	0.7	1.6	1.8	0.6	1.0	0.4
Jan-07	<b>0.3</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>0.7</b>	<b>1.7</b>	<b>0.4</b>	<b>1.1</b>	<b>1.1</b>	<b>0.0</b>	<b>2.6</b>	<b>0.4</b>	<b>1.2</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>1.8</b>	<b>0.6</b>	<b>1.0</b>	<b>0.5</b>
Feb-07	0.3	0.7	1.0	1.4	0.7	1.7	0.4	1.1	1.1	0.0	2.6	0.4	1.2	1.4	0.7	1.6	1.8	0.6	1.0	0.5
Mar-07	0.3	0.7	1.0	1.4	0.7	1.7	0.4	1.1	1.1	0.0	2.6	0.4	1.2	1.4	0.7	1.6	1.8	0.6	1.0	0.5
Apr-07	<b>0.3</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>0.7</b>	<b>1.7</b>	<b>0.4</b>	<b>1.1</b>	<b>1.1</b>	<b>0.0</b>	<b>2.6</b>	<b>0.4</b>	<b>1.2</b>	<b>1.4</b>	<b>0.7</b>	<b>1.6</b>	<b>1.9</b>	<b>0.5</b>	<b>1.0</b>	<b>0.5</b>
May-07	0.3	0.7	1.0	1.4	0.7	1.7	0.4	1.1	1.1	0.0	2.6	0.4	1.2	1.4	0.7	1.6	1.9	0.5	1.0	0.5

**Table A3: An excerpt from the QNA-MEI revisions database: revisions triangle**

**Revisions QNA-MEI dataset (OECD)**

**Australia- GDP\_sa**

**Revisions to QoQ rates of changes**

Relating to period	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1	1999 Q2	1999 Q3	1999 Q4
First estimate	0.4	0.7	0.7	1.4	0.5	1.9	0.3	1.2	0.8	0.9	1.2	1.1	0.4	1.7	0.9	1.0	1.1	1.1	0.2	1.6	1.0
5 months later	0.4	0.3	0.6	1.3	0.8	1.7	0.1	1.0	0.9	0.4	1.7	1.1	0.5	1.7	0.9	1.0	1.5	1.4	0.1	1.7	1.0
1 year later	0.9	0.1	0.2	1.7	0.6	1.5	0.3	1.3	0.7	-0.3	1.9	0.4	1.4	1.1	0.7	0.9	1.4	0.9	0.5	1.3	1.1
2 years later	1.5	0.1	0.5	1.8	0.3	1.2	0.2	1.2	0.3	0.5	1.6	1.0	1.4	1.2	0.9	1.6	1.6	1.2	0.4	1.4	1.3
3 years later	1.7	0.0	0.8	2.0	0.4	1.5	0.0	1.6	0.3	0.7	1.9	0.9	1.3	1.4	1.1	1.6	1.7	0.8	0.6	1.5	1.1
Latest estimate	0.3	0.7	1.0	1.4	0.7	1.7	0.4	1.1	1.1	0.0	2.6	0.4	1.2	1.4	0.7	1.6	1.9	0.5	1.0	0.5	1.5
Mar-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0
Jun-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul-03	0.0	0.1	-0.1	0.0	0.0	0.1	-0.1	0.1	-0.1	0.1	-0.2	0.1	0.1	-0.1	0.1	0.0	0.0	-0.1	0.1	0.0	0.0
Aug-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nov-03	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.0	-0.1	0.0	0.0	-0.1	0.1
Dec-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jan-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb-04	0.0	0.0	-0.2	0.1	0.1	-0.1	0.2	-0.2	0.0	0.3	-0.3	0.1	-0.1	0.2	0.1	0.0	-0.5	0.5	0.1	-0.8	0.2
Mar-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May-04	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1	0.1	0.0	0.0	-0.1	0.1	0.0	0.0	-0.1	0.1	-0.1	0.0	0.0
Jun-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Aug-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct-04	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	0.0	-0.1	0.1	0.1	0.0	-0.1	0.0	0.0	0.0	-0.1	0.1	0.0	0.0	0.0
Nov-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jan-05	0.0	0.0	0.1	0.0	0.1	-0.1	0.0	0.0	0.0	-0.1	0.1	-0.1	-0.1	0.3	-0.2	0.1	0.1	-0.2	0.0	0.1	0.0
Feb-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mar-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.1
May-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jun-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aug-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nov-05	0.0	0.0	0.0	-0.1	0.1	-0.1	0.0	0.0	0.1	-0.1	0.1	-0.1	0.1	0.1	-0.1	0.0	0.1	-0.1	0.0	-0.1	0.1
Dec-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jan-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb-06	0.1	0.2	-0.2	0.0	-0.1	0.2	0.1	-0.1	0.2	-0.3	0.2	0.2	-0.2	-0.3	-0.1	0.1	-0.1	0.1	0.1	-0.1	0.1
Mar-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr-06	0.0	0.0	0.1	-0.1	0.0	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jun-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aug-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct-06	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	0.0	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.1
Nov-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jan-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb-07	0.0	0.0	0.0	0.0	-0.1	0.1	-0.1	0.1	0.0	-0.1	0.1	-0.1	0.0	0.0	0.0	0.1	-0.1	-0.1	0.0	0.0	-0.1
Mar-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May-07	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Jun-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table A4: An excerpt from the QNA-MEI revisions database. Revisions analysis spreadsheet**

**Australia\_QoQ\_GDP\_sa**

**Revisions spreadsheet Whole sample**

Relating to Period	First estimate (P)	5 months later	1 year later	2 years later	3 years later	Latest estimate	Latest estimate at least 3 yrs later (L)	P
1994Q4	0.4	0.4	0.9	1.5	1.7	0.3	0.3	0.4
1995Q1	0.7	0.3	0.1	0.1	0.0	0.7	0.7	0.7
1995Q2	0.7	0.6	0.2	0.5	0.8	1.0	1.0	0.7
1995Q3	1.4	1.3	1.7	1.8	2.0	1.4	1.4	1.4
1995Q4	0.5	0.8	0.6	0.3	0.4	0.7	0.7	0.5
1996Q1	1.9	1.7	1.5	1.2	1.5	1.7	1.7	1.9
1996Q2	0.3	0.1	0.3	0.2	0.0	0.4	0.4	0.3
1996Q3	1.2	1.0	1.3	1.2	1.6	1.1	1.1	1.2
1996Q4	0.8	0.9	0.7	0.3	0.3	1.1	1.1	0.8
1997 Q1	0.9	0.4	-0.3	0.5	0.7	0.0	0.0	0.9
1997 Q2	1.2	1.7	1.9	1.6	1.9	2.6	2.6	1.2
1997 Q3	1.1	1.1	0.4	1.0	0.9	0.4	0.4	1.1
1997 Q4	0.4	0.5	1.4	1.4	1.3	1.2	1.2	0.4
1998Q1	1.7	1.7	1.1	1.2	1.4	1.4	1.4	1.7
1998Q2	0.9	0.9	0.7	0.9	1.1	0.7	0.7	0.9
1998Q3	1.0	1.0	0.9	1.6	1.6	1.6	1.6	1.0
1998Q4	1.1	1.5	1.4	1.6	1.7	1.9	1.9	1.1
1999Q1	1.1	1.4	0.9	1.2	0.8	0.5	0.5	1.1
1999Q2	0.2	0.1	0.5	0.4	0.6	1.0	1.0	0.2
1999Q3	1.6	1.7	1.3	1.4	1.5	0.5	0.5	1.6
1999Q4	1.0	1.0	1.1	1.3	1.1	1.5	1.5	1.0
2000Q1	1.1	1.5	1.2	0.5	0.2	1.0	1.0	1.1
2000Q2	0.7	1.1	0.8	1.0	1.3	1.1	1.1	0.7
2000Q3	0.6	0.4	0.3	0.2	0.1	0.2	0.2	0.6
2000Q4	-0.6	-0.6	-0.5	-0.6	-0.5	-0.8	-0.8	0.6
2001Q1	1.1	0.7	0.6	0.9	0.8	0.8	0.8	1.1
2001Q2	0.9	1.2	1.0	1.2	1.3	0.9	0.9	0.9
2001Q3	1.1	1.1	1.3	1.2	1.3	1.1	1.1	1.1
2001Q4	1.3	1.2	1.2	1.1	1.1	1.3	1.3	1.3
2002Q1	0.9	0.7	0.5	0.7	0.8	1.0	1.0	0.9
2002Q2	0.6	0.8	0.8	1.1	1.2	1.3	1.3	0.6
2002Q3	0.9	1.0	0.8	0.8	0.9	0.7	0.7	0.9
2002Q4	0.4	0.3	0.1	0.5	0.1	0.2	0.2	0.4
2003Q1	0.7	0.6	0.9	0.7	0.9	0.8	0.8	0.7
2003Q2	0.1	0.3	0.2	0.2	0.0	0.2	0.2	0.1
2003Q3	1.2	1.4	1.7	1.6	1.5	1.5	1.5	1.2
2003Q4	1.4	1.3	1.6	1.6	1.9	1.9	1.9	1.4
2004Q1	0.2	0.5	0.3	0.8		0.7		0.2
2004Q2	0.6	0.8	0.7	0.4		0.6		0.6
2004Q3	0.3	0.2	0.4	0.5		0.5		0.3
2004Q4	0.1	0.3	0.3	0.4		0.2		0.1
2005Q1	0.7	0.5	0.7			0.8		0.7
2005Q2	1.3	1.3	1.3			1.4		1.3
2005Q3	0.2	0.3	0.4			0.4		0.2
2005Q4	0.5	0.7	0.8			0.5		0.5
2006Q1	0.9	0.7				0.9		0.9
2006Q2	0.3	0.5				0.5		0.3
2006Q3	0.3					0.3		0.3
2006Q4	1.0					1.0		1.0

average |P|= 0.8

Comparison	Sample
L_Y2	94Q4-03Q4
M5_P	94Q4-06Q2
Y1_P	94Q4-05Q4
Y1_M5	94Q4-05Q4
Y2_P	94Q4-04Q4
L_P	94Q4-03Q4
Y2_Y1	94Q4-04Q4
Y3_P	94Q4-03Q4
L_Y1	94Q4-03Q4

**Table A5: An excerpt from the QNA-MEI revisions database. Summary statistics for various comparisons in the revisions analysis spreadsheet**

**Australia\_QoQ\_GDP\_sa**  
**Whole sample**

<i>Summary statistics</i>	L_Y2	M5_P	Y1_P	Y1_M5	Y2_P	L_P	Y2_Y1	Y3_P	L_Y1
<b>sample</b>	94Q4-03Q4	94Q4-06Q2	94Q4-05Q4	94Q4-05Q4	94Q4-04Q4	94Q4-03Q4	94Q4-04Q4	94Q4-03Q4	94Q4-03Q4
<b>n</b>	37	47	45	45	41	37	41	37	37
<b>mean absolute revision</b>	0.35	0.18	0.28	0.25	0.32	0.37	0.23	0.38	0.32
<b>mean revision (Rbar)</b>	0.03	0.03	0.00	-0.04	0.05	0.07	0.07	0.09	0.10
<b>st. dev(Rbar) - HAC formula</b>	0.05	0.03	0.04	0.04	0.05	0.05	0.04	0.06	0.05
<b>mean squared revision</b>	0.21	0.05	0.14	0.10	0.17	0.24	0.09	0.23	0.15
<b>relative mean absolute revision</b>	0.36	0.21	0.33	0.30	0.35	0.37	0.25	0.38	0.32
<b>t-stat</b>	0.66	0.99	-0.10	-1.04	0.97	1.27	1.75	1.52	2.07
<b>t-crit 1%</b>	3.58	3.51	3.53	3.53	3.55	3.58	3.55	3.58	3.58
<b>t-crit 5%</b>	2.03	2.01	2.02	2.02	2.02	2.03	2.02	2.03	2.03
<b>t-crit 10%</b>	1.69	1.68	1.68	1.68	1.68	1.69	1.68	1.69	1.69
<b>1% significant?</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5% significant?</b>	NO	NO	NO	NO	NO	NO	NO	NO	YES
<b>10% significant?</b>	NO	NO	NO	NO	NO	NO	YES	NO	YES
<b>Correlation</b>	0.70	0.90	0.72	0.82	0.68	0.63	0.85	0.67	0.80
<b>Min Revision</b>	-1.23	-0.49	-1.19	-0.77	-0.71	-1.07	-0.62	-0.89	-0.85
<b>Max Revision</b>	1.03	0.48	1.00	0.90	1.18	1.39	0.78	1.30	0.80
<b>Range</b>	2.26	0.97	2.19	1.67	1.89	2.46	1.40	2.19	1.65
<b>% Later &gt; Earlier</b>	51.35	51.06	62.22	46.67	51.22	51.35	58.54	54.05	62.16
<b>% Sign(Later) = Sign(Earlier)</b>	97	100	98	98	100	97	98	95	100
<b>Variance of Later estimate</b>	0.38	0.26	0.28	0.28	0.28	0.38	0.28	0.39	0.38
<b>Variance of Earlier estimate</b>	0.28	0.22	0.22	0.27	0.23	0.22	0.28	0.22	0.28
<b>UM %</b>	0.57	1.88	0.01	1.39	1.72	1.99	5.68	3.33	6.93
<b>UR %</b>	4.39	0.42	6.03	6.83	7.97	2.55	6.58	0.92	0.69
<b>UD %</b>	93.72	97.70	93.95	91.78	90.31	95.45	84.84	95.75	90.71
<b>total non-zero revisions</b>	37	47	45	45	41	37	41	37	37

Legend

- P: First published estimate
- L: Latest estimate at least 3 yrs later
- Y1: Estimate published 1 year later
- Y2: Estimate published 2 years later
- Y3: Estimate published 3 years later
- M5: Estimate published 5 months later

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