

FEATURE

Jon Beadle
Office for National Statistics

Modernising the UK's National Accounts

SUMMARY

The Office for National Statistics (ONS) is engaged in a major programme modernising its statistical systems and processes. National Accounts modernisation is at the forefront of this programme and will bring significant improvements in the quality of National Accounts estimates. This article describes these systems and processes. In order to carry forward modernisation, ONS has had to re-prioritise and reduce the scope of *Blue Book 2007*. This will mean some additional, temporary uncertainty about the quarterly path of GDP. When completed, National Accounts modernisation will mean more coherent estimates less prone to revision, consolidating the position of the UK's National Accounts as being among the best in the world.

The Office for National Statistics (ONS) is engaged in a major programme modernising its statistical systems.

The National Accounts are at the forefront of that programme. The aim is to produce the UK National Accounts *Blue Book* in September 2008 using modernised systems and methods, giving significant benefits to users in the form of better quality statistics.

Benefits will include:

- a more coherent picture of the economy produced by extending the framework for balancing income, expenditure and output
- expanded coverage of the services sector from 31 industries to around 100
- early estimates of GDP less prone to revision because changes to the structure of the economy will be incorporated more quickly, making full use of the available data

Both HM Treasury and the Bank of England have been consulted. They have commented that they

regard the delivery of better quality statistics through modernisation as a high priority, because modernised National Accounts will mean more reliable and coherent data that are less prone to revision, taking on latest information and improved methods on a much more timely basis. It will also increase our ability to relate supply and demand to each other. This will be of considerable benefit in the setting of both monetary and fiscal policy, with consequent benefits for the economy at large.

Carrying forward modernisation of the National Accounts is one of ONS's top development priorities in 2007 and 2008. This will necessitate some re-prioritisation, including reducing the scope of the *Blue Book* in 2007. Expert national accounts resources will be focused on testing and analysing modernised systems and methods.

Blue Book 2007 will, therefore, be a transition *Blue Book*, paving the way for modernised National Accounts in 2008. The scope of *Blue Book 2007* will be reduced in two main ways:

- annual benchmarking, including balancing the accounts in current prices for 2005 using supply and use balancing and benchmarking to annual surveys, will be postponed to 2008. The UK is unusual in fully benchmarking its accounts every year; most countries do it only every three to five years or even less frequently. According to a recent OECD study, the UK is only one of two countries to benchmark every year, the other being Poland, and
- previously planned methodological improvements will be postponed to 2008, apart from the improved method for measuring software investment which will go ahead

The implementation of an improved method for measuring banking sector output known as Financial Intermediation Services Indirectly Measured (FISIM) will be postponed to 2008, but a new quarterly experimental release giving GDP figures incorporating the improved FISIM estimates was launched in March 2007.

ONS's aim is to maintain the quality of the regular ongoing quarterly National Accounts estimates. However, the postponement of annual benchmarking inevitably means some temporary additional uncertainty about the path of the economy. HM Treasury and the Bank of England have been consulted and consider that the consequences for economic policy are manageable.

The UK's National Accounts are already generally considered among the best in the world and the modernisation programme will consolidate that position.

ONS modernisation programme

ONS currently has a wide range of statistical and technical legacy systems that are outdated, high risk and inefficient. The ONS Modernisation Programme is aimed at modernising systems and processes to improve the quality and reliability of its statistics and allow us to reflect changes in society faster and be more responsive to the needs of users.

The modernisation programme is doing this through:

- the creation and further development of a shared corporate data repository (CORD – Central ONS Repository for Data) which will eventually hold all ONS's statistical sources in a common environment
- the standardisation of statistical methods, systems, processes and technology solutions used to deliver ONS outputs
- the re-engineering of business processes to reduce statistical risk and improve efficiency and effectiveness

National Accounts modernisation has been at the forefront of the ONS modernisation programme since its inception. The focus of National Accounts modernisation is to address some of the issues that have been of concern to users by upgrading the systems and processes used to produce the National Accounts.

The project has been aimed at three distinct areas:

- upgrading the systems, tools and processes used to compile the National Accounts
- reviewing the methods used to compile the key components of the National Accounts
- reviewing the organisational structure and skills required to operate the new systems and processes

The project has also provided the opportunity to compare the UK National Accounts with international best practice, to identify improvements to existing methods and approaches, to produce a blueprint for the future UK National Accounts with a clear focus on user needs.

Most of the work so far has involved developing new generic systems, which will support modernisation of all ONS statistical systems. National accounts modernisation is now at the early stage of testing both new systems and new methodology. During 2007, the aim is to prepare a series of presentations and articles that will prepare the way for publication in 2008. ONS recognises the importance of being able to describe comprehensively the improvements made and the impact on published data.

Implementation of the changes described in this article is dependent on the continued development of technical systems and will be managed carefully to ensure the quality of regular monthly and quarterly National Accounts outputs is maintained.

Existing methods for compiling the National Accounts

The existing methods reflect the independent development of systems and processes for estimating gross domestic product (GDP), short-term indicators and supply and use tables. The current situation is that the three stages of the GDP process, from short-term indicators, quarterly GDP estimates and annual supply and use estimates, are not fully integrated into the same framework. The links between these three stages are seen as the cause of much of the inconsistency and bias, and analysis shows that significant revisions occur at these stages. The complexities of the links between these stages are also a cause of difficulty to users.

Definitive estimates of GDP are produced at the *Blue Book* stage by reconciling and balancing annual estimates of expenditure, income and production in current prices through the input-output framework. The input-output framework consists of the regularly produced supply and use tables and input-output analytical tables. The supply and use tables are compiled around 18 months after the year in question, when comprehensive information on expenditure, income and production becomes available. The different approaches are based on different survey and administrative data sources, and each produces estimates that, like all statistical estimates, are subject to errors and omissions. Typically, the three

measures produce different estimates. A single, definitive GDP estimate can only emerge therefore after a process of balancing and adjustment. Even after this stage, GDP estimates are liable to be revised as a result of new methodology.

Supply and use tables are constructed to show a balanced and complete picture of the flows of products in the economy and illustrate relationships between producers and consumers of goods and services. In addition, they show the interdependence between industries: what industries either purchase from one another or import to produce their output.

The general policy for managing the introduction of new data and methodological changes into the National Accounts is usually split into two phases. Using *Blue Book 2006* as an example: firstly, estimates relating to the three most recent calendar years (2003 to 2005 in *Blue Book 2006*) and secondly for all periods before this (up to 2002). Revisions for the most recent three years reflect a range of routine annual revisions, including the annual benchmarking exercise to incorporate new and revised current price data as part of the regular supply and use tables. In *Blue Book 2006*, 2004 was balanced through the input-output supply and use framework for the first time and 2003 was also updated. In addition, a number of methodological changes were incorporated to earlier years.

Annual chain-linking of the National Accounts was introduced in 2003. Since then, the reference year and latest price base for chained-volume measures (CVM) series, expressed in £ million or as indices, has each year been advanced forward by one year. The re-referencing only affects the level of each CVM series but has no effect on growth rates. However, moving the price base provides a better basis for tracking movements in the most recent years and does have an impact on growth rates from that point onwards. For *Blue Book 2006*, the base year was advanced one year from 2002 to 2003.

The periods after the last supply and use balance are compiled by aligning the income and expenditure estimates to the production measure, which is derived from the short-term output indicators, weighted together into the GDP(O) or production estimate. For example, in *Blue Book 2006*, for the periods from the first quarter of 2005 onwards, the expenditure, income and production components were balanced on a quarterly basis. This is achieved by aligning the GDP aggregates from the income and expenditure components to that derived from the output measure. The

short-term output measure is based on volume estimates of output as a proxy for gross value added (GVA). This automatic process is augmented by judgmental adjustments to ensure that the alignment adjustments are not beyond the error ranges of the components that they are applied to, that is, changes in inventories and non-financial corporations' operating surplus. This quarterly process is used for balancing all periods after the latest supply and use balance.

Modernisation of the National Accounts: methodological improvements

Improvements to national accounts methods being introduced as part of the modernisation programme mainly involve an extension of the input-output supply and use framework. This extension was first described in Tuke and Aldin (2004). Other improvements will be the development of the basis for a monthly GDP estimate, a flow of funds matrix in the financial accounts and restoring the dividends and interest matrix (DIM) as part of the National Accounts published data set.

Expansion of the input-output supply and use framework

The central development of the modernisation of National Accounts is the expansion of the input-output supply and use framework. This expansion enables a number of improvements to the quality of the UK National Accounts and an extended range of analysis.

- Firstly, the framework has been adapted to balance supply and use tables not only using estimates in current prices but also volume estimates. This will enable the move to deriving volume estimates of GDP and GVA from what is known as double deflation – separate deflation of outputs and inputs on the production side of GDP. The coherence of deflators on the expenditure and production side can then be assured
- Secondly, the initial specification of the framework has been broadened from the current 123-industry and product classification, most notably an expansion of services from 31 to around 100 industries and products. The precise level at which the data will be published will be determined over the next few months
- Thirdly, the framework has been adapted further to accommodate quarterly data, allowing quarters to be

fully balanced at detailed component level rather than reconciled through use of alignment adjustments. This development, which is built up from monthly indicators of output on the production side, also provides the foundation for a monthly estimate of GDP

Improvements in quality

The main improvements in quality derive from the integration of all the national accounts source data into a single framework making full use of all the available data.

Integrating the data at a detailed level ensures that a coherent story of the economy is built from the bottom up. Typical questions from users can then be more easily addressed. In the first instance, consistency issues will be tackled in quarterly balancing and such dependencies and relationships can be more easily analysed and presented. In particular, deflation techniques will be consistent between measures. Data will be used for balancing as soon as they are available rather than waiting 18 months for the first supply and use balance.

The enhanced framework will allow changes to the structure of the economy to be reflected faster and the structure and coherence of the framework will be more straightforward for users to interpret and analyse.

Below are a few examples of detailed consistency and coherence issues that should be resolved by the new framework:

- retail sales estimates against household expenditure components
- imports of capital goods, gross fixed capital formation on machinery and equipment against domestic production
- output of construction industries against gross fixed capital formation
- imports and exports of erratic items such as precious stones and changes in inventories
- producer and consumer prices at a detailed level

It will be possible to track these issues through the tables, and anomalies will be removed.

All these will be analysed at an earlier stage and in more detail under the expanded framework. In addition, the extended framework will permit an examination across all products in the framework, with the best data given the greatest weight in balancing the different data sources. It will also improve the ability to track transactions

of goods potentially affected by VAT missing trader intra-Community fraud.

It is envisaged that the extension of the framework should provide early estimates less prone to revision. This will partly be achieved by adopting the same processes for both early and benchmark data, but it will also be aided by the development of greater consistency between short-term and benchmark data sources. The new system builds in a much greater level of scrutiny between these two sets of sources at a very detailed level and will help analysis of the differences and more importantly better anticipate them.

Sector accounts developments

ONS has developed a flow of funds matrix in the financial flows and balance sheet system. This system will more clearly identify the sources and uses of funds through mapping the direct relationship between sector liabilities and the counterpart asset holding sector. This improvement meets extended data needs in this area required under European statistical legislation.

ONS published a DIM until 1998. The DIM shows payments and receipts of interest and dividends by financial instrument between the main institutional sectors of the economy. Resource pressures prevented the full redevelopment of the DIM at that time. The existing system is able to produce the sector total resources and uses required for the sector income and capital accounts, but it has not been fully converted onto the European System of Accounts (ESA95) framework, which the UK adopted in 1998. The new DIM system will produce income flows for each sector, and by instrument, consistent with the financial flows and financial balance sheets and the ESA95 framework. This development will raise the quality of property income estimates for all institutional sectors. ONS aims to restore the publication of resources and uses (receipts and payments) by instrument, and by sector, in *Blue Book 2008*. This will improve the basis for analysing the income position of many sectors, especially the financial and household sectors.

Plans for *Blue Book 2007*

This development of the UK National Accounts is one of the most significant since their compilation began. Given the high priority attached to delivering modernised National Accounts in 2008, it has proved necessary to free resources from other activities in order to ensure this transition is

managed as smoothly as possible, and with a complete range of analysis. Consequently, *Blue Book 2007* has been designated a transition *Blue Book* with a number of regular outputs temporarily postponed. The annual updating of the accounts through the existing supply and use tables will not take place in *Blue Book 2007* and the latest annual benchmark data will not be incorporated until 2008. The potential consequences of this postponement are considered in more detail below.

The reduced scope in the *Blue Book* in 2007 means:

- not incorporating annual benchmark survey data, including the Annual Business Inquiry and estimates from HM Revenue and Customs of income, and not striking a balanced picture of the economy based on these new data for 2005. A recent OECD study shows that the UK is only one of two countries in the 24 surveyed to benchmark every year (the other is Poland); most countries benchmark only every three to five years or even less frequently
- postponing implementation of some methodological improvements to 2008

Postponed benchmarking

Estimates for the very latest quarters would continue to be updated as usual, drawing on ONS's regular quarterly surveys. ONS attaches high priority to maintaining the quality of ongoing quarterly National Accounts estimates. However, the *Blue Book* process also involves updating information on the structure of the economy which is used as a foundation for the quarterly estimates. Postponement of this structural updating means that some additional uncertainty will attach to the quarterly estimates until *Blue Book 2008*. Some of the data will still be incorporated into the quarterly accounts where possible but not using the supply and use tables. ONS will be closely monitoring the quality of quarterly estimates through 2007 and 2008.

HM Treasury and the Bank of England have been consulted about the planned reduction in scope of *Blue Book 2007* and both consider that the consequences for policy are manageable and both attach high priority to the delivery of modernised accounts.

National accounts volume estimates are currently referenced on to 2003 prices and since the implementation of annual chain-linking have been updated annually. In *Blue Book 2007*, volume estimates will continue to use 2003 as the reference year. Volume estimates are planned to move onto a reference year of 2005 in *Blue Book 2008*.

Methodological improvements

It has previously been announced that two major methodological improvements would be implemented in *Blue Book 2007*: improved estimates of own-account software investment and improved estimates of banking output. These major developments will now only be partially implemented in 2007.

The own-account software estimates, adding about 0.7 per cent to the level of nominal GDP over the period from the 1970s to 2005, will be seen in updated estimates of gross fixed capital formation and gross operating surplus. This development is conceptually a balanced change to all three measures of GDP and can be implemented outside the supply and use framework in a straightforward manner. The consequence of not updating the supply and use tables, however, is that the weights for the output measure of GDP (GDP(O)) will also not be updated and the change will not be reflected in short-term estimates of GDP growth from 2005 onwards. This will now be implemented in 2008. Further information is given in **Box 1**.

Improved estimates of banking output for which no explicit charge is made (FISIM) will not be incorporated into the National Accounts until 2008. This is a complex change that impacts on every industry and institutional sector adding, on latest estimates, about 1.9 per cent to the level of GDP in 2005. These are large revisions to the level of GDP even by the standards of *Blue Book* revisions. The effect on real growth in any one year is, however, relatively small. As with the software change, the revisions go back a number of years and the effect on the level of GDP only builds up gradually. On balance, it has been decided that the benefits of implementing the range of modernisation improvements in *Blue Book 2008* outweigh the impact of the delay to the implementation of FISIM. To help users anticipate the effects of this change, an experimental quarterly statistical release was initiated in March 2007, which describes the impact of FISIM on the National Accounts. **Box 2** discusses the issue and associated plans in more detail.

Around 20 other much smaller revisions will also be postponed to *Blue Book 2008*. These include the reclassification of London and Continental Railways (Kellaway and Shanks, 2006), the introduction of new methodology to estimate imputed rentals, and updated information on compensation of employees and mixed income. Taken together, these changes would have resulted in a rise in the level of GDP, although this

cannot be precisely quantified until the changes are taken through the supply and use balancing process.

A number of the proposed changes also impact on the public sector finances. Most of these changes, including the reclassification of London and Continental Railways, have already been taken through the public sector accounts.

The 2007 *Blue Book*, *Pink Book* and Input-Output Analyses

The main *Blue Book* estimates will be published as usual in the Quarterly National Accounts First Release, on 29 June 2007. *Blue Book 2007*, to be released electronically on 20 July 2007, will follow the usual pattern except for those sections and tables dependent on the annual supply and use balancing. The main omission will be part 2, the industrial analyses, although estimates from GDP(O) incorporating the Index of Production and the Index of Services will be available.

The contents will therefore include:

- part 1 – main aggregates and summary accounts
- part 3 – the sector accounts, except the production account and generation of income tables
- part 4 – other analyses and derived statistics
- part 5 – UK Environmental Accounts except some tables broken down by industry

The UK Balance of Payments *Pink Book* for 2007, also to be released electronically on 20 July 2007, is not affected by the annual supply and use exercise, but will focus on data tables in order that resources can be released for the work leading up to implementation of National Accounts modernisation in 2008. There will be less analysis included than usual but all existing tables will be present except some geographic breakdowns.

UK Input-Output Analyses will not be produced in 2007.

Impact of transition arrangements on GDP estimates

It will be 2008 before the impact of not incorporating benchmark data for 2005 can be quantified. However, it is possible to analyse the impact on GDP for the newly benchmarked year at this stage at previous *Blue Books* to get some indication of the possible effect. The analysis in Table 1, covering both GDP in current prices

Box 1

Production of own-account software

The 1993 System of National Accounts (SNA93), states that both the purchase and own-account (in-house) production of software should be recorded as investment (gross fixed capital formation) and not as intermediate consumption. The acquisition must satisfy SNA93 asset definitions, such that the enterprise expects to use the software in production for more than a year. The software is then treated as an intangible fixed asset rather than as an intermediate consumption good.

The UK National Accounts to date have included estimates for own-account software, using assumptions about the labour input into this activity, by sector, based on an historic demand-side survey. It was recognised, however, that these estimates were likely to understate the activity actually taking place.

The new methodology used by ONS to improve its estimates of own-account software in *Blue Book 2007* is in accordance with the recommendations of the Eurostat and OECD computer software task forces, that is, own-account software investment should be measured implicitly by its costs of production, otherwise known as a supply-side approach. A summary of the main findings of the task forces and their possible implications is presented in Ahmad (2003). ONS's implementation of this method is based on labour market data and is described by Chamberlin and Chesson (2006). This article presents an early estimate of the effect of the new method on GDP, which is to have increased the level of nominal GDP by around 1.0 per cent over the period from the 1970s to 2005.

In fact, the increase in nominal GDP over the whole period is expected to be slightly lower at around 0.7 per cent, with a similar cumulative effect on real growth. On average, the new method increases the annual growth in real GDP by less than

0.05 percentage points a year, although the effect on growth is not smooth over the period; increased growth during the 1990s is followed by more variable effects on growth since 2000.

In the absence of supply and use balancing in 2007, the new method is being implemented in the National Accounts in a simplified way initially, in order to take on the expected revisions to levels and growth rates. This simplified implementation is possible because the new estimates of own-account software will change all three measures of GDP equally, as additions to production (value added), income (gross operating surplus) and expenditure (gross fixed capital formation), that is, the revision is balanced across the three measures of GDP. The implementation is straightforward for periods before 2005.

For more recent periods, the existing ONS methodology does not provide the basis for a balanced implementation. So for the quarters of 2005 onwards, the revised data will be incorporated into the expenditure and income measures of GDP (in gross fixed capital formation and gross operating surplus) but will not be automatically reflected in the production measure. This is because the quarterly production measure is constructed using volume indices which are aggregated based on industry weights obtained from the supply and use balance in the base year (now 2003). Since supply and use balancing using the revised data will not be done in 2007, the production weights will not take account of the revision. Although GDP growth in recent periods is based predominantly on the production measure, growth in the own-account software data will be used to inform the compilation and short-term balancing processes. As indicated above, analysis shows that, on average, the new method increases the annual growth in real GDP by less than 0.05 percentage points a year.

Box 2

Financial Intermediation Services Indirectly Measured (FISIM)

As well as charging customers directly for banking services, banks also generate service income by charging a higher rate of interest on loans than they pay on deposits. In the National Accounts, the resulting net interest receipts on lending and borrowing are treated as payment for Financial Intermediation Services Indirectly Measured (FISIM).

Currently, FISIM is not allocated to the industries or sectors that consume it, either as final or intermediate consumption. Instead, all consumption is treated as intermediate consumption of a notional industry and sector and hence does not add to GDP. ESA95, and a subsequent EU regulation, require that FISIM is allocated by consuming industry and sector or as final consumption.

The impact on the National Accounts will be that FISIM is no longer recorded entirely as intermediate consumption, but also as final consumption, for example household expenditure and exports, adding to GDP. There will also be revisions to the supply of FISIM, due to the incorporation of estimates for imports

and a revised method for the estimation of domestic output implemented by the Bank of England.

ONS published provisional estimates of the impact of the changed treatment of FISIM in March 2006, in an article released to accompany transmission of figures to the European Commission (Tily and Jenkinson, 2006). The article showed that, on average, the change added 1.6 per cent to the level of GDP at current prices.

It had previously been planned to incorporate these changes into the National Accounts in *Blue Book 2007*, but this change has been postponed to *Blue Book 2008*. However, in order to give users a guide to the potential effects on GDP, a new quarterly experimental release was introduced in March 2007. This shows the impact of FISIM on the quarterly level of 'money' or nominal GDP. A further article will provide more detail on the methodology, an update and analysis of the results, and an assessment of the impact on GDP in both nominal and real terms. This will be published in the May issue of *Economic & Labour Market Review*.

('money' GDP) and GDP in volume terms, examines revisions made at previous *Blue Books* for the year benchmarked for the first time, for instance 2004 in *Blue Book 2006*. The revisions to annual growth shown will also include methodological changes included at the same time.

This is unlike the regular ONS revisions analysis (see Obuwa and Robinson, 2006), which for any one year looks at cumulative revisions as a result of successive *Blue Books*. Here, the concern is with the effect of postponing taking on annual benchmark data for one year.

The level of 'money' GDP is nearly always revised up but, since the revisions often go back a number of years, the percentage revisions to annual growth are smaller than to the level. The average revision to annual volume or real growth is between 0.1 and 0.2 percentage points.

Impact of revisions on *Blue Book 2008*

The analysis indicates that the delayed incorporation of benchmark revisions for 2005 to *Blue Book 2008* is likely to lead to larger revisions in 2008 when benchmark data are incorporated for 2005 and 2006 and the FISIM changes are introduced. This will be alongside the wide range of methodological changes that are planned to be implemented as part of the modernisation of the UK National Accounts. The most significant areas of change are likely to be from:

- balancing of supply and use tables at current and previous years' prices
- the review of deflators and price indices to be used in the new supply and use tables
- using supply and use tables to inform quarterly GDP estimates
- the review of methods in the UK National Accounts not covered by the above changes

It is not yet known what the effect of these changes will be in terms of GDP levels or growth rates.

The new GDP supply and use system will be applied to periods from 1997, with many new methods being incorporated. There is a likelihood that GDP growth rates could be significantly revised after this point. It is unlikely that GDP growth rates will be significantly affected in earlier periods. Over the next year, as the project progresses, it is intended to publish a series of analytical articles giving further evidence on the effects of modernisation, including indications of possible revisions in *Blue Book 2008*.

Developments beyond 2008

The development of systems and national accounts methods will continue beyond 2008. Only systems that support the new supply and use framework and sector and financial accounts will be developed for *Blue Book 2008*. Major developments of systems underpinning the detailed

GDP components will not be completed before 2010. This will be accompanied simultaneously by a review of detailed compilation methods. These include:

- a major review of the transactions underpinning the sector and financial accounts which has just started
- service sector statistics used within the production measure of GDP which will continue to be developed

The expectation is that methodological development of the UK National Accounts will be a continual process aiming to meet the constant evolution of the UK economy.

ACKNOWLEDGEMENTS

This article would not have been possible without contributions from many ONS colleagues.

CONTACT

✉ elmr@ons.gsi.gov.uk

REFERENCES

- Ahmad N (2003): Measuring investment in software. STI working paper, OECD.
- Chamberlin G and Chesson A (2006) 'Survey-based measures of software investment in the UK', *Economic Trends* 627, pp 61–72 and at www.statistics.gov.uk/CCI/article.asp?ID=1401
- Humphries S (2006) 'Revisions planned for the 2006 annual Blue Book, Pink Book and Input-Output Analyses', *Economic Trends* 629, pp 20–3 and at www.statistics.gov.uk/CCI/article.asp?ID=1476
- Kellaway M and Shanks H (2006) 'National Accounts Classification of London and Continental Railways (LCR)' at www.statistics.gov.uk/ccl/article.asp?id=1409
- Mahajan S (2006) 'Development, Compilation and Use of Input-Output Supply and Use tables in the UK National Accounts', *Economic Trends* 634, pp 28–46 and at www.statistics.gov.uk/ccl/article.asp?ID=1611
- Obuwa D and Robinson H (2006) 'Revisions to quarterly GDP growth and its components', *Economic Trends* 637, pp 28–39 and at www.statistics.gov.uk/ccl/article.asp?ID=1694
- Powell M (2002) 'A report on current and planned work on Constant Price Input-Output Supply-Use balances', *Economic Trends* 578, pp 39–40 and at www.statistics.gov.uk/CCI/article.asp?ID=137

Table 1

Revisions made at previous *Blue Books*

<i>Blue Book</i> (year)	New benchmark (year)	Revisions to 'money' GDP (£ million)	Revisions to annual level of 'money' GDP (per cent)	Revisions to annual growth in 'money' GDP (per cent)	Revisions to annual volume growth of GDP (per cent)
1994	1992	956	0.2	-0.1	-
1995	1993	684	0.1	0.1	0.1
1996	1994	-611	-0.1	-0.2	0.1
1997	1995	3,266	0.5	0.3	0.2
1998	1996	12,301	1.6	0.5	0.4
1999	1997	1,917	0.2	0.2	0.0
2000	1998	7,929	0.9	0.7	0.4
2001	1999	10,163	1.1	0.2	-0.2
2002	2000	7,003	0.7	0.6	0.0
2003	2001	6,023	0.6	0.5	0.0
2004	2002	200	0.0	0.0	0.2
2005	2003	6,023	0.5	0.2	0.3
2006	2004	12,088	1.0	0.7	0.2
Average		5,226	0.6	0.3	0.15

Tily G and Jenkinson G (2006) 'Recording payments for banking services in the UK National Accounts' at www.eustatistics.gov.uk/cci/article.asp?id=1461

Tuke A and Aldin V (2004) 'Reviewing the methods and approaches of the UK National Accounts', *Economic Trends* 602, pp 47–57 and at www.statistics.gov.uk/CCI/article.asp?ID=690