

## Results of the Survey of Professional Forecasters on Macroeconomic Indicators– Round 44<sup>1</sup>

*In the 44<sup>th</sup> round of the Survey of Professional Forecasters, output growth for 2016-17 measured by gross value added at basic prices has been revised downwards by 40 basis points (bps) from the previous round of the survey for 2016-17 and projected higher by 10 bps for the year 2017-18. CPI headline inflation is forecast to increase gradually from 4.0 per cent in Q4:2016-17 to 4.9 per cent in Q3:2017-18. Medium term (5 years) and long term (10 years) growth expectation are revised down by 20 bps and 10 bps, respectively, from the previous round.*

The Reserve Bank has been conducting the Survey of Professional Forecasters since September 2007. Eighteen professional forecasters participated in the latest survey round (Round 44) conducted in January 2017<sup>2</sup>. The results of the survey are presented in the Annex in a tabular form.

### 1. **Annual Forecasts: Highlights** (Median of Forecasts)

- Forecasters expect real gross value added (GVA) at basic price to grow by 6.7 per cent in 2016-17. Activity in agriculture and allied activities and services are expected to expand at 3.5 per cent and 8.0 per cent, respectively, while their forecast of GVA growth in industry has been revised down to 5.8 per cent from 6.9 per cent in the previous round of the survey (**Table 1**).
- In 2017-18, real GVA is expected to increase by 7.5 per cent, led by growth in services (8.8 per cent) and supported by agriculture and allied activities (3.3 per cent) and industry (7.2 per cent).
- In terms of subjective probabilities, forecasters assigned the maximum chance of 54 per cent (based on the average of individual forecasts) to real GVA growth being in the range of 6.5-6.9 per cent in 2016-17 (**Chart 1**) and 33 per cent chance to GVA growth in the range of 7.0-7.4 per cent in 2017-18.

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<sup>1</sup> Data for the previous survey round were released on [December 7, 2016](#) on the RBI website.

<sup>2</sup> The results of the survey represent the views of the respondent forecasters and in no way reflect the views or forecasts of the Reserve Bank of India.

<b>Table 1: Median Forecast of Real GVA (Growth Rate) for 2016-17 and 2017-18</b>			<b>Chart 1: Probability Pattern<sup>@</sup> of GVA Growth Forecast for 2016-17 and 2017-18</b>	
	<b>2016-17</b>	<b>2017-18</b>		
Real GVA	6.7 (-0.4)	7.5 (+0.1)		
Agriculture and Allied Activities	3.5 (+0.4)	3.3 (+0.4)		
Industry	5.8 (-1.1)	7.2 (-0.1)		
Services	8.0 (-0.4)	8.8 (-0.2)		
<b>Note:</b> 3. Growth rates are in per cent. 4 Figures in parentheses represents the extent of revisions relative to the 43 <sup>rd</sup> round.				

- Private final consumption expenditure at current prices is expected to grow by 11.3 per cent in 2016-17 and by 12.4 per cent in 2017-18, although forecasters have marked down projections relative to the previous round of the survey (**Table 2**).
- The rate of gross saving is projected at 31.9 per cent of gross national disposable income (GNDI) in 2016-17 and 31.8 in 2017-18 (**Table 2**).
- Forecasters expect the rate of gross fixed capital formation at 28.3 per cent of GDP in 2016-17 and 28.8 per cent of GDP in 2017-18 (**Table 2**).

<b>Table 2: Median Forecast of PFCE and Capital Formation</b>		
	<b>2016-17</b>	<b>2017-18</b>
Private final consumption expenditure (growth rate in per cent)	11.3 (-0.2)	12.4 (-0.2)
Gross Saving Rate (per cent of GNDI)	31.9 (-0.4)	31.8 (-0.7)
Gross Fixed Capital Formation Rate (per cent of GDP)	28.3 (-1.4)	28.8 (-1.2)

Figures in parentheses represents the extent of revisions relative to the 43<sup>rd</sup> round.

- Money supply (M<sub>3</sub>) is expected to grow by 9.5 per cent in 2016-17 and 11.9 per cent in 2017-18.
- Bank credit growth is expected at 7.7 per cent in 2016-17, improving to 11.5 per cent in 2017-18 (**Table 3**).

<b>Table 3: Median Forecast of Select Monetary and Banking Variables</b>		
	<b>2016-17</b>	<b>2017-18</b>
Money Supply (M <sub>3</sub> ) (growth rate in per cent)	9.5 (-1.7)	11.9 (-0.1)
Bank Credit (growth rate in per cent)	7.7 (-3.3)	11.5 (-0.5)

Figures in parentheses represents the extent of revisions relative to the 43<sup>rd</sup> round.

- The Central Government's gross fiscal deficit (GFD) is projected at 3.5 per cent of GDP in 2016-17, which is expected to narrow to 3.1 per cent of GDP in 2017-18. The combined GFD of Central and State Governments is projected at 6.5 per cent of GDP in 2016-17, reducing to 6.0 per cent of GDP in 2017-18 (**Table 4**).

<b>Table 4: Median Forecast of Fiscal Deficit</b>		
	<b>2016-17</b>	<b>2017-18</b>
Central Government Gross Fiscal Deficit (per cent of GDP)	3.5 (0.0)	3.1 (+0.1)
Combined Gross Fiscal Deficit (per cent of GDP)	6.5 (+0.1)	6.0 (0.0)

Figures in parentheses represents the extent of revisions relative to the 43<sup>rd</sup> round.

- Merchandise export growth is likely to be 2.2 per cent in 2016-17, picking up momentum to reach 6.7 per cent in 2017-18 (**Table 5**).
- The current account deficit (CAD) is projected at 0.8 per cent and 1.1 per cent (of GDP) in 2016-17 and 2017-18, respectively. (**Table 5**).

<b>Table 5: Median Forecast of Select External Sector Variables</b>		
	<b>2016-17</b>	<b>2017-18</b>
Merchandise Exports (growth rate in per cent)	2.2 (+0.8)	6.7 (+1.1)
Merchandise Imports (growth rate in per cent)	-2.9 (-0.4)	7.6 (-0.5)
Current Account Deficit (per cent of GDP)	0.8 (+0.1)	1.1 (+0.1)
Capital Account Balance (per cent of GDP)	1.8 (-0.1)	2.5 (0.0)

Figures in parentheses represents the extent of revisions relative to the 43<sup>rd</sup> round.

## 2. Quarterly Forecasts: Highlights

- Quarterly real GVA growth at basic prices may moderate to 6.1 per cent in Q3:2016-17, improving gradually to 7.6 per cent by Q3: 2017-18 (**Table 6**).

<b>Table 6: Median Forecast of Real GVA growth from Q3:2016-17 to Q3:2017-18</b>					
	<b>Q3:16-17</b>	<b>Q4:16-17</b>	<b>Q1:17-18</b>	<b>Q2:17-18</b>	<b>Q3:17-18</b>
Real GVA at basic prices	6.1 (-0.9)	6.6 (-0.5)	7.2 (-0.2)	7.5 (+0.1)	7.6
Agriculture and Allied Activities	4.0 (+0.4)	3.5 (+0.7)	3.1 (+0.4)	3.1 (+0.3)	3.5
Industry	4.9 (-2.0)	5.2 (-1.9)	5.9 (-1.3)	6.7 (-0.6)	7.4
Services	7.1 (-1.2)	7.5 (-1.0)	8.4 (-0.4)	8.5 (-0.5)	9.1

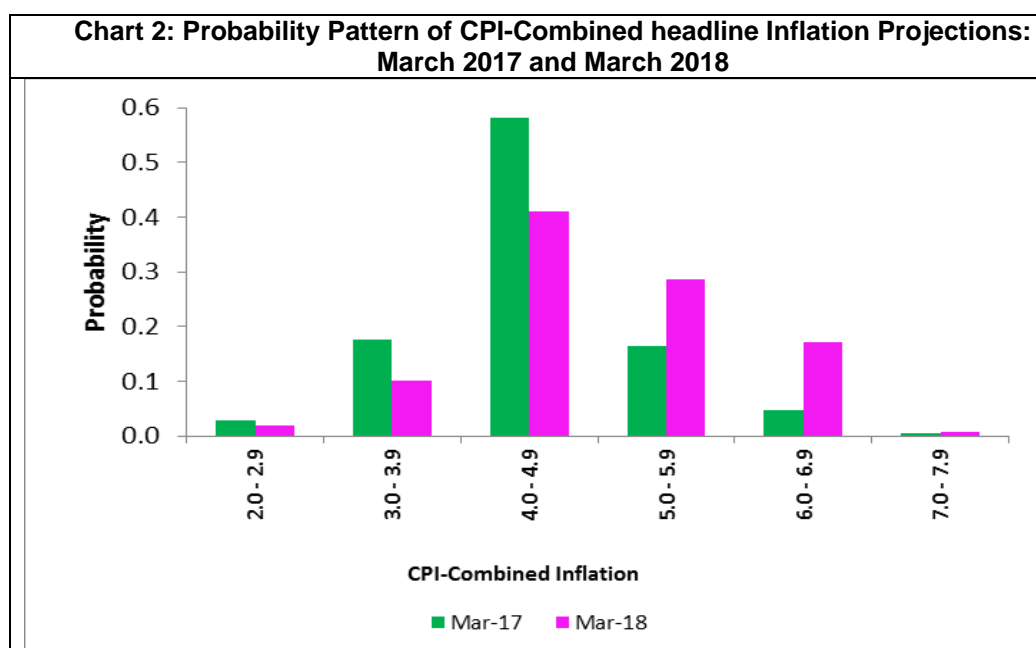
Figures in parentheses represents the extent of revisions relative to the 43<sup>rd</sup> round.

- CPI headline inflation is expected to increase to 4.0 per cent in Q4:2016-17 and edge up gradually to 4.9 per cent in Q3:2017-18. CPI Core inflation is expected to remain marginally below 5.0 per cent till Q3:2017-18 (**Table 7**).
- Core CPI (defined as headline CPI excluding food and fuel) inflation is expected to remain below 5.0 per cent till Q3:2017-18 (**Table 7**).
- WPI inflation is expected to increase to 4.3 per cent in Q4:2016-17 but may decline in the next quarter (Q1:2017-18) (**Table 7**).

<b>Table 7: Median Forecast of Inflation from Q4:2016-17 to Q3:2017-18</b>				
	<b>Q4:16-17</b>	<b>Q1:17-18</b>	<b>Q2:17-18</b>	<b>Q3:17-18</b>
CPI (Combined) headline	4.0 (-0.5)	4.1 (-0.4)	4.7 (0.0)	4.9
Core CPI (Combined) (excluding food & fuel)	4.9 (0.0)	4.9 (0.0)	4.9 (+0.1)	4.8
WPI headline	4.3 (+0.3)	3.4 (+0.3)	3.5 (+0.5)	3.9

Figures in parentheses represents the extent of revisions relative to the 43<sup>rd</sup> round.

- Forecasters assigned the maximum probability of 58 per cent to CPI headline inflation falling in the range 4.0-4.9 per cent in March 2017 (**Chart 2**). Based on this probability distribution, the implicit CPI inflation for March 2017 is 4.5 per cent. For March 2018, a maximum probability of 41 per cent is assigned to inflation in the range 4.0-4.9 per cent. Based on this probability distribution, the implicit CPI inflation for March 2018 is 5.0 per cent.



- Volatility may be observed in the exchange rate of the Indian rupee against the US Dollar. In terms of the median forecast, the Indian rupee is expected to move in the range of ₹68.10 to ₹69.30 per US Dollar till Q3:2017-18 (**Annex Table A.3**).

### 3. Long Term Forecasts

- The long- term real GVA growth expectations is at 8.0 per cent, slightly lower than 8.1 per cent in the previous round. The medium-term growth forecast for the next five years remains at 7.5 per cent, which is 20 bps lower than in the last round (**Chart 3**).
- Average CPI inflation is marked down to 4.7 per cent for the next five years, 30 bps below the forecast polled in the last round of the survey. The long-term (ten years ahead) inflation forecast is expected at 4.5 per cent, the same level as in the previous round. (**Chart 4**).

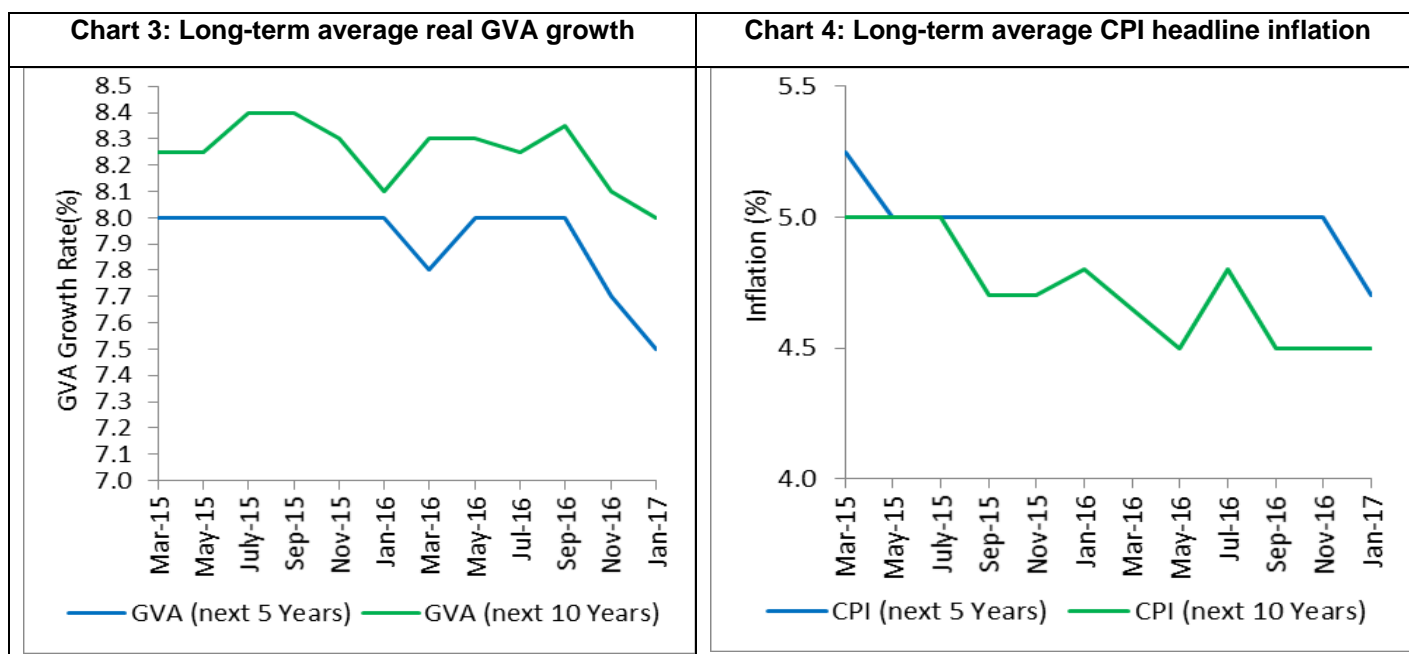


Table A.1: Annual Forecasts for 2016-17

Key Macroeconomic Indicators		Annual Forecasts for 2016-17			
		Mean	Median	Max	Min
1	Real GVA at basic prices (growth rate in per cent)	6.7	6.7	7.3	6.3
a	Agriculture & Allied Activities (growth rate in per cent)	3.5	3.5	5.1	1.2
b	Industry (growth rate in per cent)	6.0	5.8	8.2	4.8
c	Services (growth rate in per cent)	8.0	8.0	8.8	6.8
2	Private Final Consumption Expenditure at current market price (growth rate in per cent)	10.8	11.3	13.0	6.8
3	Gross Saving (per cent of Gross National Disposable Income)	31.9	31.9	33.7	30.1
4	Gross Fixed Capital Formation (per cent of GDP)	27.9	28.3	29.7	24.0
5	Money Supply (M3) (growth rate in per cent)	10.2	9.5	15.5	7.2
6	Bank Credit of Scheduled Commercial banks (growth rate in per cent)	7.6	7.7	12.2	3.1
7	Combined Gross Fiscal Deficit (per cent of GDP)	6.5	6.5	7.5	6.0
8	Central Government Gross Fiscal Deficit (per cent of GDP)	3.5	3.5	3.7	3.5
9	Repo Rate(end period)	6.0	6.0	6.3	5.8
10	CRR (end period)	4.0	4.0	4.0	4.0
11	Yield of 91-Days Treasury Bills (end period)	6.1	6.1	6.5	5.9
12	YTM of Central Govt. Securities with term to maturity of 10-years (end period)	6.3	6.3	6.6	6.0
13	Overall Balance of Payments (in US \$ bn.)	20.0	18.9	35.0	0.1
14	Merchandise Exports (in US \$ bn.)	270.6	271.7	278.0	258.7
15	Merchandise Exports (growth rate in per cent)	1.6	2.2	4.4	-2.9
16	Merchandise Imports (in US \$ bn.)	387.3	384.9	408.8	373.0
17	Merchandise Imports (growth rate in percent)	-2.4	-2.9	3.1	-6.0
18	Merchandise Trade Balance (per cent of GDP)	-5.2	-5.0	-4.7	-5.9
19	Net Invisible Balance (in US \$ bn.)	98.9	98.2	109.3	91.7
20	Current Account Balance (in US \$ bn.)	-17.3	-17.0	-10.0	-28.0
21	Current Account Balance (per cent of GDP)	-0.8	-0.8	-0.5	-1.3
22	Capital Account Balance (in US \$ bn.)	36.0	39.6	52.2	14.0
23	Capital Account Balance (per cent of GDP)	1.7	1.8	2.3	0.6

Table A.2: Annual Forecasts for 2017-18

Key Macroeconomic Indicators		Annual Forecasts for 2017-18			
		Mean	Median	Max	Min
1	Real GVA at basic prices (growth rate in per cent)	7.4	7.5	7.8	6.8
a	Agriculture & Allied Activities (growth rate in per cent)	3.2	3.3	4.5	2.0
b	Industry (growth rate in per cent)	7.1	7.2	8.6	5.6
c	Services (growth rate in per cent)	8.6	8.8	9.1	7.8
2	Private Final Consumption Expenditure at current market price (growth rate in per cent)	12.6	12.4	14.5	11.1
3	Gross Saving (per cent of Gross National Disposable Income)	32.0	31.8	34.2	29.5
4	Gross Fixed Capital Formation (per cent of GDP)	28.6	28.8	31.0	26.2
5	Money Supply (M3) (growth rate in per cent)	11.5	11.9	15.0	8.5
6	Bank Credit of Scheduled Commercial banks (growth rate in per cent)	10.8	11.5	13.3	8.0
7	Combined Gross Fiscal Deficit (per cent of GDP)	6.2	6.0	7.3	5.7
8	Central Government Gross Fiscal Deficit (per cent of GDP)	2.7	3.1	3.5	3.0
9	Repo Rate(end period)	5.9	6.0	6.0	5.5
10	CRR (end period)	4.1	4.0	5.0	4.0
11	Yield of 91-Days Treasury Bills (end period)	6.1	6.0	6.5	5.9
12	YTM of Central Govt. Securities with term to maturity of 10-years (end period)	6.2	6.2	6.7	5.9
13	Overall Balance of Payments (in US \$ bn.)	33.5	32.8	55.0	19.4
14	Merchandise Exports (in US \$ bn.)	290.6	291.0	319.5	267.0
15	Merchandise Exports (growth rate in per cent)	7.0	6.7	14.9	2.3
16	Merchandise Imports (in US \$ bn.)	420.7	418.6	470.5	397.0
17	Merchandise Imports (growth rate in per cent)	8.7	7.6	15.1	4.7
18	Merchandise Trade Balance (per cent of GDP)	-5.3	-5.3	-4.9	-6.2
19	Net Invisible Balance (in US \$ bn.)	100.9	100.6	116.3	92.0
20	Current Account Balance (in US \$ bn.)	-25.9	-26.8	-13.2	-35.5
21	Current Account Balance (per cent of GDP)	-1.1	-1.1	-0.5	-1.4
22	Capital Account Balance (in US \$ bn.)	59.4	60.0	80.0	38.0
23	Capital Account Balance (per cent of GDP)	2.4	2.5	3.2	1.6

**Table A.3: Quarterly Forecasts from Q3:2016-17 to Q2:2017-18**

	Key Macroeconomic Indicators	Quarterly Forecasts							
		Q3: 2016-17				Q4: 2016-17			
		Mean	Median	Max	Min	Mean	Median	Max	Min
1	Real GVA at basic prices (growth rate in per cent)	6.1	6.1	6.8	4.8	6.6	6.6	7.4	5.8
a	Agriculture & Allied Activities (growth rate in per cent)	4.3	4.0	7.0	2.7	4.0	3.5	7.0	2.9
b	Industry (growth rate in per cent)	4.6	4.9	6.3	1.9	5.3	5.2	7.2	4.0
c	Services (growth rate in per cent)	7.2	7.1	8.4	4.6	7.7	7.5	8.7	6.7
2	Private Final Consumption Expenditure (growth rate in per cent)	9.8	10.3	10.5	8.2	10.4	10.6	10.9	9.7
3	Gross Fixed Capital Formation (per cent of GDP)	27.5	27.5	28.7	25.9	27.9	28.0	30.0	25.7
4	₹ per U.S. Dollar (RBI reference rate-end period)	--	--	--	--	68.5	68.1	69.6	67.9
5	Repo Rate (end period)	--	--	--	--	6.1	6.0	6.3	6.0
6	CRR (end period)	--	--	--	--	4.0	4.0	4.0	4.0
7	Merchandise Export (in US\$ bn.)	67.6	68.3	72.1	60.3	71.3	71.1	73.2	69.3
8	Merchandise Import (in US\$ bn.)	103.9	103.2	113.5	97.0	102.1	100.2	115.0	95.8
9	Indian Crude Oil basket Price (in US\$ per barrel)	--	--	--	--	53.5	54.0	57.0	49.0

	Key Macroeconomic Indicators	Quarterly Forecasts											
		Q1: 2017-18				Q2: 2017-18				Q3:2017-18			
		Mean	Median	Max	Min	Mean	Median	Max	Min	Mean	Median	Max	Min
1	Real GVA at basic prices (growth rate in per cent)	7.0	7.2	7.6	6.2	7.5	7.5	7.9	6.8	7.6	7.6	8.2	6.8
a	Agriculture & Allied Activities (growth rate in per cent)	3.1	3.1	4.0	2.3	3.2	3.1	4.0	2.5	3.9	3.5	6.8	2.5
b	Industry (growth rate in per cent)	6.0	5.9	7.5	4.8	6.7	6.7	7.9	5.5	7.3	7.4	8.1	6.0
c	Services (growth rate in per cent)	8.3	8.4	8.9	7.2	8.5	8.5	9.0	7.4	8.8	9.1	9.6	7.6
2	Private Final Consumption Expenditure (growth rate in per cent)	11.1	11.0	12.2	9.5	11.9	12.0	12.7	10.7	13.3	13.0	17.5	11.0
3	Gross Fixed Capital Formation (per cent of GDP)	28.2	28.1	29.6	27.1	28.0	27.0	30.7	26.3	27.8	27.6	30.2	25.6
4	₹ per U.S. Dollar (RBI reference rate-end period)	69.1	68.9	70.5	67.8	69.2	69.2	71.5	67.5	69.5	69.3	72.5	67.2
5	Repo Rate (end period)	5.9	6.0	6.0	5.5	5.9	6.0	6.0	5.5	5.8	5.75	6.0	5.5
6	CRR (end period)	4.1	4.0	5.0	4.0	4.1	4.0	5.0	4.0	4.1	4.0	5.0	4.0
7	Merchandise Export (in US\$ bn.)	71.3	70.1	76.3	68.9	73.4	72.6	78.9	70.6	71.4	71.6	80.3	60.0
8	Merchandise Import (in US\$ bn.)	104.6	104.8	112.5	96.8	106.8	105.6	116.0	100.0	108.5	107.3	119.0	97.0
9	Indian Crude Oil basket Price (in US\$ per barrel)	55.5	54.0	62.0	52.0	57.8	56.0	64.0	55.0	60.5	60.0	67.0	55.0

**Table A.4: Forecasts of CPI-Combined Inflation**

	CPI Combined Headline				Core CPI Combined (excluding food & fuel)			
	Mean	Median	Max	Min	Mean	Median	Max	Min
Q4:2016-17	4.0	4.0	4.4	3.5	4.9	4.9	5.3	4.5
Q1:2017-18	4.0	4.1	4.9	3.0	4.8	4.9	5.2	4.3
Q2:2017-18	4.5	4.7	5.3	3.5	4.9	4.9	5.5	4.5
Q3:2017-18	5.1	4.9	5.9	4.0	4.9	4.8	5.6	4.5

**Table A.5: Forecasts of WPI Inflation**

	WPI Headline				WPI-Manufactured Products			
	Mean	Median	Max	Min	Mean	Median	Max	Min
Q4:2016-17	4.2	4.3	4.9	3.7	3.3	3.2	3.7	2.5
Q1:2017-18	3.3	3.4	4.5	2.1	2.9	2.8	3.8	2.3
Q2:2017-18	3.3	3.5	4.5	1.0	2.9	2.9	4.0	2.0
Q3:2017-18	3.8	3.9	5.0	1.3	3.0	3.1	4.0	1.6

**Table A.6: Mean probabilities attached to possible outcomes of real GVA growth**

Growth Range	Forecasts for 2016-17	Forecasts for 2017-18
Below 2.0 per cent	0.00	0.00
2.0 to 2.4 per cent	0.00	0.00
2.5 to 2.9 per cent	0.00	0.00
3.0 to 3.4 per cent	0.00	0.00
3.5 to 3.9 per cent	0.00	0.00
4.0 to 4.4 per cent	0.00	0.00
4.5 to 4.9 per cent	0.00	0.00
5.0 to 5.4 per cent	0.00	0.00
5.5 to 5.9 per cent	0.03	0.00
6.0 to 6.4 per cent	0.15	0.04
6.5 to 6.9 per cent	0.54	0.19
7.0 to 7.4 per cent	0.21	0.33
7.5 to 7.9 per cent	0.07	0.25
8.0 to 8.4 per cent	0.01	0.14
8.5 to 8.9 per cent	0.00	0.04
9.0 to 9.4 per cent	0.00	0.01
9.5 to 9.9 per cent	0.00	0.00
10.0 per cent or more	0.00	0.00



**Table A.7: Mean probabilities attached to possible outcomes of CPI (Combined) inflation**

Inflation Range	Forecasts for March 2017	Forecasts for March 2018
Below 0 per cent	0.00	0.00
0 to 0.9 per cent	0.00	0.00
1.0 to 1.9 per cent	0.00	0.00
2.0 to 2.9 per cent	0.03	0.02
3.0 to 3.9 per cent	0.18	0.10
4.0 to 4.9 per cent	0.58	0.41
5.0 to 5.9 per cent	0.16	0.29
6.0 to 6.9 per cent	0.05	0.17
7.0 to 7.9 per cent	0.00	0.01
8.0 to 8.9 per cent	0.00	0.00
9.0 to 9.9 per cent	0.00	0.00
10.0 to 10.9 per cent	0.00	0.00
11.0 to 11.9 per cent	0.00	0.00
12.0 to 12.9 per cent	0.00	0.00
13.0 to 13.9 per cent	0.00	0.00
14.0 per cent or above	0.00	0.00

**Table A.8: Mean probabilities attached to possible outcomes of WPI inflation**

Inflation Range	Forecasts for March 2017	Forecasts for March 2018
Below 0 per cent	0.00	0.00
0 to 0.9 per cent	0.00	0.01
1.0 to 1.9 per cent	0.02	0.06
2.0 to 2.9 per cent	0.09	0.09
3.0 to 3.9 per cent	0.33	0.31
4.0 to 4.9 per cent	0.45	0.34
5.0 to 5.9 per cent	0.11	0.17
6.0 to 6.9 per cent	0.01	0.03
7.0 to 7.9 per cent	0.00	0.00
8.0 to 8.9 per cent	0.00	0.00
9.0 to 9.9 per cent	0.00	0.00
10.0 to 10.9 per cent	0.00	0.00
11.0 to 11.9 per cent	0.00	0.00
12.0 to 12.9 per cent	0.00	0.00
13.0 to 13.9 per cent	0.00	0.00
14.0 per cent or above	0.00	0.00

**Table A.9: Annual Average Percentage Change**

	Annual average percentage change over the next five years				Annual average percentage change over the next ten years			
	Mean	Median	Max	Min	Mean	Median	Max	Min
Real GVA	7.5	7.5	8.4	6.5	7.8	8.0	8.9	7.0
CPI Combined	4.8	4.7	5.4	4.2	4.6	4.5	5.6	4.0
WPI	3.8	3.9	4.6	3.0	3.9	4.1	4.7	2.5