

Malcom Elizabeth Adisheshiah
Mid-Year Review of the Indian
Economy
NCAER
November 11, 2017

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An Economy in Transition



Source: [Uttam Ghosh/Rediff.com](http://UttamGhosh/Rediff.com)

- Medium-run macroeconomic uncertainty
- Reforms
- Short-run Challenges
- Macroeconomic Outlook

Medium-Run Uncertainty:

Economic Growth, Inflation, Fiscal Balance, Current Account Balance and Unemployment

Medium-run Uncertainty has increased post 2008

NCAER Business Confidence Index
October 2003 to July 2017



Source: NCAER

Short-Run Volatility

BCI , January 2014 to July 2017, (Index and %qoq)

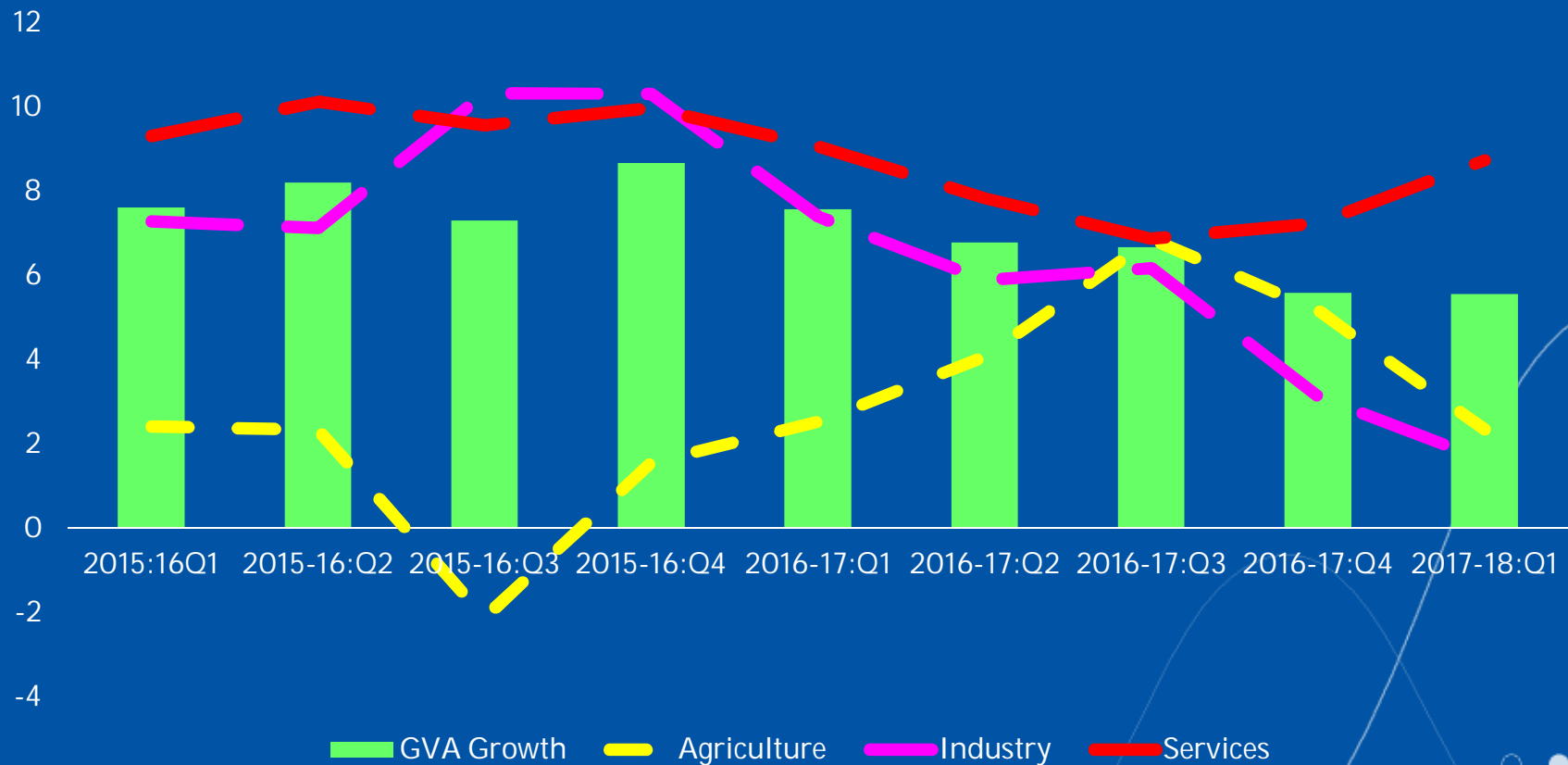


Source: NCAER



Growth has steadily fallen....

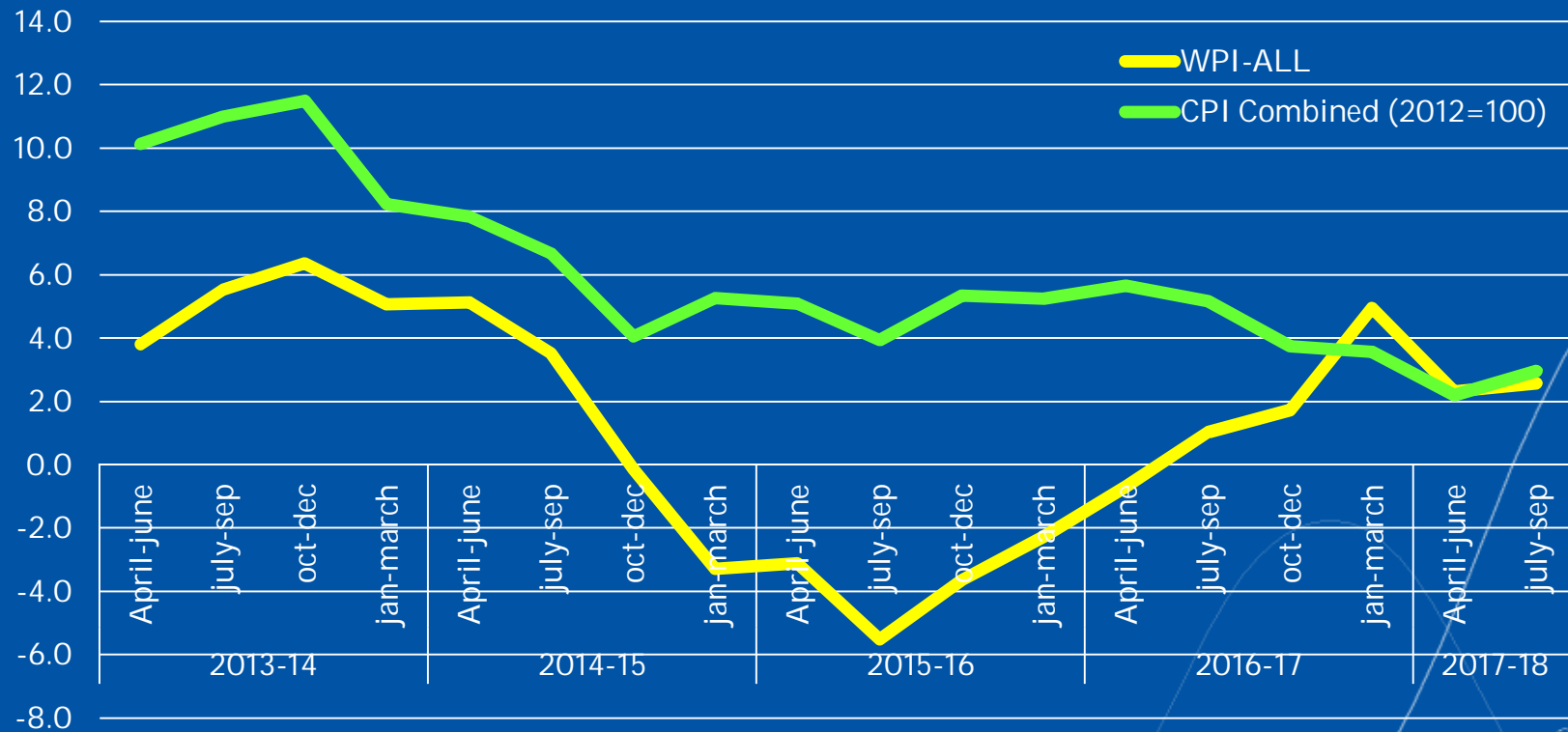
GVA Growth of Agriculture, Industry and Services (%yoy), 2015-16:Q1 to 2017-18:Q1



Source: MoSPI

Inflation has moderated

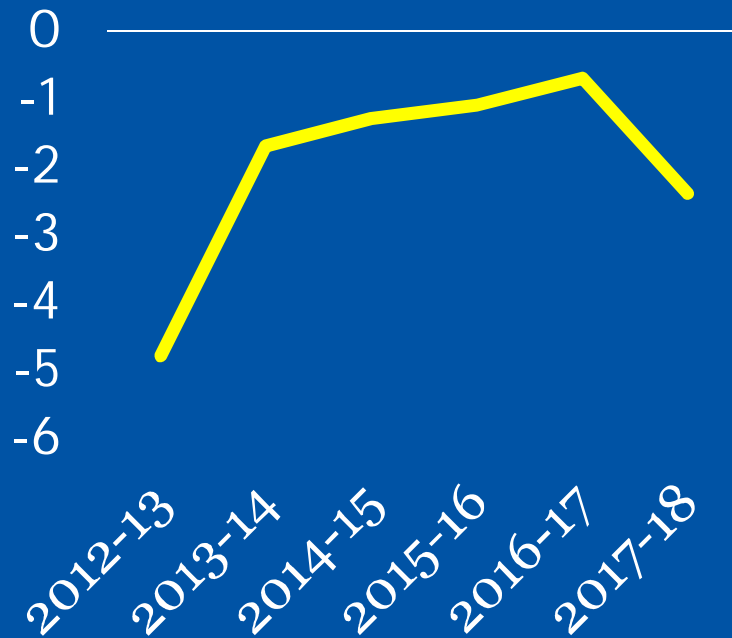
CPI Combined (2012=100) and WPI Inflation (2011-12=100), 2013-14:Q1 to 2017-18:Q2, (%yoy)



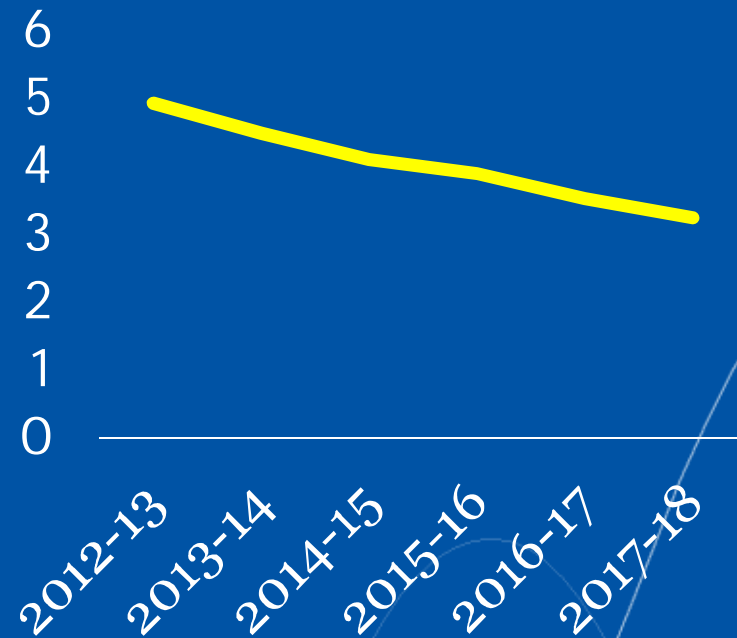
Source: Office of Economic Advisor and MoSPI.

Twin deficits moderated...

Current Account Deficit as % of GDP, 2012-13 to 2017-18



Gross Fiscal Deficit as % of GDP, 2012-13 to 2017-18



Note: For CAD, this is for 2017-18:Q1 and for fiscal deficit this is Budgeted Estimate
 Source: RBI



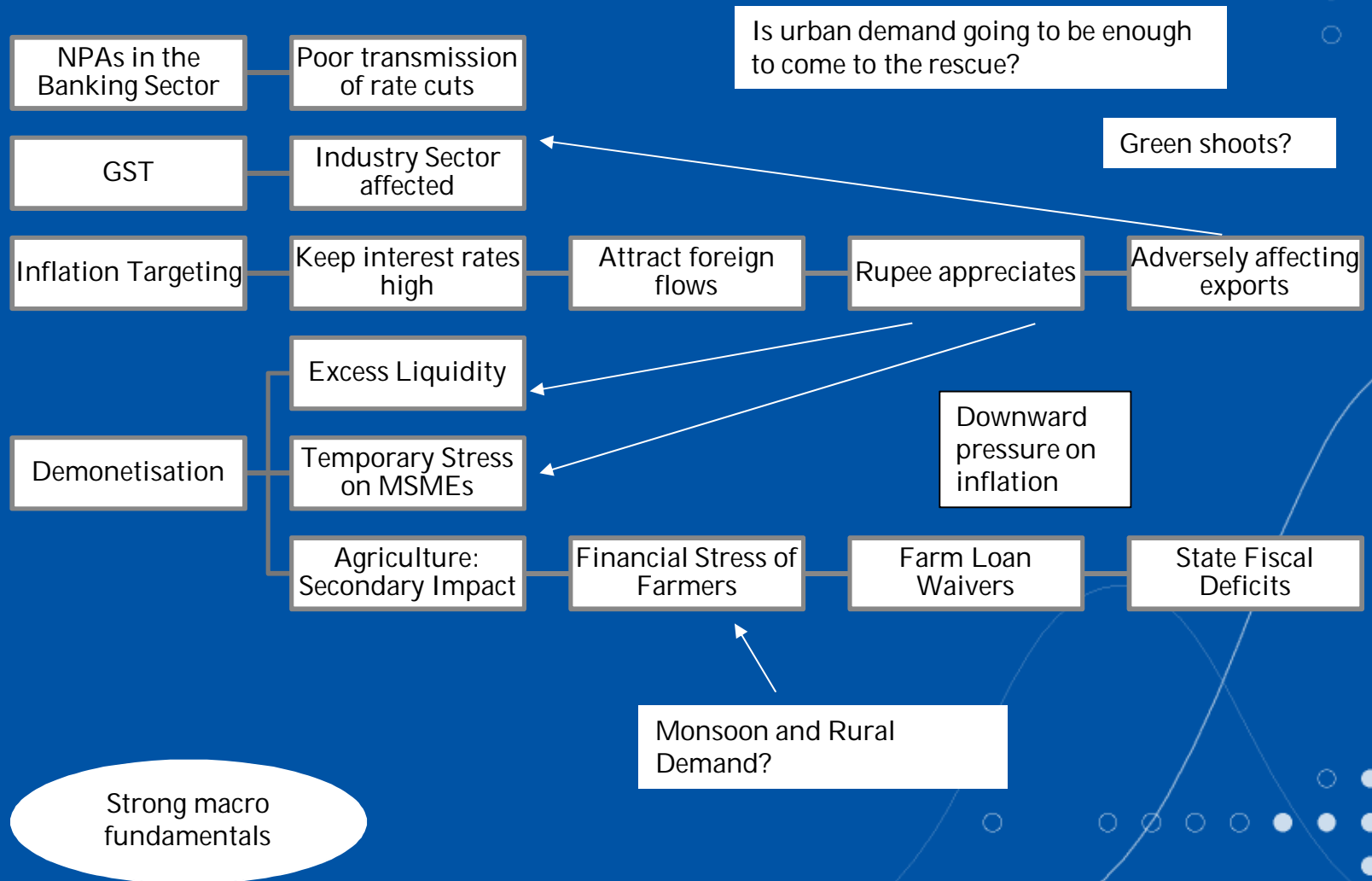
Underperformance of economic growth in the medium-run

- Employment
 - Evidence weakest on employment growth
 - Abraham (2017) suggests that employment improved between March 2010 and 2012 but shrunk by 0.4% per annum between 2013-14 and 2015-16
- India has underperformed on growth and employment fronts while performing well on inflation, fiscal and current account deficits

Short-Run



Problem of Plenty: Macro-imbbalances?



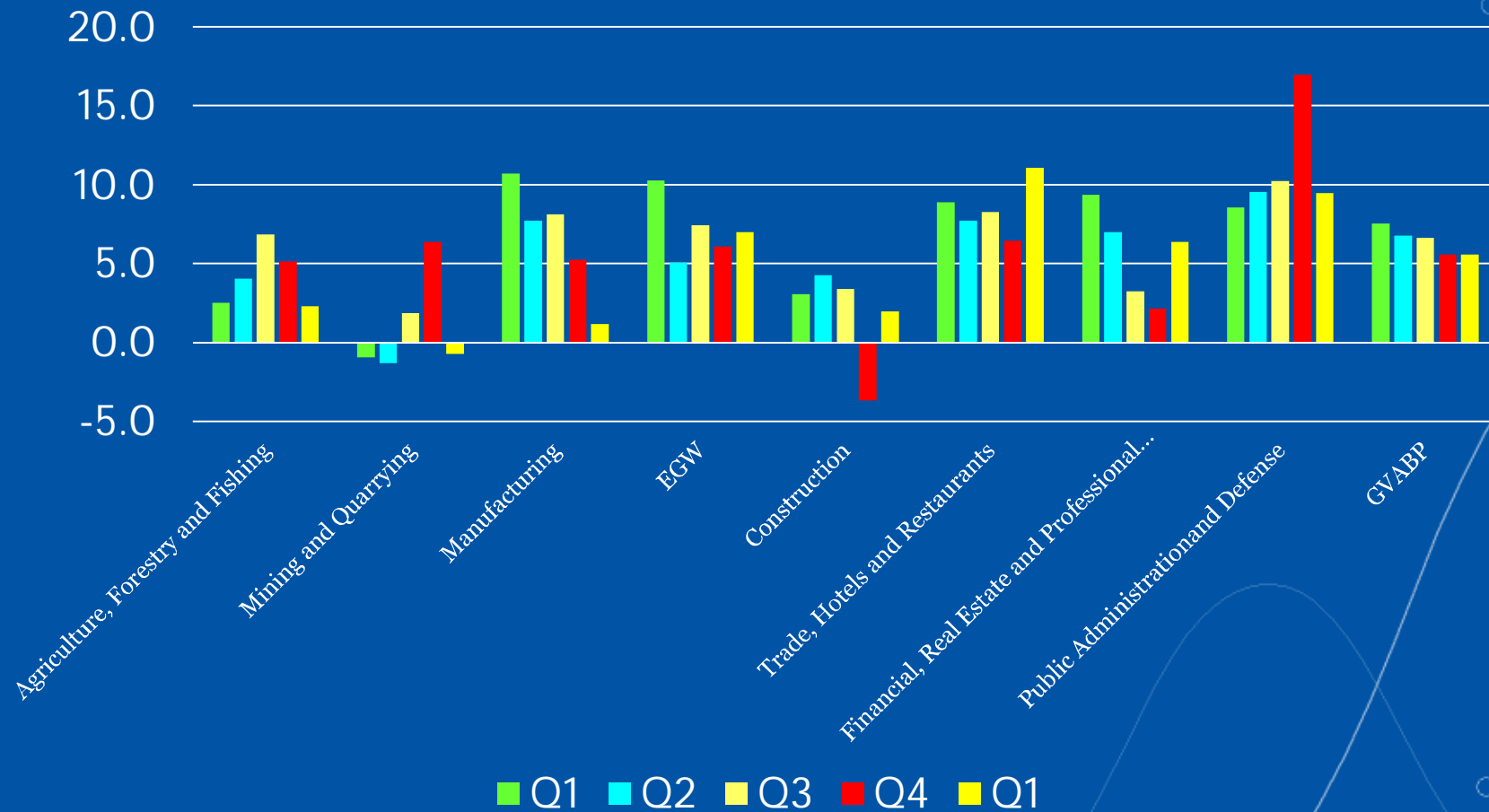
Projections for the World % (Y-o-Y)

Country/ Region	2016	2017	2018
US	1.6	2.2 (↑)	2.3 (↑)
China	6.7	6.8 (↑)	6.5 (↑)
Euro Area	1.8	2.1 (↑)	1.9 (↑)
Japan	1.0	1.5 (↑)	0.7 (↑)
India	7.1	6.7 (↓)	7.4 (↓)
Emerging Market and Developing Economies	1.7	4.6 (↔)	4.9 (↑)
Advanced Economies	1.7	2.2 (↑)	2.0 (↑)
World	3.2	3.6(↑)	3.7 (↑)

Note: The arrows indicate changes in direction from April 2017 forecasts. Source: IMF World Economic Outlook (WEO) Update, July 2017

Economic Growth has stagnated between January and June 2017

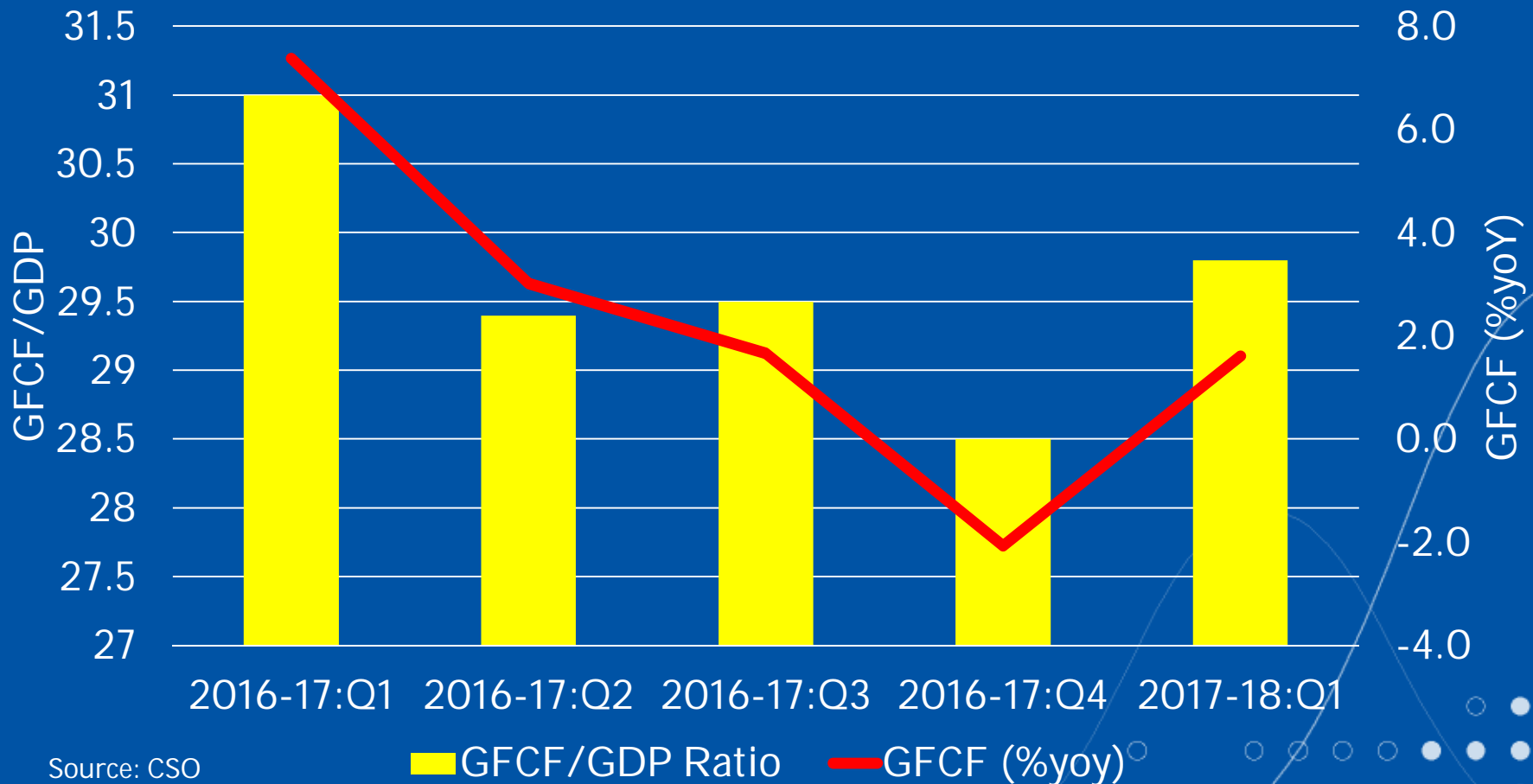
GVA at Basic Prices, 2016-17: Q1 to 2017-18:Q1



Source: CSO

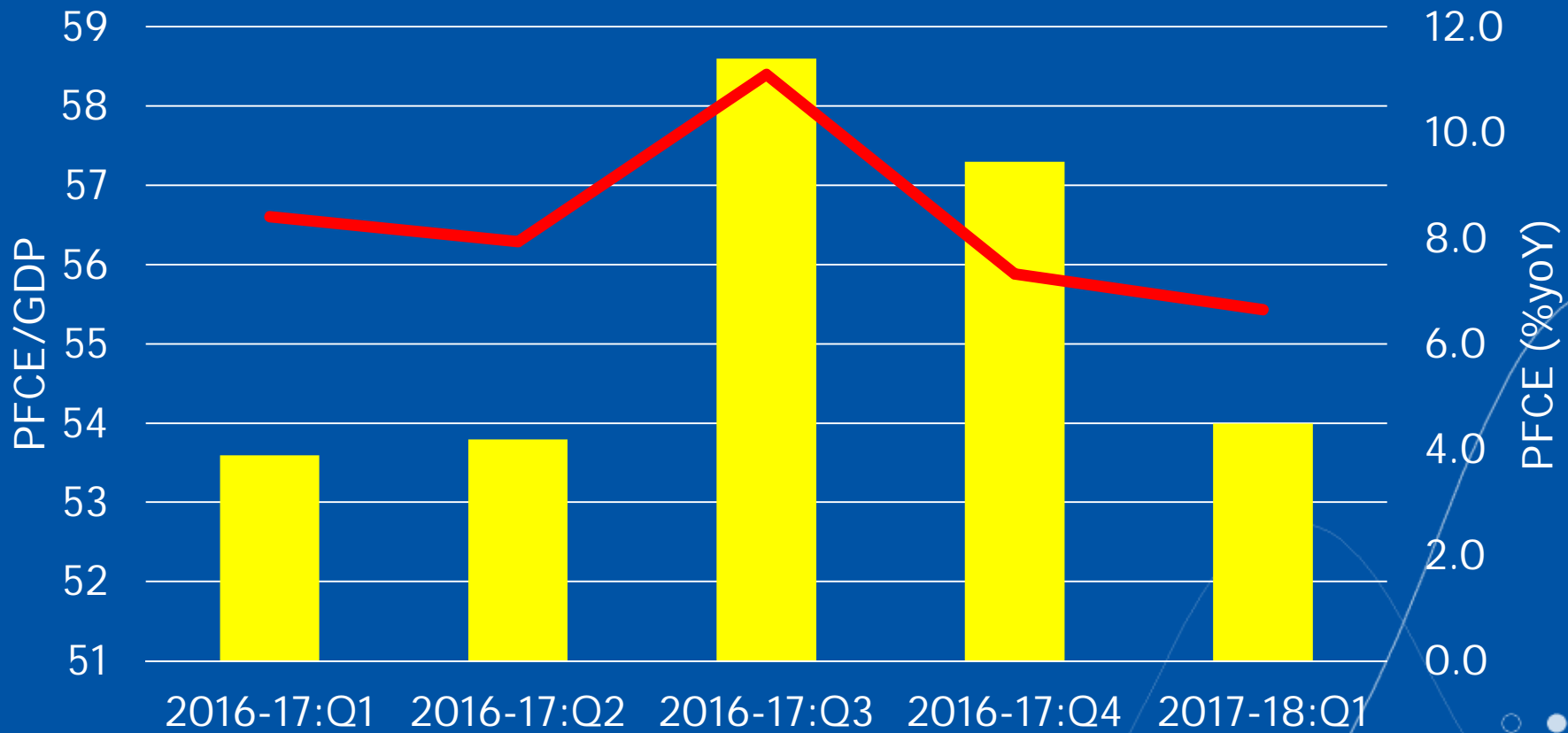
GFCF recovers in 2017-18: Q1

GFCF/GDP Ratio and GFCF (%yoy), 2016-17:Q1 to 2017-18:Q1



Consumption Expenditure has come down

PFCE/GDP Ratio and PFCE (%yoy), 2016-17:Q1 to 2017-18:Q1



Source: CSO

■ PFCE/GDP Ratio

— PFCE (%yoy)

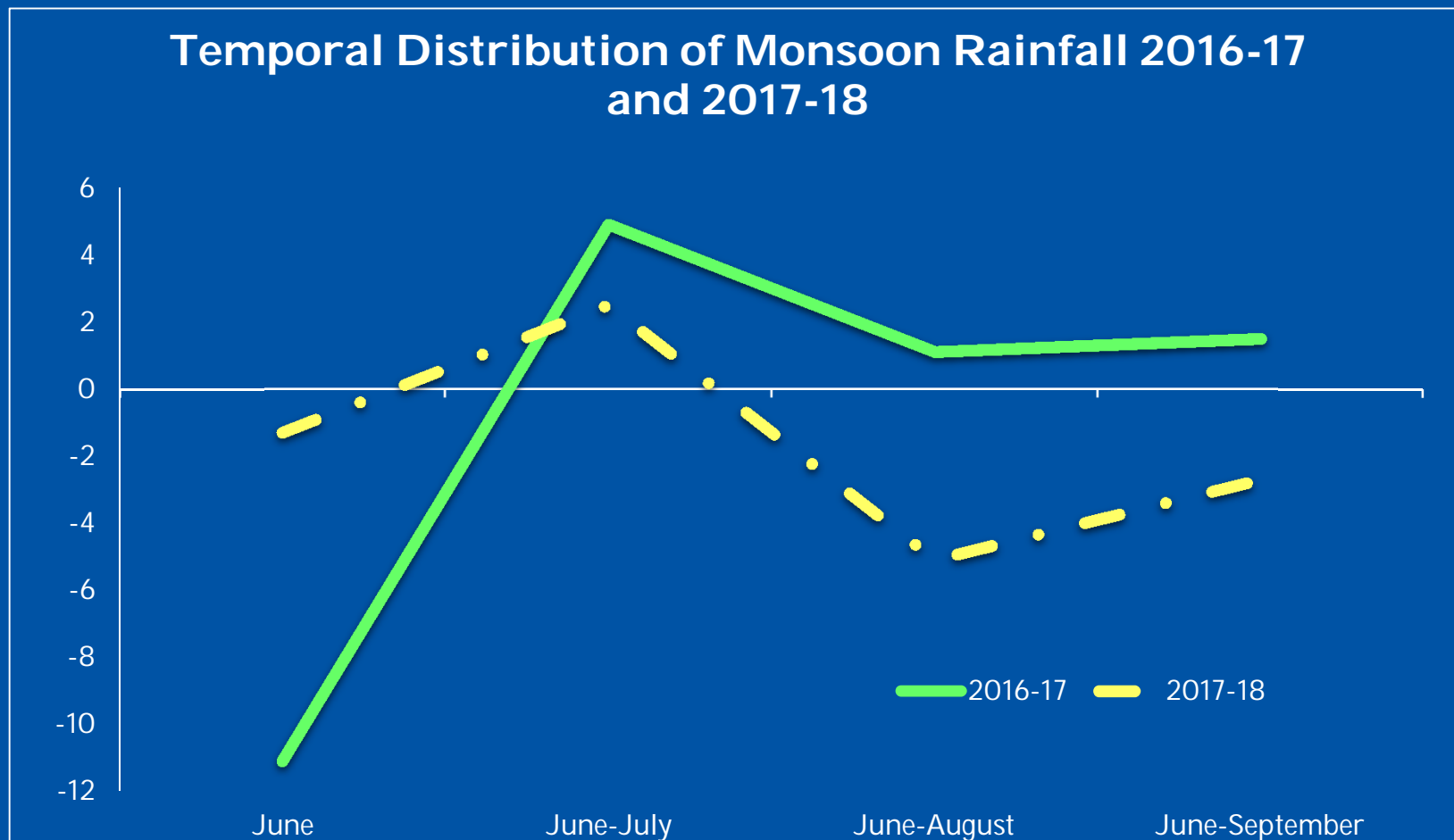
An Economy in Transition

Indicators from 2017-18: Q2

Agriculture



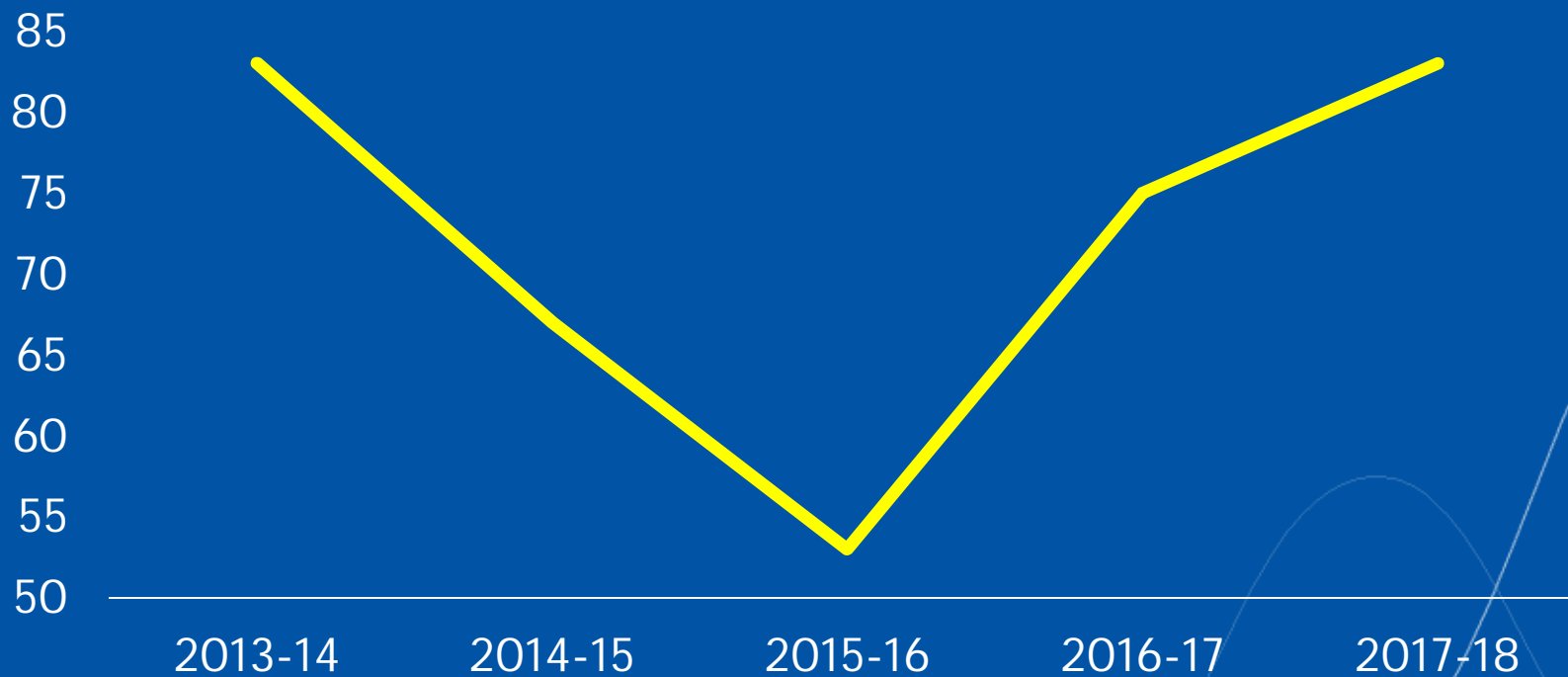
Temporal distribution of rainfall worse than last year



Source: Authors' Computations from the IMD

Spatial Distribution better in 2017-18 versus 2016-17

Spatial Distribution of Monsoon Rainfall 2013-14 to 2017-18



Source: Authors' Computations from the IMD

Agricultural Production Prospects

Table A.2: Estimated Growth Rate of Selected Agricultural Crops in 2017-18

	Estimate 1	Estimate 2
Kharif Rice	2.1	3.3
Kharif Coarse Cereals	-1.0	0.1
Kharif Pulses	0.9	2.0
Kharif Food grains	0.9	2.0
Kharif Oilseeds	0.0	-0.6
Cotton#	3.4	1.5
Sugarcane	-0.6	1.4

Source: NCAER

Note:

Estimate I: Based on output equations.

Estimate II: Based on area and yield equations.

Muted Food Inflation

Changes in Wholesale Price Indices of Food Articles in 2016-17 and 2017-18
(April-September)

S. No.	Product	Increase in 2016-17 over 2015-16	Increase in 2017-18 over 2016-17
1	Food Articles	6.2	0.9
2	Cereals	8.5	2.2
3	Pulses	28.7	-24.4
4	Vegetables	4.7	5.6
5	Fruits	7.9	2.1
6	Milk	2.5	4.2
7	Eggs, meat and fish	2.2	2.2
8	Condiments and spices	6.8	-14.5
9	Other food articles	9.2	-1.1

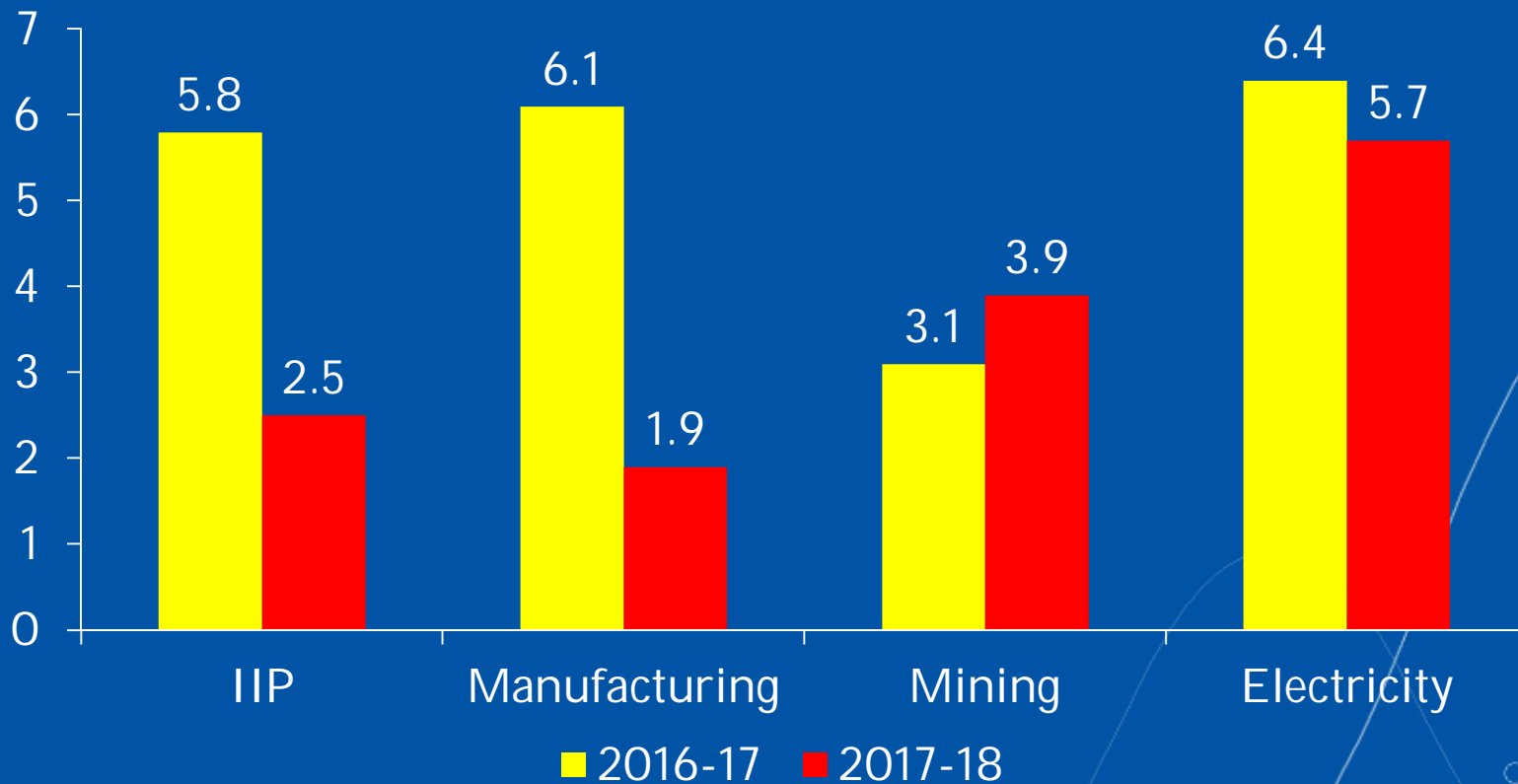
Source: Computed from the Office of Economic Advisor.

Industry



Industrial Growth driven by manufacturing has slowed down

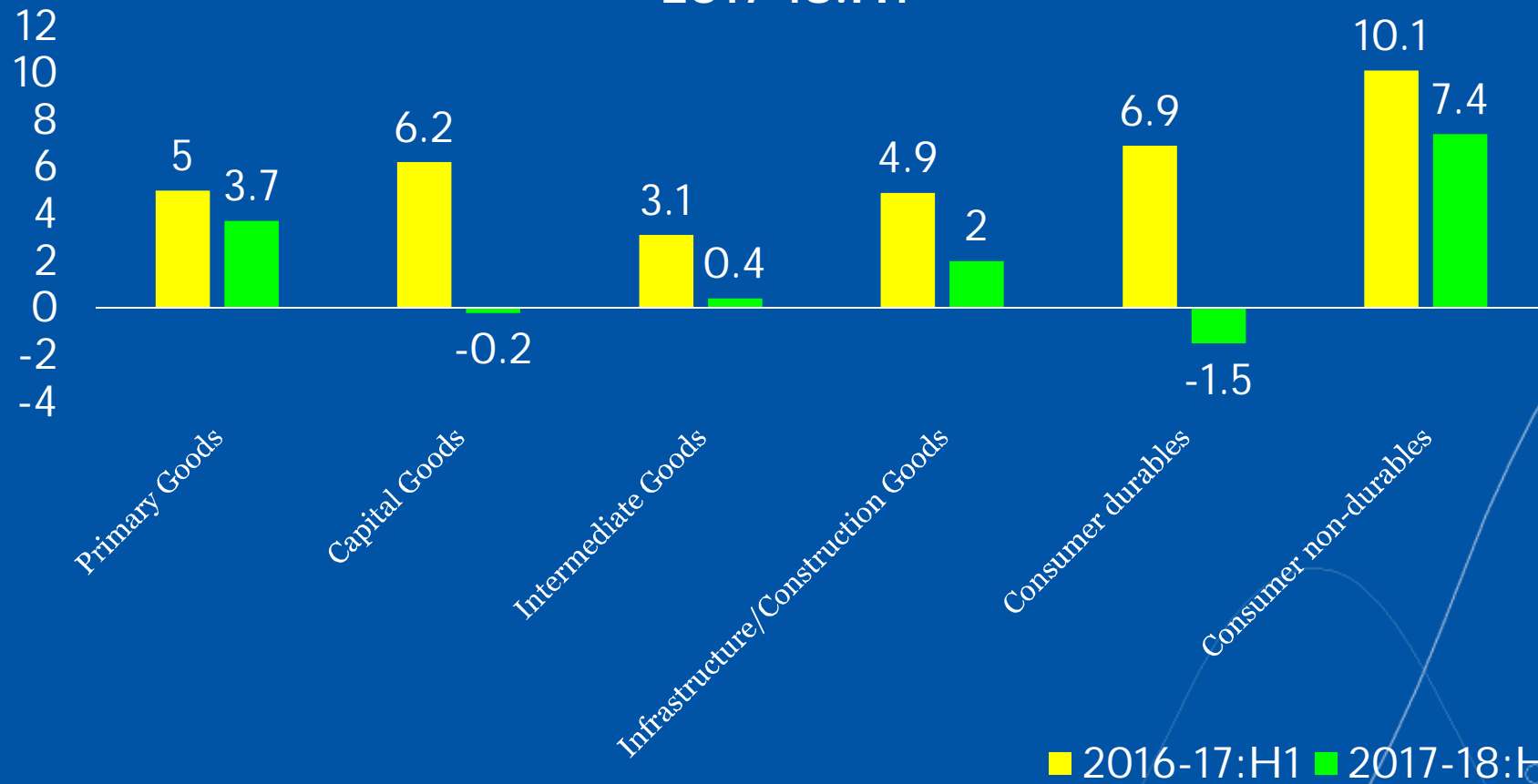
Growth in IIP, April-September 2016-17 and 2017-18, (%yoy)



Source: MoSPI

Capital Goods has shown growth in August and September 2017

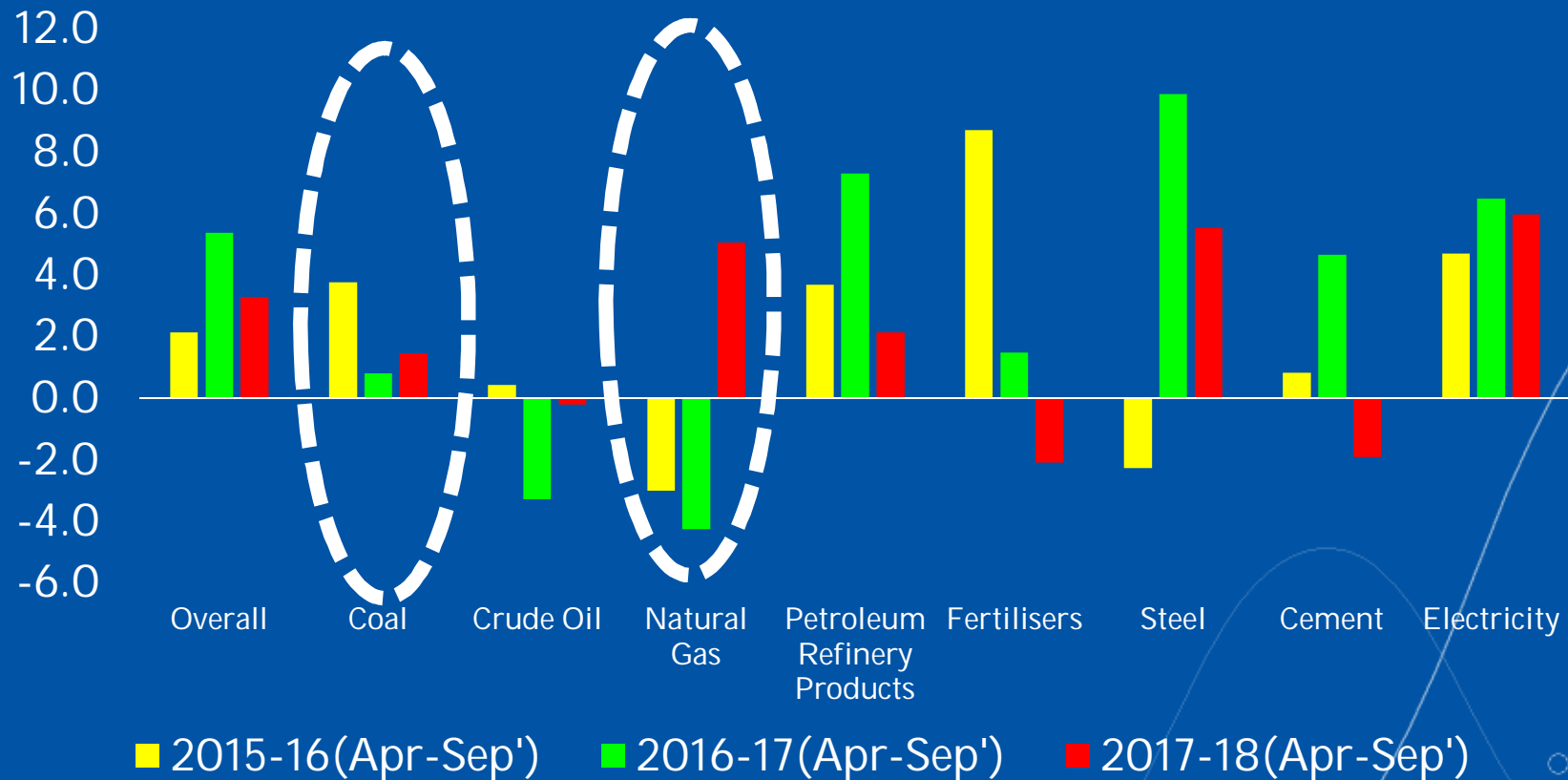
Use-based Classification of Goods, 2016-17:H1 and 2017-18:H1



Source: MoSPI

Core Industry slowed down in the first half except.....

Core Industry, 2015-16:H1 to 2017-18: H1(%yoy)



Source: Office of Economic Advisor

Services



Mixed Growth

Fiscal Year/Quarters	Tourists Arrival (Numbers)	Revenue Earning Goods Traffic by Railways (Mn Tonnes)	Cargo Handled at Major Ports ('000 tonnes)	Production of Commercial Vehicles ('000 Numbers)	New Telephone Connections (Fixed+ Wireless in Millions)	Growth in Aggregate Deposits (Rs Cr)	Bank Credit to Commercial Sector (Rs Cr)
2016–17: H1	11.1	-1.5	5.3	6.1	5.0	13.2	12.1
H2	30.5	2.4	8.1	0.2	12.8	11.2	8.1
2017–18: H1	15.6	4.9	3.4	-5.4	14.3*	8.1	6.3

Sources : i) Foreign Tourist Arrivals - Press Information bureau, Ministry of Tourism; Railway traffic - Press Information bureau, Ministry of Railways; Port Cargos – Indian Port Association; <http://ipa.nic.in/pcs/default.asp>; and Aggregate Deposits and Bank Credit - RBI

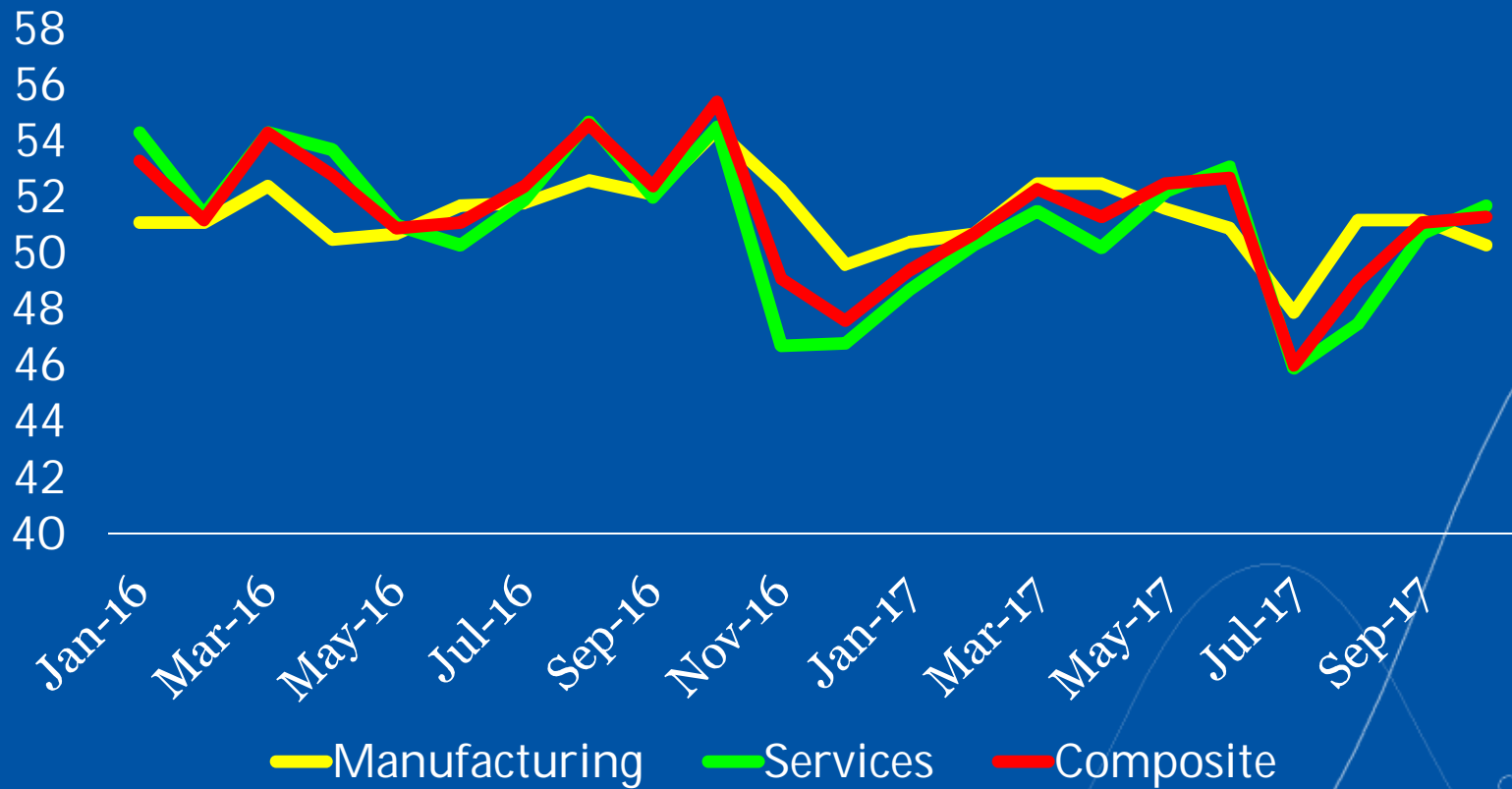
Aviation continues to exhibit strong growth

Domestic and International Air Passenger and Cargo Traffic				
Total Traffic (April-September)				
	Passenger Lakh	% chg	Cargo '000' tonnes	% chg
2016-17	1,060.1	18.9	1,207.6	7.3
2017-18	1,207	13.9	1,388.1	15.0

Source: Airports Authority of India

Shaky Recovery

PMI of Manufacturing, Services and Composite, January 2016 to October 2017



Source: Nikkei

External Sector: Spillovers in domestic markets



Volatile merchandise exports growth but strong imports growth

Figure E.1a: Volatility, Merchandise Exports
 (August 2016 to September 2017)

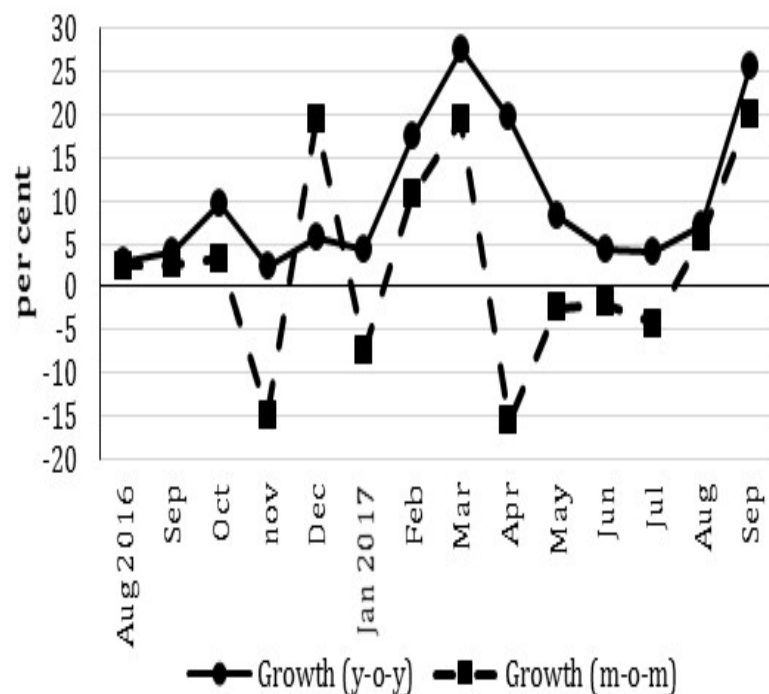
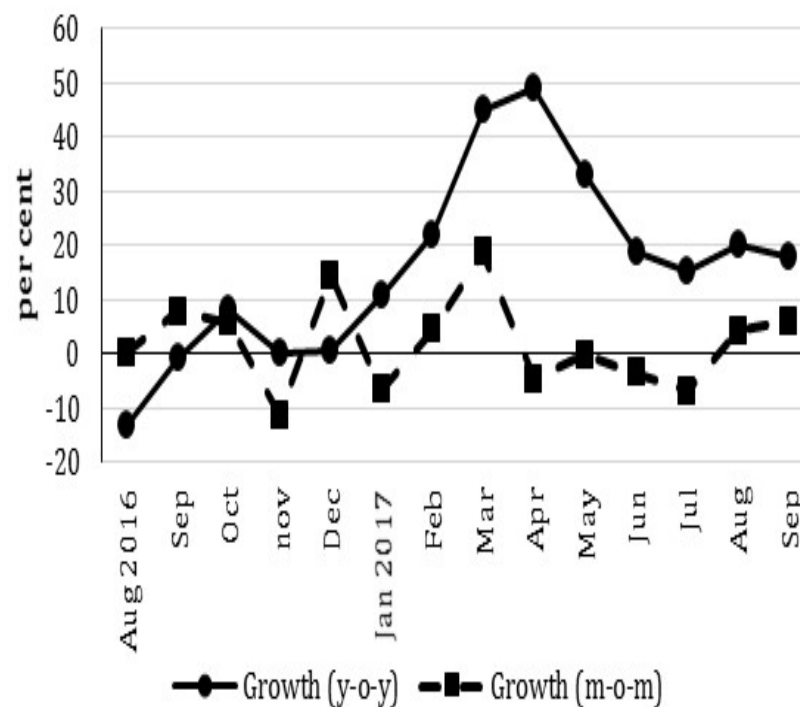


Figure E.1b: Volatility, Merchandise Imports
 (August 2016 to September 2017)



Little discernible impact on exports?

Impact of the Appreciating Rupee on Exports, April 2016 to September 2017 (%yoy)



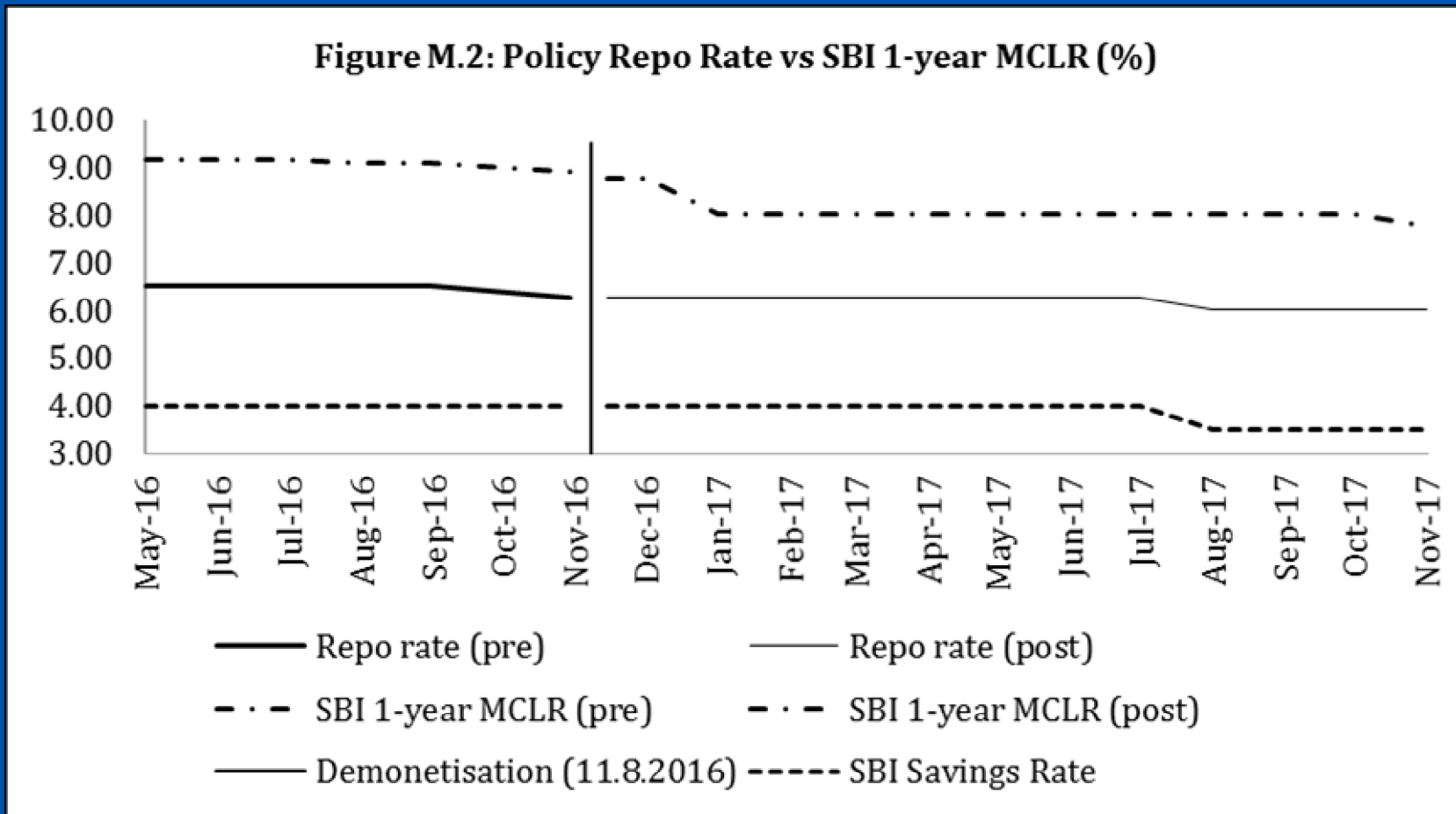
Source: RBI and Ministry of Commerce

Money and Capital Markets



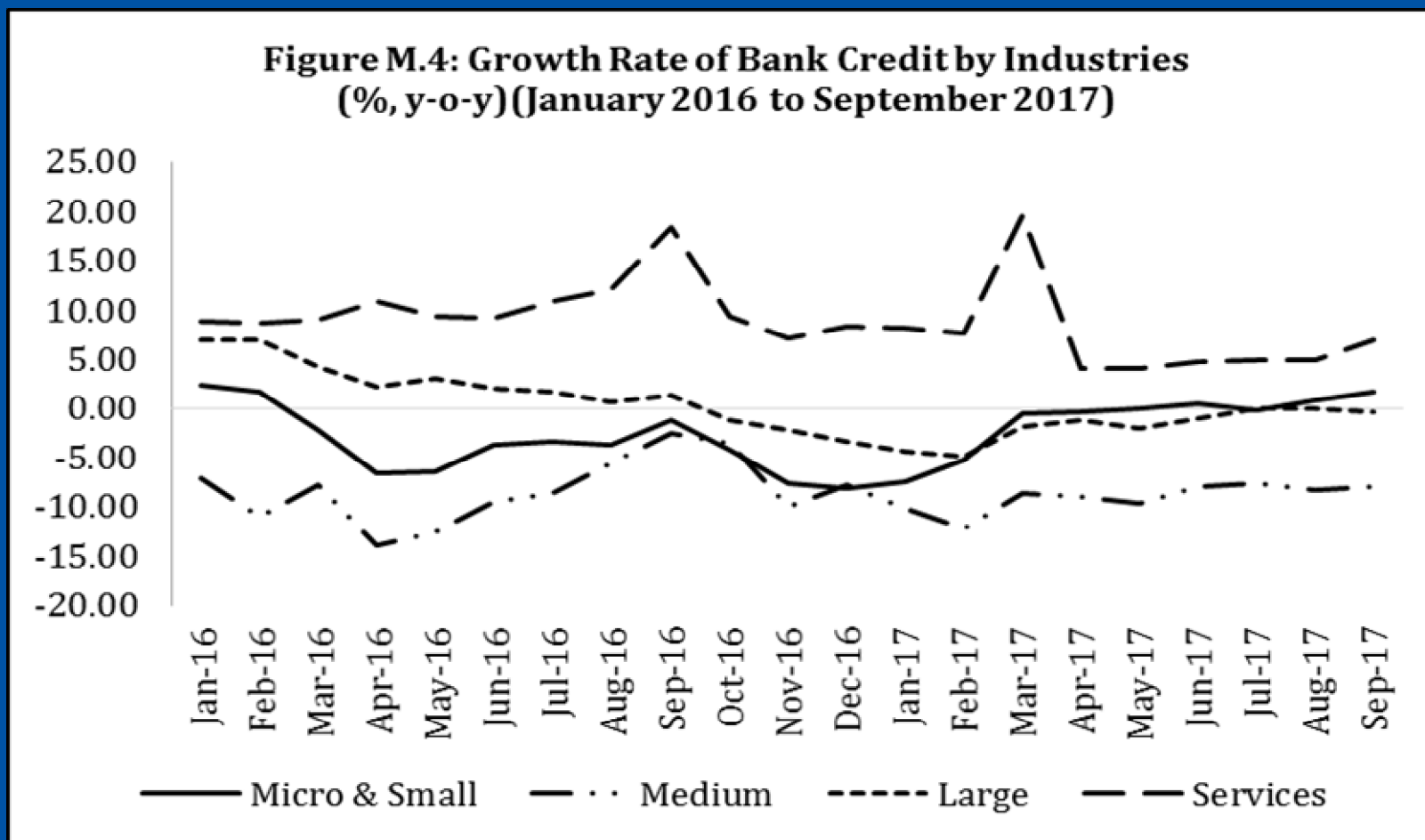
More movement on transmission

Figure M.2: Policy Repo Rate vs SBI 1-year MCLR (%)



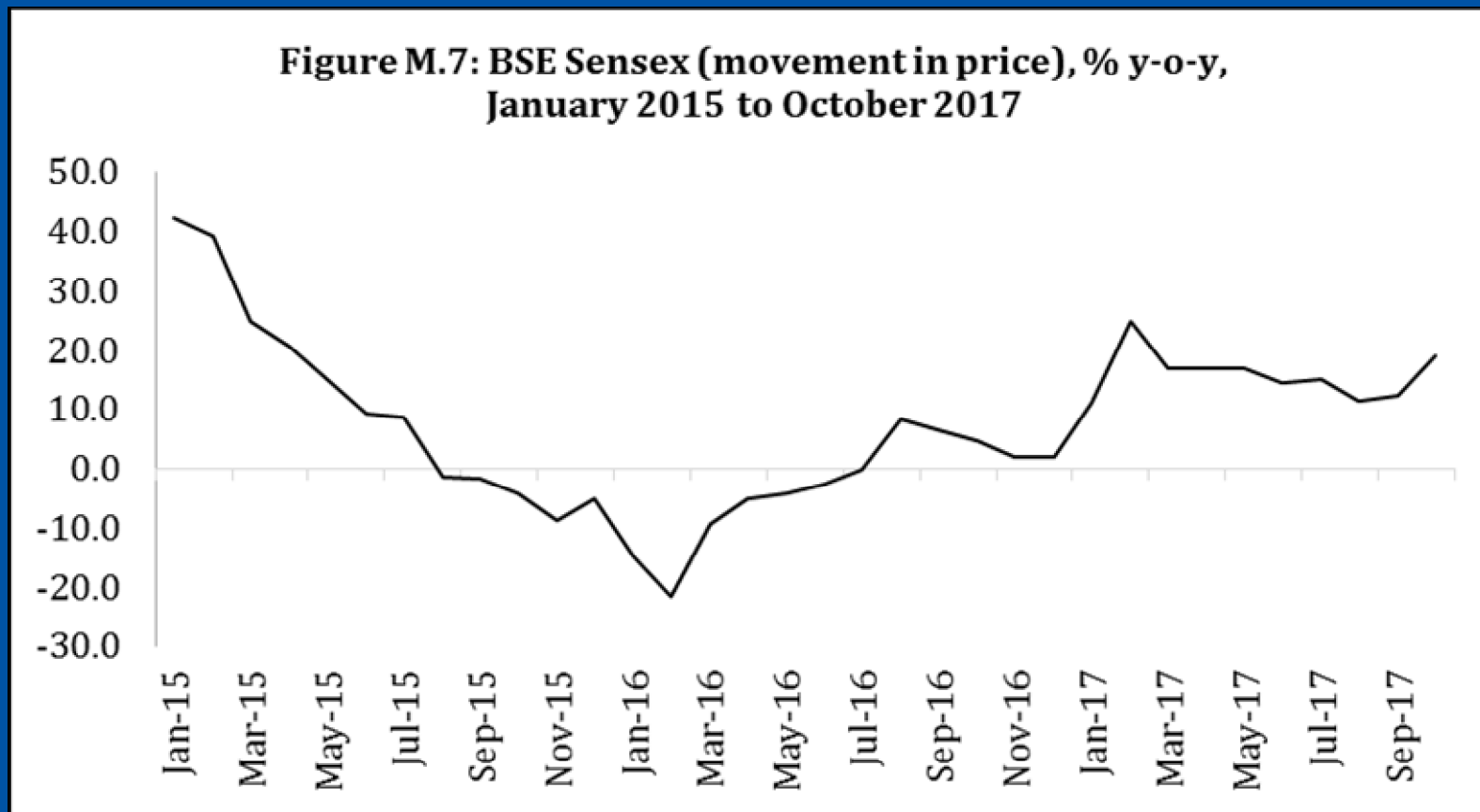
Source: Reserve Bank of India, State Bank of India

Uptake of Bank Credit by MSMEs limited



Source: Reserve Bank of India

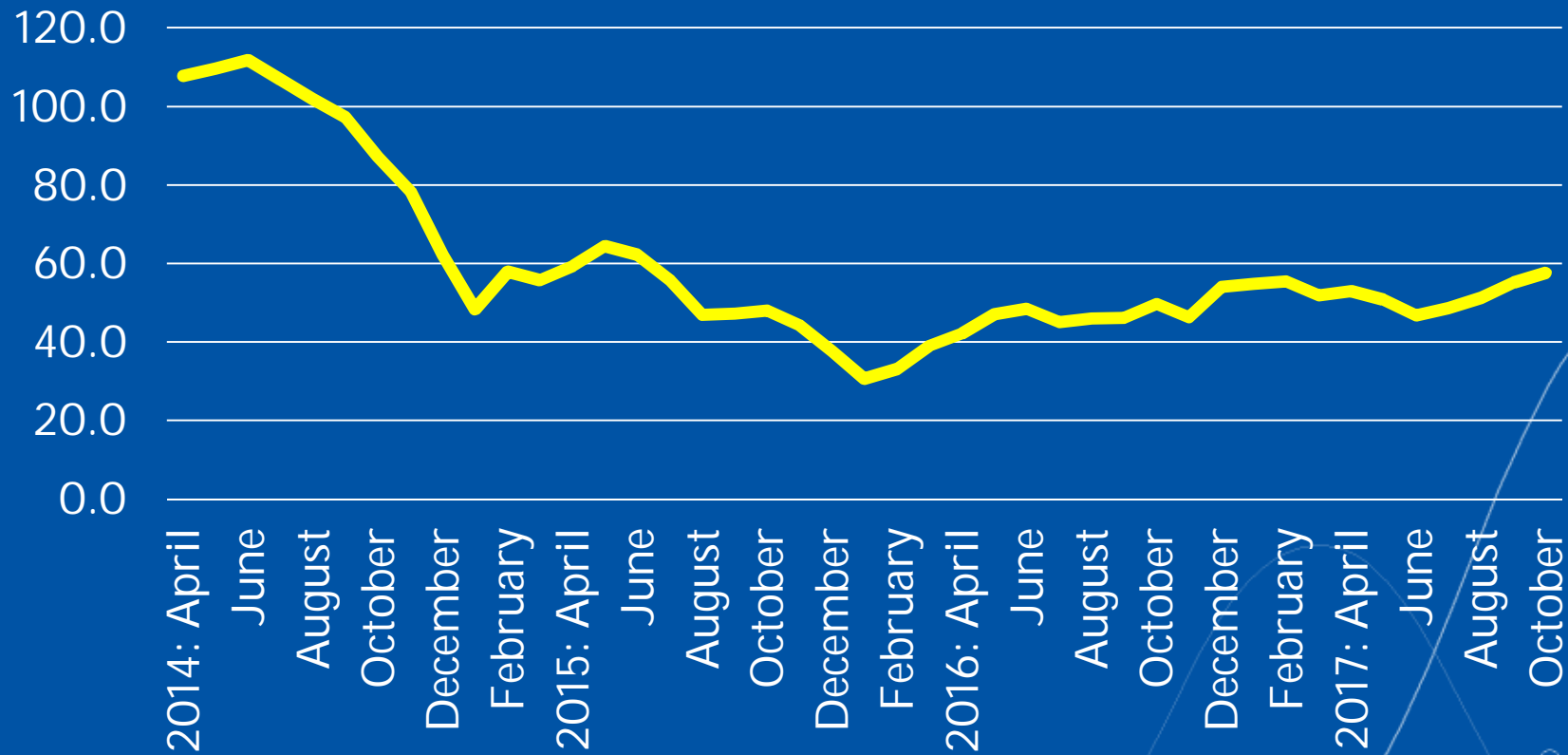
Sensex has been booming in India after last year



Source: BSE.

Crude Oil Prices increasing

Crude Oil (US\$ per barrel), April 2014 to October 2017



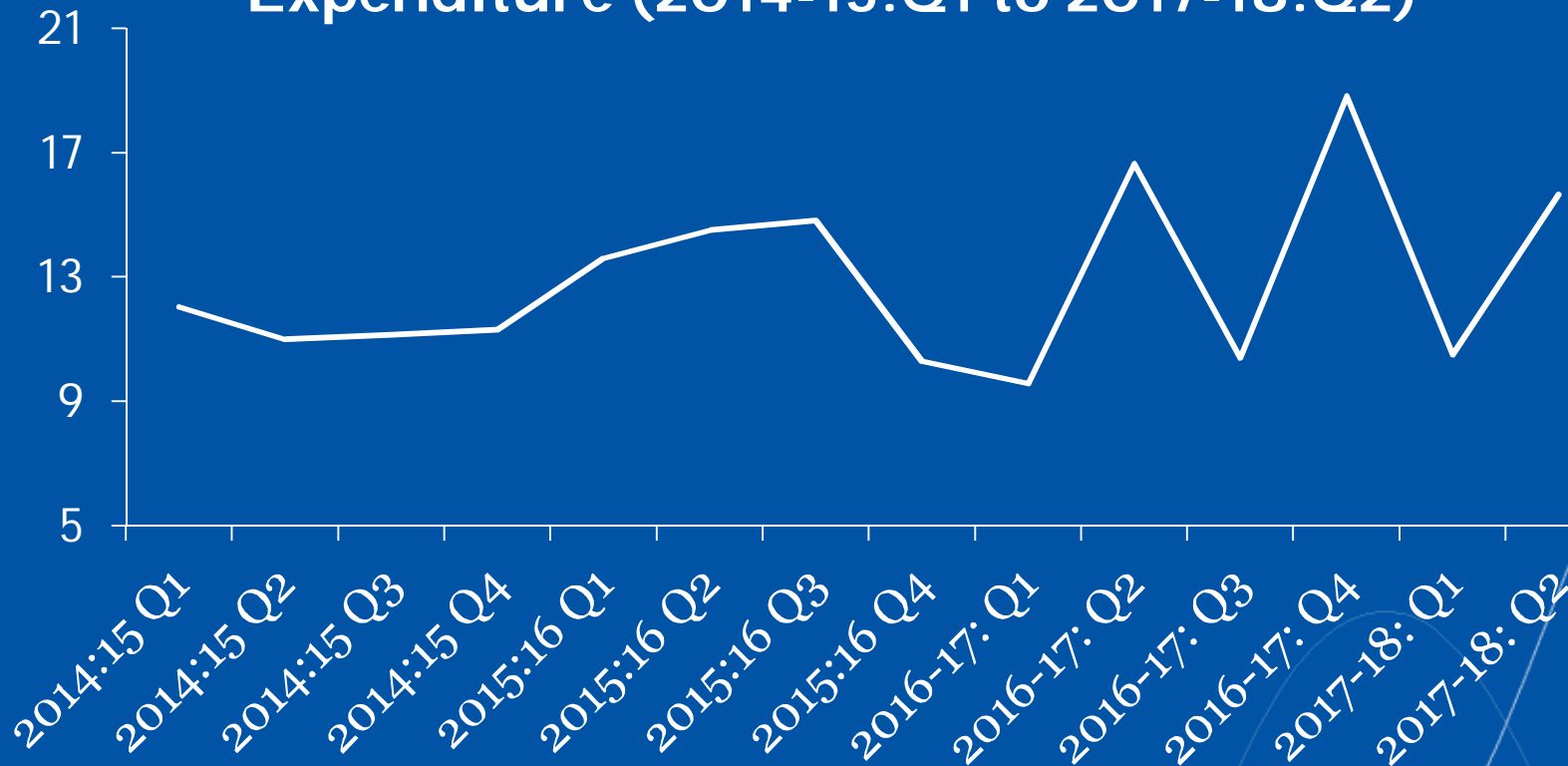
Source: World Bank

Public Finance



Improvement in share of Capital to Total Expenditure

Capital Expenditure as % of Total Expenditure (2014-15:Q1 to 2017-18:Q2)



Source: NCAER Computations from CGA

Improvement in Revenue to Gross Fiscal Deficit

Revenue Deficit as Ratio of Gross Fiscal Deficit, 2014-15:Q1 to 2017-18:Q2



Source: NCAER Computations from CGA

Forecast: For an Economy in Transition



Summary Real GDP Forecasts for India

	RBI (October 2017)	Ministry of Finance (August 2017)	ADB September 2017	IMF October 2017	World Bank October 2017
GDP	6.7 (GVABP)	6.75-7.5% downside	7.0	6.7	7.0
Consumer Inflation	4.6	Below 4%	4.0	3.8	4.0

Notes: *GVA at basic prices (2011-12) is GVA at Basic Prices and GDPMP is GDP at Market Prices (2011-12)

Sources: Asian Development Bank, Reserve Bank of India, World Bank, Budget 2015 and International Monetary Fund

NCAER Outlook for 2017-18

	Quarterly Model GVA Basic Prices (%yoy)
Q1	5.6
Q2	5.7
Q3	6.4
Q4	6.5
2017-18	6.0

Notes: *GVA at basic prices (2011-12) is GVA at Basic Prices and GDPMP is GDP at Market Prices (2011-12)

Sources: Asian Development Bank, Reserve Bank of India, World Bank, Budget 2015, International Monetary Fund and NCAER

NCAER Outlook for 2017-18

	Annual Model (%)
GVA Basic Prices	6.2
GDP Market Prices	6.2
Agriculture	3.0
Industry	4.5
Services	7.6
Exports (US\$)	10.7
Imports (US\$)	24.4
Current Account (% of GDP)	-2.5
Fiscal Deficit (% of GDP)	3.4

Notes: *GVA at basic prices (2011-12) is GVA at Basic Prices and GDPMP is GDP at Market Prices (2011-12)

Sources: Asian Development Bank, Reserve Bank of India, World Bank, Budget 2015, International Monetary Fund and NCAER

GDP Nowcasting : A New Approach to Know the Now-GDP

What's Now-casting?

“Now-casting is defined as the prediction of the present, the very near future and the very recent past. More broadly we can define it as the exercise of reading, through the lenses of a model, the flow of data releases in real time. The term is a contraction for now and forecasting and has been used for a long-time in meteorology.” - Giannone, Reichlin and Small, 2008

Why Now-casting?

Benefits of Now-casting	Details
Get up to Speed quickly	Now-Casting identifies data series that matter in each economy, and shows quickly how key indicators - including GDP - are moving
Read the News-flow	Now-Casting provides a transparent, quantified way to interpret all of the key data releases - including surveys
Most Up to Date Assessment	Now-Casting delivers assessment of the current state of the economy which is automatically updated whenever relevant data releases are published, exploiting the incremental information
Best Near-term Forecast	Now-Casting is proven to be at least as accurate as the best judgmental forecasters, but much more timely.
Dispassionate view of the Economy	Now-Casting publishes the output from its statistical model automatically, without any judgmental intervention.

Sectors

Agriculture, Forestry and Fishing

Mining & Quarrying

Manufacturing

Electricity, Gas, Water Supply, Other Utilities , and Construction

Trade, Hotels, Transport, Communication and services related to broadcasting

Financial, real estate and professional services

Public Administration , Defense and other services

Indicators used for Quarterly estimates of Non-agricultural GVA growth

Sectors	Indicators
Mining and Quarrying	Mining and Quarrying Index, Monthly production of Crude Oil and Coal
Manufacturing	Manufacturing Index, monthly production of Steel and Fertilizers, PMI-Manufacturing, Commercial vehicles production, Passenger car production, BCI (OCED, Composite leading indicator (OECD), merchandise non-oil imports, Two wheeler (CMIE), FDI investment
Electricity, Gas and Water Supply, and Construction	Electricity Index, Monthly production of Cement, Monthly production of Crude Oil Production, Oil Imports
Trade, Hotels, Transport, Communication and services related to broadcasting	Railway freight traffic of major commodities, Cargo traffic- Ports, Cargo Traffic (air) Foreign tourist arrivals in India, Telecommunication subscriber base, PMI-Services, Merchandise Trade (exports + imports)
Financial, real estate and professional services	Bank credit to Commercial sectors, National stock exchange trading volume, Personal loan housing (including priority sector housing), PMI-Services, National Stock Exchange Index, FII investment, FOREX
Public Administration & Defense, Other services	Expenditure of the Central government net of interest payments, RBI net credit to government, Receipts of Central Government

Sectoral Factors

Sectors	Indicators
Mining and Quarrying	f_t^{Mining}
Manufacturing	$f_t^{Manufacturing}$
Electricity, Gas and Water Supply, and Construction	$f_t^{Electricity}$
Trade, Hotels, Transport, Communication and services related to broadcasting	$f_t^{Services}$
Financial, real estate and professional services	$f_t^{Banking}$
Public Administration & Defense, Other services	$f_t^{Other\ Services}$

Dynamic Factor Analysis

- **Logarithmic transformation:** The time series data are in monthly frequency and natural logarithms are taken for all
- **Stationarity:** The ADF test performed to check for non-stationarity and stationarity obtained by appropriately differencing the time series data
- **Seasonal Adjustment:** X-11 with automatic ARIMA selection performed using X-11- Auto, and SEATS based with automatic ARIMA selection performed using TRAMO.
- **Scale Adjustment:** each time series is standardized by first subtracting its mean and then dividing by its standard deviation (i.e., create a z - score $y * t$ with mean = 0 and SD = 1)

Projections

Sectors	Q2 Forecast (2017-18) Per cent
Agriculture, Forestry and Fishing	2.29
Mining & Quarrying	4.69
Manufacturing	6.30
Electricity, Gas, Water Supply, Other Utilities , and Construction	3.41
Trade, Hotels, Transport, Communication and services related to broadcasting	6.86
Financial, real estate and professional services	7.31
Public Administration , Defence and other services	6.33
Gross Value added at Constant Prices (Base: 2011-12)	5.77
Projection of Gross Value added at Constant Prices (Base: 2011-12) for Quarter 3: 5.65 percent	

Thank You

