

Statistical bulletin

UK producer price inflation: Feb 2017

Changes in the prices of goods bought and sold by UK manufacturers including price indices of materials and fuels purchased (input prices) and factory gate prices (output prices).



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1 . Main points

- Both the annual and monthly rate of producer price inflation increased in February 2017.
- Factory gate prices (output prices) rose 3.7% on the year to February 2017, which is the eighth consecutive period of annual price increases and the highest they have been since December 2011.
- Prices for materials and fuels paid by UK manufacturers for processing (input prices) rose 19.1% on the year, a slight decrease from the year to January 2017 but the second fastest rate of annual growth since September 2008.
- Prices of imported materials and fuels increased 19.0% on the year, which is the first time the annual rate has been lower than the overall input PPI since December 2015.

2 . Things you need to know about this release

The factory gate price (output price) is the amount received by UK manufacturers for the goods that they sell to the domestic market. It includes the margin that businesses make on goods, in addition to costs such as labour, raw materials and energy, as well as interest on loans, site or building maintenance, or rent.

The input price measures the price of materials and fuels bought by UK manufacturers for processing. It includes materials and fuels that are both imported or sourced within the domestic market. It is also not limited to materials used in the final product, but includes what is required by businesses in their normal day-to-day running, such as fuels.

Index numbers shown in the main text of this bulletin are on a net sector basis. The index for any sector relates only to transactions between that sector and other sectors; sales and purchases within sectors are excluded.

Indices relate to average prices for a month. The full effect of a price change occurring part way through any month will only be reflected in the following month's index.

All index numbers exclude VAT. Excise duty (on cigarettes, manufactured tobacco, alcoholic liquor and petroleum products) is included, except where labelled otherwise.

Each Producer Price Index (PPI) has 2 unique identifiers: a 10-digit index number, which relates to the [Standard Industrial Classification](#) code appropriate to the index and a 4-character alpha-numeric code, which can be used to find series when using the [time series dataset](#) for PPI.

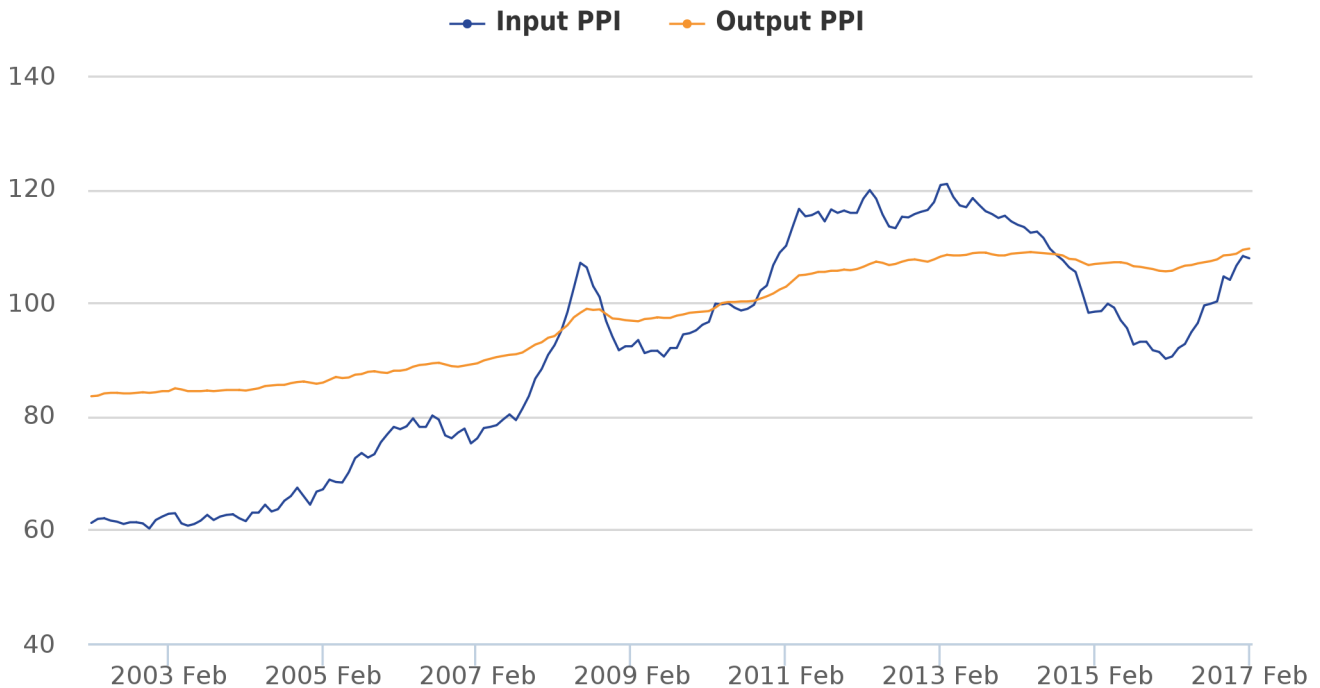
Every 5 years, producer price indices are rebased and their weights updated to reflect changes in the industry.

Figures for the latest 2 months are provisional and the latest 5 months are subject to revisions in light of (a) late and revised respondent data and (b) for the seasonally adjusted series, revisions to seasonal adjustment factors are re-estimated every month. A routine seasonal adjustment review is normally conducted in the autumn each year.

Full definitions of the terms used within this analysis can be found in the Quality and methodology section within this bulletin.

3 . Producer price inflation summary

Figure 1: Input and output PPI, UK, February 2002 to February 2017



Source: Office for National Statistics

Over the past 15 years, input PPI has experienced large peaks and troughs and strong overall growth, driven by global movements in prices for crude oil and commodities (Figure 1). Between February 2002 and February 2017, input prices increased 76%, which was mainly fuelled by crude oil prices which rose 209% over the period. Output prices increased 31% across the same period.

More recently we have seen input prices move out of a 32 month period of deflation between November 2013 and June 2016. Following the EU referendum vote in June 2016, the rate of input inflation has steadily grown, reaching 19.1% in February 2017. Output prices also moved out of a period of deflation in July 2016 following 24 months of falling prices.

Since the pre- downturn peak in mid- 2008, output prices have grown 10.7%, while input prices were at the same level in February 2017 as they were back in June 2008. This suggests that while the UK production sector is currently bearing the same overall cost for materials and fuels that it was in mid- 2008, the amount it receives for goods at the factory gate is 10.7% higher.

Table 1: Input prices

UK, September 2016 to February 2017

		Percentage change			
		All materials and fuels purchased		Imported materials and fuels purchased	
		1 month	12 months	1 month	12 months
2016	Sep	0.4	7.6	0.2	8.9
	Oct	4.4	12.4	4.5	14.0
	Nov	-0.6	13.5	-1.6	14.5
	Dec	2.4	16.6	1.8	17.3
2017	Jan	1.6	20.1	2.2	20.1
	Feb	-0.4	19.1	-0.6	19.0

Source: Office for National Statistics

Notes:

1. Both series are not seasonally adjusted.

Input producer prices grew 19.1% on the year to February 2017 and fell 0.4% between January 2017 and February 2017. It is the eighth consecutive period of annual growth and the second highest increase seen since September 2008.

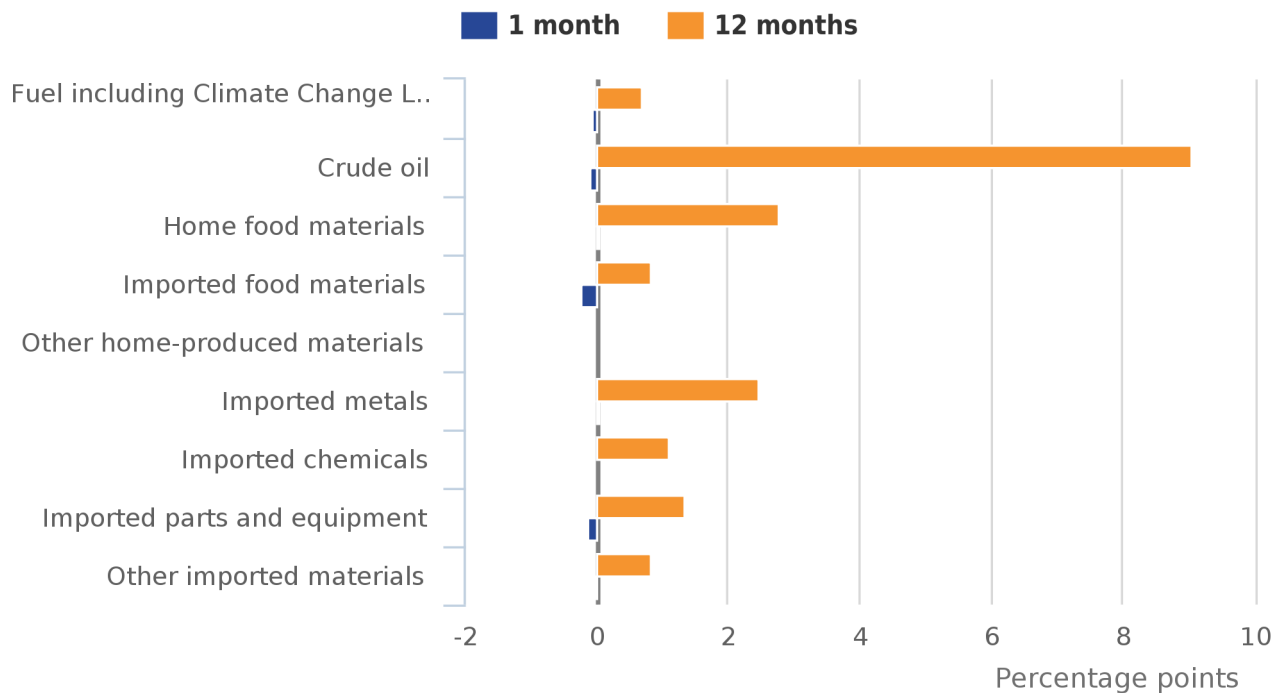
Prices of imported materials and fuels rose 19.0% on the year to February 2017, which is largely the result of a 10.4% depreciation of the sterling effective exchange rate and an 89.3% annual increase in the price of inputs of crude oil. In recent months imported materials and fuels has been the main driver of input PPI inflation as it has a weight of around 68% of the input price index, however, input PPI overall grew at a faster rate.

Table 2: Input prices: 1 and 12 month percentage change to February 2017

UK		
Product group	Percentage change	
	1 month	12 month
Fuel including Climate Change Levy	-0.3	5.6
Crude oil	-0.6	89.3
Home food materials	0.2	19.6
Imported food materials	-2.7	10.4
Other home-produced materials	0.3	0.3
Imported metals	0.7	35.2
Imported chemicals	-0.1	7.3
Imported parts and equipment	-0.6	6.8
Other imported materials	-0.3	8.5
All manufacturing	-0.4	19.1

Source: Office for National Statistics

Figure 2: Input PPI, contribution to 1 month and 12 month growth rate, February 2017, UK



Source: Office for National Statistics

Figure 2 shows the contributions by sector to the annual and monthly input price inflation rate. Crude oil provided the largest contribution of 9.05 percentage points to the annual rate, although on the month it provided a downward contribution of 0.10 percentage points. Crude oil prices have increased by 89.3% on the year to February 2017 and decreased by 0.6% on the month, which is the highest annual increase seen since June 2000.

Home food materials and imported metals prices were the second and third largest contributors to the annual rate, with annual growth rates of 19.6% and 35.2% respectively.

Prices of home food materials have been growing for the past 10 months, with the February figure being the second highest annual increase seen since April 2011. The main contributor to the rise in home food materials was crop and animal production, which has increased mainly on the back of a rise in the price of wheat.

The annual rate of inflation for imported metals has now seen 8 months of consecutive growth following 17 months of falling prices. The annual growth rate of 35.2% has fallen back slightly compared with January 2017 but is still the second largest increase since recent records began in 1996.

Table 3: Output prices

UK, September 2016 to February 2017

		Percentage change	
		All manufactured products	
		1 month	12 months
2016	Sep	0.3	1.2
	Oct	0.7	2.1
	Nov	0.1	2.4
	Dec	0.2	2.8
2017	Jan	0.6	3.6
	Feb	0.2	3.7

Source: Office for National Statistics

Notes:

1. Series is not seasonally adjusted

The annual rate of inflation for factory gate prices continued to grow on the year to February 2017 with prices increasing by 3.7%. It is the eighth consecutive rise after 2 years of falls and the largest increase since December 2011.

Month-on-month prices saw an increase of 0.2% between January 2017 and February 2017. Monthly inflation has now been growing since February 2016, which is the longest continuous period of growth since the end of 2011.

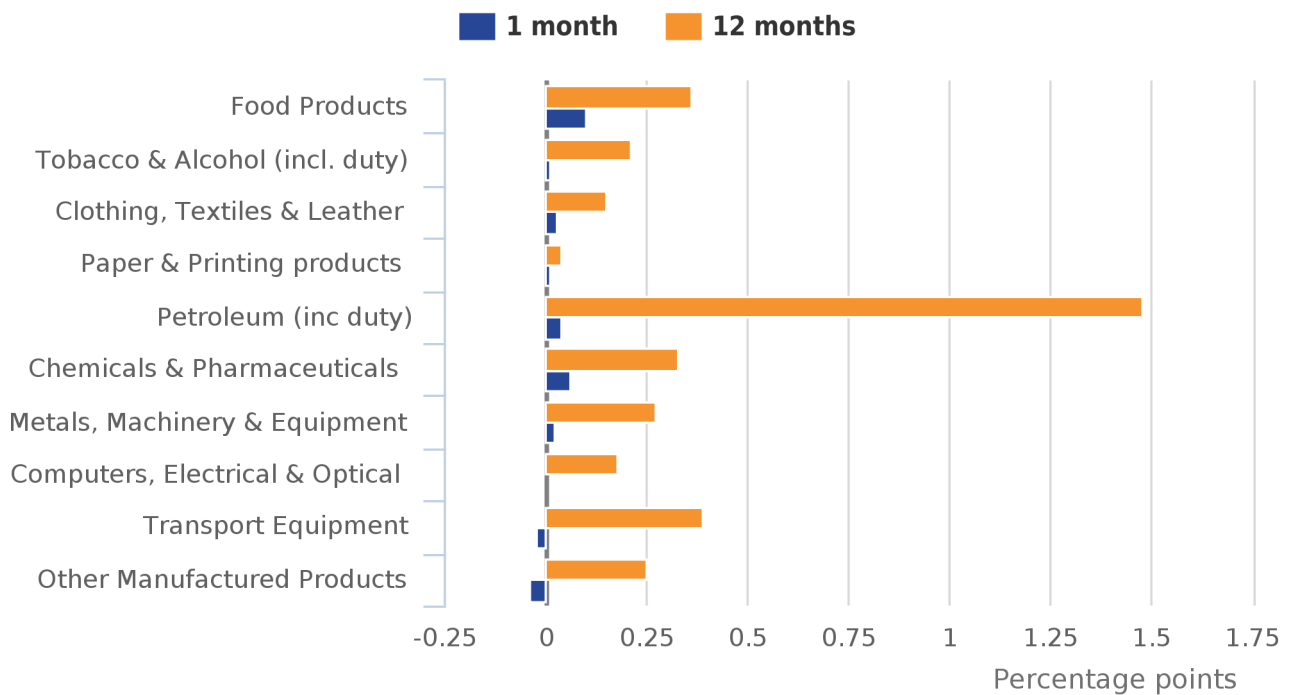
Table 4: Output prices: 1 and 12 months percentage change to February 2017

Product group	Percentage Change	
	1 month	12 month
Food products	0.5	2.3
Tobacco and alcohol (incl. duty)	0.1	2.2
Clothing, textile and leather	0.3	1.3
Paper and printing	0.2	1.1
Petroleum products (incl. duty)	0.3	23.4
Chemical and pharmaceutical	0.6	4.4
Metal, machinery and equipment	0.3	3.7
Computer, electrical and optical	0.0	1.5
Transport equipment	-0.1	3.2
Other manufactured products	-0.2	1.6
All manufacturing	0.2	3.7

Source: Office for National Statistics

Figure 3: Output PPI, contribution to 1 month and 12 month growth rate, February 2017, UK

Office for National Statistics

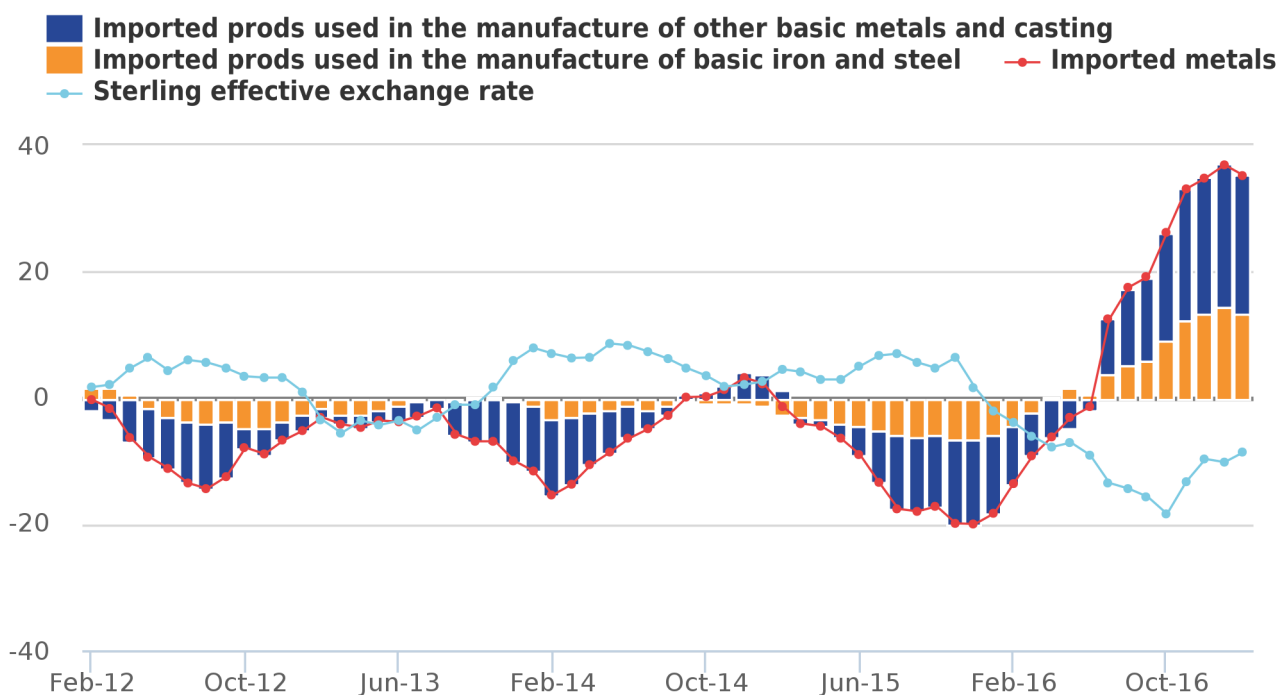


Petroleum products had an annual growth rate of 23.4% and showed an upward contribution of 1.48 percentage points to the PPI output annual rate (Figure 3), which was driven by diesel and gas oil which increased 22.1%. This was the second largest annual rise to prices of petroleum products since April 2010 and the sixth consecutive increase after 3 years of falling prices.

All sectors showed upward contributions to the annual rate, with transport equipment being the second largest with an annual growth rate of 3.2%, driven by a 2.9% increase in the prices of motor vehicles, trailers and semi-trailers. The month-on-month rate decreased by 0.1%, which was also driven by motor vehicles, trailers and semi-trailers.

4 . Why has the cost of imported metals reached record levels and how is this feeding through to factory gate prices?

Figure 4: 12 month inflation rate for products used in the manufacture of metal goods, by type of product, February 2012 to February 2017



Source: Office for National Statistics

Notes:

1. Source of Sterling Effective Exchange Rate: The Bank of England.
2. Contributions do not always add up to the annual rate due to rounding.

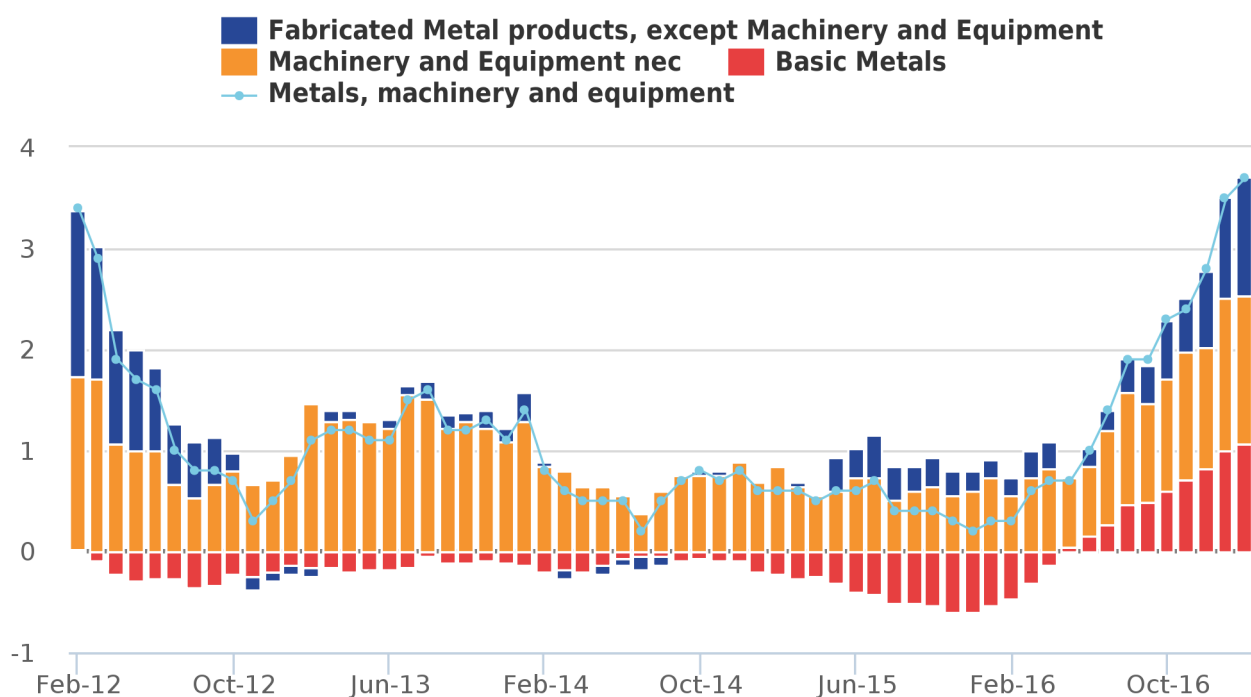
Figure 4 shows the rate of inflation for imported metals used in the manufacture of metal goods, broken down by type of product and the sterling effective exchange rate. From 2012 to mid- 2016, imported metal prices went through a prolonged period of price deflation, albeit with some peaks and troughs. Looking at the sterling effective exchange rate it can be seen that it mostly appreciated across this period. All else equal, an appreciation of sterling leads to a decrease in the price of UK imports when transactions are carried out in foreign currency. The opposite is true when sterling depreciates, which can be seen from 2016 when metal prices increased.

Movements in the price of metals on the global market also had an impact on producer prices inflation in the UK. Global prices for metals went through a prolonged period of deflation starting in early 2011, which resulted in falling input costs for UK manufacturers of metal goods. In its [Commodity Special Feature](#) (2015) the International Monetary Fund (IMF) suggested the decline in global metal prices from 2011 was likely due to global supply outstripping demand.

Since December 2015, the annual change to the sterling effective exchange rate has fallen by as much as 18.4% in October 2016. This along with a recovery in global metal prices since early 2016 has led to the inflation rate for imported inputs used in metal manufacturing reaching 36.9% in January 2017, its highest annual growth since recent records began in 1996.

Imported products used in the manufacture of other basic metals and castings contributed most to movements to basic metals prices over the past 15 years. The same trend across time can be also be seen, however, for imported products used in the manufacture of basic iron and steel.

Figure 5: 12 month inflation rate for manufacturers of metals, machinery and equipment goods, by type of product, February 2012 to February 2017



Source: Office for National Statistics

Notes:

- Contributions do not always add up to the annual rate due to rounding.

Figure 5 shows the rate of factory gate price inflation for manufacturers of metals, machinery and equipment broken down by type of metal product. In terms of contributors to the rate of inflation, manufacturers of basic metals is the only sector to have witnessed any significant period of falling prices. The greater influence of exchange rate movements and global metal prices on manufacturers that make basic metal products might reflect the fact that input costs represent a larger overall proportion of the cost for manufacturing basic metal goods compared to other metal products. Businesses manufacturing goods such as machinery and equipment and fabricated metals will likely have wider more complicated supply chains with a broader mix of home produced and imported inputs. Since early 2016 all types of metal goods have witnessed price inflation, which resulted in 10 consecutive months of price increases by February 2017.

5 . Links to related statistics

In addition to the data included within this statistical bulletin, the following detailed datasets are available:

[PPI Aerospace and Electronic Indices](#)
[PPI MM22 Producer Price Indices](#)

Higher, lower and equal movements for each Producer Price Index are shown in the [PPI records](#).

A summary of the revisions to PPI data are available in the PPI revision triangles:

[PPI Revision triangle for total output \(12 months\)](#)
[PPI Revision triangle for total output \(1 month\)](#)
[PPI Revision triangle for total input \(12 months\)](#)
[PPI Revision triangle for total input \(1 month\)](#)

Other important measures of inflation and prices include the [Consumer Prices Index \(CPI\)](#) and the [Services Producer Price Index \(SPPI\)](#).

6 . Quality and methodology

The [PPI Quality and Methodology Information document](#) contains important information on:

- the strengths and limitations of the data and how it compares with related data
- users and uses of the data
- how the output was created
- the quality of the output including the accuracy of the data

If you would like more information about the reliability of the data, a [PPI standard errors article](#) was published 20 March 2017. The article presented the calculated standard errors of the Producer Price Index (PPI) during the period January 2016 to December 2016, for both month-on-month and 12-month growth.

[Guidance on using indices in indexation clauses](#) has been published on our website. It covers producer prices, services producer prices and consumer prices.

An up-to-date manual for the PPI, including the import and export index, is now available. [PPI methods and guidance](#) provides an outline of the methods used to produce the PPI as well as information about recent PPI developments.

Gross sector basis figures, which include intra-industry sales and purchases, are shown in [PPI dataset Tables 4 and 6](#).

The detailed input indices of prices of materials and fuels purchased by industry ([PPI dataset Table 6](#)) do not include the Climate Change Levy (CCL). This is because each industry can, in practice, pay its own rate for the various forms of energy, depending on the various negotiated discounts and exemptions that apply.

1R Output Prices: Summary (not seasonally adjusted) - SIC 2007

REVISIONS - BACKGROUND INFORMATION ONLY

2010=100, SIC2007

	Net Sector						Gross Sector					
	Output of manufactured products			All manufacturing excluding food, beverages, tobacco and petroleum			Food products, beverages and tobacco, including duty			Coke and refined petroleum products, including duty		
	Index (2010=100)	percentage change over		Index (2010=100)	percentage change over		Index (2010=100)	percentage change over		Index (2010=100)	percentage change over	
		1 mth	12 mths		1 mth	12 mths		1 mth	12 mths		1 mth	12 mths
	7200700000			7200799000			7111101280			7112190080		
	JVZ7			K3BI			K65A			K37Y		
2016 Aug	-	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-
2017 Jan	0.1	-	0.1	0.1	-	0.1	0.3	0.1	0.3	-	-	-
Feb	..	..	..	..	..	..	..	..	..	..	..	..

Please see Statistical Bulletin section entitled 'Revisions' for further information.

Source: Office for National Statistics

2R Net Sector Input Prices, including Climate Change Levy¹: summary

(not seasonally adjusted) - SIC 2007

REVISIONS - BACKGROUND INFORMATION ONLY

2010=100, SIC2007

	All manufacturing (materials and fuel purchased)			Materials purchased by manufacturing industry			Fuel purchased by manufacturing industry		
	Index (2010=100)	percentage change over		Index (2010=100)	percentage change over		Index (2010=100)	percentage change over	
		1 mth	12 mth		1 mth	12 mth		1 mth	12 mths
		6207000050			6207000010			6207000060	
	K646			K644			K647		
2016 Aug	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-0.1	-0.1	-0.1	-	-	-
Dec	-0.3	-0.3	-0.4	-0.2	-0.1	-0.3	-0.5	-0.4	-0.4
2017 Jan	-0.4	-0.1	-0.4	-0.4	-0.2	-0.5	-0.2	0.2	-0.2
Feb	..	..	..	..	..	..	..	..	..

¹ The Climate Change Levy was introduced in April 2001.

Source: Office for National Statistic

p = provisional
r = revised

Please see Statistical Bulletin section entitled 'Revisions' for further information.

7R Output Prices excluding duty: JVZ8 (not seasonally adjusted)

REVISIONS - BACKGROUND INFORMATION ONLY

2010=100, SIC2007

All manufacturing, excluding duty			
	Index (2010=100)	Percentage change over	
		1 month	12 months
	7200700010		
	JVZ8		
2013 Aug	-	-	-
Sep	-	-	-
Oct	-	-	-
Nov	-	-	-
Dec	-	-	-
2014 Jan	-	-	-
Feb	-	-	-
Mar	-	-	-
Apr	-	-	-
May	-	-	-
Jun	-	-	-
Jul	-	-	-
Aug	-	-	-
Sep	-	-	-
Oct	-	-	-
Nov	-	-	-
Dec	-	-	-
2015 Jan	-	-	-
Feb	-	-	-
Mar	-	-	-
Apr	-	-	-
May	-	-	-
Jun	-	-	-
Jul	-	-	-
Aug	-	-	-
Sep	-	-	-
Oct	-	-	-
Nov	-	-	-
Dec	-	-	-
2016 Jan	-	-	-
Feb	-	-	-
Mar	-	-	-
Apr	-	-	-
May	-	-	-
Jun	-	-	-
Jul	-	-	-
Aug	-	-	-
Sep	-	-	-
Oct	-	-	-
Nov	-	-	-
Dec	0.1	0.1	0.1
2017 Jan	0.1	-0.1	0.1
Feb	..	..	..

This series excludes excise duties payable on tobacco products, alcoholic liquor and petroleum products.

Source: Office for National Statistics

Please see Statistical Bulletin section entitled 'Revisions' for further information.

8R Output Prices: revisions (not seasonally adjusted) - SIC 2007

2010=100, SIC2007

	Output of manufactured products			All manufacturing excluding food, beverages, tobacco and petroleum		
	Index (2010=100)	percentage change over		Index (2010=100)	percentage change over	
		1 month	12 months		1 month	12 months
	7200700000			7200799000		
	JVZ7			K3BI		
2013 Aug	-	-	-	-	-	-
Sep	-	-	-	-	-	-
Oct	-	-	-	-	-	-
Nov	-	-	-	-	-	-
Dec	-	-	-	-	-	-
2014 Jan	-	-	-	-	-	-
Feb	-	-	-	-	-	-
Mar	-	-	-	-	-	-
Apr	-	-	-	-	-	-
May	-	-	-	-	-	-
Jun	-	-	-	-	-	-
Jul	-	-	-	-	-	-
Aug	-	-	-	-	-	-
Sep	-	-	-	-	-	-
Oct	-	-	-	-	-	-
Nov	-	-	-	-	-	-
Dec	-	-	-	-	-	-
2015 Jan	-	-	-	-	-	-
Feb	-	-	-	-	-	-
Mar	-	-	-	-	-	-
Apr	-	-	-	-	-	-
May	-	-	-	-	-	-
Jun	-	-	-	-	-	-
Jul	-	-	-	-	-	-
Aug	-	-	-	-	-	-
Sep	-	-	-	-	-	-
Oct	-	-	-	-	-	-
Nov	-	-	-	-	-	-
Dec	-	-	-	-	-	-
2016 Jan	-	-	-	-	-	-
Feb	-	-	-	-	-	-
Mar	-	-	-	-	-	-
Apr	-	-	-	-	-	-
May	-	-	-	-	-	-
Jun	-	-	-	-	-	-
Jul	-	-	-	-	-	-
Aug	-	-	-	-	-	-
Sep	-	-	-	-	-	-
Oct	-	-	-	-	-	-
Nov	-	-	-	-	-	-
Dec	-	-	-	0.1	0.1	0.1
2017 Jan	0.1	-	0.1	0.1	-	0.1
Feb	..	..	..	..	..	..

Please see Statistical Bulletin section entitled 'Revisions' for further information.

Source: Office for National Statistics

9R Net Sector Input Prices, including Climate Change Levy¹: revisions - SIC 2007

2010=100, SIC2007

	All manufacturing industries			All manufacturing excluding food, beverages, tobacco and petroleum industries					
	not seasonally adjusted			not seasonally adjusted			seasonally adjusted		
	Index (2010=100)	percentage change over		Index (2010=100)	percentage change over		Index (2010=100)	percentage change over	
		1 month	12 months		1 month	12 months		1 month	12 months
	6207000050 K646			6207990050 K655			6207998950 K658		
2013 Aug	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-
2014 Jan	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-
2015 Jan	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-
2016 Jan	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Dec	-0.3	-0.3	-0.4	-0.4	-0.3	-0.4	-0.4	-0.2	-0.4
2017 Jan	-0.4	-0.1	-0.4	-0.1	0.3	-0.1	-0.2	0.2	-0.2
Feb	..	..	..	..	..	..	..	..	..

¹ The Climate Change levy was introduced in April 2001.
Please see Statistical Bulletin section entitled 'Revisions' for further information.

Source: Office for National Statistics