



## Press Release

### GDP growth of 0.5 per cent in the 3 months to November

Our monthly estimates of GDP suggest that output expanded by 0.5 per cent in the three months to November, similar to our estimate from last month and slightly stronger than the official outturn for the third quarter of 2017 which was 0.4 per cent. The monthly estimate is closely tracking our forecast for real GDP growth for the final quarter of this year which also stands at 0.5 per cent.

Amit Kara, Head of UK Macroeconomic Forecasting at NIESR, said “*We estimate that economic growth recovered to 0.5 per cent in the three months to November from 0.4 per cent in the third quarter.*”

*UK GDP growth remains supported by the dominant service sector as well as industrial production. Activity in the construction sector, by contrast, remains under pressure. The manufacturing sector contributed strongly to industrial production and this is in part because of exchange rate effect on exports.*

*UK economic activity has picked-up in the second half of this year and GDP growth at 0.5 per cent is somewhat higher than the economy’s speed limit. If, as we expect, the economy continues to expand around this pace and inflation remains elevated, there is a case for the Bank of England to gradually raise the policy rate to stop the economy from overheating. Consistent with that view, our latest forecast for the UK is conditioned on a 25 basis points increase in Bank Rate every six months such that the policy rate reaches 2 per cent in 2021”.*

**Technical notes:** Our track record in producing early estimates of GDP suggests that our projection for the most recent three-month period has a root mean squared error (RMSE) of 0.224% point (for the full sample period 1999Q3-2015Q4) when compared to the first estimate produced by the ONS. For the period 2008Q1 to 2015Q4 the RMSE is 0.290% point. The impact of the adverse weather in 2010Q4 is a noticeable outlier. Excluding 2010Q4 from the analysis, the RMSE for the full sample period is 0.188% point, and for 2008Q1 to 2015Q4 the RMSE is 0.231% point. These comparisons can be made only for complete calendar quarters. Outside calendar quarters the figures are less reliable than this.

A paper describing the methodology used to produce the data was published in the February 2005 volume of the *Economic Journal*:

Mitchell, J. Smith, R. J., Weale, M. R., Wright, S. and Salazar, E. L. (2005) ‘An Indicator of Monthly GDP and an Early Estimate of Quarterly GDP Growth’, *Economic Journal*, No. 551, pp. F108-F129.

- Available from: [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1468-0297](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1468-0297)

A paper describing the methodology used to produce the data for the inter-war period was published in the October 2012 volume of *Explorations in Economic History*:

Mitchell, J., Solomou, S. and Weale, M. (2012) 'Monthly GDP estimates for inter-war Britain', *Explorations in Economic History*, Vol. 49, No. 4, pp. 543-556.

- Available from: <http://www.journals.elsevier.com/explorations-in-economic-history/>

From April until October 2006 our estimates were computed using the Index of Services published by ONS. However this monthly series shows considerable volatility which has caused us some problems in estimating GDP. From our November 2006 press release we have therefore reverted to using a model of private services output based on indicator variables. This means that, while all our figures for calendar quarters are fully coherent with ONS data, our estimates of monthly private service output are not. The series can be thought of as indicating the underlying value of the ONS series.

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**Notes for editors:** For further information please contact the NIESR Press Office or Paola Buonadonna on 020 7654 1923/ [p.buonadonna@niesr.ac.uk](mailto:p.buonadonna@niesr.ac.uk)

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**Table 1: Summary Table of Quarterly Growth Rates (2015=100)**

|        | <b>Monthly Data</b> |       | <b>3 months ending in<br/>month shown</b> |       | <b>Quarterly Growth %<br/>per quarter</b> |      |
|--------|---------------------|-------|---|-------|---|------|
|        | Industry            | GDP   | Industry                                  | GDP   | Industry                                  | GDP  |
| Jan-16 | 99.7                | 101.2 | 99.5                                      | 101.1 | -1.2%                                     | 0.5% |
| Feb-16 | 99.4                | 101.0 | 99.4                                      | 101.1 | -1.0%                                     | 0.3% |
| Mar-16 | 100.0               | 101.1 | 99.7                                      | 101.1 | -0.1%                                     | 0.2% |
| Apr-16 | 102.4               | 101.6 | 100.6                                     | 101.2 | 1.1%                                      | 0.2% |
| May-16 | 101.7               | 101.5 | 101.4                                     | 101.4 | 2.0%                                      | 0.3% |
| Jun-16 | 101.6               | 101.7 | 101.9                                     | 101.6 | 2.2%                                      | 0.5% |
| Jul-16 | 101.6               | 102.0 | 101.6                                     | 101.7 | 1.0%                                      | 0.5% |
| Aug-16 | 101.3               | 101.9 | 101.5                                     | 101.9 | 0.1%                                      | 0.5% |
| Sep-16 | 101.2               | 102.1 | 101.4                                     | 102.0 | -0.5%                                     | 0.4% |
| Oct-16 | 100.3               | 102.2 | 100.9                                     | 102.1 | -0.7%                                     | 0.3% |
| Nov-16 | 102.4               | 103.0 | 101.3                                     | 102.4 | -0.2%                                     | 0.5% |
| Dec-16 | 103.5               | 102.6 | 102.1                                     | 102.6 | 0.7%                                      | 0.6% |
| Jan-17 | 103.1               | 102.7 | 103.0                                     | 102.8 | 2.0%                                      | 0.7% |
| Feb-17 | 102.3               | 102.9 | 103.0                                     | 102.8 | 1.6%                                      | 0.3% |
| Mar-17 | 101.6               | 102.7 | 102.3                                     | 102.8 | 0.3%                                      | 0.2% |
| Apr-17 | 101.8               | 103.2 | 101.9                                     | 102.9 | -1.1%                                     | 0.2% |
| May-17 | 102.0               | 103.0 | 101.8                                     | 103.0 | -1.1%                                     | 0.2% |
| Jun-17 | 102.4               | 103.1 | 102.1                                     | 103.1 | -0.3%                                     | 0.3% |
| Jul-17 | 102.8               | 103.3 | 102.4                                     | 103.1 | 0.5%                                      | 0.2% |
| Aug-17 | 103.1               | 103.5 | 102.8                                     | 103.3 | 0.9%                                      | 0.3% |
| Sep-17 | 103.8               | 103.7 | 103.2                                     | 103.5 | 1.1%                                      | 0.4% |
| Oct-17 | 103.8               | 103.8 | 103.6                                     | 103.7 | 1.2%                                      | 0.5% |
| Nov-17 | 103.8               | 104.0 | 103.8                                     | 103.8 | 1.0%                                      | 0.5% |

*More...*

**Table 2: Output by Sector (2015=100)**

|        | <b>Industry</b> | <b>Agriculture</b> | <b>Construction</b> | <b>Private Services</b> | <b>Public Services</b> | <b>GDP(B)</b> | <b>GDP</b> |
|--------|-----------------|--------------------|---------------------|-------------------------|------------------------|---------------|------------|
| Jan-16 | 99.7            | 95.9               | 100.9               | 102.0                   | 100.9                  | 101.0         | 101.2      |
| Feb-16 | 99.4            | 94.7               | 101.2               | 101.8                   | 101.3                  | 100.8         | 101.0      |
| Mar-16 | 100.0           | 94.1               | 101.9               | 102.2                   | 100.9                  | 100.9         | 101.1      |
| Apr-16 | 102.4           | 94.1               | 103.0               | 102.4                   | 100.9                  | 101.4         | 101.6      |
| May-16 | 101.7           | 94.0               | 103.6               | 102.4                   | 101.1                  | 101.3         | 101.5      |
| Jun-16 | 101.6           | 93.9               | 103.9               | 102.8                   | 101.3                  | 101.5         | 101.7      |
| Jul-16 | 101.6           | 93.7               | 103.7               | 103.3                   | 101.6                  | 101.7         | 102.0      |
| Aug-16 | 101.3           | 93.7               | 103.9               | 103.3                   | 101.5                  | 101.6         | 101.9      |
| Sep-16 | 101.2           | 94.0               | 104.4               | 103.6                   | 101.5                  | 101.8         | 102.1      |
| Oct-16 | 100.3           | 94.5               | 105.4               | 104.1                   | 101.5                  | 101.9         | 102.2      |
| Nov-16 | 102.4           | 94.8               | 106.3               | 104.8                   | 101.6                  | 102.7         | 103.0      |
| Dec-16 | 103.5           | 94.8               | 107.2               | 103.7                   | 101.7                  | 102.3         | 102.6      |
| Jan-17 | 103.1           | 94.5               | 108.0               | 103.8                   | 102.0                  | 102.5         | 102.7      |
| Feb-17 | 102.3           | 94.4               | 108.4               | 104.4                   | 101.8                  | 102.7         | 102.9      |
| Mar-17 | 101.6           | 94.3               | 108.5               | 104.1                   | 102.1                  | 102.6         | 102.7      |
| Apr-17 | 101.8           | 94.3               | 108.1               | 104.8                   | 102.3                  | 103.0         | 103.2      |
| May-17 | 102.0           | 94.3               | 107.7               | 104.5                   | 102.2                  | 102.8         | 103.0      |
| Jun-17 | 102.4           | 94.3               | 107.3               | 104.7                   | 102.1                  | 102.9         | 103.1      |
| Jul-17 | 102.8           | 94.4               | 106.9               | 104.9                   | 102.2                  | 103.1         | 103.3      |
| Aug-17 | 103.1           | 94.5               | 106.7               | 105.2                   | 102.4                  | 103.3         | 103.5      |
| Sep-17 | 103.8           | 94.5               | 106.5               | 105.3                   | 102.5                  | 103.5         | 103.7      |
| Oct-17 | 103.8           | 94.5               | 106.5               | 105.4                   | 102.7                  | 103.6         | 103.8      |
| Nov-17 | 103.8           | 94.5               | 106.5               | 105.8                   | 102.8                  | 103.8         | 104.0      |

*More...*

**Table 3: Output in Quarter Ending in Month Shown (2015=100)**

|        | <b>Industry</b> | <b>Agriculture</b> | <b>Construction</b> | <b>Private Services</b> | <b>Public Services</b> | <b>GDP(B)</b> | <b>GDP</b> |
|--------|-----------------|--------------------|---------------------|-------------------------|------------------------|---------------|------------|
| Jan-16 | 99.5            | 97.7               | 100.9               | 101.4                   | 100.9                  | 100.9         | 101.1      |
| Feb-16 | 99.4            | 96.2               | 101.0               | 101.7                   | 101.1                  | 100.9         | 101.1      |
| Mar-16 | 99.7            | 94.9               | 101.3               | 102.0                   | 101.0                  | 100.9         | 101.1      |
| Apr-16 | 100.6           | 94.3               | 102.0               | 102.1                   | 101.0                  | 101.0         | 101.2      |
| May-16 | 101.4           | 94.1               | 102.8               | 102.3                   | 101.0                  | 101.2         | 101.4      |
| Jun-16 | 101.9           | 94.0               | 103.5               | 102.5                   | 101.1                  | 101.4         | 101.6      |
| Jul-16 | 101.6           | 93.9               | 103.7               | 102.8                   | 101.3                  | 101.5         | 101.7      |
| Aug-16 | 101.5           | 93.8               | 103.8               | 103.1                   | 101.4                  | 101.6         | 101.9      |
| Sep-16 | 101.4           | 93.8               | 104.0               | 103.4                   | 101.5                  | 101.7         | 102.0      |
| Oct-16 | 100.9           | 94.1               | 104.6               | 103.7                   | 101.5                  | 101.8         | 102.1      |
| Nov-16 | 101.3           | 94.4               | 105.4               | 104.2                   | 101.5                  | 102.1         | 102.4      |
| Dec-16 | 102.1           | 94.7               | 106.3               | 104.2                   | 101.6                  | 102.3         | 102.6      |
| Jan-17 | 103.0           | 94.7               | 107.2               | 104.1                   | 101.8                  | 102.5         | 102.8      |
| Feb-17 | 103.0           | 94.6               | 107.9               | 104.0                   | 101.9                  | 102.5         | 102.8      |
| Mar-17 | 102.3           | 94.4               | 108.3               | 104.1                   | 102.0                  | 102.6         | 102.8      |
| Apr-17 | 101.9           | 94.3               | 108.3               | 104.5                   | 102.1                  | 102.8         | 102.9      |
| May-17 | 101.8           | 94.3               | 108.1               | 104.5                   | 102.2                  | 102.8         | 103.0      |
| Jun-17 | 102.1           | 94.3               | 107.7               | 104.7                   | 102.2                  | 102.9         | 103.1      |
| Jul-17 | 102.4           | 94.4               | 107.3               | 104.7                   | 102.2                  | 102.9         | 103.1      |
| Aug-17 | 102.8           | 94.4               | 107.0               | 104.9                   | 102.3                  | 103.1         | 103.3      |
| Sep-17 | 103.2           | 94.5               | 106.7               | 105.1                   | 102.4                  | 103.3         | 103.5      |
| Oct-17 | 103.6           | 94.5               | 106.6               | 105.3                   | 102.5                  | 103.5         | 103.7      |
| Nov-17 | 103.8           | 94.5               | 106.5               | 105.5                   | 102.7                  | 103.6         | 103.8      |

*More...*

**Table 4: Growth in Quarter Ending in Month Shown over Previous Quarter (% at Annual Rate)**

|        | <b>Industry</b> | <b>Agriculture</b> | <b>Construction</b> | <b>Private Services</b> | <b>Public Services</b> | <b>GDP(B)</b> | <b>GDP</b> |
|--------|-----------------|--------------------|---------------------|-------------------------|------------------------|---------------|------------|
| Jan-16 | -4.6%           | -9.4%              | 3.8%                | 3.8%                    | 3.9%                   | 2.1%          | 2.2%       |
| Feb-16 | -4.1%           | -13.6%             | 2.4%                | 3.6%                    | 3.4%                   | 0.8%          | 1.1%       |
| Mar-16 | -0.4%           | -15.6%             | 2.0%                | 4.0%                    | 1.6%                   | 0.4%          | 0.8%       |
| Apr-16 | 4.6%            | -13.1%             | 4.3%                | 2.7%                    | 0.6%                   | 0.3%          | 0.6%       |
| May-16 | 8.3%            | -8.4%              | 7.3%                | 2.6%                    | -0.5%                  | 1.2%          | 1.4%       |
| Jun-16 | 9.1%            | -3.7%              | 9.0%                | 2.2%                    | 0.4%                   | 2.0%          | 2.0%       |
| Jul-16 | 4.2%            | -1.8%              | 7.0%                | 2.8%                    | 1.3%                   | 2.0%          | 2.1%       |
| Aug-16 | 0.5%            | -1.3%              | 3.9%                | 3.2%                    | 1.9%                   | 1.7%          | 1.9%       |
| Sep-16 | -2.1%           | -0.8%              | 1.9%                | 3.4%                    | 1.6%                   | 1.2%          | 1.6%       |
| Oct-16 | -2.7%           | 0.9%               | 3.2%                | 3.3%                    | 0.6%                   | 1.0%          | 1.3%       |
| Nov-16 | -0.8%           | 2.9%               | 6.2%                | 4.1%                    | 0.3%                   | 2.0%          | 2.2%       |
| Dec-16 | 2.8%            | 3.9%               | 9.1%                | 3.1%                    | 0.4%                   | 2.4%          | 2.4%       |
| Jan-17 | 8.4%            | 2.7%               | 10.3%               | 1.7%                    | 1.2%                   | 3.0%          | 2.8%       |
| Feb-17 | 6.7%            | 0.6%               | 9.8%                | -0.7%                   | 1.4%                   | 1.6%          | 1.3%       |
| Mar-17 | 1.0%            | -1.3%              | 7.7%                | -0.2%                   | 1.6%                   | 1.2%          | 0.8%       |
| Apr-17 | -4.2%           | -1.7%              | 4.4%                | 1.3%                    | 1.2%                   | 1.0%          | 0.7%       |
| May-17 | -4.5%           | -1.2%              | 0.8%                | 2.0%                    | 1.3%                   | 1.0%          | 0.8%       |
| Jun-17 | -1.0%           | -0.4%              | -2.2%               | 2.1%                    | 0.8%                   | 1.2%          | 1.2%       |
| Jul-17 | 2.0%            | 0.2%               | -3.7%               | 0.9%                    | 0.4%                   | 0.7%          | 0.7%       |
| Aug-17 | 3.9%            | 0.7%               | -4.1%               | 1.7%                    | 0.3%                   | 1.3%          | 1.3%       |
| Sep-17 | 4.7%            | 0.9%               | -3.7%               | 1.7%                    | 0.8%                   | 1.6%          | 1.6%       |
| Oct-17 | 4.6%            | 0.7%               | -2.7%               | 2.4%                    | 1.4%                   | 2.1%          | 2.1%       |
| Nov-17 | 4.1%            | 0.5%               | -1.6%               | 2.2%                    | 1.5%                   | 2.0%          | 2.0%       |

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