

Assessment of compliance with the Code of Practice for Official Statistics

Short-Term Economic Output Indicators: Preliminary Estimate of GDP, and Indices of Production and Services

(produced by the Office for National Statistics)

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About the UK Statistics Authority

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

Contact us

Tel: 0845 604 1857

Email: authority.enquiries@statistics.gsi.gov.uk

Website: www.statisticsauthority.gov.uk

UK Statistics Authority
1 Drummond Gate
London
SW1V 2QQ

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ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, while the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, reports may point to such questions if the Authority believes that further research would be desirable.

Assessment reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

- i. factual evidence and assurances by senior statisticians in the producer body;
- ii. the views of users who we contact, or who contact us, and;
- iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*.

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Statement by the Head of Assessment on the Short-Term Economic Output Indicators Re-assessments

The short-term economic output indicators are among the most important, high profile statistics produced by the Office for National Statistics (ONS), providing some of the earliest signals about the health and momentum of the UK economy, including consumer and business confidence. They inform decisions that affect the daily lives of everyone in the UK, such as interest rates. They are used by a wide range of organisations and people for making and monitoring economic policy, and for informing day-to-day and strategic decisions. This Assessment report is one of a suite of three reports covering five different, related indicators.

Overall, the report finds that ONS complies with much of the Code of Practice for Official Statistics. Users who engaged with the Assessment team as part of this assessment reported that the statistics largely meet their needs. ONS produces and publishes the statistics in a timely way, to a pre-announced timetable, and engages effectively with the key institutional users of the statistics. But it is wrong to focus just on these well-known institutions, like the Bank of England and the Office for Budget Responsibility. More than most sets of statistics, this package of outputs speaks to a very wide range of audiences for a wide range of uses, from guiding business decisions to acting as a general barometer of the economy.

In light of this enormous public significance, the range of Requirements included within this report reflects the fact that ONS is not doing all that it can to extract maximum value from the statistics. Many of the requirements relate to ONS communicating more effectively about some aspect of the statistics, or the processes involved in producing them. ONS does not consistently produce an adequate narrative to explain what the statistics mean, and could enhance their utility by giving more prominent reference to the material in the separate analytical documents that it produces, which draw together overall messages from a range of economic statistics (including those on the labour market). And while ONS has undertaken work to understand and measure the quality of the statistics, we agree with users that ONS needs to present information about uncertainty more clearly and more prominently.

Overall, these issues might reflect a situation within this pressurised area of ONS where the scope for highly skilled professional analysts to be able to stand back from the detail of the production process could be improved. Being able to step back would allow those experts to be able to undertake more activities that have potential to add significant public value to these statistics.

Ed Humpherson
Head of Assessment, UK Statistics Authority

1 Summary of findings

1.1 Introduction

1.1.1 This is one of a series of reports¹ prepared under the provisions of the *Statistics and Registration Service Act 2007*². The Act gives the Statistics Authority power to re-assess whether the *Code of Practice for Official Statistics*³ continues to be complied with in relation to official statistics already designated as National Statistics. The report covers the following short-term economic indicators produced by the Office for National Statistics (ONS) and reported in:

- *Gross Domestic Product: Preliminary Estimate*⁴ (GDP)
- *Index of Production*⁵ (IoP)
- *Index of Services*⁶ (IoS)

1.1.2 This report forms part of a broader assessment of short-term economic output indicators produced by ONS. Assessment reports 279 and 280 examine Retail Sales statistics and Construction Outputs and New Orders.

1.1.3 The previous assessments of IoP and IoS statistics were reported in Assessment report 81, published in January 2011. The GDP preliminary estimates were assessed in Assessment report 100, published in March 2011⁷. Each of these sets of statistics has been re-assessed as part of the Statistics Authority's ongoing programme of re-assessment.

1.1.4 This report was prepared by the Authority's Assessment team, and approved by the Assessment Committee on behalf of the Board of the Statistics Authority, based on the advice of the Head of Assessment.

1.2 Decision concerning designation as National Statistics

1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Statistics Authority confirms that the statistics listed in paragraph 1.1.1 are designated as National Statistics, subject to ONS implementing the Requirements listed in section 1.5 and reporting them to the Authority by June 2014.

1.2.2 ONS has informed the Assessment team that it has started to implement the Requirements listed in section 1.5. The Statistics Authority welcomes this.

¹ <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

² http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf

³ <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

⁴ <http://www.ons.gov.uk/ons/rel/gva/gross-domestic-product--preliminary-estimate/index.html>

⁵ <http://www.ons.gov.uk/ons/rel/iop/index-of-production/index.html>

⁶ <http://www.ons.gov.uk/ons/rel/ios/index-of-services/index.html>

⁷ <http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/index.html>

1.3 Summary of strengths and weaknesses

- 1.3.1 ONS engages effectively with the key stakeholders for the GDP(O), IoP and IoS statistics but does not engage sufficiently with other users, such as, employer organisations and trade associations. Users told us that they were generally satisfied with the quality of the statistics and the decisions made by ONS on the trade-off between accuracy and timeliness.
- 1.3.2 ONS publishes *GDP*, *IoP* and *IoS* with a summary of the latest indicators in each of the statistical reports, ONS has published information about special factors (such as the Golden Jubilee) that have impacted upon the statistics, which were valued by users. However, ONS does not provide sufficiently clear and prominent guidance about the degree of uncertainty associated with the estimates, particularly regarding the preliminary GDP estimate. And the commentary tends not to be straightforward or insightful and often simply repeats the numbers in the summary tables.
- 1.3.3 ONS does not always make clear to users the rationale for methodological choices, and the information presented about methods and quality has not kept pace with developments to the statistics. However, ONS's continuous improvement programme provides a good framework for improving all aspects of these statistics, and in particular, for sharing good practice.
- 1.3.4 Some common themes have emerged from assessing all of the short-term economic output indicators at the same time. These include the need to communicate better the uncertainty associated with early estimates to avoid inadvertent misuse of the statistics; the need to present the short-term economic output indicators more coherently on ONS's website to aid interpretation; and the need to improve the way that data are made available to better support analysis and re-use. At the same time, it is clear that ONS is making continuing efforts to engage more effectively with users and to provide a better narrative around the statistics.

1.4 Detailed recommendations

- 1.4.1 The Assessment team identified some areas where it felt that ONS could improve the production and presentation of statistics on GDP, IoP and IoS. Those which are essential for ONS to address in order to strengthen its compliance with the *Code* and to enable designation as National Statistics are listed – as Requirements – in section 1.5, alongside a short summary of the key findings that led to each Requirement being made. Other recommended changes, which the Assessment team considers would improve the statistics and the service provided to users but which are not formally required for their designation as National Statistics, are listed – as Suggestions – in section 1.6.

1.5 Requirements for designation as National Statistics

- 1.5.1 This section includes those improvements that ONS is required to make in respect of its statistics on GDP, IoP and IoS in order to fully comply with the *Code of Practice for Official Statistics*, and to enable designation as National Statistics.

Finding	Requirement	
<p><i>GDP, IoP and IoS</i> provide insufficient information about the uses made of the statistics and ONS does not sufficiently engage users outside the main stakeholder group. ONS should:</p>	1	<p>(a) Take further steps to develop a greater understanding of the use made of the GDP(O), IoP and IoS statistics by users such as trade associations, employer organisations and representative bodies of key users including the financial services sector; (b) document more fully the types of decision they inform; and (c) update the published information about users' experiences of the statistics (para 3.3).</p>
<p>Revisions are of crucial interest to users. Yet ONS does not make the scale of change sufficiently clear. ONS should:</p>	2	<p>Improve the explanation of the nature of and scale of revisions alongside the statistics and improve the signposting to the GDP revisions analysis (para 3.6).</p>
<p>It is essential that users are confident that these statistics are produced with integrity. The purpose and content of ONS's regular meetings with HMT, the Bank of England, OBR and BIS are unclear. ONS should:</p>	3	<p>(a) Publish terms of reference for the short-term economic output indicators and quarterly National Accounts review meetings; (b) make the date of publication of any minutes transparent; and (c) document how those who produce the statistics are protected from any political pressures that might influence the production or presentation of the statistics (para 3.7).</p>
<p>The supporting quality information accompanying the GDP(O), IoP and IoS statistics is out of date; however, ONS has published some helpful additional analyses that could help explain the uncertainty associated with the statistics. ONS should:</p>	4	<p>Update the published user guides and information about methods and quality to reflect the latest developments in the GDP(O), IoP and IoS indicators, and provide better information about the strengths and limitations of the statistics (para 3.9).</p>
	5	<p>(a) Discuss with users the type of information they require about the quality and uncertainty of the estimates; (b) review the feasibility of updating the IoP standard errors; and (c) update the continuous improvement plans for the short-term economic output indicators using the feedback from users (para 3.10).</p>
<p>17 of the component industry statistics included in the Index of Services are</p>	6	<p>Give users an indication of the timescale for completing the industry reviews for all the remaining experimental statistics (para 3.12).</p>

<p>experimental. IOS was launched as an experimental statistic in 2001, so some statistics have been experimental for over a decade. Given the long-standing status of some of the data, ONS should:</p>		
<p>It is important that users can compare available relevant statistics for other countries when interpreting the UK position. ONS should:</p>	7	<p>Provide users with links to equivalent statistics for other countries where available (para 3.13).</p>
<p>Every third month, ONS includes additional employment questions in its survey, and this reduces response rates. ONS should:</p>	8	<p>Investigate the impact of lower response rates on the short-term economic output indicators and if significant, establish whether there are any improvements that might be introduced to improve the response rates in those months when employment questions are asked, and publish its plans (para 3.16).</p>
<p>These are among the most important statistics that ONS produces. But there is a risk that staff turnover affects ONS's ability to produce high quality outputs. ONS should:</p>	9	<p>Present evidence that its recruitment and retention arrangements ensure that appropriately skilled people are employed and retained in the production of the short-term economic output indicators, and are based on an appropriate competence framework (para 3.18).</p>
<p>Despite improvements to the presentation of these statistical outputs, ONS does not provide an adequate narrative to explain what the statistics mean. ONS should:</p>	10	<p>Further improve the clarity of the commentary in <i>GDP</i>, <i>IoP</i> and <i>IoS</i>, to aid user interpretation of the statistics, by: using straightforward language to describe the main concepts; clearly describing the main patterns in the statistics; and improving the consistency of presentation across each of the reports, as well as on its website, and drawing on material from other relevant reports. As part of meeting this Requirement ONS should consider the points</p>

		detailed in annex 1 and annex 2 (para 3.20).
ONS has long recognised the need to improve its website; however, more can be done to ensure that the access to related statistics is straightforward for users. ONS should:	11	Improve the accessibility of <i>GDP</i> , <i>IoP</i> and <i>IoS</i> through its website, making it clear to users how the different statistical reports relate to each other, to the other short-term economic output indicators, and to the other estimates of GDP (para 3.21).
For many users in the financial sector ready access to underlying figures is an essential part of their use of the statistics; however, this re-use is limited by poor table design. ONS should:	12	Review the presentation of the supplementary data tables for <i>IoP</i> and <i>IoS</i> , in consultation with users, to ensure that they are in forms that enable and encourage analysis and re-use (para 3.22).
ONS's published Statement of Administrative Sources is not complete. ONS should:	13	Ensure that all the administrative data sources used in the production of <i>IoS</i> are listed in its Statement of Administrative Sources, and publish information about the quality audit arrangements for these sources (para 3.26).

1.6 Suggestions for extracting maximum value from the statistics

1.6.1 This section includes some suggestions for improvement to ONS's statistics on GDP, *IoP* and *IoS*, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

1	ONS might usefully consider a range of means of identifying and engaging users, drawing on examples of good practice from within ONS and the wider Government Statistical Service (para 3.3).
2	ONS could help users of <i>GDP</i> , <i>IoP</i> and <i>IoS</i> by making the <i>National Accounts Five-Year Plan</i> and any updates on progress more easily accessible (para 3.3).
3	ONS might aid users' interpretation of these statistics by including a description of how the GDP(O) and <i>IoS</i> indicators in the UK are

	changing in comparison with other countries (para 3.13).
4	ONS could aid users' understanding of any limitations on the utility of the statistics by publishing clear links in <i>GDP</i> , <i>IoP</i> and <i>IoS</i> to its disclosure control policy (para 3.14).
5	ONS might find the Authority's Statement <i>Administrative Data and Official Statistics</i> useful in establishing appropriate quality audit arrangements (para 3.26).

2 Subject of the assessment

2.1 The UK Annual and Quarterly National Accounts (National Accounts) are produced using an accounting framework that provides a systematic and detailed statistical description of the UK economy. The accounting framework currently adopts the concepts and definitions in the *European system of national and regional accounts 1995*⁸ (ESA95), which is the European Union equivalent of the United Nations' *System of National Accounts 1993*⁹ (1993 SNA). Work is currently underway to publish the National Accounts consistent with the *European System of Accounts 2010*¹⁰ (ESA 2010) during 2014. The Accounts contain the elements required to compile aggregate measures, such as gross domestic product (GDP). ONS's short-term economic output indicators are a suite of statistics published in five statistical reports as indicators of short-term changes in economic activity:

- *Gross Domestic Product: Preliminary Estimate (GDP)*
- *Index of Production (IoP)*
- *Index of Services (IoS)*
- *Retail Sales*
- *Construction Output and New Orders (Construction)*

This Assessment report assesses the compliance with the *Code* of the first three sets of statistics. Assessment reports 279 and 280 review *Retail Sales*, and *Construction and New Orders*, respectively. The National Accounts¹¹ are currently being re-assessed separately.

2.2 GDP is the measure of all the activity in the UK economy in a particular period and is estimated in three different ways, based on the availability of different data sources. ONS publishes its first (or preliminary) estimate using the output approach (GDP(O)) in the first month after the reference quarter; this is published in *GDP*. A second estimate is produced in month two with fuller output information as well as some aggregate income and expenditure data. A further estimate is produced a month later in *Quarterly National Accounts (QNA)*, using detailed information on income and expenditure. There are potential subsequent revisions in QNA as later data become available, as well as in the annual National Accounts published in the Blue Book.

2.3 *IoP* and *IoS* present the monthly changes in the volume of output of the UK production and service industries, accounting for around 15 and 78 per cent, respectively, of output from the UK economy. (The remainder of the UK economy comprises the construction and agriculture industries.) ONS uses retail sales data in its compilation of the retail component of the *IoS*. ONS uses *IoP* and *IoS* (as well as construction output statistics) as components of GDP(O) and they contribute, in turn, to the National Accounts. ONS publishes *IoP* each month around 26 working days after the end of the reference month.

⁸ http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:ESA95

⁹ <http://unstats.un.org/unsd/nationalaccount/sna1993.asp>

¹⁰ http://epp.eurostat.ec.europa.eu/portal/page/portal/esa_2010/introduction

¹¹ The first assessment of the UK Annual and Quarterly National Accounts was published in Assessment report100: <http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/index.html>

It publishes *IoS* around eight weeks after the end of the reference month. *GDP* is timed to be released alongside *IoS*. The figures in the two reports are concurrent; however, *GDP* relates to the whole of the previous quarter (for example, Q4 2013), while *IoS* gives monthly figures up to the middle month of the equivalent quarter (November, in this example).

- 2.4 The short-term economic output indicators are used by the government, the Bank of England and a wide range of private sector organisations. Government departments use the statistics to provide an evidence base for future policy development and to monitor the impact of policy and progress towards government targets. Officials in the Bank of England use the statistics to inform advice they give to various policy committees, most notably their Monetary Policy and Financial Policy Committees¹². The Office for Budget Responsibility (OBR) produces a five-year economic forecast twice yearly in its *Economic and fiscal outlook*¹³. As part of this, OBR forecasts *GDP* and takes on the latest available estimates at that time¹⁴.
- 2.5 Macro-economists in the private sector have similar interests in monitoring the health of the economy, interpreting the main signals in the statistics and offering advice to their clients or colleagues – for example, commenting on the likelihood of changes to interest rates or decisions to slow down or speed up quantitative easing. The private sector uses the statistics to develop its own forecasts of consumer spending and industry growth to try to understand future pressures and demands. Industry users also use the statistics in combination with other data sources to look at long term trends and learn from how things played out retrospectively – for example, in relation to workforce trends and levels of investment. The statistics are also used for a wide range of other purposes including: informing tender prices; estimating market values; benchmarking industry performance with the UK economy and internationally; examining the relative importance of different industries over time; briefing the media; and supporting education and training.
- 2.6 Individual indices of the *IoP* are obtained from two main types of source data:
- output measured in turnover sales, which comes from ONS's Monthly Business Survey (Production and Services)¹⁵ (MBS)
 - output measured in physical units, such as tonnes of coal or cubic metres of gas, which are provided by other government departments.
- The *IoS* also uses turnover sales data from the MBS, but draws on a wider range of other data sources, including the use of direct volume measures and various proxies for output, such as employment numbers. The data sources include other ONS surveys and information provided by other government departments, trade bodies and private sector businesses.
- 2.7 Supplementary monthly results from the MBS are published in an additional output *Turnover and Orders in Production and Services Industries*¹⁶

¹² <http://www.bankofengland.co.uk/Pages/home.aspx>

¹³ <http://budgetresponsibility.org.uk/economic-fiscal-outlook-december-2013/>

¹⁴ <http://budgetresponsibility.org.uk/pubs/Forecasting-the-economy.pdf>

¹⁵ [http://www.ons.gov.uk/ons/about-ons/get-involved/taking-part-in-a-survey/information-for-](http://www.ons.gov.uk/ons/about-ons/get-involved/taking-part-in-a-survey/information-for-businesses/a-to-z-of-business-surveys/monthly-business-survey--production-and-services-/index.html)

[businesses/a-to-z-of-business-surveys/monthly-business-survey--production-and-services-/index.html](http://www.ons.gov.uk/ons/about-ons/get-involved/taking-part-in-a-survey/information-for-businesses/a-to-z-of-business-surveys/monthly-business-survey--production-and-services-/index.html)

¹⁶ <http://www.ons.gov.uk/ons/rel/iop/turnover-orders--prod/september-2013/tsd-topsi-sep-2013.html>

(TOPSI). TOPSI is an official statistics publication. It comprises tables of turnover and orders in current prices, not seasonally adjusted, and does not include any commentary. It is not within the scope of this assessment as ONS has no plans to seek National Statistics designation at this time.

- 2.8 European Regulation (EC) 1165/98 and subsequent amendments¹⁷ require the collection of short-term statistics (STS) by EU Member States. ONS told us that it complies fully with this STS regulation with respect to IoP. There is currently no regulatory requirement to provide IoS data to Eurostat¹⁸ but ONS told us that it submits the data on a voluntary basis. From September 2014, the UK has to produce its National Accounts according to the concepts and definitions of *ESA 2010*, which is equivalent to the *System of National Accounts 2008*¹⁹ (2008 SNA). Eurostat is also leading an initiative, *Framework Regulation Integrating Business Statistics*²⁰ that aims to streamline and rationalise the reference framework for European business statistics and reduce unnecessary statistical burden on respondents. The resulting changes to regulations will impact on the short-term economic output indicators no earlier than 2016.
- 2.9 ONS consulted²¹ on its *National Accounts and Related Statistics Work Plan for 2013/14 to 2017/18*²² (*National Accounts Five-Year Plan*) from 31 May to 31 July 2013. The *National Accounts Five-Year Plan* includes in its scope all of the short-term economic output indicators and outlines the work programme to be able to deliver on related European Regulations, including providing details of derogations²³ that it has sought from Eurostat. ONS also began a National Statistics Quality Review²⁴ of the National Accounts and related products in September 2013. The review is due to report later in Spring 2014. ONS advised that the short-term economic output indicators are not the central focus of this review, and so we have not delayed this Assessment to consider its outcomes. However, the assessment of the National Accounts will consider the outcomes of the review and this may lead to requirements that impact the short-term economic output indicators, either directly or indirectly.
- 2.10 These short-term economic output indicators are published in HTML and PDF with the time series data tables published in Excel and CSV formats. This equates to a level three rating under the Five Star Scheme that forms part of the Open Standards Principles proposed in the *Open Data White Paper: Unleashing the Potential*²⁵ and adopted as government policy in November 2012²⁶. Five stars represents the highest star rating within the Scheme.

¹⁷ http://epp.eurostat.ec.europa.eu/portal/page/portal/short_term_business_statistics/legislation

¹⁸ <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

¹⁹ <http://unstats.un.org/unsd/nationalaccount/sna2008.asp>

²⁰ http://ec.europa.eu/governance/impact/planned_ia/docs/2012_estat_011_business_statistics_en.pdf

²¹ <http://www.ons.gov.uk/ons/about-ons/get-involved/consultations/consultations/national-accounts-and-related-statistics-work-plan/index.html>

²² <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/articles/2011-present/national-accounts-and-related-outputs-work-plan-2013-14---2017-18/index.html>

²³ Derogations are formal permissions to delay producing some of the detail required by ESA 2010 regulation

²⁴ <http://www.ons.gov.uk/ons/media-centre/statements/announcement-of-the-nsqr-on-the-national-accounts/index.html>

²⁵ http://data.gov.uk/sites/default/files/Open_data_White_Paper.pdf

²⁶ <https://www.gov.uk/government/publications/open-standards-principles/open-standards-principles>

2.11 ONS told us that the staff costs to produce *GDP*, *IoP* and *IoS* are around £730,000 a year. The cost of running the MBS, which is used to produce these statistics, is around £1.1 million a year.

3 Assessment findings

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

Requirements from previous Assessment report 81 (January 2011) – IoP/IoS:

- Take steps to develop a greater understanding of the use made of these statistics; publish the relevant information and assumptions and use them to better support the use of the statistics.

Requirements from previous Assessment report 100 (March 2011) – GDP(O):

- Document the wider uses of the National Accounts, and take steps to engage further with a broader range of users
- Publish information about users' experiences of the National Accounts, including details of whether the data quality and the format and timing of reports meet their needs

- 3.1 ONS engages regularly with the Bank of England, Department for Business, Innovation and Skills (BIS), HM Treasury, and OBR about their use of these statistics – for example, through meetings of the Short-term Output Indicators Stakeholder Group²⁷ and regular Reviews of Quarterly National Accounts²⁸. As part of its key accounts strategy, ONS also invites these users (and other government departments) to comment on its performance at the end of each year. During the user survey for this Assessment (see Annex 2), users who are members of these different groups told us that they welcome these opportunities for a regular dialogue with ONS.
- 3.2 ONS has been making efforts to engage with a wider range of users – for example, hosting a GDP(O) Users Seminar²⁹, holding a question and answer session on Twitter and running consultations about a range of planned developments³⁰. However, despite promoting these activities in the statistical reports, on StatsUserNet³¹ and via email to large numbers of known users, ONS acknowledges that it has generally experienced a limited response; nine people attended the information seminar and ONS received only five responses to its consultation³² about its *National Accounts Five-Year Plan*³³ launched in

²⁷ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/presentations-and-meeting-papers/short-term-output-indicators-stakeholder-group/index.html>

²⁸ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/presentations-and-meeting-papers/meeting-papers/index.html>

²⁹ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/presentations-and-meeting-papers/gdpo-users-seminar/index.html>

³⁰ <http://www.ons.gov.uk/ons/about-ons/get-involved/consultations/index.html>

³¹ <http://www.statsusernet.org.uk/StatsUserNet/Home>

³² See footnote 22

³³ See footnote 23

May 2013. The information published by ONS in the statistical reports and associated quality reports about the users and uses of the short-term economic output indicators echoes these difficulties. The focus is mainly on the use of the statistics by those listed in paragraph 3.1, informed by the outcomes of user events and surveys carried out during 2011 to capture users' experiences of the statistics³⁴ carried out following the first assessment of National Accounts.

- 3.3 The *National Accounts Five-Year Plan* states that by 2014, in addition to providing a programme of articles and seminars, ONS will support a user forum for the short-term economic output indicators that promotes discussions with non-government users. In its response to the consultation about the plan, ONS says that it will work with the Royal Statistical Society's Financial and Economic Statistics User Group³⁵ and other users to further develop its approach to user engagement. ONS also told us that a new ONS Economic Forum will meet for the first time in April 2014. As part of the designation as National Statistics, ONS should (a) take further steps to develop a greater understanding of the use made of the GDP(O), IoP and IoS statistics by users such as trade associations, employer organisations and representative bodies of key users including the financial services sector; (b) document more fully the types of decision they inform; and (c) update the published information about users' experiences of the statistics³⁶ (Requirement 1). We suggest that in meeting this requirement, ONS might usefully consider a range of means of identifying and engaging users, drawing on examples of good practice from within ONS and the wider Government Statistical Service. We further suggest that ONS could help users of the GDP, IoP and IoS statistics by making the *National Accounts Five-Year Plan* and any updates on progress more easily accessible.

³⁴ <http://www.ons.gov.uk/ons/about-ons/get-involved/consultations/user-surveys/index.html>

³⁵ <http://www.rss.org.uk/site/cms/contentviewarticle.asp?article=1047>

³⁶ In relation to Principle 1, Practices 1, 2 and 5 of the *Code of Practice*

Principle 2: Impartiality and objectivity

Official statistics, and information about statistical processes, should be managed impartially and objectively.

Requirements from previous Assessment report 100 (March 2011) – GDPO:

- Announce planned changes to methods or classifications for National Accounts more prominently

- 3.4 ONS publishes these statistics in an orderly and timely manner on its website, free of charge to users. The statistics are presented impartially and objectively.
- 3.5 ONS generally alerts users to planned changes to methods or classifications in the background notes to its statistical reports in advance of publishing the changed statistics. It also publishes detailed articles and reports explaining the changes in, for example, *IoS Industry Reviews*³⁷ and *Blue Book 2011: Improvements to GDP(O), IoS and IoP*³⁸.
- 3.6 ONS regards revisions as an inevitable consequence of publishing timely estimates of GDP as they are necessarily based on partial information, since full information is not available for a number of years. ONS manages revisions to the statistics in *GDP*, *IoP* and *IoS* in line with the National Accounts revisions policy³⁹. However, explanations provided in the statistical reports need improving in the following ways:
- ONS publishes revisions tables in the statistical reports and Excel tables including revisions triangles⁴⁰, tests for the statistical significance of the average revisions, and information about the typical size of revisions users might expect – for example, between the preliminary and third estimates of the change in GDP. (Between Q1 2007 and Q3 2013 this average revision was -0.01 percentage points, while the absolute average revision was 0.12 percentage points⁴¹). ONS also maintains a database of real time GDP back to 1955⁴². However, information about how to interpret these different analyses is not always clear and some of the metadata in the Excel spreadsheets is limited. The spreadsheets do not signpost users to other explanatory information, although the IoS tables do provide contact details for users with queries.

³⁷ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/index-of-services/future-improvements/industry-reviews/index.html>

³⁸ <http://www.ons.gov.uk/ons/rel/naa2/second-estimate-of-gdp/q2-2011/art--bb11-improvements-to-gdp--ios--iop.html>

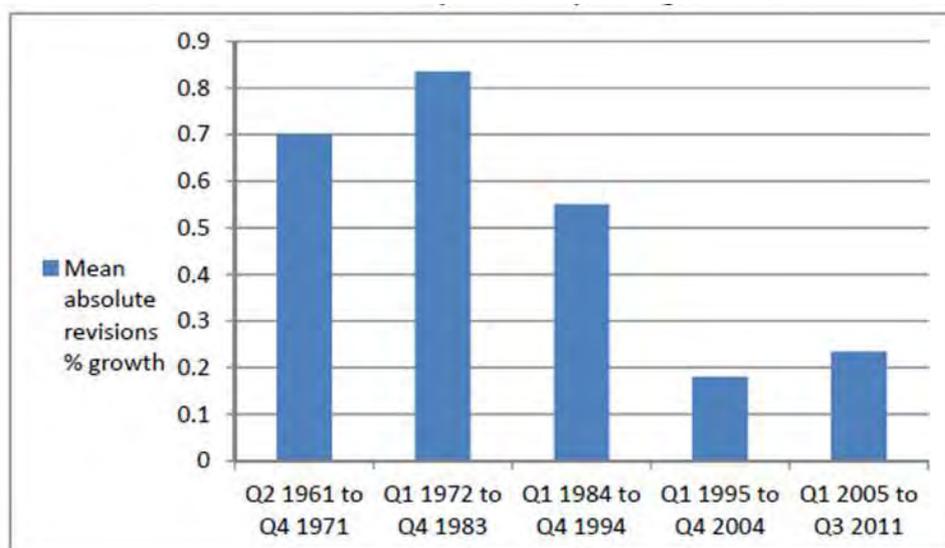
³⁹ <http://www.ons.gov.uk/ons/guide-method/revisions/revisions-policies-by-theme/economy/national-accounts-revisions-policy.pdf>

⁴⁰ Revisions triangles track revisions over time

⁴¹ <http://www.ons.gov.uk/ons/rel/naa1-rd/national-accounts-articles/revisions-to-gdp-and-components/index.html>

⁴² <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/gdp-revisions-triangles-and-real-time-database/index.html>

- ONS provides a detailed explanation about the nature and scale of revisions in supporting articles⁴³ but the explanation alongside the statistics, and the signposting to further information, are not sufficiently clear to help users understand the likely change in the estimates or the degree of uncertainty. The reports each present a summary of the revisions in a table in the background notes, highlighting whether the changes are statistically significant; however, the accompanying text does not clearly explain the results or set out the implications for the use of the indicators.
- While users responding to this Assessment voiced some frustration with the number of revisions to published statistics and some wanted more information about the nature of the revisions, the overall view was that ONS strikes an appropriate balance between timeliness and accuracy. A number of commentators⁴⁴ have highlighted that the GDP growth rate between Q1 and Q2 2008 was initially estimated as 0.2 per cent, and then revised to 0.0 per cent in the QNA release but subsequently substantially revised – to -0.9 per cent (as given in the January 2014 revisions article). ONS emphasises the degree of change between the first and third GDP estimates in *GDP* but does not draw sufficient attention to the absolute change in GDP revisions over the longer period, such as after 24 months, alongside the statistics. The chart below (from the January 2014 revisions article) shows this mean absolute revision to quarterly GDP growth in different time periods from 1961-1971 through to 2005-2011. It illustrates that the scale of absolute revision between the preliminary GDP growth estimate and after 24 months was around 0.2 percentage points from 1995, and increased slightly over recent the period of economic recession and recovery, but has remained substantially lower than in the earlier time periods.



- ONS has cautioned that while its long term plan to develop the ‘third estimate’ of GDP in the Quarterly National Accounts using supply-use tables balanced in both current and constant prices should reduce late revisions to GDP, it may increase revisions between the preliminary and

⁴³ See footnote 42

⁴⁴ <http://www.significancemagazine.org/details/webexclusive/2101119/GDP-to-be-revised-again.html>
<http://www.bbc.co.uk/news/business-17854550>

third estimates. As a consequence, we consider that the need for clear information about the uncertainty of the GDP estimates will become increasingly important.

As part of the designation as National Statistics, ONS should improve the explanation of the nature of and scale of revisions alongside the GDP(O), IoP and IoS statistics; and improve the signposting to the revisions analysis⁴⁵ (Requirement 2).

⁴⁵ In relation to Principle 2, Practice 6 and Principle 4, Practice 2 of the *Code of Practice*

Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

- 3.7 No incidents of political pressures, abuses of trust or complaints relating to professional integrity, quality or standards were reported to the Assessment team. As noted in paragraph 3.1, ONS holds two quarterly meetings with HM Treasury, Bank of England, OBR and BIS – one about the short-term economic output indicators and one to review the quarterly National Accounts. ONS has published the minutes⁴⁶ for the meetings held in 2013 on its website. However, ONS does not publish any terms of reference for the groups and as the minutes are not dated, it is difficult to establish how quickly they are made available. Also, while the quarterly National Accounts review meetings are always held after the release of those statistics, there are no such restrictions on the timing of the short-term economic output indicators meetings. For example, the group met on 4 June to discuss Q1 2013, after the release of the second estimate of GDP on 23 May but before the quarterly National Accounts on 27 June. The minutes of the short-term economic output indicators meetings illustrate that discussions do sometimes extend to the National Accounts. ONS assured us that there has never been political interference during those meetings. However, given the potential risk of the appearance of inappropriate influence by the key stakeholders on the estimates, ONS could do more to increase the transparency of the discussions and protect the independence of the statistics. As part of the designation as National Statistics, ONS should (a) publish terms of reference for the short-term economic output indicators and quarterly National Accounts review meetings; (b) make the date of publication of any minutes transparent; and (c) document how those who produce the statistics are protected from any political pressures that might influence the production or presentation of the statistics⁴⁷ (Requirement 3).
- 3.8 ONS statisticians and economists are involved in press briefings at the time of the release of the statistical reports. This ensures that statistical experts can comment publicly on statistical issues and minimises the risk of misinterpretation of the statistics.

⁴⁶ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/presentations-and-meeting-papers/index.html>

⁴⁷ In relation to Principle 3, Practice 2 of the *Code of Practice*

Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

Requirements from previous Assessment report 81 (January 2011) – IoP/IoS:

- Improve the accessibility of information on ONS’s website about the methods used to produce the Index of Production and publish more detailed information about these methods
- (a) Publish a plan to review the data sources and methods used to produce the experimental statistics components of the Index of Services to ensure that these components are produced to a level of quality that meets users’ needs;
(b) include in the plan, feasibility work to improve the methods for deflating turnover data for service industries. The feasibility plan should include examination of suitable data sources, methods and international guidance, taking account of the implications for National Accounts as a whole; and
(c) consult users about the plan

Requirements from previous Assessment report 100 (March 2011) – GDPO:

- Publish a plan to improve the accessibility and timeliness of the information that is provided to users about the methods used to produce the National Accounts
- Publish plans to provide more detailed information and explanation about the quality, including strengths and limitations, of the National Accounts, and invite feedback from users about whether this meets their needs

3.9 ONS publishes a range of information about the methods used to produce the GDP(O), IoP and IoS indicators and about the quality of these statistics including: Quality and Methodology Information documents (QMIs) and Summary Quality Reports (SQRs)⁴⁸; and user guides to the statistics. It also publishes ad hoc articles, reports and conference papers⁴⁹ explaining its methods; for example, on 1 November 2013 ONS published *The Challenges of Measuring the UK Service Sector*⁵⁰ which describes ONS’s history of measuring the UK service sector, and how it is seeking to meet the challenges of rebalancing its statistical systems to better reflect the sector’s importance.

⁴⁸ <http://www.ons.gov.uk/ons/guide-method/method-quality/quality/quality-information/economy/index.html>

⁴⁹ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/index.html>

⁵⁰ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/output-approach-to-gdp/engagement/the-challenges-of-measuring-the-uk-service-sector.pdf>

However, ONS has not updated all of the methods and quality documents and user guides to reflect the latest developments in the statistics; for example, IoP SQR was released in 2009 and refers to the (former) Monthly Production Inquiry. ONS published a QMI document for IoS in December 2013 which highlights the difficulty of measuring the accuracy of IoS due to the non-random nature of some of the industry data sources. It also has a link to information about the industry reviews and states that some 'components are experimental'; however, it does not make clear the implications for the quality of the IoS estimates of using the experimental data. Little information is presented about the strengths and limitations of the methods employed – for example, for seasonal adjustment and deflation. The Authority has launched a Monitoring Review⁵¹ to address the concern that the rationale for the choice of deflators in official statistics publications is often unclear, and more advice to users is needed. Also, the statistical reports do not always link to the latest information. Accessibility to the methods and quality information is discussed further under Principle 8. As part of the designation as National Statistics, ONS should update the published user guides and information about methods and quality to reflect the latest developments in the GDP(O), IoP and IoS indicators and provide better information about the strengths and limitations of the statistics⁵² (Requirement 4).

- 3.10 *GDP, IoP, and IoS* include statements that 'expectations of accuracy and reliability in early estimates are often too high'. In 2007, ONS published an article⁵³ that examined the accuracy of the IoP estimates based on an analysis of their sampling error. ONS told us that it is not feasible to produce standard errors for IoP on a monthly basis; however, considerable time has elapsed since the 2007 article and it would seem appropriate for this analysis to be updated to provide users with a current indication of the accuracy of the IoP indicators. ONS describes uncertainty associated with the indicators in terms of revisions (described in paragraph 3.6); however, these reflect the reliability of the estimates rather than their accuracy. ONS notes in the GDP(O) QMI that a 'value can be reliable (as in not revised) without being accurate'. The QMI also highlights that a fall in the response rates can affect the accuracy of the estimates. It also gives an indication of the amount of data that the preliminary, second and third estimates are based on (at 44 per cent, 83 per cent and 92 per cent, respectively, compared with the amount after one year). *GDP* does not explain the limitations of the revisions in describing the accuracy of the GDP estimates but does highlight the expected sample fraction of the final output estimate that GDP(O) is based on. The need for clearer guidance was highlighted by a number of users who told us that they felt that ONS could do more to measure and emphasise more prominently the degree of uncertainty associated with these estimates. In January 2014, ONS outlined some further investigations in its article, *Revisions to GDP and components*⁵⁴, including examining: the degree of uncertainty in the GDP estimates due to the supply of further data versus methods changes; international approaches to revisions;

⁵¹ <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/review-outlines/mr-outline-03-14.pdf>

⁵² In relation to Principle 4, Practices 1 and 2 of the *Code of Practice*

⁵³ <http://www.ons.gov.uk/ons/rel/elmr/economic-and-labour-market-review/no--8--august-2007/measures-of-accuracy-for-the-index-of-production.pdf>

⁵⁴ See footnote 42

and developing process maps in supporting the explanation of the revisions. As part of the designation as National Statistics, ONS should: (a) discuss with users the type of information they require about the quality and uncertainty of the estimates; (b) review the feasibility of updating the IoP standard errors; and (c) update the continuous improvement plans for the short-term economic output indicators using the feedback from users⁵⁵ (Requirement 5).

- 3.11 ONS applies standard quality assurance procedures each time the statistics are produced. These procedures are signed off annually by the head of the division responsible for the statistics following a 'walk-through' of the production process. ONS completed an annual quality review for IoP using a Quality, Methods and Harmonisation Tool⁵⁶ (QMHT) in order to provide additional assurance about the quality and methodology of these outputs. Based on the recommendations that the Assessment team saw, the QMHT supports the principles of the *Code*. However, the statistics team told us that it considers that the QMHT is yet not producing sufficiently 'intelligent' output to justify the resources required to input the necessary information and is not helping to inform its continuous improvement programme. ONS's Quality Centre manages the deployment of QMHT and told us that it would be conducting a user engagement exercise with the statistics teams in early 2014 to gauge fitness for purpose and inform improvements.
- 3.12 ONS classifies 17 of the component industry indices of the IoS as experimental statistics. Following a re-launch in March 2012, ONS published an article in August 2012 outlining a work programme of IoS industry reviews to examine the methods for calculating the output of the industry⁵⁷. The work programme prioritised the industries for review based on factors including their experimental status and adherence with international (Eurostat) guidelines. All of the ten highest priority industries identified were those for which the indices were experimental statistics. In November 2013⁵⁸, ONS updated users about progress against the work programme and said that it would shortly be consulting users about the recommendations from six of the reviews – it anticipates that the rolling review programme will have achieved coverage of 39 per cent of GDP(O) by summer 2014, with the remaining experimental industry data accounting for 13 per cent of GDP(O). However, while the Assessment team appreciates that ONS is progressing the work programme and keeping users regularly updated, IoS was first launched as an experimental statistic in 2001. Some users told us that they would like all the IoS industry statistics brought to a level of quality that will allow the experimental status to be removed. As part of the designation as National Statistics, ONS should give users an indication of the timescale for completing the industry reviews for all the remaining experimental statistics⁵⁹ (Requirement 6).
- 3.13 The *National Accounts Five-Year Plan* outlines how ONS complies with current European Regulations and how it will implement new regulatory requirements driven by international standards, most notably the introduction of the concepts

⁵⁵ In relation to Principle 1, Practice 5 and Principle 4, Practice 2 of the *Code of Practice*

⁵⁶ <http://www.ons.gov.uk/ons/guide-method/method-quality/quality/harmonisation/index.html>

⁵⁷ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/index-of-services/future-improvements/industry-reviews/index-of-services---industry-reviews-august-2012.pdf>

⁵⁸ <http://www.ons.gov.uk/ons/guide-method/method-quality/ons-statistical-continuous-improvement/continuous-improvement-of-gross-domestic-product--november-2013.doc>

⁵⁹ In relation to Principle 4, Practices 2 and 5 of the *Code of Practice*

and definitions in ESA10. *IoP* provides brief comparisons of the UK statistics with the EU and G7 countries; *IoS* and *GDP* do not provide international comparisons. None of the statistical reports provides links to equivalent international statistics. The supporting methods and quality information provide some further information about the international standards for the short-term economic output indicators and briefly discuss the comparability of the statistics with those from other countries. As part of the designation as National Statistics, ONS should provide users with links to equivalent statistics for other countries where available⁶⁰ (Requirement 7). We suggest that ONS might aid users' interpretation of these statistics by including a description of how the GDP(O) and IoS indicators in the UK are changing in comparison with other countries.

⁶⁰ In relation to Principle 4, Practice 6 of the *Code of Practice*

Principle 5: Confidentiality

Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.

- 3.14 ONS has assured us that it takes all necessary steps to protect the confidentiality of the data that it collects. ONS provides some information in the quality reports about how it protects confidentiality but it does not provide links to its disclosure control policy⁶¹. We suggest that ONS could aid users' understanding of any limitations on the utility of the statistics by publishing clear links in *GDP*, *IoP* and *IoS* to its disclosure control policy.
- 3.15 ONS exchanges confidential statistical records for statistical purposes with a small number of government departments, devolved administrations and Eurostat. Arrangements with Eurostat are governed by European regulation. ONS told us that the arrangements with the other bodies is the same for all the short-term economic output indicators – individual service level agreements are signed and reviewed annually and ONS uses secure electronic transfer methods to send the data.

⁶¹ <http://www.ons.gov.uk/ons/guide-method/best-practice/disclosure-control-policy-for-tables/index.html?format=contrast>

Principle 6: Proportionate burden

The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.

Requirements from previous Assessment report 100 (March 2011) – GDPO:

- Produce a plan for regular communication and consultation with suppliers of data for the National Accounts, which addresses the burden placed on suppliers and the availability of alternative data sources

3.16 ONS reports the costs of responding to statistical surveys in its annual compliance plans⁶²; the cost of compliance in 2011/12 was estimated at just under £3.5 million for the MBS. Once a quarter, additional employment questions are asked. The statistics team told us that this impacts upon response rates to the survey every third month – for example, the statistical team estimates the impact on the number of responses received for the survey that underpins another of the short-term economic output indicators, retail sales, is a fall of approximately two per cent. As part of the designation as National Statistics, ONS should investigate the impact of lower response rates on the short-term economic output indicators and if significant, establish what improvements it might introduce to improve the response rates in those months when employment questions are asked, and publish its plans⁶³ (Requirement 8).

⁶² <http://www.ons.gov.uk/ons/about-ons/get-involved/taking-part-in-a-survey/information-for-businesses/compliance-and-simplification-plans/index.html?format=contrast>

⁶³ In relation to Principle 6, Practice 1 of the *Code of Practice*

Principle 7: Resources

The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.

Requirements from previous Assessment report 81 (January 2011) – IoP/IoS:

- Demonstrate effective stewardship of resources allocated to these statistics, including how expenditure is monitored against work programmes

3.17 The short-term economic output indicators are produced by a number of small teams under the common leadership of a senior statistician, with the GDP(O), IoP and IoS indicators being produced by two small teams of 23 staff in total. The statistics team told us that ONS generally experiences a high risk of staff turnover across the teams producing the short-term economic output indicators, making it difficult to maintain a corporate memory, and that it struggles to recruit people with specialised skills needed. Our research indicated that there are a number of interacting factors at play:

- the transfer of National Accounts operations from London to Newport over a concentrated period of time means that a lot of people joined at the same time and so will potentially move on at the same time.
- High vacancy rates across National Accounts means that jobs are often offered on promotion, with those with the greatest experience naturally having the greatest chance of success and so moving between teams.
- ONS recruiting based on general statistical competences drawn from the general Civil Service Competency framework, rather than giving greater weight to testing the competences needed to acquire key skills used by a ‘national accountant’ such as seasonal adjustment; deflation; interpreting and assuring economic time series; and contextualising the statistics for users.

3.18 The first two factors might be considered a natural and unavoidable part of bedding in operations and should resolve themselves over time with sound management – ONS told us that it has put some policies in place including investing more resources in economic statistics and prioritising recruitment and limiting lateral moves away from identified priority teams. However, we are concerned that ‘national accountant’ is not viewed as a key profession within ONS and that recruitment does not focus more on the specialist skills set required. Also, whilst the statistics team told us that it has access to advice from economists in preparing commentary and briefing, and that these economists prove a good ‘sounding board’ for the statisticians, we consider that the statistics would benefit from having economists more embedded in the quality assurance process. While the Assessment team understands the challenges that ONS faces, these are some of the most important official statistics that ONS produces and as such we consider that it is of the highest priority that they should be sufficiently resourced by people with the appropriate skills. As part of designation as National Statistics, ONS should present

evidence that its recruitment and retention arrangements ensure that appropriately skilled people are employed and retained in the production of the short-term economic output indicators, and are based on an appropriate competence framework⁶⁴ (Requirement 9).

- 3.19 ONS told us that the division that produces the short-term economic output indicators prepares an annual business plan, and that the statistics team must report progress against the plan each year as part of ONS's stewardship reporting process.

⁶⁴ In relation to Principle 7, Practices 1 and 6 of the *Code of Practice*

Principle 8: Frankness and accessibility

Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.

Requirements from previous Assessment report 81 (January 2011) – IoP/IoS:

- Improve the commentary and analysis in *Index of Production* and *Index of Services* to aid user interpretation and understanding
- Review the use of headline estimates based on volatile monthly data

Requirements from previous Assessment report 100 (March 2011) – GDPO:

- Review the options for improving the way in which the National Accounts are disseminated on ONS's website to provide easier access for users
- Improve the commentary and analysis in the statistical releases for the National Accounts to aid user interpretation and understanding
- Review the content of the statistical bulletins for *Gross domestic product preliminary estimate*; *UK output, income and expenditure*; and *Quarterly National Accounts* to enhance their clarity and consistency

3.20 ONS has taken steps to make its economic indicators more understandable and accessible. In 2012 ONS introduced video summaries for *GDP* and started to publish regular additional pieces of narrative alongside the statistical reports to provide users with helpful insights in to specific aspects of the statistics. Examples include 'GDP and the Labour Market'⁶⁵. ONS economists have authored articles on the BBC online website⁶⁶ explaining GDP and the broad nature of changes – aimed at non-expert users – and each month prepare an overview article, *Economics Review*⁶⁷. They also give press briefings at the time of the publication of *GDP*, explaining the nature of the GDP growth rates. ONS has also made improvements to the commentary in each of the statistical reports in response to feedback received from a range of activities during 2012 and 2013 – for example, the Chair of the Authority, Sir Andrew Dilnot, led two workshops to review and improve ONS statistical reports including *GDP*; ONS ran focus groups with a range of users and established a Statistical Products Working Group; and ONS engaged with the National Statistician's Good Practice Team to have some of its outputs reviewed by an expert user panel. While the clarity of the key findings at the start of the statistical reports has been improved, further improvements are required:

- The detailed sections of the statistical reports do not clearly draw out the main messages, for example, the description of the production and sector

⁶⁵ <http://www.ons.gov.uk/ons/rel/elmr/gdp-and-the-labour-market/q4-2013--january-gdp-update/sum-jan-gdp.html>

⁶⁶ <http://www.bbc.co.uk/news/business-22277954>

⁶⁷ <http://www.ons.gov.uk/ons/rel/elmr/economic-review/february-2014/art-feb-er.html>

analysis of *IoP*. They also do not explain technical terms in a straightforward way,

- ONS does not draw on explanations given by its economists at the time of the publication within the commentary of the reports or to information from the additional available analyses such as in *Economics Review*.
- *GDP*, *IoP* and *IoS* have some stylistic differences that we consider ONS could usefully address to aid user interpretation.
- The title of *GDP* does not make clear that the figures presented in the statistical report are the change in GDP, rather than GDP itself. ONS presents the headline GDP growth rate on the 'Key Figures' section on the home page of its website – it incorrectly labels it 'Gross Domestic Product' when it is in fact the quarterly growth rate. This short-hand terminology has the potential to increase confusion among non-expert users in accessing and understanding the statistics.

ONS acknowledges that enhancements can be made to aid user interpretation – we welcome the steps taken to establish an editorial group to oversee the continuous improvement of the statistical reports for the short-term economic output indicators. As part of the designation as National Statistics, ONS should further improve the clarity of the commentary in *GDP*, *IoP* and *IoS*, to aid user interpretation of the statistics, by: using straightforward language to describe the main concepts; clearly describing the main patterns in the statistics; and improving the consistency of presentation across each of the reports, as well as on its website, and drawing on material from other relevant reports⁶⁸ (Requirement 10). As part of meeting this Requirement ONS should consider the points detailed in, annex 1 and the user views in annex 2 in seeking to improve the statistical reports.

- 3.21 The latest estimates for each of the GDP(O), *IoP* and *IoS* indicators are reasonably straightforward to locate on ONS's website. However, the amount of information available to the user depends on how they access the statistics. If their search takes them directly to the statistical report, then the user will potentially miss important information held on the release web page, including the additional pieces of narrative described in paragraph 3.19. ONS often does not highlight this information in the statistical report. Also, ONS does not make optimum use of the release page to direct users to important information about the statistics that is held in separate areas of ONS's website – for example, statistical plans and web pages dedicated to presenting information about methods and quality⁶⁹, which ONS told us that it is reviewing. Users suggested a model for this might be the Consumer Price Inflation statistics release page⁷⁰. It also would be helpful to users if ONS could improve the signposting between each of the short-term economic output indicators and with the other estimates of GDP. The new Economy theme pages⁷¹ that ONS has introduced on its website should help users in this respect but there is no clear link to these pages from the release pages or the statistical reports. Again, ease of accessibility is dependent on the point of entry to the website. As part of the

⁶⁸ In relation to Principle 8, Practice 2 of the *Code of Practice*

⁶⁹ <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/index.html>

⁷⁰ <http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/october-2013/index.html>

⁷¹ <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Economy>

designation as National Statistics, ONS should improve the accessibility of *GDP*, *IoP* and *IoS* through its website, making it clear to users how the different statistical reports relate to each other, to the other short-term economic output indicators, and to the other estimates of GDP⁷² (Requirement 11).

- 3.22 As part of the user response to this Assessment, we received a range of feedback about the Excel data tables that ONS publishes alongside the statistical reports; more than one user said that they would welcome a review of the tables published for *IoP* and *IoS*. The key themes were: the volume of data makes it difficult to locate the key series; the quality of presentation and labelling of the data tables is mixed and the numbering system is different to the tables in the statistical reports; there are no direct links to the data tables in the statistical report; and the file sizes are too large for older versions of Excel to cope with. As part of the designation as National Statistics, ONS should review the presentation of the supplementary data tables for *IoP* and *IoS*, in consultation with users, to ensure that they are in forms that enable and encourage analysis and re-use⁷³ (Requirement 12).

⁷² In relation to Principle 8, Practice 4 of the *Code of Practice*

⁷³ In relation to Principle 8, Practice 6 of the *Code of Practice*

Protocol 1: User engagement

Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.

3.23 The requirements for this Protocol are covered elsewhere in this report.

Protocol 2: Release practices

Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.

Requirements from previous Assessment report 81 (January 2011) – IoP/IoS:

- Prepare a report about options for bringing forward the release dates for the Index of Services, and about the implications that this would have for the quality of the statistics
- Ensure that all releases are issued at 9.30am on the day of release

Requirements from previous Assessment report 100 (March 2011) – GDPO:

- Publish the actions that will be taken to prevent the recurrence of the problems that affected the release of the National Accounts for the first quarter of 2010

3.24 *GDP, IoP and IoS* are normally issued at 9.30am. Since 2011, ONS has reported a small number of breaches of this timetable to the National Statistician for *GDP*⁷⁴. In the breach report covering the three months to June 2013, ONS reports that timeliness of market sensitive publications has improved significantly but that there are several factors impacting upon timely release, including the size and volume of files to be uploaded to its website. ONS includes information in the breach reports about actions being taken to minimise this risk going forward.

3.25 Based on the lists published alongside the statistical reports in January 2014, restricted access to each of the statistical reports is given 24 hours prior to publication to five Ministers in HMT, including the Chancellor of the Exchequer and Chief Secretary to the Treasury, and to the Governor of the Bank of England. The lists indicate that:

- 34 Ministers and external officials receive *GDP*⁷⁵, including the Prime Minister, the Deputy Prime Minister and two Ministers in BIS.
- 31 Ministers and officials receive *IoP*⁷⁶, including the Prime Minister, and the two BIS Ministers that receive *GDP*.
- 18 Ministers and officials receive *IoS*⁷⁷, including the Private Secretary to the Prime Minister.

ONS told us that during 2013 it re-examined the lists of those people given restricted access prior to release as part of a wider review by the National

⁷⁴ <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/breach-reports/index.html>

⁷⁵ <http://www.ons.gov.uk/ons/rel/construction/output-in-the-construction-industry/november-2013/pra-con-web-nov-2013.html>

⁷⁶ <http://www.ons.gov.uk/ons/rel/iop/index-of-production/november-2013/pra-pre-release-access-list-nov-2013.html>

⁷⁷ <http://www.ons.gov.uk/ons/rel/ios/index-of-services/november-2013/pra-ios-november-2013.html>

Statistician of pre-release access to ONS statistics, but that this has resulted in only minor reductions to the pre-release access lists for the short-term economic output indicators, mainly to remove cases of duplication. Sir Andrew Dilnot, Chair of The Authority, recently wrote to Bernard Jenkin MP, Chair of the Public Administration Select Committee, to reiterate his concern that pre-release access arrangements for GDP are deeply unsatisfactory⁷⁸. The Authority supports the National Statistician's drive to reduce the degree and incidence of pre-release access to the fullest extent possible under the law. The National Statistician will shortly be finalising the necessary arrangements to reduce further pre-release access to ONS statistics following the exercise to minimise the extent of such access⁷⁹. Equality of access is a fundamental principle of statistical good practice, both in the UK and internationally. All the parties to public debate should, as far as possible, have the same information at the same time, and only the absolute minimum number of people should see official statistics in their final form before they are published.

⁷⁸ <http://www.statisticsauthority.gov.uk/reports---correspondence/correspondence/letter-from-sir-andrew-dilnot-to-bernard-jenkin-mp---10032014.pdf>

⁷⁹ <http://www.statisticsauthority.gov.uk/news/statistics-authority-statement-of-strategy.pdf>

Protocol 3: The use of administrative sources for statistical purposes

Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.

- 3.26 ONS has published a Statement of Administrative Sources⁸⁰. ONS told us that it uses a number of administrative sources alongside survey data to compile the IoS, including data from the Civil Aviation Authority and the Office for Rail Regulation. ONS has not published any information about the ongoing arrangements for quality audits of these administrative sources and they are not all listed in the Statement of Administrative Sources. As part of the designation as National Statistics, ONS should ensure that all the administrative data sources used in the production of IoS are listed in ONS's Statement of Administrative Sources, and publish information about the quality audit arrangements for these sources⁸¹ (Requirement 13). We suggest that ONS might find the Authority's Statement *Administrative Data and Official Statistics*⁸² useful in establishing appropriate quality audit arrangements.
- 3.27 ONS told us that, as part of its continuous improvement plan, it is also investigating the feasibility of using administrative data sources from Department of Energy and Climate Change to supplement elements of IoP and improve its overall quality. ONS is also exploring the use of VAT turnover data from HM Revenue and Customs in areas where there is no MBS data or as a benchmark for GDP(O).

⁸⁰ <http://www.ons.gov.uk/ons/guide-method/the-national-statistics-standard/code-of-practice/statement-of-administrative-sources/index.html>

⁸¹ In relation to Protocol 3, Practice 5 of the *Code of Practice*

⁸² <http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/index.html>

Annex 1: Compliance with Standards for Statistical Reports

- A1.1 In November 2012, the Statistics Authority issued a statement on *Standards for Statistical Reports*⁸³. While this is not part of the *Code of Practice for Official Statistics*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*. In relation to the statistical reports associated with ONS's short-term economic output indicators, this annex comments on compliance with the statement on standards.
- A1.2 In implementing any Requirements of this report (at paragraph 1.5) which relate to the content of statistical reports, we encourage the producer body to apply the standards as fully as possible.

Include an impartial narrative in plain English that draws out the main messages from the statistics

- A1.3 The title of *GDP* does not make clear that the figures presented in the statistical report are the change in GDP, rather than GDP itself. The main messages from the statistics are given at the start of *IoP*, *IoS* and *GDP*. They are presented in a straightforward style, describing the latest changes and highlighting any notable contributions to those changes by the different industry sectors. Of the three reports, *GDP* is clearest as it focuses on the quarter on quarter change. *IoP*'s main messages attempt to summarise the changes in relation to comparisons with the previous month, the previous quarter, and with the same month a year ago, but without drawing out how the different patterns relate to each other.
- A1.4 *IoS* attempts to define the *IoS* measure but is a technical description – ‘chained volume index movements of the UK services industries’. Further explanation is provided in the background notes but a more straightforward description of the statistics would benefit non-expert users. *GDP* also contains technical descriptions in the main narrative (such as, gross value added), and the report provides an explanation of the weights given in Table 1 several pages after the first use of the term; the explanation also could be made clearer. The reports do, however, highlight the fact that the main concepts are explained in the background notes section of the report.
- A1.5 *IoP* and *IoS* include descriptions of both the changes in the industry contributions to the overall index measure, as well as the industry growth rates; however, these descriptions are not straightforward to understand. The detailed narrative in each of the reports tends to be lists of figures and does not sufficiently draw out the main patterns revealed by the statistics. *IoP December 2013* also does not contain a description of the two component level charts (Figures 3 and 4).
- A1.6 While the statistical reports are potentially too short to benefit from a detailed table of contents, there is little information to help users navigate the statistics. It may be helpful to users to provide a brief summary of the overall structure and content of the reports. Also, while there are some similar features that appear in all the reports they are often labelled or presented differently. Again, a more consistent presentation across the reports may help users.

⁸³ <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html>

A1.7 All narrative is reported impartially with no statements of opinion and is demonstrably evidence based.

Include information about the context and likely uses of the statistics

A1.8 All of the statistical reports include 'economic context' or 'economic background' sections that place the statistics within the broader context of what is happening in the economy. While the most pertinent features of the economy discussed rightly differ between the statistical reports, we consider that it would aid comparison to apply some consistency across the reports in certain respects – for example, the length of time series considered when discussing trends.

A1.9 ONS publishes a monthly analysis of the economic and labour market statistics alongside the main statistical reports. While *GDP* touches briefly on the issues in its economic context section it does not signpost users to the detailed article. ONS has produced additional analyses of special events (such as the weather and the Olympic Games effect), which users told us that they found helpful.

A1.10 The statistical reports all briefly define the headline measures, and provide a brief explanation of their key purpose. The reports point users to further information about concepts and definitions in the background notes. The links between the preliminary estimates and the other estimates of GDP could be more clearly and prominently explained, with better signposting. However, it is helpful that the next publication date in the statistical report makes this connection.

A1.11 *IoP* presents some brief summary information about the uses of the statistics. No such information is presented in *IoS* and *GDP*. ONS gives an outline of different uses of the indicators by the main stakeholders in the respective QMI documents.

Include information about the strengths and limitations of the statistics in relation to their potential use

A1.12 The main messages are used to advise users of any special or one-off factors they should consider when using the statistics. However, while *GDP* includes an early statement about the preliminary estimates being subject to revision and *IoP* and *IoS* caution users about the volatility of the month-on-month growth rates, all of the reports would benefit from more prominent information about the uncertainty associated with the estimates.

A1.13 *GDP*, *IoP* and *IoS* do not present sufficient information about possible errors but do highlight that the estimates based on survey data are subject to statistical error. ONS uses the revisions analysis to indicate the precision of the estimates but does not provide information about the accuracy of the estimates.

A1.14 ONS publishes a range of information about the scale of revisions in the statistical reports and in Excel tables, presenting revisions triangles and tests for the significance of the average revisions. While *IoP* for December 2013 demonstrated statistically significant revisions, ONS did not explain the relevance of the findings. The metadata might be improved to help users

interpret this information. Also, where ONS provides links to revisions policies, these are out of date.

Be professionally sound

- A1.15 The descriptive statements are demonstrably consistent with the statistics. The descriptions of proportions, changes, trends and patterns are professionally sound.
- A1.16 All the statistical reports present data tables, charts and infographics that seek to illustrate the contributions of the different components to the overall estimate of GDP. The presentation is inconsistent across the reports and some of the tables and charts are unclear, including: the colouring of the charts (the relevance of the different colours is not explained and the colours are not clear when printed in black and white); the relationship between the main groups and their component parts are not clearly shown; and the ordering of the industries varies within the individual reports. For example, in *IoP* it is not immediately clear that there are two levels of breakdown in the chart – components of *IoP* and components of manufacturing. More generally, the charts in *IoP* focus on *IoP* and the Index of Manufacturing (*IoM*). The Assessment team assumes that this reflects a keen user interest in the *IoM* but we consider that it would be helpful to have a better illustration of the trends in the other elements of *IoP* over the same time period, even if this is only presented once. A user who is unfamiliar with the construction of *IoP* might struggle to understand immediately the difference between *IoP* and *IoM*.
- A1.17 The titles of the charts may be unclear to non-expert users. For example, the title for Figure 1 in *IoP* (December 2013) does not include the time range for the data series presented (September 2011 to December 2013). The axis labels also do not make the time period clear and the text incorrectly refers to the series beginning in August 2011.

Include, or link to, appropriate metadata

- A1.18 The titles of the statistical reports explain the coverage of the statistics and the period to which the latest statistics relate. The name of the producer body, and the name and contact details of the responsible statistician are all given in the reports.
- A1.19 The statistical reports all include background notes with some summary information about methods and quality. ONS then provides further information in method and quality documents, in user guides and in a range of published articles and reports. Each output has a methodology page on ONS's website which provides links to this information. Some of the links within the statistical reports and on the methodology pages do not link to the latest available information. Also, a number of the key documents are out of date, and do not reflect the latest developments in the statistics. The sum of all the information is fairly comprehensive but it is not presented coherently. The signposting of the most important information could be improved. Some of the most useful information about the statistics is included in reports of triennial reviews of the underpinning surveys.

A1.20 The release page for each output on ONS's website provides a link to the associated data tables. The statistical reports direct users to the 'data section of this publication' but no links are provided within the PDFs. The Excel workbooks all include tables of contents but provide very limited metadata.

Annex 2: Summary of assessment process and users' views

- A2.1 This assessment was conducted from August 2013 to March 2014.
- A2.2 The Assessment team – Penny Babb, Emma Bowditch and Donna Livesey – agreed the scope of and timetable for this assessment with representatives of ONS in August. The Written Evidence for Assessment was provided between 11 and 15 October 2013. The Assessment team subsequently met ONS during November to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

Summary of users contacted, and issues raised

- A2.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.
- A2.4 The Assessment team received 20 responses from the user consultation in relation to GDP(O), IoP and IoS. The respondents were grouped as follows:

Employers' organisations, trade associations and professional bodies	3
Commercial	10
Central government , Bank of England and regulators	4
Individuals	1
Data suppliers	2

- A2.5 Users provided feedback on the three sets of statistics included in this Assessment report. Some common themes emerged but there were also some diverging views. This is indicative of the range of users and potential uses of these statistics (as described in section 2 of this Report).
- A2.6 The overall impression from the feedback is that users find ONS staff to be helpful and prompt in answering any questions about the statistics, though some highlighted difficulties in reaching staff with expert knowledge of the data. Those users who engaged in regular stakeholder meetings with ONS reported strong working relationships and one user indicated that they would like something similar. One user not involved in these groups suggested that ONS hold one or two user meetings each year.
- A2.7 Users told us that they understood that the early release of short-term economic output indicators would inevitably result in later revisions. The information published alongside the statistics in revisions triangles was broadly welcomed, though some users identified areas for improvement – clearer revisions information in the data downloads; more detailed revisions analysis; and better information about the nature of the revisions. Users also conveyed the importance of having better and more prominent indications of any

uncertainty associated with the estimates in order to allow them to advise clients appropriately and to avoid misuse of the statistics.

- A2.8 Some users told us that they do not use the commentary presented around the statistics and go straight to the data tables. Others told us that they value the commentary and were broadly positive about recent improvements in explaining the strengths and limitations of the statistics. Users said that they particularly welcome additional analysis about one-off factors, assumptions underpinning the estimates and the impact of changes to methods. Some users are only interested in the very short term and focus on the latest estimate. Others want to examine the latest estimates in the context of longer term trends and would like to see explanations for any exceptions from the trend, including any anecdotal evidence that ONS has.
- A2.9 A number of users highlighted problems with the data tables in the statistical reports and made available in Excel. Issues were raised across all the outputs with users suggesting a review of the content, presentation and accessibility of the data tables for *IoP* and *IoS*. Users acknowledged recent improvements to ONS's website but told us that poor signposting remains a barrier to using these statistics on three levels – linking the data, metadata and statistical reports; presenting the short-term economic output indicators as a coherent group; and placing these estimates in the context of the other measures of GDP and the National Accounts. One user said that a certain amount of expertise is needed to navigate these statistics, in particular the three estimates of GDP. Users suggested that a more coherent presentation across the outputs and a glossary of terms would be helpful.
- A2.10 Users also identified a need to bring all the *IoS* industry statistics to a level of quality that will allow the experimental status to be removed.

Key documents/links provided

Written Evidence for Assessment document

