

Results of the Survey of Professional Forecasters on Macroeconomic Indicators– Round 43¹

Professional Forecasters expect the output {measured using Gross Value Added (GVA) at basic prices} to grow at 7.1 per cent in 2016-17 which is 50 basis points (bps) lower than the previous survey round (Forecasts are in terms of median). For 2017-18, GVA growth is expected at 7.4 per cent, which is 40 bps lower compared to the last round. Quarterly growth projections for the next five quarters indicate that growth may moderate to 7.0 per cent in Q3:2016-17 but subsequently improve to 7.4 per cent till Q2:2017-18. Forecasters also expect moderation in CPI headline inflation from the previous round to 4.1 per cent in Q3:2016-17. Medium-term (5 years) and long-term (10 years) growth are expected at 7.7 per cent and 8.1 per cent, respectively.

The Reserve Bank has been conducting the Survey of Professional Forecasters since September 2007. **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.** Twenty Two professional forecasters participated in the latest survey round (Round 43) conducted in November 2016. The results of the survey are presented in the Annex in a tabular form.

1. **Annual Forecasts** (Median of forecasts of the respondents)

- Forecasters expect real Gross Value Added at basic prices (GVA) to grow by 7.1 per cent in 2016-17. 'Agriculture & Allied Activities' and 'Services' are expected at 3.1 per cent and 8.4 per cent, respectively. 'Industry' growth forecast has been placed at 6.9 per cent **(Table 1)**.
- In 2017-18, real GVA is expected to increase by 7.4 per cent, led by growth in 'Services' by 9.0 per cent. 'Agriculture & Allied Activities' and 'Industry' are expected to grow by 2.9 per cent and 7.3 per cent, respectively.
- In terms of subjective probabilities assigned to growth projections, forecasters ascribed maximum 28 per cent chance (based on the average of individual forecasts) that real GVA growth in 2016-17 will be in the range of 6.5-6.9 per cent **(Chart 1)**. Again, for the year 2017-18, GVA growth is expected in 7.5-7.9 per cent range with 35 per cent chance.

¹ Data for the previous survey round were released on [October 4, 2016](#) on the RBI website.

Table 1: Median Forecast of Real GVA (Growth Rate) for 2016-17 and 2017-18			Chart 1: Probability Pattern² of GVA Growth Forecast for 2016-17 and 2017-18	
	2016-17	2017-18		
Real GVA	7.1 (-0.5)	7.4 (-0.4)		
Agriculture and Allied Activities	3.1 (-0.4)	2.9 (-0.1)		
Industry	6.9 (-0.6)	7.3 (-0.6)		
Services	8.4 (-0.4)	9.0 (-0.2)		
Note: 1. Growth rates are in per cent. 2. Figures in parentheses in all tables indicate change in forecasts from the previous survey round.				

- Private Final Consumption Expenditure at current prices is expected to grow by 11.5 per cent in 2016-17 and further by 12.6 per cent in 2017-18 (**Table 2**).
- Gross Saving Rate is expected at 32.3 per cent of Gross National Disposable Income (GNDI) in 2016-17 and is likely to improve marginally to 32.5 in 2017-18 (**Table 2**).
- Forecasters expect Gross Fixed Capital Formation rate to improve to 29.7 per cent of GDP in 2016-17 from 29.3 per cent in 2015-16. GFCF is expected to further go up to 30.0 per cent of GDP in 2017-18 (**Table 2**).

Table 2: Median Forecast of PFCE and Capital Formation		
	2016-17	2017-18
Private final consumption expenditure at current prices (growth rate in per cent)	11.5 (-1.1)	12.6 (-0.4)
Gross Saving Rate (per cent of GNDI)	32.3 (+0.7)	32.5 (+0.4)
Gross Fixed Capital Formation Rate (per cent of GDP)	29.7 (+0.2)	30.0 (+0.2)

- Money supply (M₃) growth has been revised down by 30 basis points (bps) to 11.2 per cent from 11.5 per cent in the previous round for 2016-17. M₃ is expected to grow by 12.0 per cent in 2017-18. Bank credit growth is forecasted at 11.0 per cent in 2016-17 and is likely to improve to 12.0 per cent in 2017-18 (**Table 3**).

Table 3: Median Forecast of Select Monetary and Banking Variables		
	2016-17	2017-18
Money Supply (M ₃)	11.2 (-0.3)	12.0 (-0.3)
Bank Credit	11.0 (-0.5)	12.0 (-1.0)

- Central Government's gross fiscal deficit (GFD) is projected at 3.5 per cent of GDP in 2016-17 and is expected to improve to 3.0 per cent of GDP in 2017-18. The

² Forecasters were asked to assign probabilities in the fixed range

combined GFD of Central and State Governments is projected at 6.4 per cent of GDP in 2016-17 and is likely to reduce to 6.0 per cent of GDP in 2017-18 (**Table 4**).

Table 4: Median Forecast of Fiscal Deficit		
	2016-17	2017-18
Central Government Gross Fiscal Deficit (per cent of GDP)	3.5 (0.0)	3.0 (-0.3)
Combined Gross Fiscal Deficit (per cent of GDP)	6.4 (-0.1)	6.0 (0.0)

- Merchandise Exports is likely to grow by 1.4 per cent in 2016-17 and is expected to improve to 5.6 per cent in 2017-18 (**Table 5**).
- Current Account Deficit is projected at 0.7 per cent and 1.0 per cent (of GDP) in 2016-17 and 2017-18, respectively. Capital Account balance is expected at 1.9 per cent of GDP in 2016-17 (**Table 5**).

Table 5: Median Forecast of Select External Sector Variables		
	2016-17	2017-18
Merchandise Exports (growth rate in per cent)	1.4 (+0.2)	5.6 (-0.5)
Merchandise Imports (growth rate in per cent)	-2.5 (-1.4)	7.1 (-2.1)
Current Account Deficit (per cent of GDP)	0.7 (-0.3)	1.0 (-0.2)
Capital Account Balance (per cent of GDP)	1.9 (-0.1)	2.5 (-0.4)

2. Quarterly Forecasts

- The real GVA growth forecast for this round has been revised down from the previous round. For Q3:2016-17, real GVA growth forecast has been revised down by 60 bps to 7.0 per cent from 7.6 per cent in the previous round. GVA growth is expected to improve gradually to 7.4 per cent in Q2: 2017-18 (**Table 6**).

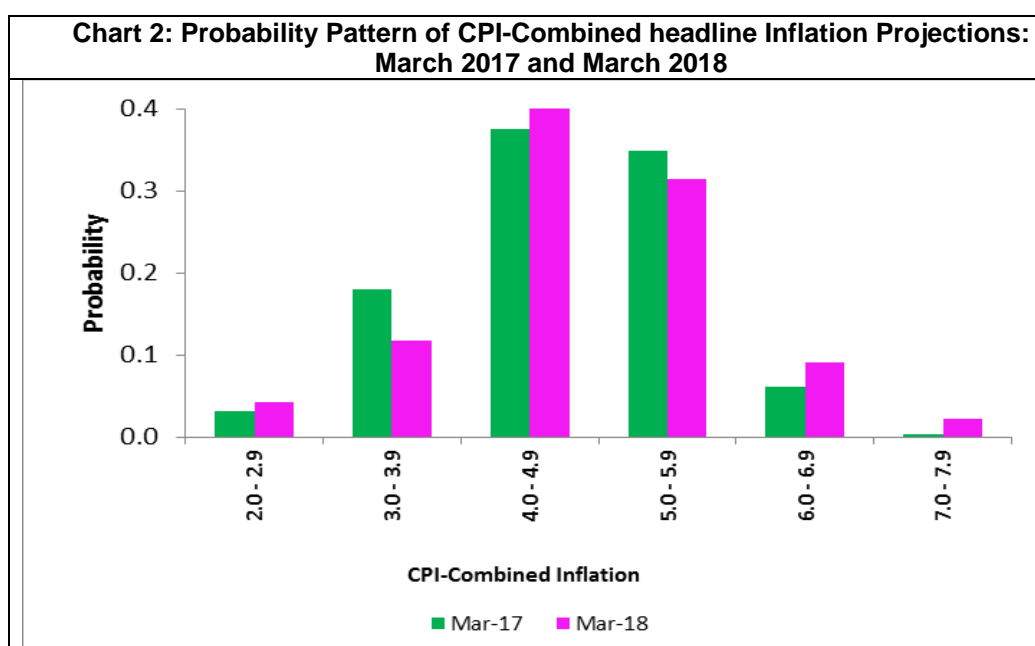
Table 6: Median Forecast of Real GVA growth from Q3:2016-17 to Q2:2017-18				
	Q3:16-17	Q4:16-17	Q1:17-18	Q2:17-18
Real GVA at basic prices	7.0 (-0.6)	7.1 (-0.5)	7.4 (-0.4)	7.4 (-0.6)
Agriculture and Allied Activities	3.6 (-0.4)	2.8 (-0.7)	2.7 (+0.2)	2.8 (+0.2)
Industry	6.9 (-1.1)	7.1 (-0.8)	7.2 (-0.7)	7.3 (-0.8)
Services	8.3 (-0.4)	8.5 (-0.2)	8.8 (-0.1)	9.0 (-0.1)

- CPI (Combined) headline inflation is expected to fall sharply to 4.1 per cent in Q3:2016-17 and thereafter gradually increases to 4.7 per cent till Q2:2017-18 (**Table 7**).
- The core CPI (defined as excluding food and fuel) inflation is revised up compared to the last round and is likely to remain below 5.0 per cent till Q2:2017-18 (**Table 7**).

- WPI inflation is expected to go up to 4.0 per cent in Q4:2016-17 and may decline thereafter (**Table 7**).

	Q3:16-17	Q4:16-17	Q1:17-18	Q2:17-18
CPI (Combined) headline	4.1 (-0.4)	4.5 (-0.2)	4.5 (0.0)	4.7 (+0.3)
Core CPI (Combined) (excluding food & fuel)	4.8 (0.0)	4.9 (+0.1)	4.8 (+0.2)	4.8 (+0.2)
WPI headline	3.3 (-0.4)	4.0 (-0.4)	3.1 (+0.1)	3.0 (-0.3)

- Forecasters assigned maximum probability of 38 per cent that CPI headline inflation will fall in the range 4.0-4.9 per cent and 35 per cent for the range 5.0-5.9 in March 2017 (**Chart 2**). Based on this probability distribution, the implicit CPI inflation for March 2017 is 4.7 per cent. For March 2018, forecasters assigned highest probability of 41 per cent for the range 4.0-4.9 per cent, while 31 per cent probability is assigned for the range 5.0-5.9 per cent. Based on this probability distribution, the implicit CPI inflation for March 2018 is 4.9 per cent.



- Variation observed in the forecast of the Indian Rupee ₹ against the US\$. Variability in the Rupee is expected in Q4:2016-17, as suggested by the wide variation in the forecast from Rs 66.50 per USD to Rs. 72.35 per USD. . In terms of median of forecast, Indian Rupee is expected to move within the range of ₹67.70 to ₹68.05 per US\$ till Q2:2017-18 (**Annex Table A.3**).

3. Long Term Forecasts

- The long- term real GVA growth expectations is at 8.1 per cent as compared to 8.35 per cent in the previous round. The medium- term growth forecast for the next five years is expected at 7.7 per cent, which is 30 bps lower than previous round (**Chart 3**).
- The average CPI inflation for the next five years and ten years remained unchanged at 5.0 per cent and 4.5 per cent in the current round, respectively, from the previous round. (**Chart 4**).

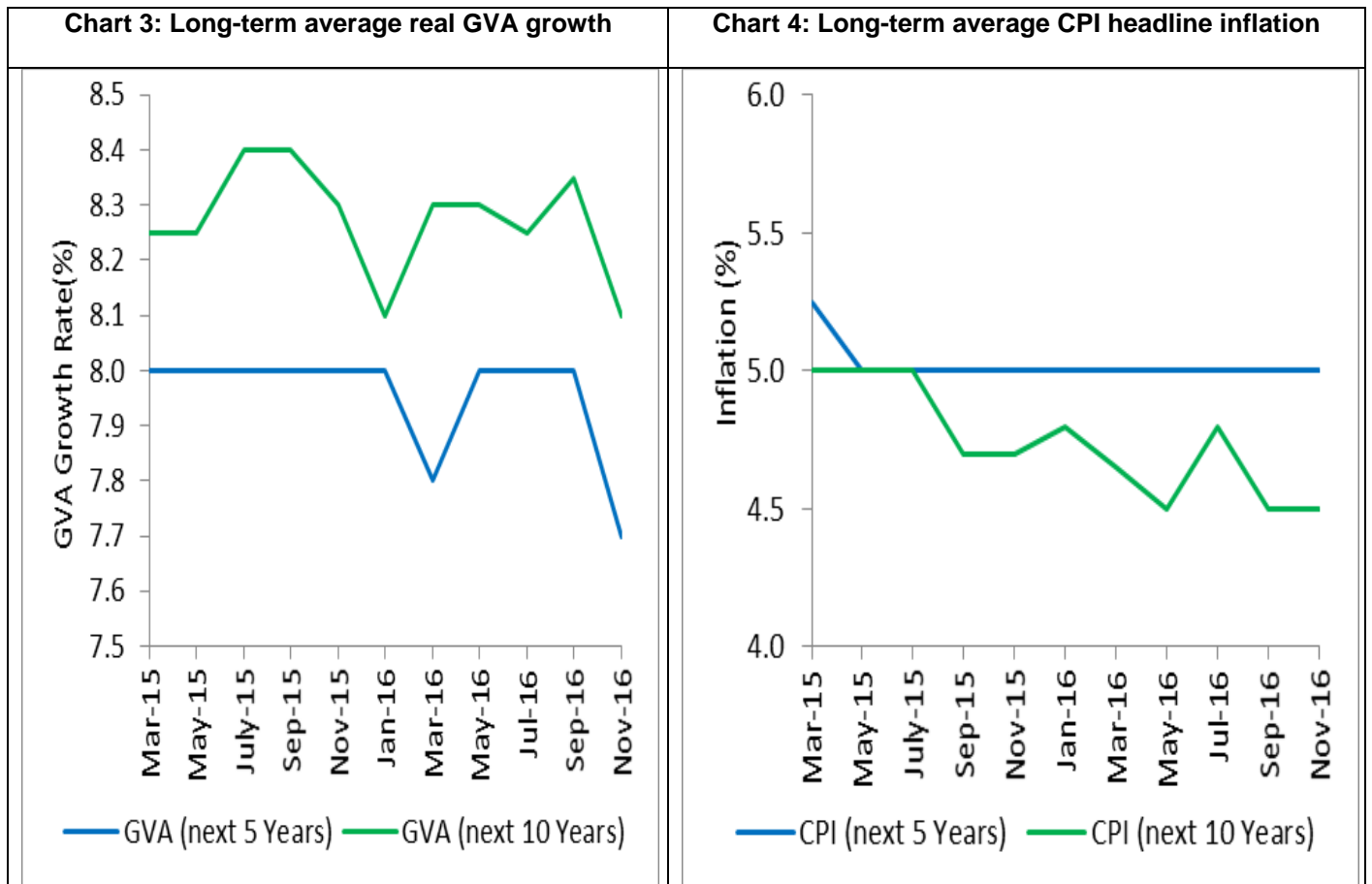


Table A.1: Annual Forecasts for 2016-17

Key Macroeconomic Indicators		Annual Forecasts for 2016-17			
		Mean	Median	Max	Min
1	Real GVA at basic prices (growth rate in per cent)	7.0	7.1	7.9	6.0
a	Agriculture & Allied Activities (growth rate in per cent)	3.2	3.1	4.5	1.3
b	Industry (growth rate in per cent)	6.9	6.9	9.0	5.0
c	Services (growth rate in per cent)	8.4	8.4	9.7	6.4
2	Private Final Consumption Expenditure at current market price (growth rate in per cent)	11.1	11.5	12.7	7.9
3	Gross Saving (per cent of Gross National Disposable Income)	32.1	32.3	34.0	28.0
4	Gross Fixed Capital Formation (per cent of GDP)	29.6	29.7	32.2	27.0
5	Money Supply (M3) (growth rate in per cent)	11.2	11.2	13.5	9.5
6	Bank Credit of Scheduled Commercial banks (growth rate in per cent)	11.0	11.0	12.8	9.2
7	Combined Gross Fiscal Deficit (per cent of GDP)	6.4	6.4	6.7	6.0
8	Central Government Gross Fiscal Deficit (per cent of GDP)	3.2	3.5	3.7	-3.5
9	Repo Rate(end period)	6.00	6.00	6.25	5.75
10	CRR (end period)	4.08	4.00	5.00	4.00
11	Yield of 91-Days Treasury Bills (end period)	6.3	6.2	7.2	5.8
12	YTM of Central Govt. Securities with term to maturity of 10-years (end period)	6.6	6.5	7.6	6.0
13	Overall Balance of Payments (in US \$ bn.)	31.4	29.3	60.0	9.0
14	Merchandise Exports (in US \$ bn.)	268.4	270.0	285.2	231.0
15	Merchandise Exports (growth rate in per cent)	0.6	1.4	7.1	-12.0
16	Merchandise Imports (in US \$ bn.)	381.4	383.4	437.8	276.0
17	Merchandise Imports (growth rate in per cent)	-2.4	-2.5	10.4	-11.7
18	Merchandise Trade Balance (per cent of GDP)	-5.3	-5.1	-3.4	-6.8
19	Net Invisible Balance (in US \$ bn.)	102.5	101.1	118.0	90.0
20	Current Account Balance (in US \$ bn.)	-16.3	-15.0	4.0	-46.9
21	Current Account Balance (per cent of GDP)	-0.7	-0.7	0.5	-2.0
22	Capital Account Balance (in US \$ bn.)	43.1	40.2	90.0	23.0
23	Capital Account Balance (per cent of GDP)	1.9	1.9	3.0	1.0

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	7.40	8.30	6.6
a	Agriculture & Allied Activities (growth rate in per cent)	2.8	2.90	3.9	1.7
b	Industry (growth rate in per cent)	7.5	7.30	9.2	6.0
c	Services (growth rate in per cent)	9.0	8.95	10.40	7.8
2	Private Final Consumption Expenditure at current market price (growth rate in per cent)	12.4	12.6	15.0	8.5
3	Gross Saving (per cent of Gross National Disposable Income)	32.5	32.5	34.5	30.0
4	Gross Fixed Capital Formation (per cent of GDP)	30.4	30.0	33.1	29.0
5	Money Supply (M3) (growth rate in per cent)	12.1	12.0	14.0	10.5
6	Bank Credit of Scheduled Commercial banks (growth rate in per cent)	12.1	12.0	14.4	10.0
7	Combined Gross Fiscal Deficit (per cent of GDP)	6.0	6.0	6.5	5.5
8	Central Government Gross Fiscal Deficit (per cent of GDP)	3.2	3.0	3.5	3.0
9	Repo Rate(end period)	5.87	5.75	6.50	5.50
10	CRR (end period)	4.06	4.00	5.00	4.00
11	Yield of 91-Days Treasury Bills (end period)	6.3	6.3	7.5	5.6
12	YTM of Central Govt. Securities with term to maturity of 10-years (end period)	6.5	6.3	7.6	5.9
13	Overall Balance of Payments (in US \$ bn.)	37.3	35.0	55.0	18.4
14	Merchandise Exports (in US \$ bn.)	287.4	288.8	300.0	261.0
15	Merchandise Exports (growth rate in per cent)	6.4	5.6	13.6	1.5
16	Merchandise Imports (in US \$ bn.)	406.8	416.0	438.4	280.0
17	Merchandise Imports (growth rate in per cent)	7.8	7.1	14.2	1.4
18	Merchandise Trade Balance (per cent of GDP)	-5.0	-5.2	-3.4	-6.3
19	Net Invisible Balance (in US \$ bn.)	104.6	105.0	120.0	90.3
20	Current Account Balance (in US \$ bn.)	-24.6	-25.0	-10.0	-38.5
21	Current Account Balance (per cent of GDP)	-0.9	-1.0	0.4	-1.5
22	Capital Account Balance (in US \$ bn.)	75.3	65.8	233.2	39.0
23	Capital Account Balance (per cent of GDP)	2.4	2.5	3.2	1.5

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)	6.8	7.0	8.3	4.2	7.0	7.1	8.0	5.0
a	Agriculture & Allied Activities (growth rate in per cent)	3.1	3.6	4.9	-0.7	3.1	2.8	4.7	1.4
b	Industry (growth rate in per cent)	6.8	6.9	11.5	1.9	7.3	7.1	12.0	5.2
c	Services (growth rate in per cent)	8.2	8.3	10.1	4.9	8.5	8.5	10.4	6.4
2	Private Final Consumption Expenditure (growth rate in per cent)	10.3	10.3	12.4	7.0	10.8	10.1	13.0	9.7
3	Gross Fixed Capital Formation (per cent of GDP)	28.3	28.2	31.5	24.9	28.8	29.0	31.7	24.3
4	₹ per U.S. Dollar (RBI reference rate-end period)	67.98	67.75	69.50	66.70	68.18	68.00	72.35	66.50
5	Repo Rate (end period)	6.15	6.25	6.25	6.00	6.00	6.00	6.25	5.75
6	CRR (end period)	4.01	4.00	4.25	4.00	4.08	4.00	5.00	4.00
7	Merchandise Export (in US\$ bn.)	66.9	67.9	70.4	60.3	68.6	70.0	72.6	60.2
8	Merchandise Import (in US\$ bn.)	102.1	102.4	110.0	91.5	101.7	100.0	119.1	90.9
9	Indian Crude Oil basket Price (in US\$ per barrel)	47.0	47.0	49.5	45.0	48.2	48.0	52.0	46.5

	Key Macroeconomic Indicators	Quarterly Forecasts							
		Q1: 2016-17				Q2: 2017-18			
		Mean	Median	Max	Min	Mean	Median	Max	Min
1	Real GVA at basic prices (growth rate in per cent)	7.5	7.4	8.1	6.8	7.5	7.4	8.1	6.8
a	Agriculture & Allied Activities (growth rate in per cent)	2.7	2.7	3.5	1.6	2.8	2.8	3.6	1.8
b	Industry (growth rate in per cent)	7.6	7.2	12.1	5.8	7.8	7.3	12.3	6.3
c	Services (growth rate in per cent)	9.0	8.8	10.4	7.9	9.0	9.0	10.4	7.4
2	Private Final Consumption Expenditure (growth rate in per cent)	11.2	11.2	12.5	9.3	12.0	12.4	13.0	10.7
3	Gross Fixed Capital Formation (per cent of GDP)	28.8	29.0	31.7	25.6	29.0	29.3	30.9	25.4
4	₹ per U.S. Dollar (RBI reference rate-end period)	68.07	68.05	70.30	66.50	67.84	67.70	70.35	65.50
5	Repo Rate (end period)	5.95	6.00	6.25	5.75	5.89	5.88	6.25	5.75
6	CRR (end period)	4.08	4.00	5.00	4.00	4.08	4.00	5.00	4.00
7	Merchandise Export (in US\$ bn.)	69.0	69.8	71.5	61.8	70.9	71.4	75.0	61.5
8	Merchandise Import (in US\$ bn.)	101.0	99.4	110.4	94.0	103.6	103.6	110.5	94.5
9	Indian Crude Oil basket Price (in US\$ per barrel)	49.0	49.5	53.5	45.0	49.7	49.9	55.5	45.0

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
Q3:2016-17	4.3	4.1	5.6	3.7	4.7	4.8	5.2	4.2
Q4:2016-17	4.5	4.5	5.5	3.5	4.8	4.9	5.1	4.3
Q1:2017-18	4.6	4.5	5.7	3.9	4.7	4.8	5.2	4.0
Q2:2017-18	4.8	4.7	5.9	3.7	4.7	4.8	5.4	3.8

Table A.5: Forecasts of WPI Inflation

	WPI Headline				WPI-Manufactured Products			
	Mean	Median	Max	Min	Mean	Median	Max	Min
Q3:2016-17	3.1	3.3	4.2	-0.9	2.0	2.6	3.3	-1.5
Q4:2016-17	3.7	4.0	4.8	-0.9	2.3	2.8	3.8	-1.4
Q1:2017-18	3.1	3.1	4.5	1.0	2.2	2.8	3.2	-0.9
Q2:2017-18	3.2	3.0	4.3	2.0	2.7	3.0	3.5	1.3

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	0.02	0.01
5.5 to 5.9 per cent	0.03	0.02
6.0 to 6.4 per cent	0.15	0.04
6.5 to 6.9 per cent	0.28	0.16
7.0 to 7.4 per cent	0.24	0.18
7.5 to 7.9 per cent	0.23	0.35
8.0 to 8.4 per cent	0.04	0.17
8.5 to 8.9 per cent	0.01	0.05
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	0.04
3.0 to 3.9 per cent	0.18	0.12
4.0 to 4.9 per cent	0.38	0.41
5.0 to 5.9 per cent	0.35	0.31
6.0 to 6.9 per cent	0.06	0.09
7.0 to 7.9 per cent	0.00	0.02
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	0.02	0.01
1.0 to 1.9 per cent	0.05	0.04
2.0 to 2.9 per cent	0.18	0.20
3.0 to 3.9 per cent	0.38	0.37
4.0 to 4.9 per cent	0.26	0.22
5.0 to 5.9 per cent	0.11	0.12
6.0 to 6.9 per cent	0.00	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	7.64	7.70	8.43	6.40	8.25	8.10	11.50	7.00
CPI Combined	4.86	4.95	5.50	4.10	4.73	4.50	6.00	4.00
WPI	3.64	3.60	5.00	1.50	3.70	3.90	5.50	2.00