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India's quest for outperformance - cyclical outlook and structural agenda

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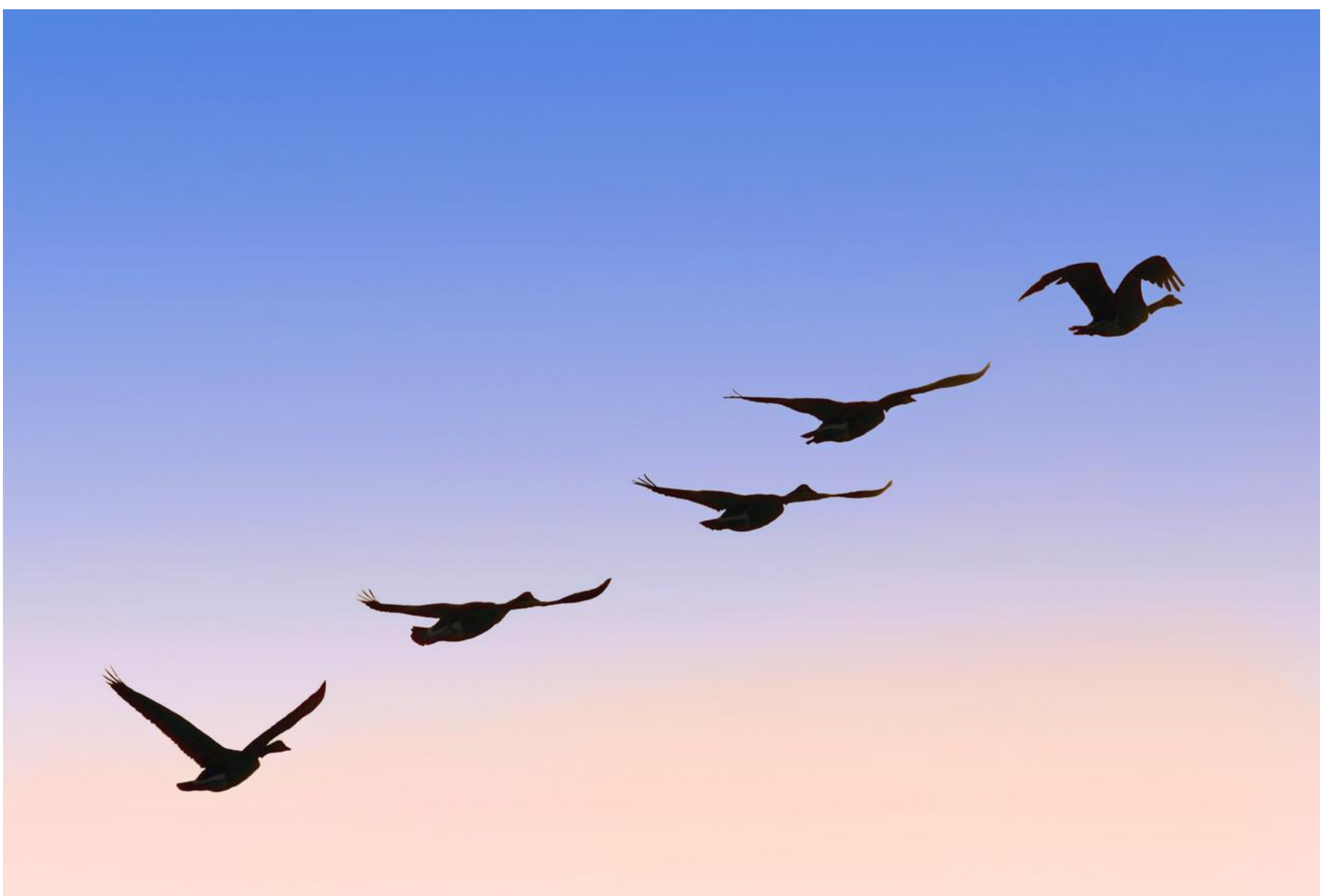

Reform update, short term growth outlook

A growth and investment model

Fiscal structural reforms

Monetary policy, direction, effectiveness, transmission

Inflation, rainfall, supply side reforms

Exchange rate, competitiveness, reserves

Demographics

Urbanization

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Reform priorities

1) Re-start stalled projects **-** Reducing regulatory uncertainty and simplifying procedures for obtaining clearances is a top priority

2) Tackle food inflation **-** open market sale of food grains, crack down on hoarders, improve infrastructure facility, increase farm productivity

3) Revive manufacturing **-** (raise manufacturing sector's share in GDP to 25% from 15% by 2025)

4) Fiscal consolidation **-** Getting the fiscal deficit down to 3% of GDP by FY17/18

5) Goods and Services Tax **-** tax reforms critical to achieve fiscal consolidation

6) Subsidy rationalization **-** oil, food, fertilizer subsidies constitute1.8% of GDP; need to reduce subsidies further & make it more targeted

7) Capital account liberalization **-** Increased FDI caps and further liberalization of debt markets

Status of reform measures announced since May 2014

Key reform measures announced by the government since assuming office in May'14	EXECUTION
Deregulating diesel prices, paving the way for new investments in petroleum sector	Operational
Raising gas prices from US$ 4.2 per million British thermal unit to US$ 5.6, and linking pricing, transparently and automatically, to international prices so as to provide incentives for greater gas supply and thereby relieving the power sector bottlenecks	Operational
Taxing energy products. Since October 2014, taking advantage of declining oil prices, the excise tax on diesel and coal was increased four times	Operational
Replacing the cooking gas subsidy by direct transfers on a national scale	Partially operational
Securing political consensus on the goods and services tax (GST) that will allow legislative passage of the constitutional amendment bill	Bill passed in Lower House; awaiting passage in Upper House
Instituting a major program for financial inclusion—the Pradhan Mantri Jan Dhan Yojana under which over 125 million new accounts have been opened till mid-February 2014	Progressing
Continuing the push to extending coverage under the Aadhaar program, targeting enrollment for 1 billion Indians; as of early February 2015, 757 million Indians had been bio-identified and 139-Aadhaar linked bank accounts created	Progressing
Increasing FDI cap in defense	Operational
Passing an ordinance to make land acquisition less onerous, thereby easing the cost of doing business, while ensuring that farmers get fair compensation	Stuck in Parliament
Facilitating Presidential assent for labour reforms in Rajasthan, setting an example for further reform initiatives by the states	Progressing
Passing the coal mines bill which will enable private companies to mine coal for sale in the open market, thereby helping in easing India's power sector woes	Legislated
Passing an ordinance increasing the FDI cap in insurance to 49% from 26%	Legislated
Passing the Mines and Minerals (Development and Regulation) (MMDR) Amendment Ordinance, 2015 is a significant step in revival of the hitherto stagnant mining sector in the country. The process of auction for allotment would usher in greater transparency and boost revenues for the States	Legislated
Accepting recommendations of 14th Finance Commission to decentralize more revenues to states	Operational
Faster liquidation of foodgrain stock surplus	Operational

Source: Press Information Bureau of India, Deutsche Bank

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Political constraint – the government lacks majority in the Upper House, which is delaying the passage of land & GST bill

Percentage of seats held by Political Parties in Lok Sabha (LS) and Rajya Sabha (RS)

	Lok Sabha	Rajya Sabha	% of total seats in LS	% of total seats in RS
National Democratic Alliance (NDA)	336	62	62%	25%
BJP	282	46	52%	19%
Allies	54	16	10%	7%
United Progressive Alliance (UPA)	54	76	10%	31%
Congress	44	67	8%	27%
Allies	10	9	2%	4%
Others	153	103	28%	42%
Total	543	245	100%	100%

Source: Lok Sabha and Rajya Sabha, Deutsche Bank. Note: Currently 4 seats are vacant in Rajya Sabha

State-wise allocation of Rajya Sabha (RS) seats

States	No. of seats	% of total RS seats	States	No. of seats	% of total RS seats	States	No. of seats	% of total RS seats
Andhra Pradesh	18	7.7%	Jharkhand	6	2.6%	Odisha	10	4.3%
Arunachal Pradesh	1	0.4%	Karnataka	12	5.2%	Puducherry	1	0.4%
Assam	7	3.0%	Kerala	9	3.9%	Punjab	7	3.0%
Bihar	16	6.9%	Madhya Pradesh	11	4.7%	Rajasthan	10	4.3%
Chhattisgarh	5	2.1%	Maharashtra	19	8.2%	Sikkim	1	0.4%
Goa	1	0.4%	Manipur	1	0.4%	Tamil Nadu	18	7.7%
Gujarat	11	4.7%	Meghalaya	1	0.4%	Tripura	1	0.4%
Haryana	5	2.1%	Mizoram	1	0.4%	Uttarakhand	3	1.3%
Himachal Pradesh	3	1.3%	Nagaland	1	0.4%	Uttar Pradesh	31	13.3%
Jammu and Kashmir	4	1.7%	NCT Delhi	3	1.3%	West Bengal	16	6.9%

Source: Rajya Sabha, Deutsche Bank

Election calendar

State	Last election	Next election	Ruling party	LS seats	% of LS seats	State	Last election	Next election	Ruling party	LS seats	% of LS seats
Bihar	Nov-10	Nov-15	JD (U)	40	7.3%	Gujarat	Dec-12	Dec-17	BJP	26	4.8%
Assam	Apr-11	Apr-16	INC	14	2.6%	Meghalaya	Feb-13	Feb-18	INC	2	0.4%
Kerala	Apr-11	Apr-16	UDF	20	3.7%	Tripura	Feb-13	Feb-18	CPI (M)	2	0.4%
Tamil Nadu	Apr-11	Apr-16	AIADMK	39	7.2%	Karnataka	May-13	May-18	INC	28	5.1%
West Bengal	Apr-11	Apr-16	AITC	42	7.7%	Madhya Pradesh	Nov-13	Nov-18	BJP	29	5.3%
Manipur	Jan-12	Jan-17	INC	2	0.4%	Rajasthan	Dec-13	Dec-18	BJP	25	4.6%
Punjab	Jan-12	Jan-17	SAD+BJP	13	2.4%	NCT Delhi	Dec-13	Dec-18	AAP	7	1.3%
Uttar Pradesh	Feb-Mar-12	Mar-17	SP	80	14.7%	Chhattisgarh	Nov-13	Nov-18	BJP	11	2.0%
Uttarakhand	Jan-12	Jan-17	INC	5	0.9%	Odisha	Apr-14	Apr-19	BJD	21	3.9%
Goa	Mar-12	Mar-17	BJP	2	0.4%	Andhra Pradesh	Apr-May-14	May-19	TDP	42	7.7%
Himachal Pradesh	Nov-12	Nov-17	INC	4	0.7%	General Elections	Apr-May-14	May-19	BJP	543	

Source: Election Commission of India, Deutsche Bank

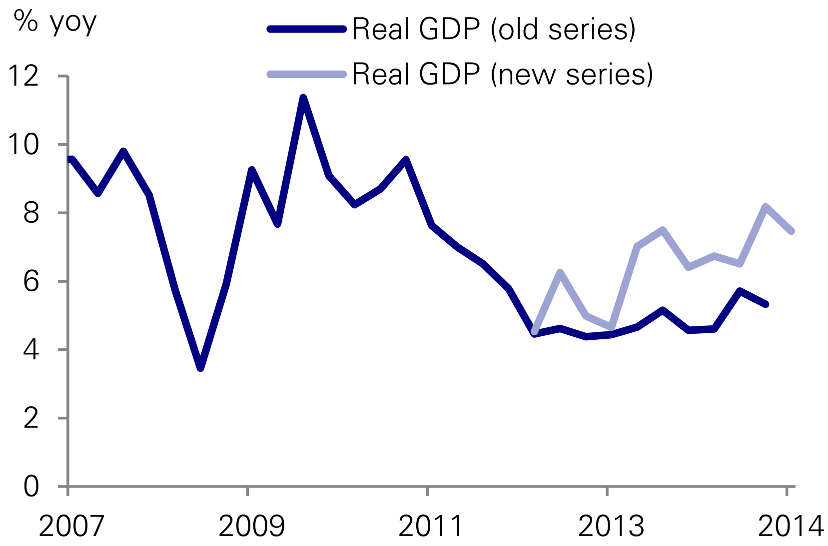
Names of key political parties (in alphabetical order)

1. AAP: Aam Aadmi Party
2. AIADMK: All India Anna Dravida Munnetra Kazhagam
3. AITC: All India Trinamool Congress
4. BJD: Biju Janata Dal
5. BJP: Bharatiya Janata Party
6. CPI (M): Communist Party of India (Marxist-Leninist)
7. INC: Indian National Congress
8. JD (S): Janata Dal (Secular)
9. JD (U): Janata Dal (United)
10. PDP : Peoples Democratic Party
11. SAD: Shiromani Akali Dal
12. SP: Samajwadi Party
13. TDP: Telegu Desam Party
14. UDF: United Democratic Front

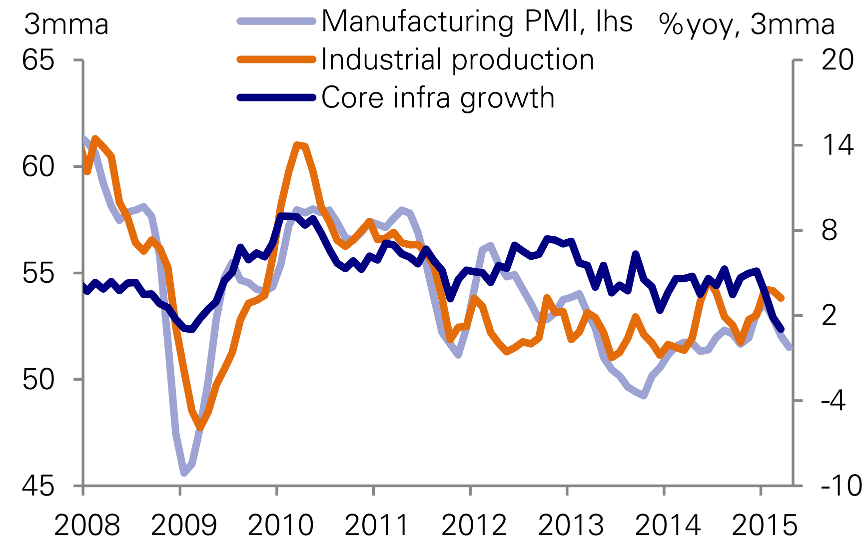
Source: Election Commission of India, Deutsche Bank

New GDP series is at odds with high frequency indicators

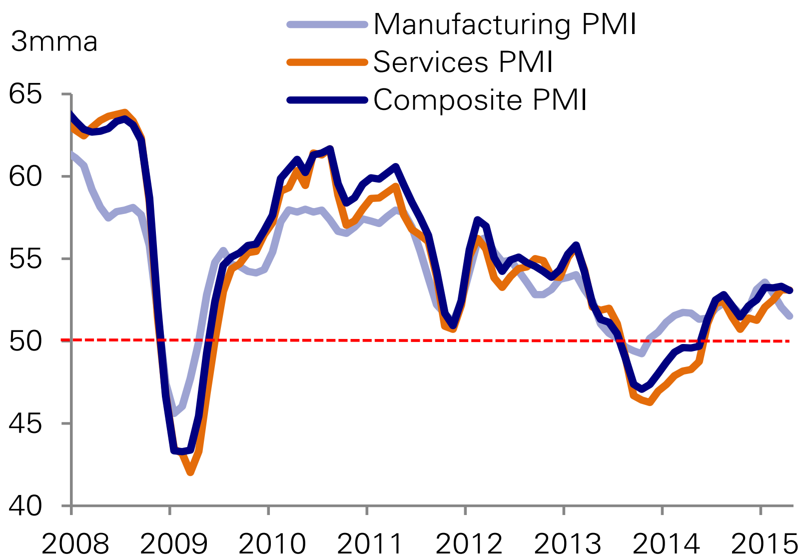
New GDP series suggests growth recovery began in 2012



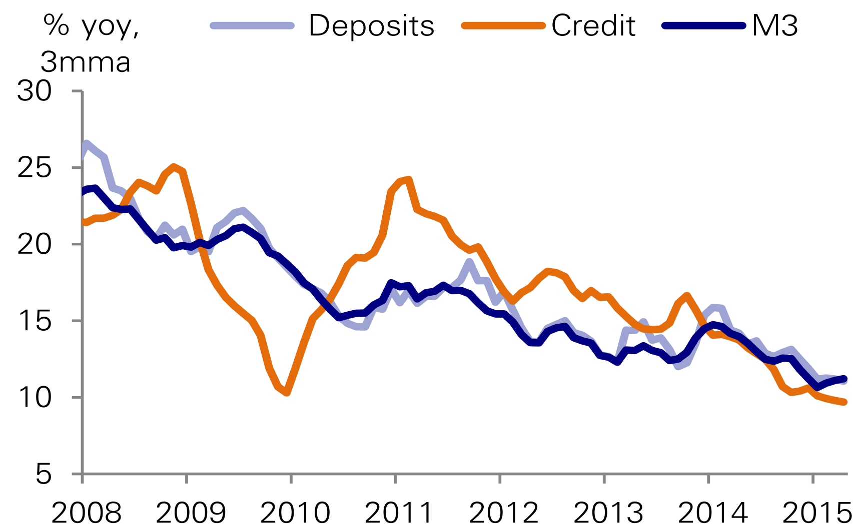
Source: CSO, CEIC, Deutsche Bank



Source: Haver Analytics, CEIC, Deutsche Bank



Source: Haver Analytics, Deutsche Bank

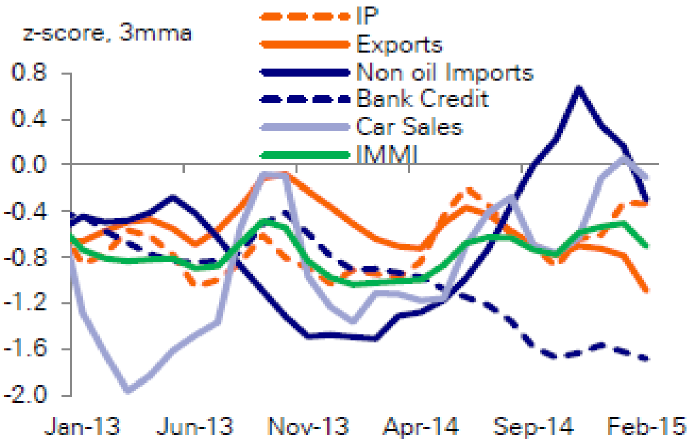


Source: CEIC, Deutsche Bank

Growth momentum remains weak

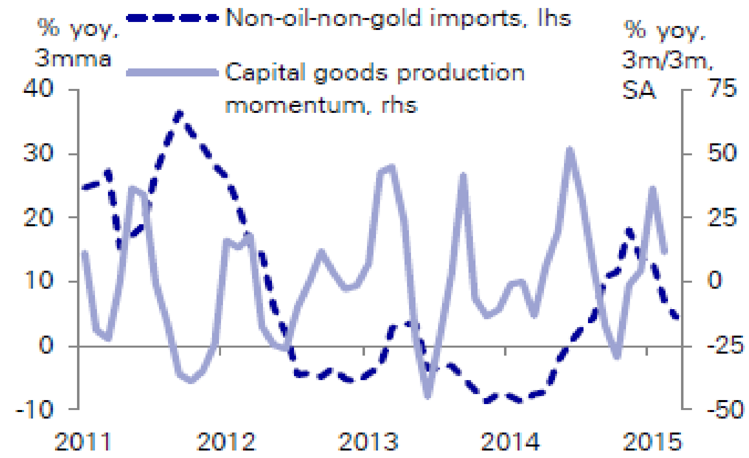
India macroeconomic momentum indicator (IMMI) is a composite index which attempts to capture the underlying momentum in the economy by tracking the movement of five growth relevant variables: industrial production, exports, non-oil imports, bank credit to commercial sector, and auto sales

India macroeconomic momentum has also moderated



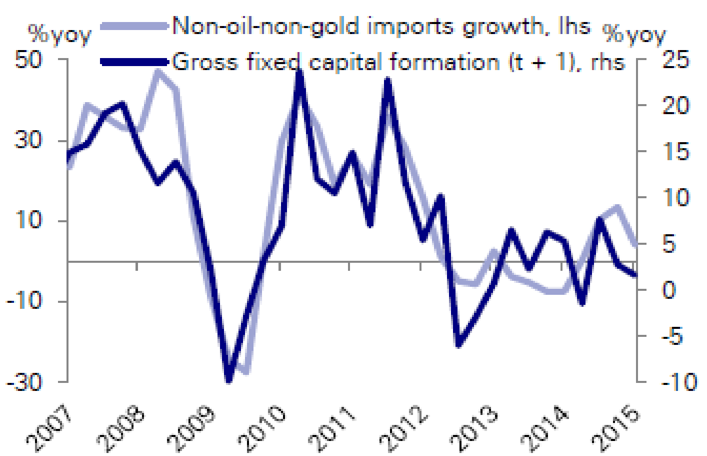
Source: CEIC, Deutsche Bank

Capital goods production momentum has weakened



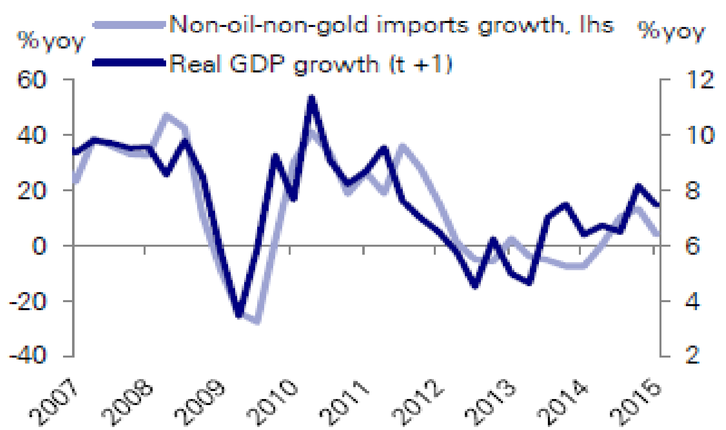
Source: CEIC, Deutsche Bank

Economic momentum is likely to have moderated



Source: CEIC, Deutsche Bank

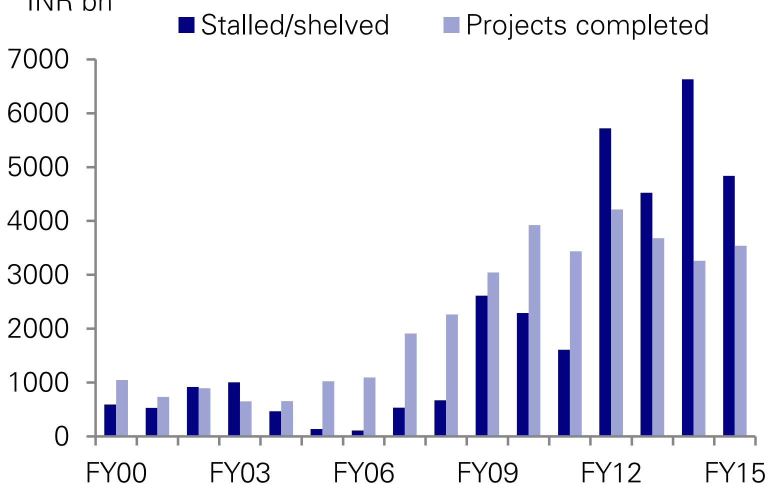
Real GDP growth likely to be lower in Jan-March'15



Source: CEIC, Deutsche Bank

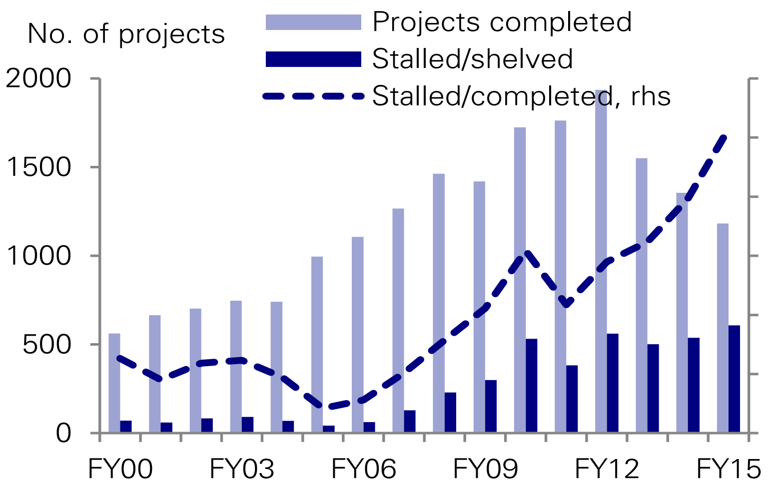
Capex recovery will take time – more stress in the private sector relative to public sector

Stalled project costs have eased in FY15



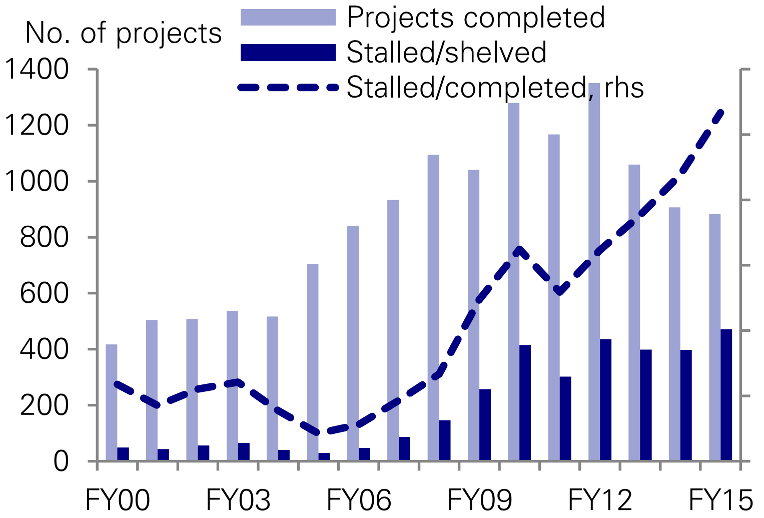
Source: CEIC, Deutsche Bank

But stalled/completion ratio is at a record high



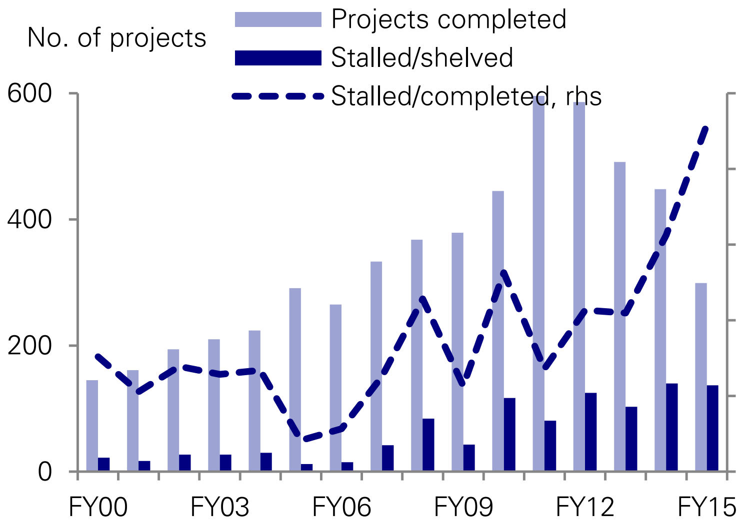
Source: CEIC, Deutsche Bank

Private sector in worse shape



Source: CMIE , Deutsche Bank

Public sector investment will have to take the lead



Source: CMIE, Deutsche Bank

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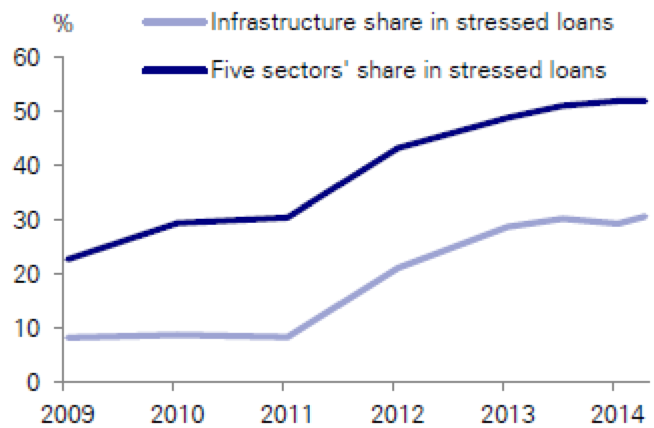
Stalled projects have affected banks' balance sheet

Major contributor to stressed advances of scheduled commercial banks (%)

Sector		Mar-09	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Jun-14
Infrastructure	Share in total advances	9.5	11.8	13.5	13.2	14.6	14.4	14.8
	Share in total stressed advances	8.3	8.8	8.4	21.2	28.8	29.4	30.7
Iron & steel	Share in total advances	3.9	4.1	4.4	4.6	4.9	4.8	4.8
	Share in total stressed advances	5.1	7.8	7.7	6.7	8.2	10.8	10.2
Textiles	Share in total advances	3.8	3.8	3.8	3.4	3.7	3.5	3.5
	Share in total stressed advances	9.0	11.6	12.2	8.9	7.5	7.7	7.2
Aviation	Share in total advances	0.9	1.0	0.9	0.7	0.5	0.5	0.5
	Share in total stressed advances	0.1	1.1	1.8	6.3	3.9	3.3	3.1
Mining	Share in total advances	0.5	0.6	0.7	0.7	0.7	0.6	0.6
	Share in total stressed advances	0.3	0.2	0.4	0.4	0.6	0.9	0.9
Total of these sectors	Share in total advances	18.6	21.3	23.3	22.6	24.4	23.9	24.2
	Share in total stressed advances	22.8	29.5	30.5	43.3	48.9	52.0	52.0

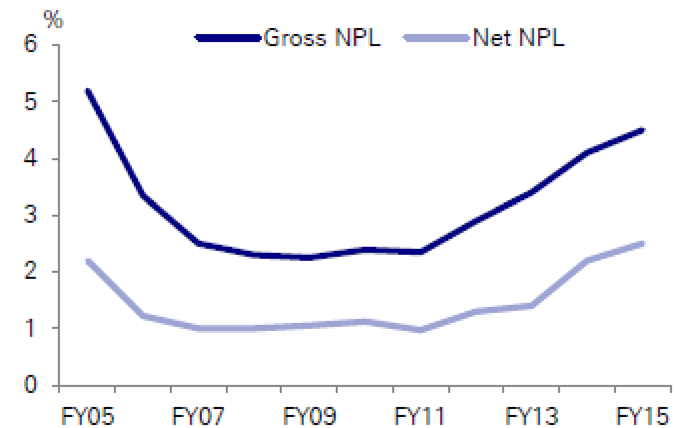
Source: RBI Financial Stability Report – December 2014, Deutsche Bank

Stressed loans are concentrated in five key sectors – infra, iron & steel, textiles, aviation and mining



Source: RBI Financial Stability Report – December 2014, Deutsche Bank

Gross and net NPL* of the banking system – has steadily deteriorated in the last few years



*Source: RBI, Deutsche Bank. Note: * does not include re-structured assets.*

Land bill a key test for investment revival

* The Land Acquisition, Rehabilitation and Resettlement (LARR) Act came into force in January 2014, replacing the Land Acquisition Act of 1894

* The new Act, requiring consent of 80% of "affected families" for land acquisition and compensating up to 4 times the market value of the land in rural areas and twice the market value in urban areas, raised concerns about the time and cost of obtaining land

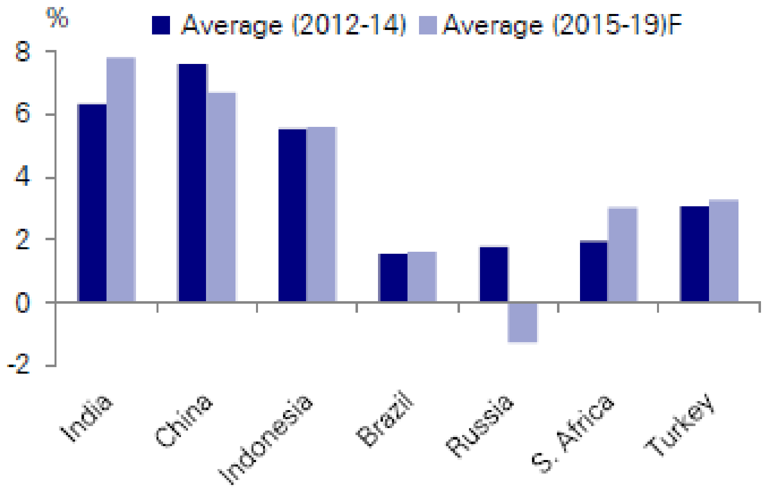
* The government is trying to make some changes to the Act (whereby the consent clause and social impact assessment will not be applicable for five sectors including infrastructure), which is expected to make land acquisition relatively easier, but this has evoked strong criticism from opposition parties and civil society activists

* An amendment to the 2014 law was passed through the Lower House on March 10, with the amendments softening the consent and impact assessment needs. The journey through the Upper House (session is ongoing) has turned out to be more challenging as the government is a minority in the Upper House

* The passage of the amended legislation would help business sentiments, but could entail substantial political cost as the government could be seen as favoring businesses over environmental concerns and the rights of small landowners

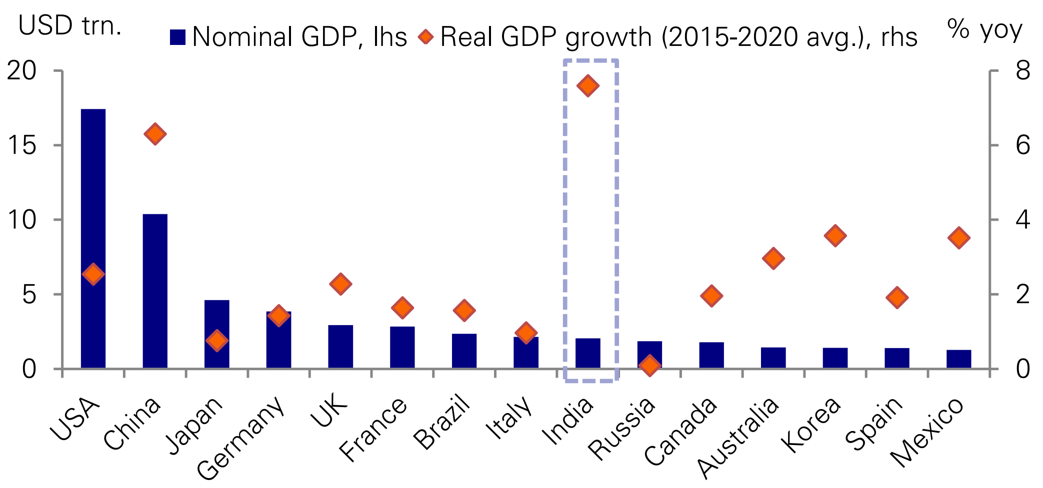
Within the EM though, India's macro is compelling

India's real GDP growth likely to remain high relative to key EM peers



Source: CEIC, Deutsche Bank. Forecast data for Turkey is only for 2015 and 2016; forecast for all other countries is for the period 2015-2019

No country above USD1 trillion GDP is likely to grow as fast as India in the next 5-6 years



Source: IMF, CEIC, Deutsche Bank

Investment pick-up is a prerequisite to economic revival

National accounts: production and expenditure side GDP

% yoy	FY12/13	FY13/14	FY14/15F	FY15/16F	FY16/17F
Real GDP	**5.1**	**6.9**	**7.4**	**7.5**	**7.5**
Agriculture	1.7	3.8	1.1	3.3	3.0
Industry	5.0	5.1	6.0	6.6	6.6
Services	5.9	8.1	10.0	9.0	9.0
Expenditure side GDP					
Consumption exp.	4.9	6.5	7.6	6.6	7.1
Private	5.5	6.2	7.1	6.5	7.3
Government	1.7	8.2	10.0	7.5	5.8
Investment	-0.3	3.0	4.1	7.3	9.5
Exports	6.7	7.3	0.9	6.8	12.8
Imports	6.0	-8.4	-0.5	4.5	13.2

Source: CSO, CEIC, Deutsche Bank forecasts

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Growth and investment model for India 2015-20

Key assumptions and implications

<u>Savings:</u> We expect a gradual improvement in the savings rate as the public sector consolidates its fiscal position, corporate profitability returns, and households find savings worthwhile as inflation eases and real rates rise. Buoyed by the improvement in savings rate, the investment ratio rises from 32% to 35% of GDP. Current account deficit rises steadily, but sustainably, to around 3% of GDP

<u>Growth:</u> Nominal GDP crosses USD3.2trln by 2020, raising per capita GDP to around USD2500. This constitutes about a 4.5% annual average growth of real per capita income

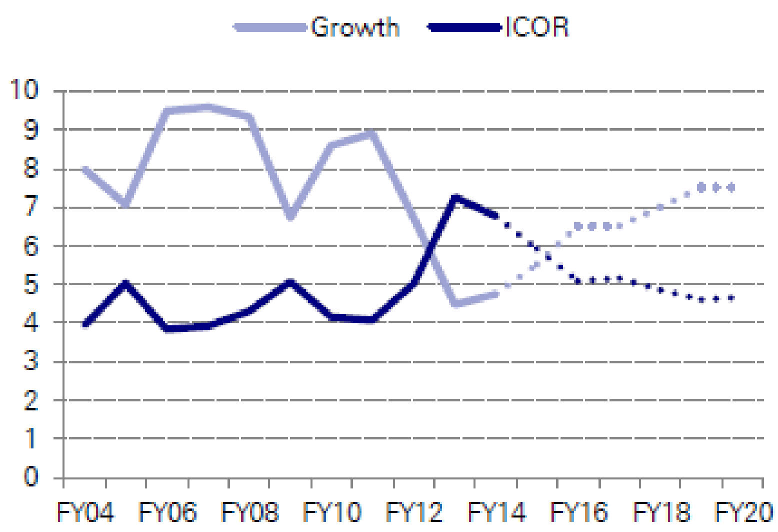
<u>Inflation:</u> RBI targets inflation successfully, bringing it down to below 6% by FY16 and below 5% by FY19

<u>Rupee:</u> The exchange rate appreciates gradually in real terms. In nominal terms, against the USD, the rupee ranges from 63-65

Assuming progress is made in fiscal consolidation, monetary stability, and structural reforms, India's macro path for the rest of decade could well be a promising and sustainable one

Sustainable growth above 7% would need significant improvements in productivity

7%+ growth by the end of the decade would require significant improvements in productivity

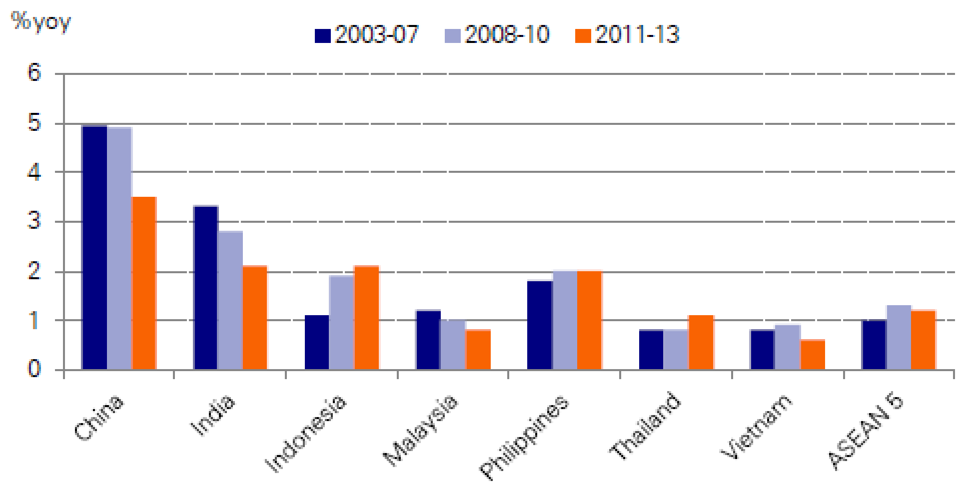


Source: CEIC, Deutsche Bank. ICOR stand for incremental capital output ratio, derived by dividing gross investment by real GDP growth. Dotted lines denote projections.

- ➢ **India'sTFP growth has declined almost each year since 2007, presently running below 2%. In contrast, Indonesia, Philippines, and Thailand have seen TFP rise during the same period**

- ➢ **To boost Total Factor Productivity, India needs to i) increase its scale of manufacturing; ii) reduce product market regulation; iii) ease employment protection; and iv) remove barriers to entry**

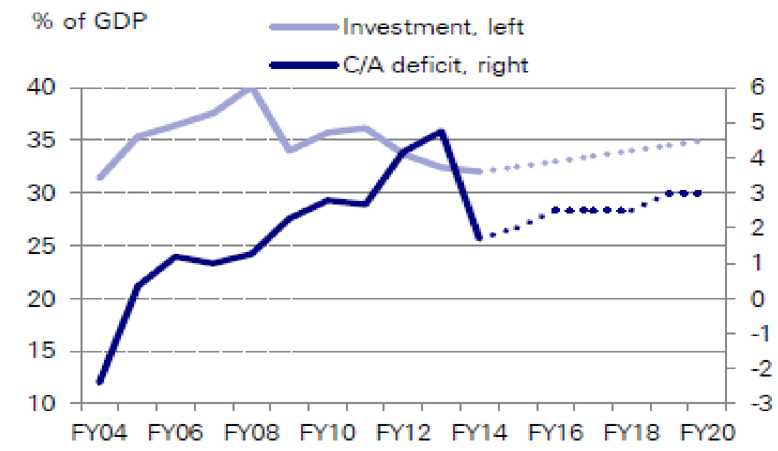
Total factor productivity



*Source: IMF, Deutsche Bank. * TFP calculations are derived from "Potential Growth in Emerging Asia." by Rahul Anand, Kevin C. Cheng, Sidra Rehman, and Longmei Zhang, IMF Working paper 14/2, 2014, Washington DC*

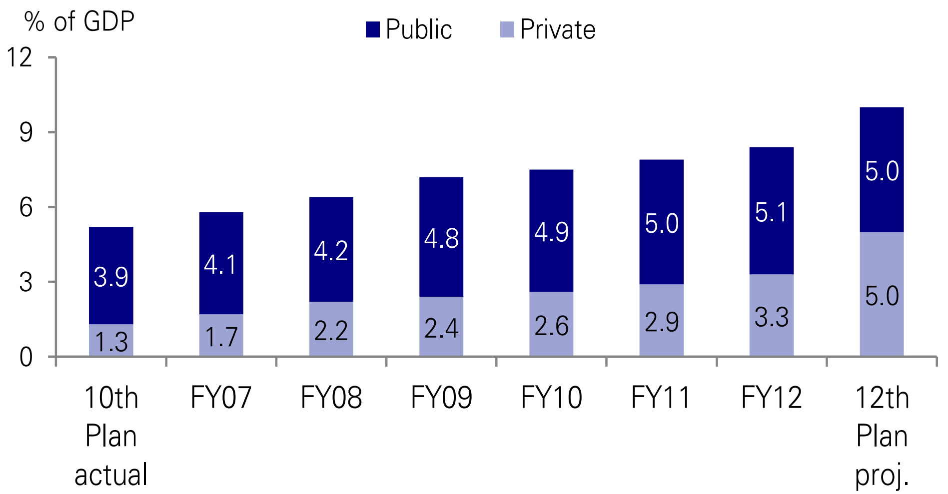
Infrastructure investment also needs to rise appreciably to support non-inflationary high growth rate

Investment recovery will likely be accompanied by a rise in the current account deficit



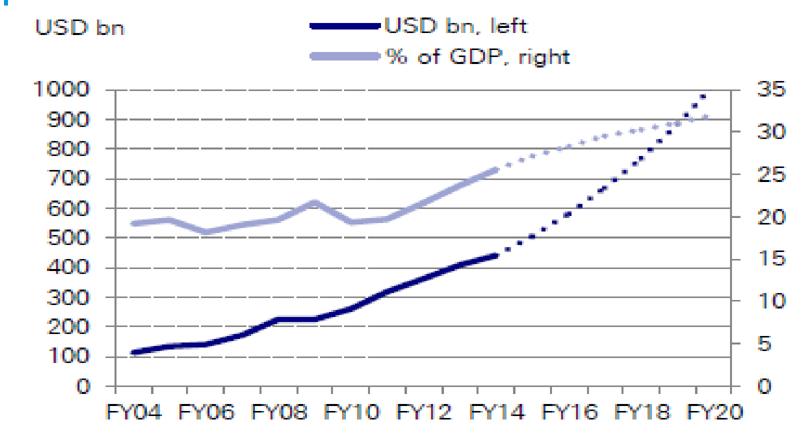
Source: CEIC, Deutsche Bank. Dotted lines denote projections.

USD1trn infrastructure investment required



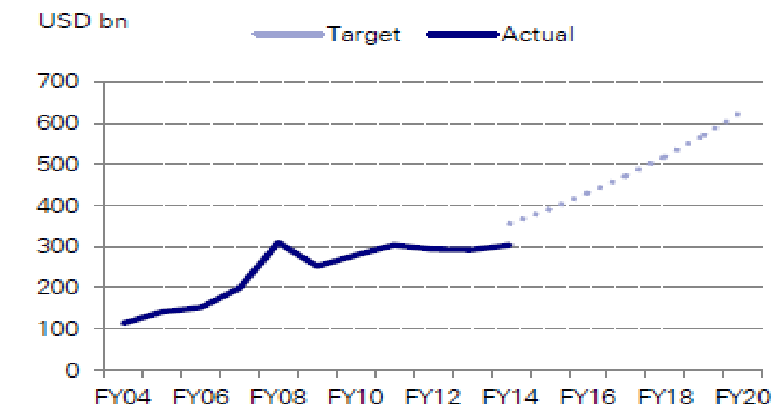
Source: Planning Commission, Deutsche Bank

External debt will rise gradually



Source: CEIC< Deutsche Bank

If the target is 10-months of imports, RBI will have to add substantially to spot reserves



Source: CEIC, Deutsche Bank

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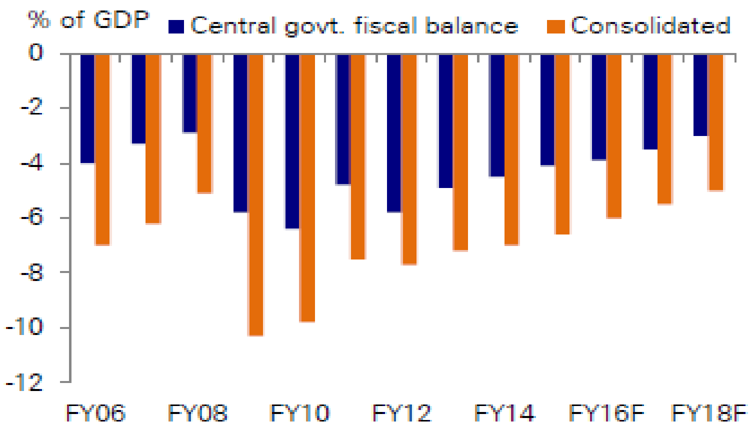
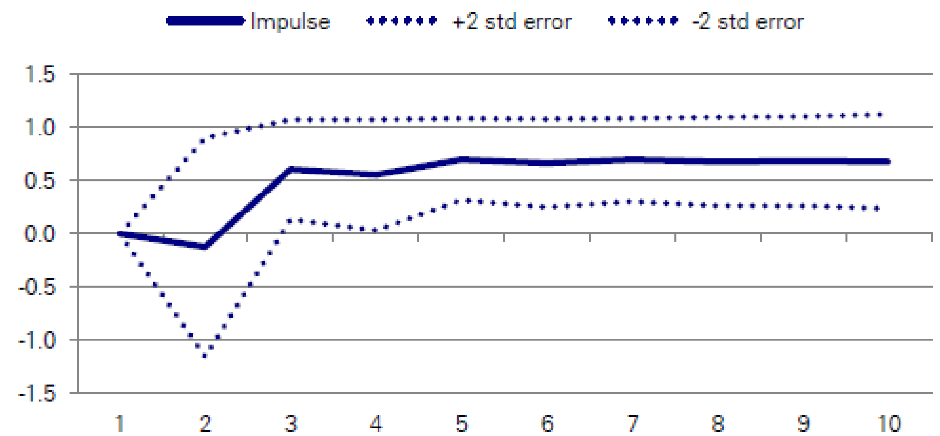
Fiscal consolidation is key

The authorities want to bring the centre's fiscal deficit down to 3.0% of GDP by FY18



Source: CEIC, Budget documents, Deutsche Bank

1% of GDP reduction in deficit leads to growth rising by 0.4% within 2 years subsequent to the effort



Source: CEIC, Deutsche Bank. Impulse response estimated by running a reduced form VAR of real GDP growth and fiscal balance over 1974-2014, using annual data. 1 standard deviation of fiscal deficit is 1.4% of GDP.

FY15/16 fiscal projection - Budget vs. DB forecast

	INR bn		% of GDP		% yoy	
Items	Budget	DB forecast	Budget	DB forecast	Budget	DB forecast
Total receipts	12218	12162	8.7	8.6	4.6	4.1
Total expenditure	17775	17636	12.6	12.5	5.7	4.9
Non-Plan Expenditure	13122	13262	9.3	9.4	8.2	9.3
Plan Expenditure	4653	4374	3.3	3.1	-0.6	-6.5
Fiscal Deficit	5556	5474	3.9	3.9		

Source: Government of India, Deutsche Bank

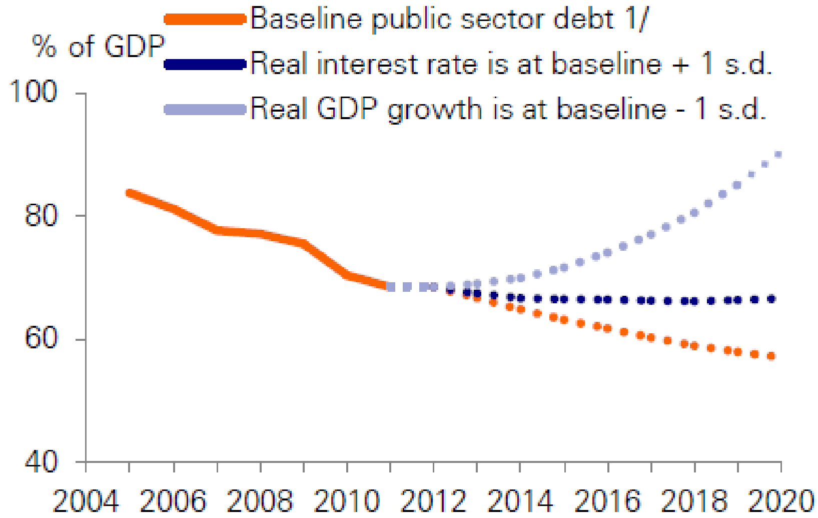
Medium term fiscal policy statement

% of GDP, at current market prices	FY15 revised estimate	FY16, budget estimate	FY17 target	FY18 target
Revenue deficit	2.9	2.8	2.4	2.0
Fiscal deficit	4.1	3.9	3.5	3.0
Gross tax revenue	9.9	10.3	10.5	10.7
Total outstanding liabilities at the end of the year	46.8	46.1	44.7	42.8

Source: Government of India, Deutsche Bank. Note: "Total outstanding liabilities" include external public debt at current exchange rates.

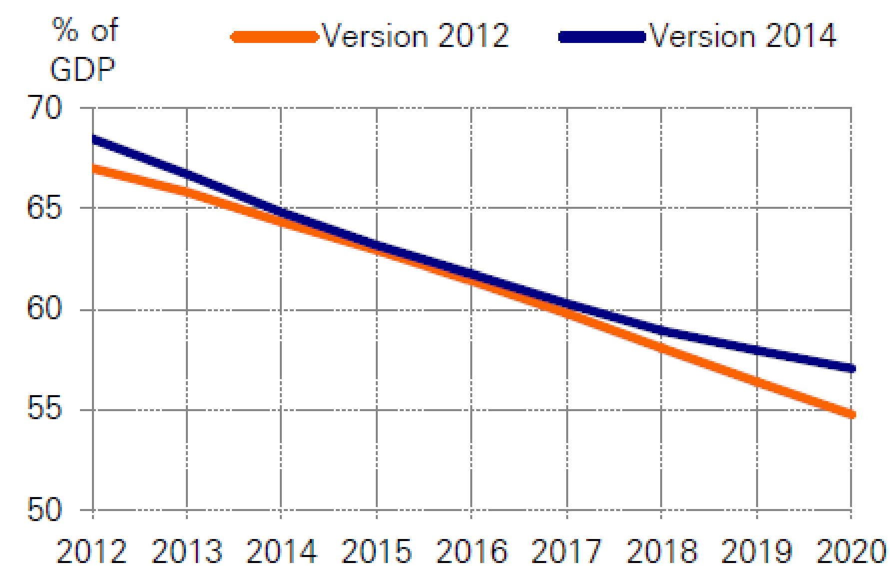
Debt sustainability hinges on sustaining strong growth

Considerable vulnerability to debt sustainability, if growth slowdown prolongs for a lengthy period



Source: Govt. of India, Deutsche Bank. 1/ Combined Central and State level debt. Interest rate shock entails real interest rate on public debt rising to 3.5%. Growth shock entails real GDP growing by 4%.

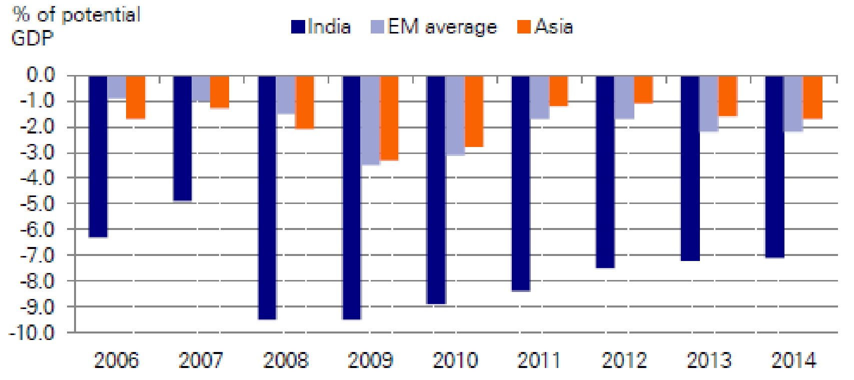
Baseline Debt/GDP ratio: projected in our 2012 exercise vs. latest projections



Source: Government of India, Deutsche Bank. 1/ Combined Central and State level debt.

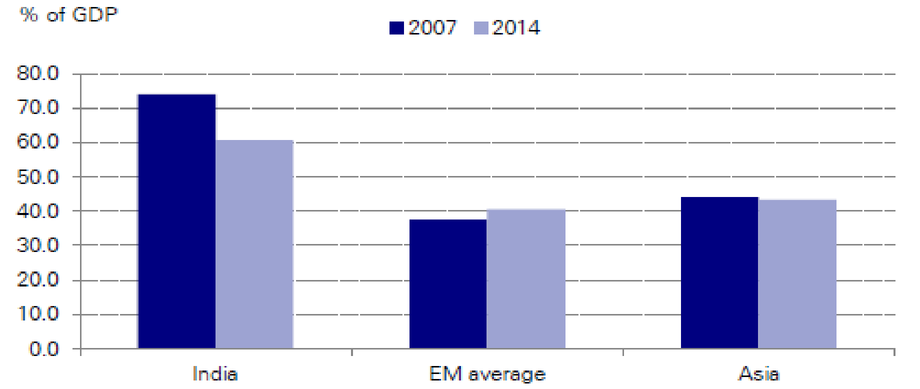
India's fiscal metrics rank poorly compared to peers

General Government Cyclically Adjusted Balance – India's fiscal metrics are poor by emerging market standards



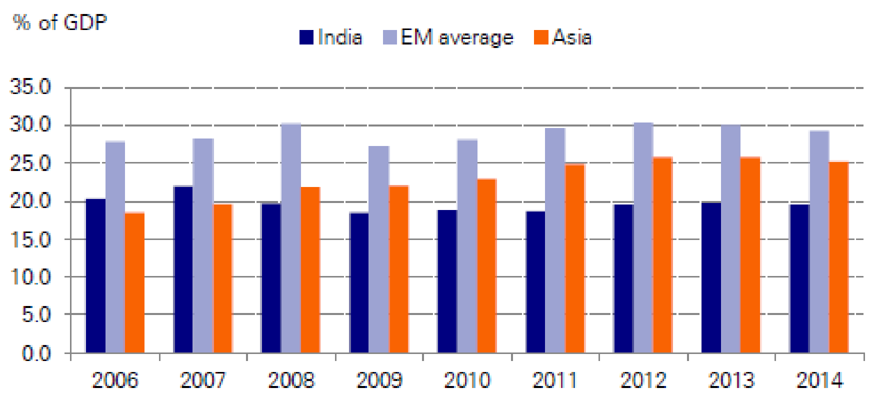
Source: CEIC, IMF, Deutsche Bank

India's general government gross debt is still far higher than the EM average and servicing this high level of debt is very costly



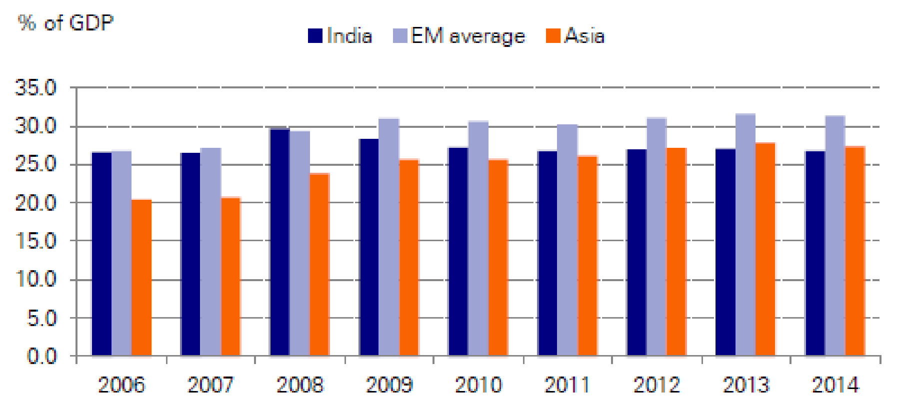
Source: CEIC, IMF, Deutsche Bank

General Government Revenue



Source: CEIC, IMF, Deutsche Bank

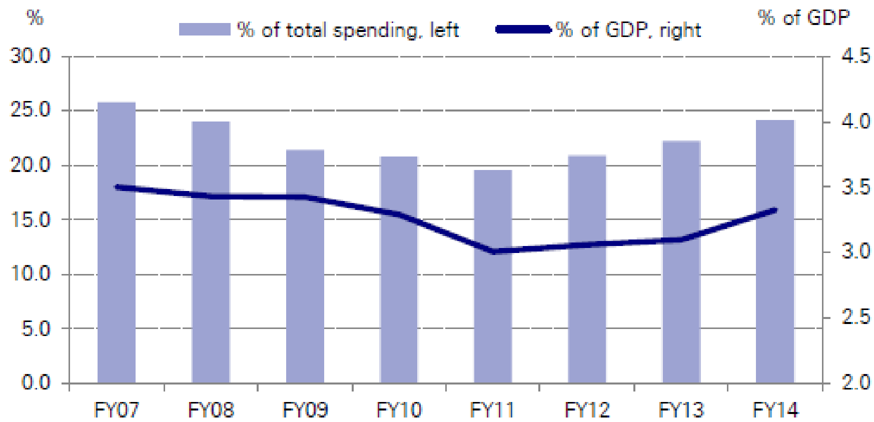
General Government Expenditure



Source: CEIC, IMF, Deutsche Bank

Need to focus on quality of fiscal consolidation

Interest spending taking up a large chunk of the budget



Source: CEIC, Deutsche Bank

- **Quality of expenditure is poor: interest, defense and subsidies constitute 53% of total expenditure**

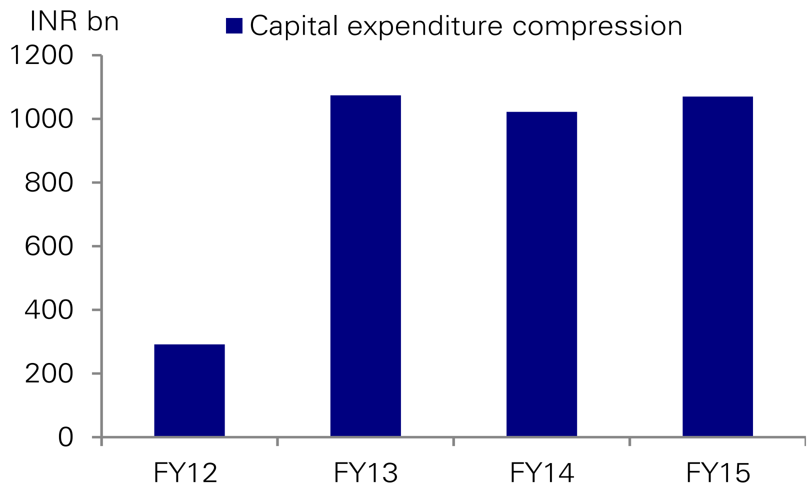
Government expenditure (% of GDP)

Year	Revenue Exp.	Interest payments	Pay and allow-ances*	Pension	#Defence	Subsidies	Capital Exp.	Total Exp.
	1	2	3	4	5	6	7	8
2001-02	12.80	4.56	1.33	0.61	2.30	1.32	2.58	15.38
2004-05	11.85	3.92	1.19	0.56	2.34	1.42	3.50	15.35
2007-08	11.92	3.43	0.93	0.49	1.84	1.42	2.37	14.29
2008-09	14.10	3.41	1.20	0.59	2.03	2.30	1.60	15.70
2009-10	14.08	3.29	1.39	0.87	2.19	2.18	1.74	15.82
2010-11	13.37	3.01	1.14	0.74	1.98	2.23	2.01	15.38
2011-12	12.72	3.03	1.06	0.68	1.90	2.42	1.76	14.48
2012-13	12.30	3.10	1.07	0.69	1.80	2.54	1.65	13.95
2013-14 (RE)	12.33	3.35	-	0.65	1.79	2.25	1.68	14.01
2014-15 (BE)	12.18	3.32	-	0.64	1.78	2.02	1.76	13.94

*Source: Various Budget reports, 14th Finance Commission report, Deutsche Bank. Note: * Brochure on pay and allowances of central government (excluding Defence Services)*

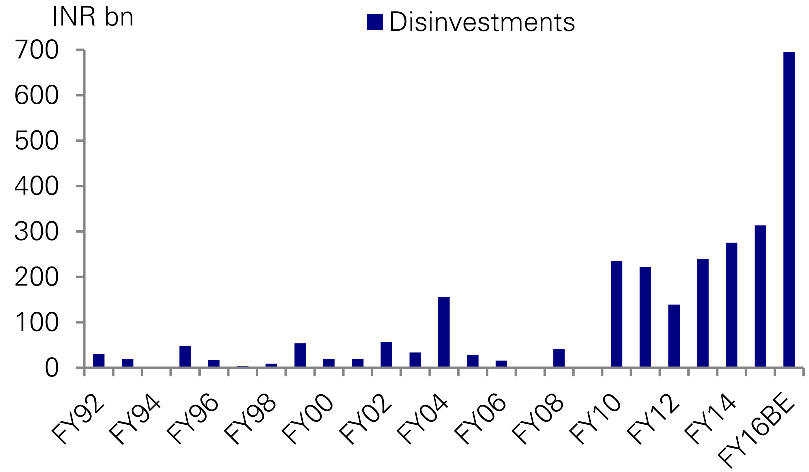
Dependence on one-off disinvestment proceeds and capital expenditure compression need to be reduced

The government has cut capital expenditure by 1% of GDP for the third consecutive year to contain fiscal deficit



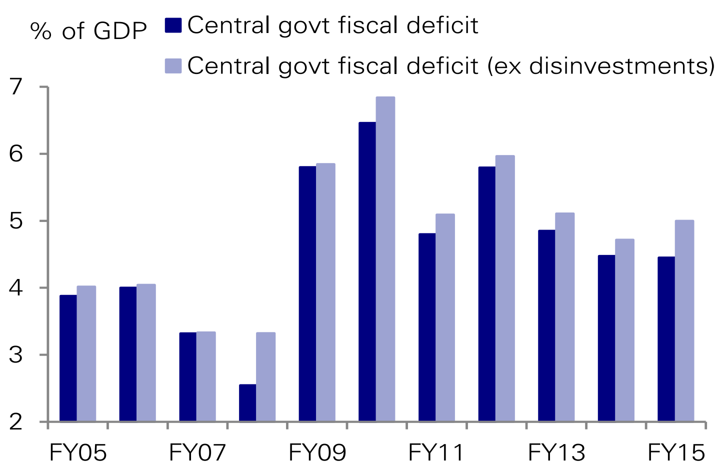
Source: Various Budget reports, Deutsche Bank

Dependence on disinvestments to contain fiscal deficit is not a good strategy; real fiscal effort needs to be accelerated



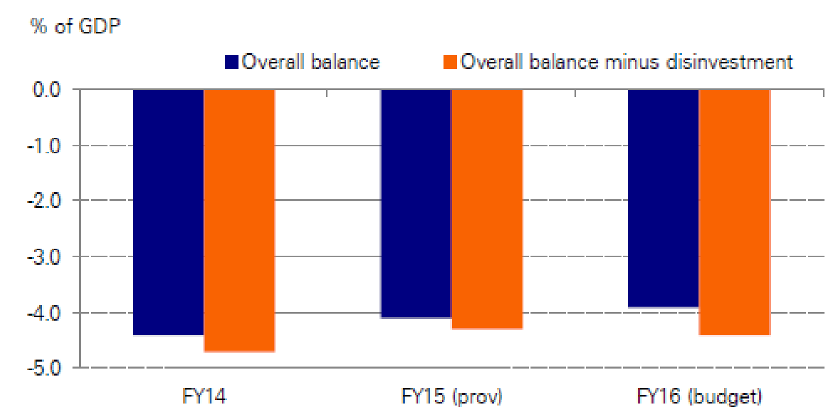
Source: Various Budget reports, Deutsche Bank

Fiscal deficit should be considered ex disinvestment proceeds



Source: Various Budget reports, Deutsche Bank

Fiscal stance, excluding one-offs, is slightly stimulatory



Source: Government of India, Deutsche Bank

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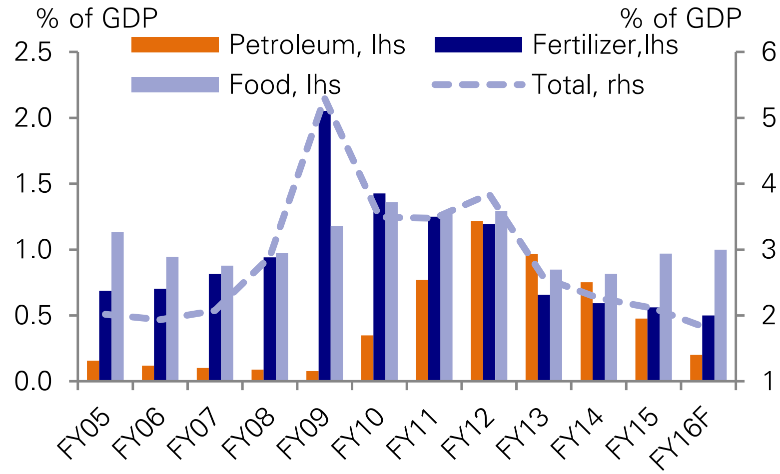
Containing subsidy is a key priority

Explicit subsidies relative to Central government's revenue receipts

Year	Food	Fertiliser	Petroleum	Others	Bonds	Total
2001-02	8.69	6.25	0.00	0.38	4.47	19.79
2004-05	8.43	5.19	0.97	0.39	0.00	14.98
2007-08	5.78	6.00	0.52	0.79	5.18	18.27
2008-09	8.10	14.18	0.53	1.20	17.76	41.77
2009-10	10.20	10.70	2.61	1.17	1.80	26.48
2010-11	8.10	7.90	4.87	1.13	0.00	21.99
2011-12	9.69	9.32	9.11	0.88	0.00	29.00
2012-13	9.67	7.46	11.02	1.09	0.00	29.24
2013-14 (RE)	8.94	6.60	8.31	0.98	0.00	24.83
2014-15(BE)	9.67	6.13	5.33	0.78	0.00	21.91

Source: Various Budget reports, 14th Finance Commission report, Deutsche Bank.

- **Energy subsidies will decline significantly if global oil prices remain soft, but food (1.0 % of GDP) and fertilizer subsidies (0.5% of GDP) will continue to keep overall subsidy level high**



Source: Various Budget reports, Deutsche Bank.

Oil subsidies will reduce significantly in this and next year, if global oil prices remain soft

Oil under-recovery and sharing

	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15E	FY16E	FY17E
Brent price (US$/bbl)	82.4	85.2	70.1	86.8	114.4	110.5	107.6	86.7	62.5	71.3
US$/INR	40.2	45.9	47.4	45.6	48.0	54.4	60.5	61.3	64.0	65.0
Gross under-recoveries (INR bn)										
Domestic LPG	191	176	174	220	300	396	465	359	111	264
PDS Kerosene	155	282	143	196	274	294	306	236	159	191
Diesel	352	531	0	0	1	1	1	0	0	0
Petrol	73	52	52	22	0	0	0	0	0	0
Total under-recovery	771	1,043	461	782	1,385	1,610	1,399	712	270	455
Subsidy sharing formula (INR bn)										
Upstream	256	330	144	303	550	600	670	428	108	182
Government of India	353	713	260	410	835	1,000	708	284	162	273
OMCs	162	0	56	69	0	10	21	0	0	0
Gross under-recovery	771	1,043	461	782	1,385	1,610	1,399	712	270	455
Sharing in %										
Upstream	33%	32%	31%	39%	40%	37%	48%	60%	40%	40%
Government of India	46%	68%	56%	52%	60%	62%	51%	40%	60%	60%
OMCs	21%	0%	12%	9%	0%	1%	1%	0%	0%	0%

Source: Government of India, Deutsche Bank

Subsidy delivery is characterized by inefficiency and major pilferage

How much do subsidies benefit the poor?

Product	Producer Subsidy	Consumer Subsidy	Fiscal expenditure (INR bn)	Fiscal expenditure(% of 2011-12 GDP)	What share of benefits accrue to the poor?
Railways	N/A	Subsidised passenger fares	510	0.57	The bottom 80% of households constitute only 28.1% of total passenger through fare on railways
Liquefied petroleum gas	N/A	Subsidy (now via DBT)	237	0.26	The bottom 50% of households only consume 25% of LPG
Kerosene	N/A	Subsidy via PDS	204	0.23	41% of PDS kerosene allocation are lost as leakage, and only 46% of the remainder is consumed by poor households
Fertiliser & nitrogenous commodities	Firm and nutrient specific subsidies to manufacturers. Import of urea regulated by the government	Maximum	738	0.82	Urea and P&K manufacturers derive most economic benefit from the subsidy, since farmers, especially poor farmers, have elastic demand for fertilizer
Rice (paddy)	Price floor (minimum support price)	Subsidy via PDS	1,290	1.14	15% of PDS rice is lost as leakage. Households in the bottom 3 deciles consume 53% of the remaining 85% that reaches households
Wheat					54% of PDS wheat is lost as leakage. Households in the bottom 3 deciles consume 56% of the remaining 46% that reaches households
Pulses	Price floor (MSP)	Subsidy via PDS	1.58	0.002	The bottom 3 deciles consume 36% of subsidized pulses
Electricity	Subsidy	Capped below market price	323	0.36	Average monthly consumption of bottom quintile = 45 kWh vs top quintile = 121 kWh. Bottom quintile captures only 10 % of the total electricity subsidies, top quintile captures 37% of subsidy
Water	N/A	Subsidy	142	0.5	Most water subsidies are allocated to private taps, whereas 60% of poor households get their water from public taps
Sugar for sugar cane farmers, subsidy to mills	Minimum price	Subsidy via PDS	330	0.37	48% of PDS sugar is lost as leakage. Households in the bottom 3 deciles consume 44% of the remaining 52% that reaches households
Total			3,776	4.24	

Source: Economic Survey 2014/15 – Volume I, Deutsche Bank

Moving toward a cash transfer scheme through JAM trinity – current status and challenges

* The government's aim to move toward a cash transfer system through the trinity of Jan Dhan Yojana (a scheme targeted to achieve comprehensive financial inclusion), Aadhaar (Unique Identification Number) and Mobile numbers – popularly known as "JAM" is encouraging as it will help target subsidies better and reduce pilferage in the system

* The cash transfer mechanism of delivering subsidies is already being tried out in certain areas, by paying cooking gas subsidies directly into the bank accounts of 97million recipients. But the challenge is to deliver all subsidies through the cash transfer system mechanism, including food and fertilizers which account for 1.5% of GDP (INR2trillion).

* According to the 2014/15 Economic Survey report, total number of Aadhaar enrolments are expected to exceed 1 billion by end-2015, from about 700mn enrolments that have been already completed by end-December 2014.

* Linking Aadhaar to the potential recipient's bank accounts is critical to make the cash transfer mechanism a success; by end-2014, over 100 million bank accounts have already been linked with Aadhaar numbers and with the introduction of Jan Dhan Yojana, the number of bank accounts is expected to increase further

* Despite the obvious benefits, many state governments including Orissa, Tamil Nadu and Madhya Pradesh have shown resistance to move toward a cash transfer system of delivering food subsidies, citing lack of technological preparedness and raising doubts whether the JAM trinity will work or not

* The challenge for the central government will be to convince all the states (especially in non-BJP ruled states) to embrace cash transfer scheme wholeheartedly, keeping political differences aside

* As far as opening of bank accounts are considered, effort should be made to ensure that due diligence is not sacrificed just to meet targets

* Also while providing financial inclusion is imperative to be able to enjoy a just and equitable growth, it should be complemented with consumer protection and literacy, so that financial frauds can be avoided. The current JAM trinity fails to address this issue, which could become a complicating factor later

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Goods and services tax – current status and challenges

*** The FY16 budget indicated that GST will be implemented from April 2016, but did not provide further details**

*** The budget was silent on what the revenue neutral rate (a rate at which where will be no revenue loss to the states after the adoption of GST) should be and which items should be outside the purview of the proposed GST**

*** Late last year, a sub-committee on GST recommended to fix the combined revenue neutral rate at 26.68% (12.77% CGST + 13.91% SGST = 26.68%). These rates are nearly the same as — if not slightly higher than — the current rates of indirect taxes at the central and state levels. Ideally, the rates for GST ought to be significantly lower than current rates to bring additional competitive strength to the economy**

*** The states want petroleum, liquor and land to stay outside the purview of GST, which if accepted, would dilute the efficacy of GST and would make the revenue neutral rate higher than ideally desired**

*** For operationalizing GST, an amendment to the constitution (122nd amendment) is required by securing two thirds of the majority in Parliament. The bill has been passed in the Lower House; awaiting passage in the Upper House. GST cannot be passed by a joint session of the Parliament, as joint sessions are not applicable to the "constitution amending bills" like the GST**

*** Once the legal framework is established, major efforts are needed to align IT, human resource, and accounting framework for effective implementation**

Taxes to be subsumed under the proposed GST

Taxes levied by the Central Government that would be subsumed in CGST	Taxes levied by the State Governments that would be subsumed in SGST
Central Excise Duty	VAT/Sales tax
Additional Excise Duty	Entertainment tax (unless it is levied by the local bodies
Excise Duty levied under the Medicinal and Toiletries Preparation Act	Luxury tax
Service Tax	Taxes on lottery, betting, and gambling
Additional Customs Duty, commonly known as Countervailing Duty (CVD)	State cesses and surcharges relating to supply of goods and services
Special Additional Duty of Customs	Entry tax not in lieu of octroi
Surcharges	
Cesses	

Source: RBI, Deutsche Bank

Competitive Cooperative Federalism – will it work?

*** We welcome the government's decision to decentralize more resources to states and accord them with greater discretionary spending power**

*** But the question is whether the states have the administrative capability and willingness to be able to spend the increased allocation, productively and transparently. This remains an open question at this stage**

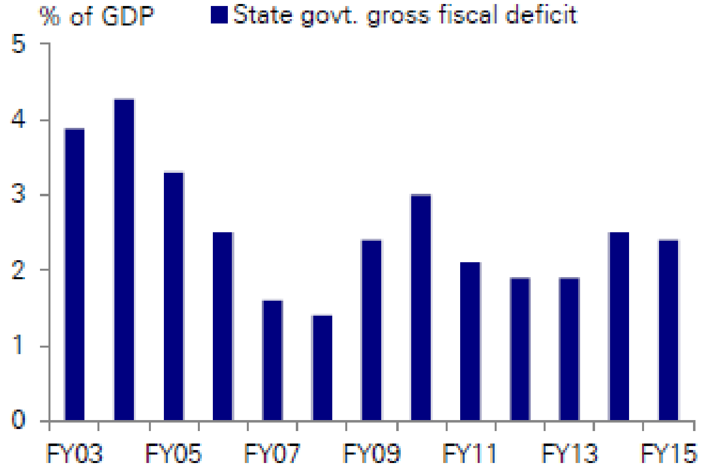
*** Another issue is that while the states' cumulative fiscal deficit has reduced over the years, there is considerable heterogeneity among the performance of the various states**

*** States which are poor and populous (but fiscally weak), such as Uttar Pradesh, Bihar and West Bengal would be receiving a higher allocation of the increased transfer of funds from the central government**

*** Transferring larger share of resources to states which have historically been fiscally imprudent, could prove to be counterproductive, in our view, as it would disincentivize such states to expedite fiscal reforms**

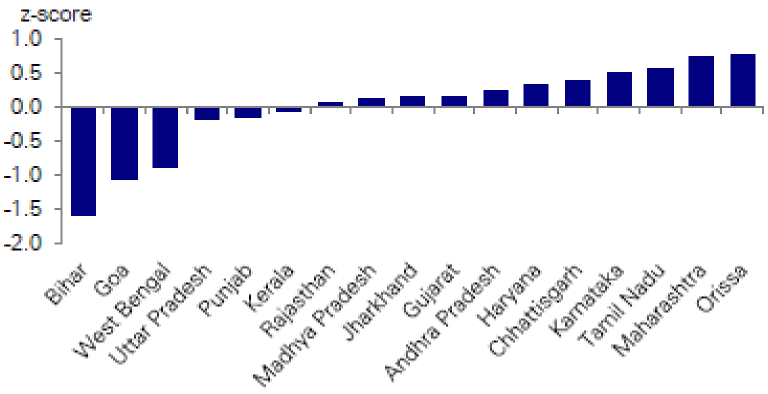
Snapshot of state finances and ranking of states

States' gross fiscal deficit has improved somewhat



Source: RBI, 14th Finance Commission report, Deutsche Bank

Fiscal health of key states based on 2013-14 figures



Source: RBI, Deutsche Bank. Note: Lower the z-score, weaker the fiscal health of the state. The composite z-score has been calculated by taking four fiscal metrics into consideration – i) gross fiscal deficit/GDP; ii) primary deficit/GDP; iii) own tax revenue/GDP; and iv) public debt/GDP

All States aggregate	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14 (RE)	2014-15 (BE)
GFD/GDP	3.3	2.5	1.6	1.4	2.4	3.0	2.1	1.9	1.9	2.5	2.4
RD/GDP	1.2	0.2	-0.7	-0.9	-0.2	0.6	0.0	-0.3	-0.2	0.0	-0.3
PD/GDP	0.6	0.2	-0.6	-0.6	0.6	1.2	0.5	0.4	0.4	1.0	0.9
RD/GFD	36.8	7.5	-42.0	-62.4	-8.4	19.2	-1.9	-14.1	-10.4	-1.0	-11.8
Outstanding Debt & liabilities/ GDP	31.1	30.5	28.2	26.0	25.5	24.8	23.0	21.9	21.6	21.4	21.0

Source: 14th Finance Commission , Finance Accounts; State Budgets, 2014-15. Note: (+) indicates deficit, (-) indicates surplus)

- **We use four fiscal parameters – fiscal deficit, primary deficit, own tax revenue and state debt, all as a % of GSDP to construct a composite fiscal ranking of the states**
- **Orissa tops the fiscal scorecard, followed by Maharashtra, Tamil Nadu and Karnataka, while Bihar fares the worst**
- **Uttar Pradesh and West Bengal continue to be fiscally challenged, while states such as Goa and Kerala have seen a significant deterioration over the years**

Fiscally weak states to receive higher share of centre's resources; can prove to be counter-productive

State wise share in central taxes

	States	Share of States (%)
1	Andhra Pradesh	4.3
2	Arunachal Pradesh	1.4
3	Assam	3.3
4	**Bihar**	**9.7**
5	Chhattisgarh	3.1
6	Goa	0.4
7	Gujarat	3.1
8	Haryana	1.1
9	Himachal Pradesh	0.7
10	Jammu &Kashmir	1.9
11	Jharkhand	3.1
12	Karnataka	4.7
13	Kerala	2.5
14	Madhya Pradesh	7.5
15	Maharashtra	5.5
16	Manipur	0.6
17	Meghalaya	0.6
18	Mizoram	0.5
19	Nagaland	0.5
20	Odisha	4.6
21	Punjab	1.6
22	Rajasthan	5.5
23	Sikkim	0.4
24	Tamil Nadu	4.0
25	Telangana	2.4
26	Tripura	0.6
27	**Uttar Pradesh**	**18.0**
28	Uttarakhand	1.1
29	**West Bengal**	**7.3**
	Total	100.0

Source: 14th Finance Commission report, Deutsche Bank

Criteria and Weights

Criteria	Weight (%)
Population	17.5
Demographic Change	10.0
Income Distance	50.0
Area	15.0
Forest Cover	7.5

Source: 14th Finance Commission report, Deutsche Bank

- **The devolution of tax revenues from the centre to states is based on a formula, whereby the relatively poorer (calculated as the income distance of a particular state from the state having the highest GSDP) and populous states qualify for a larger share of resources**

- **Based on this, states which are poor and populous (but fiscally weak), such as Uttar Pradesh, Bihar and West Bengal would be receiving a higher allocation of the increased transfer of funds from the central government**

Reform update, short term growth outlook

A growth and investment model

Fiscal structural reforms

Monetary policy, direction, effectiveness, transmission

Inflation, rainfall, supply side reforms

Exchange rate, competitiveness, reserves

Demographics

Urbanization

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What RBI believes and wants to achieve

1) No trade-off between growth and inflation in the long term – Imperative to get inflation and inflation expectations down, to achieve higher growth and investments

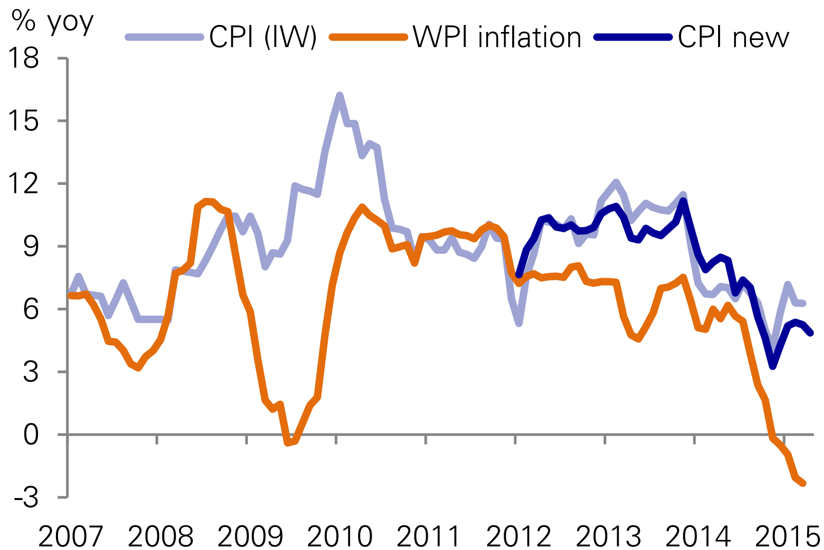
2) Growth is important, but composition of growth is even more important – healthy mix of consumption and investment growth needs to be achieved to prevent macro imbalances from building up

3) Need to maintain positive real interest (1.5-2.0%)in the economy – to incentivize higher financial savings, which is critical to fund investment needs of the country; unless this is achieved, pressure on current account deficit will persist

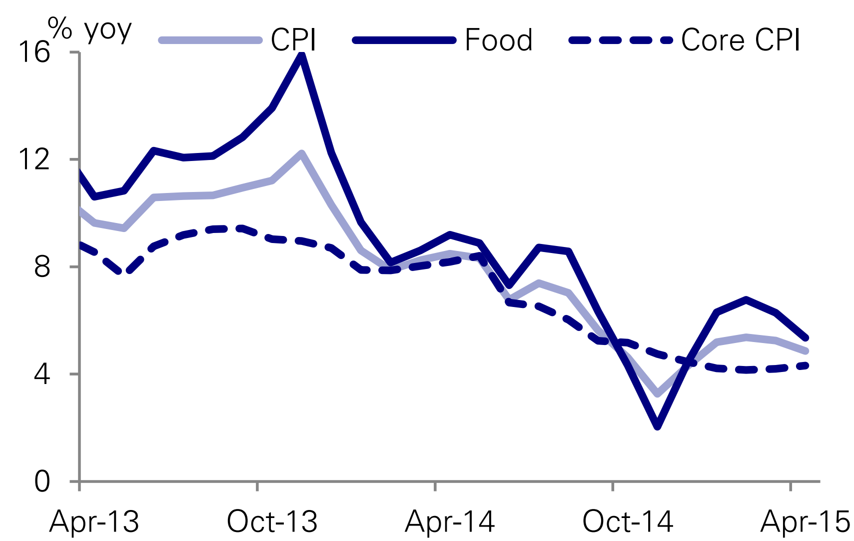
4) Inflation glide path – RBI has targeted to bring CPI inflation down to 6% by Jan 2016 and to 4% thereafter; need to ***sustain*** CPI inflation at 4-6% in the medium term

5) Current account deficit – Policy framework should be geared to sustain current account deficit at about 2.0-2.5% of GDP

Inflation has eased significantly, helped by lower food and fuel prices; core CPI inflation has also moderated



Source: CEIC, Deutsche Bank



Source: CEIC, Deutsche Bank

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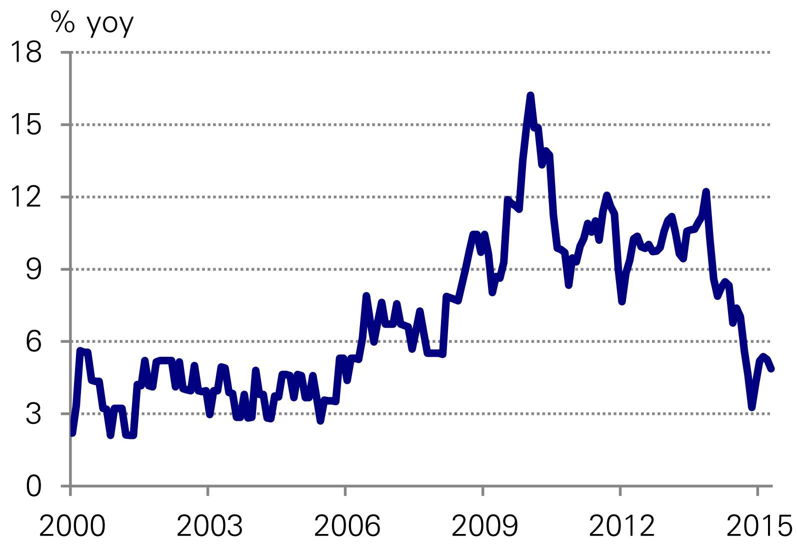
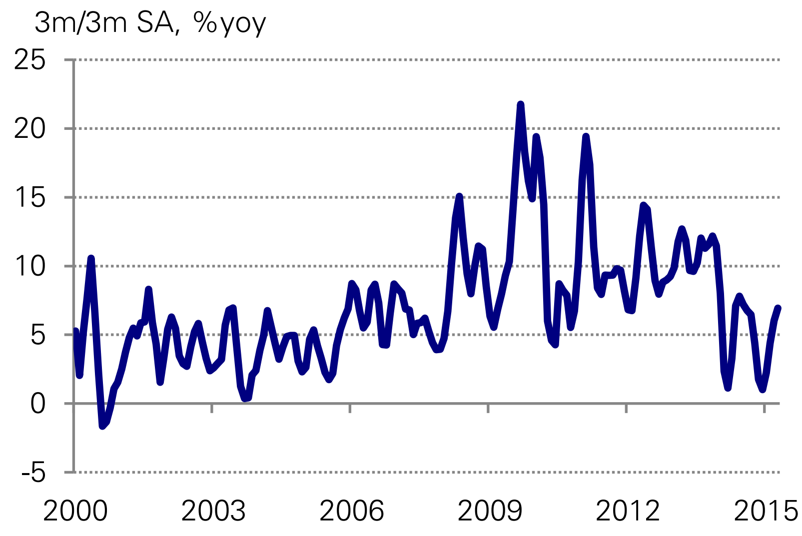
CPI inflation and inflation momentum – long term trend

CPI inflation down by 400bps in FY15 vs. FY14



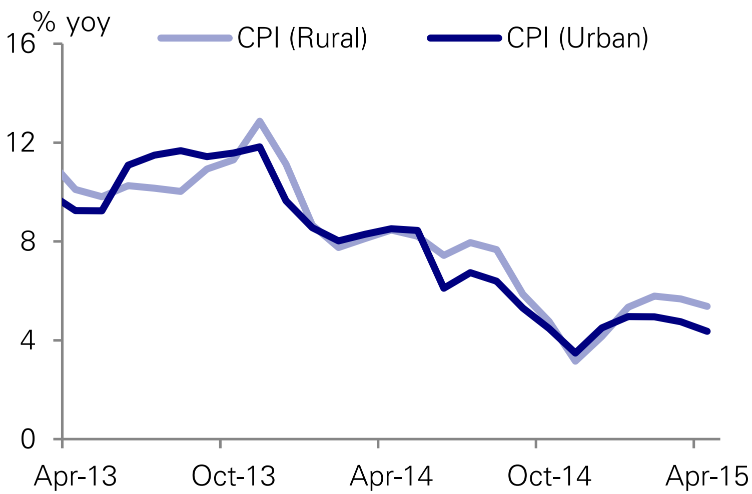
Source: CEIC, Deutsche Bank

CPI inflation momentum has also moderated compared to past

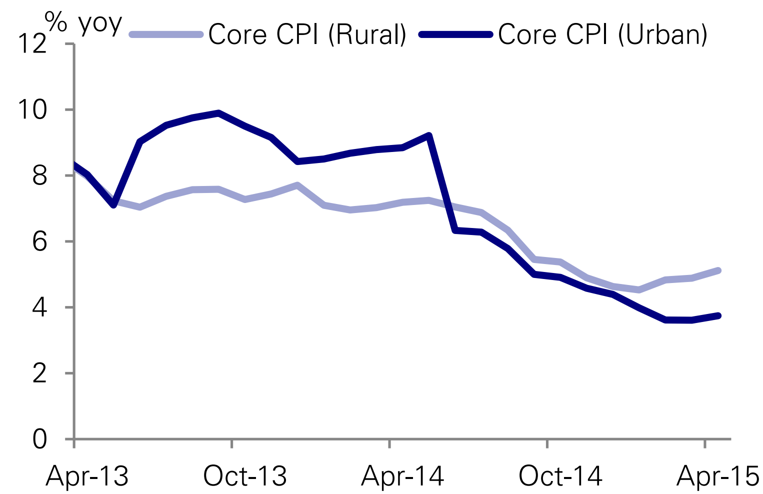


Source: CEIC, Deutsche Bank

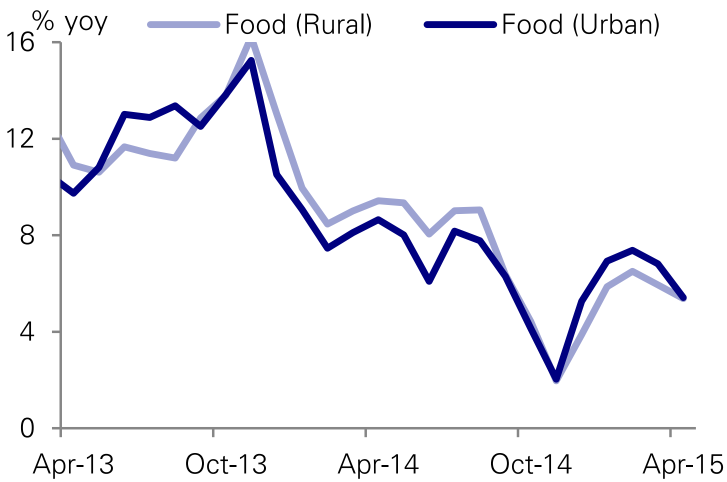
No major divergence between rural and urban CPI



Source: CEIC, Deutsche Bank

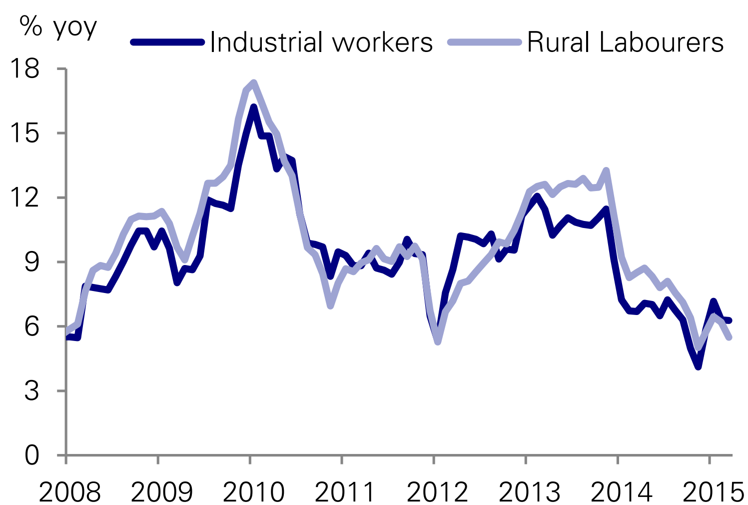


Source: CEIC, Deutsche Bank



Source: CEIC, Deutsche Bank

Old CPI also shows the same trend



Source: CEIC, Deutsche Bank

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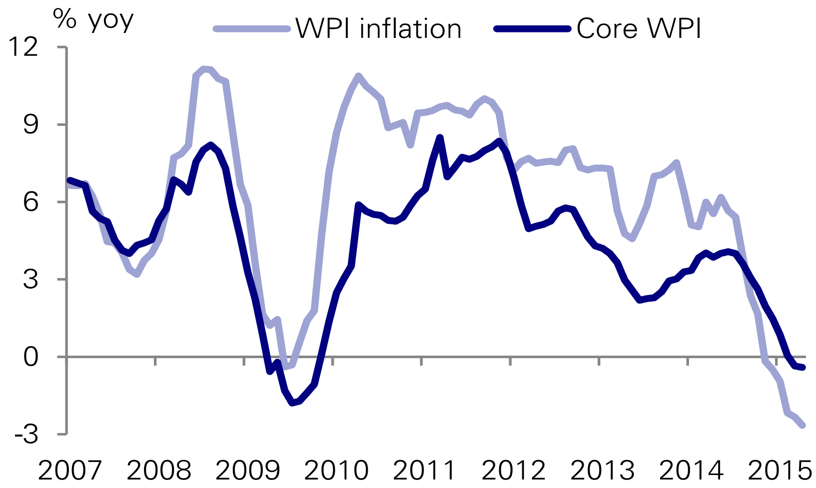
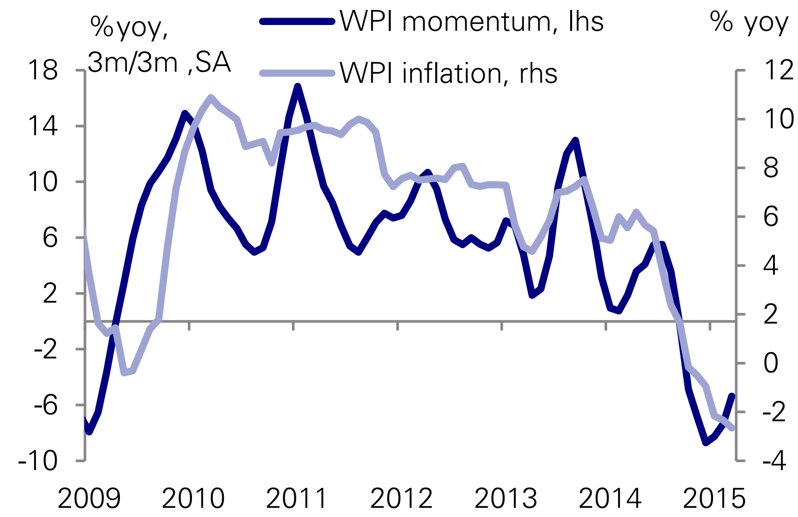
WPI and core WPI inflation has turned negative

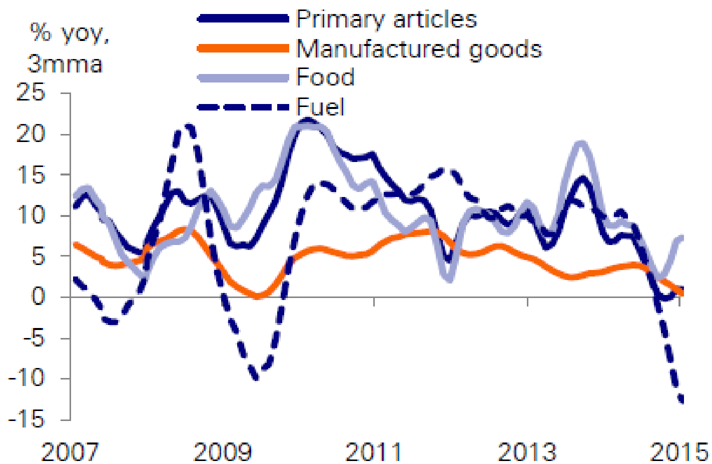


Source: CEIC, Deutsche Bank



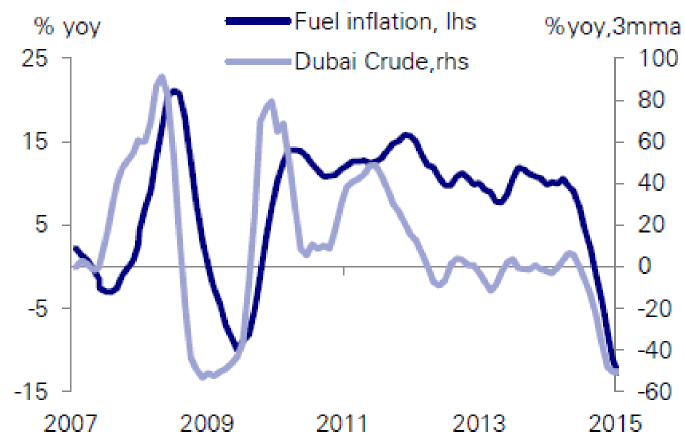
Source: CEIC, Deutsche Bank

Key components of WPI inflation



Source: CEIC, Deutsche Bank

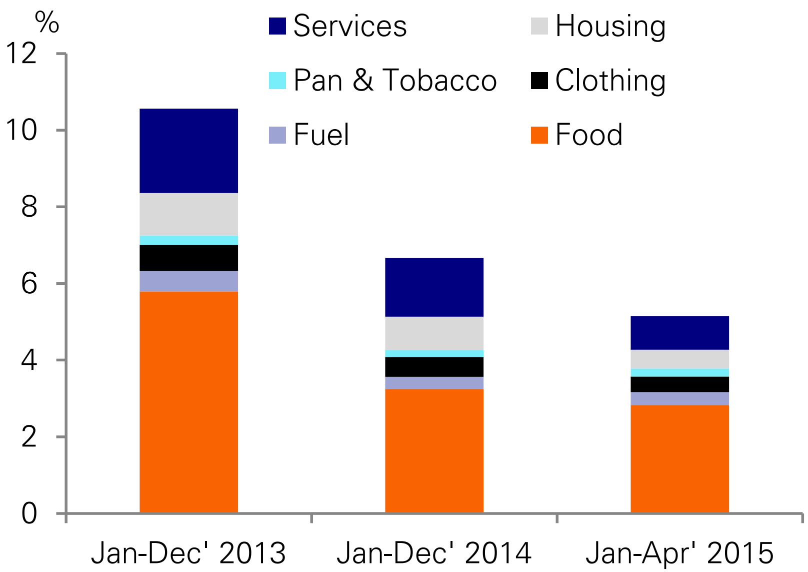
WPI fuel inflation and Dubai crude prices



Source: CEIC, Bloomberg Finance LP, Deutsche Bank

Food inflation drives CPI inflation, given almost 50% weight in the CPI basket

Contribution of components to CPI



Source: CEIC, Deutsche Bank

Factors driving food inflation

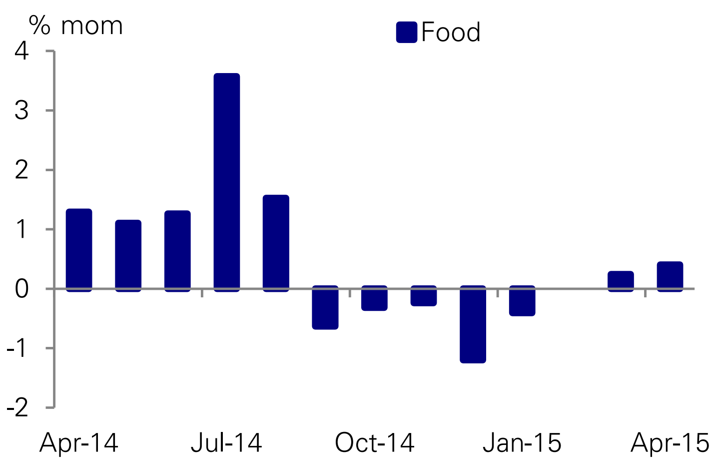
- **Demand-supply mismatch**
- **Food security act and pricing policy**
- **Evidence of hoarding**
- **Asymmetry related to monsoon rains**

% contribution to CPI	Jan-Dec' 2013	Jan-Dec' 2014	Jan-Apr' 2015
Food	5.8	3.2	2.8
Pan & Tobacco	0.2	0.2	0.2
Clothing	0.7	0.5	0.4
Housing	1.1	0.9	0.5
Fuel	0.5	0.3	0.3
Services	2.2	1.5	0.9
CPI	10.6	6.7	5.1

Source: CEIC, Deutsche Bank

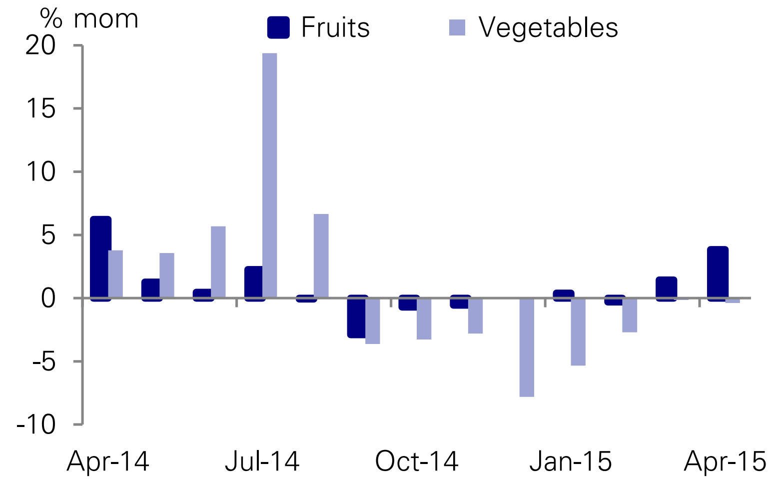
Food inflation looks to have bottomed; unseasonal rain in Feb-March likely to put pressure on food prices

Food price disinflation has ended



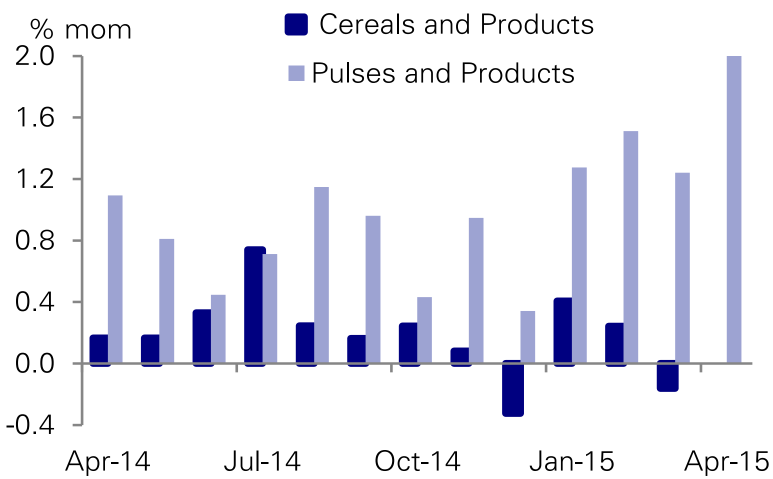
Source: CEIC, Deutsche Bank

Fruits & vegetable inflation showing divergent trend



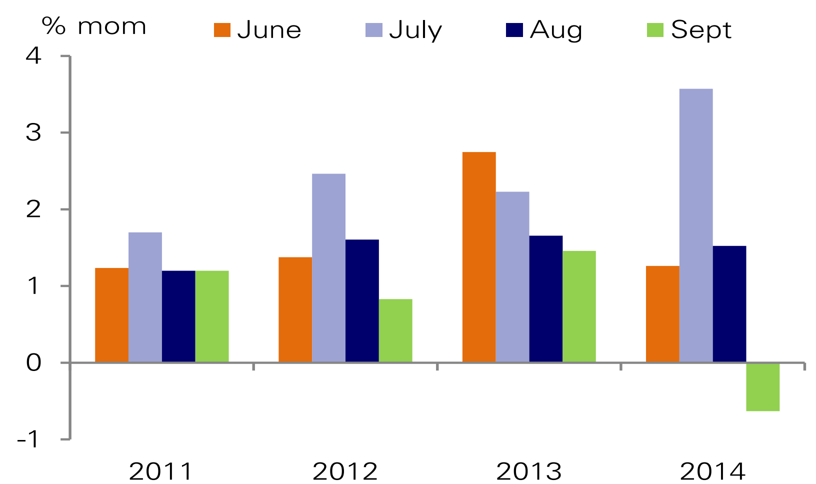
Source: CEIC, Deutsche Bank

Unseasonal rain has affected prices of pulses



Source: CEIC, Deutsche Bank

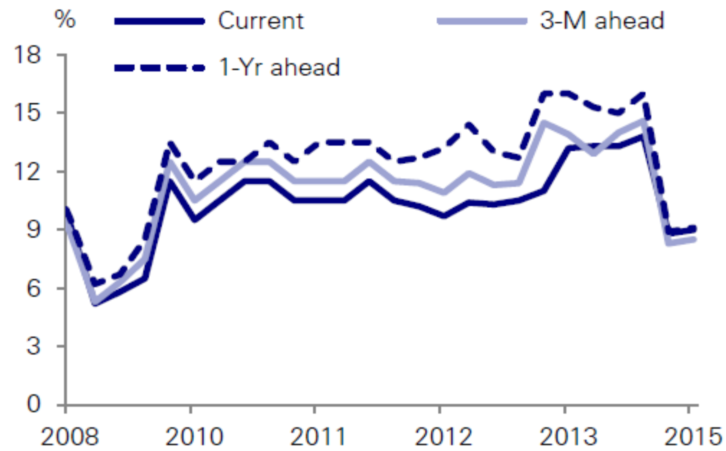
Food prices tend to firm in June-July each year, but last year's spike in July was striking



Source: CEIC, Deutsche Bank

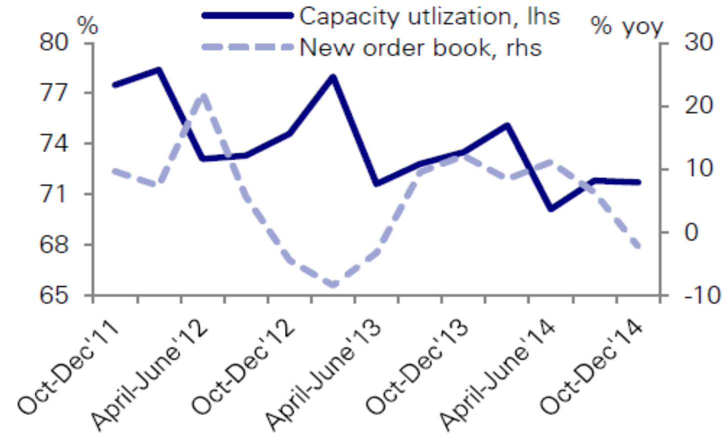
Besides the risk related to food price dynamic, underlying inflation pressure remains muted

Inflation expectations of households have moderated



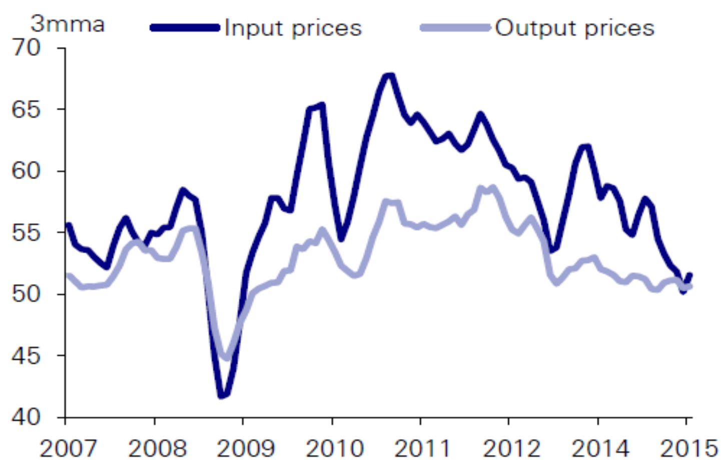
Source: RBI, Deutsche Bank

Low capacity utilization and weak order book



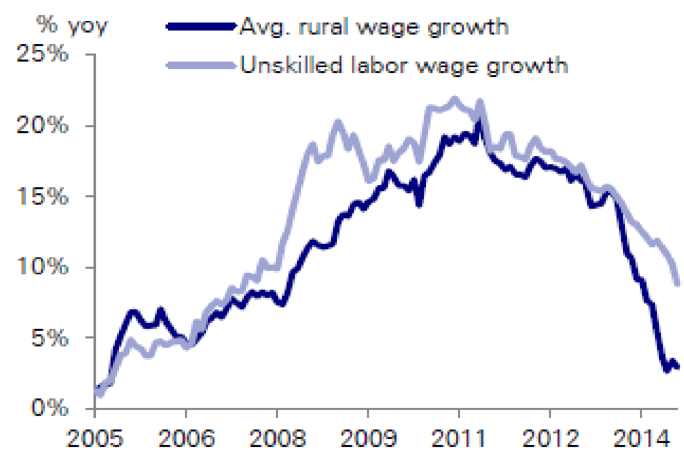
Source: RBI, Deutsche Bank

Input and output prices in the manufacturing sector



Source: RBI, Deutsche Bank

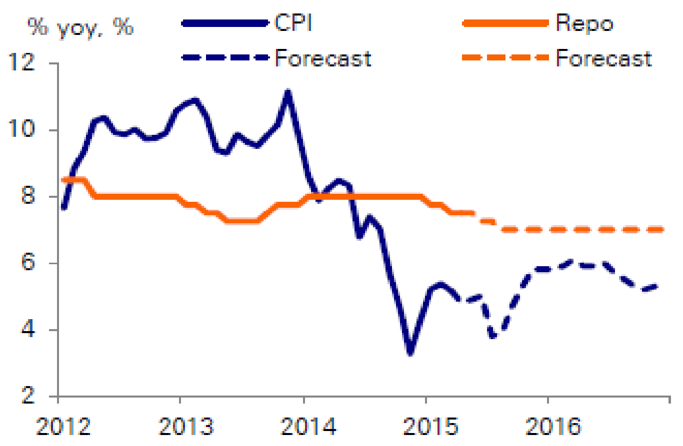
Rural wage growth has fallen sharply



Source: RBI, Deutsche Bank

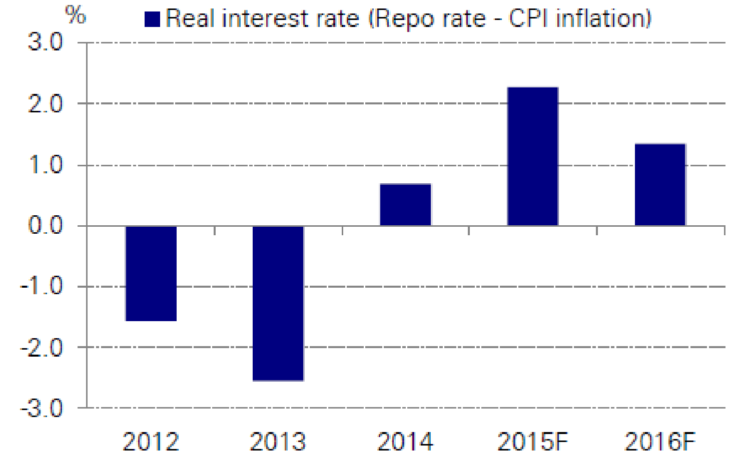
We expect CPI to average 5.5% in FY16, which leaves room for RBI to cut the repo rate by another 50bps

Based on our inflation projection, we expect another 50bps of repo rate cut by August 2015



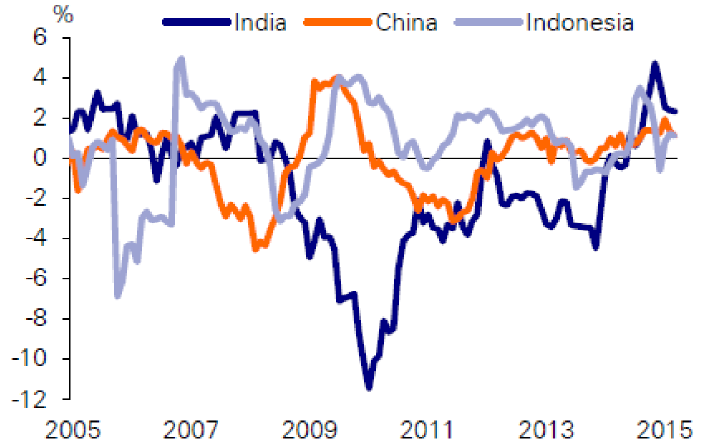
Source: CEIC, RBI, Deutsche Bank

Even with rate cuts, real interest rates are likely to be higher in 2015 and 2016 compared to the previous years



Source: CEIC, Deutsche Bank

India's real interest rate (Repo rate – CPI inflation) is currently higher than that of comparable EM peers



Source: CEIC, Deutsche Bank

Key assumptions influencing our rate cut call (25bps each in June and August)

- **We assume that administrative measures will be successful in preventing food prices from spiking excessively in the event of a poor summer monsoon, helping RBI meet its 6% Jan 2016 CPI target**
- **We assume oil prices will not rise much from current levels**
- **RBI will have to cut policy rate more to push banks into cutting lending rates; the transmission so far from policy rate to bank lending rate has been disappointing and is insufficient to boost real economic activity**
- **India's real interest rate remain higher than comparable peers at this stage, leaving room for RBI to cut rates further**

Monetary policy transmission is not smooth

*** With inflation coming down, the Reserve Bank of India has cut the policy repo rate by 50bps to 7.50% during the first quarter of the year. The yield curve has shifted down and flattened as long-term bond yields have declined substantially**

*** Some key commercial banks finally reduced their lending rates recently, in response to the 50bps repo rate cut of RBI in the 1Q'2015, but only by 15-25bps**

*** There are four key reasons why banks have been reluctant to reduce their lending rates so far: (i) peculiarities of the funding structure, (ii) uncertainty about credit quality, (iii) balance sheet concerns weighing down loan demand, and (iv) persisting liquidity tightness in specific areas of the financial system**

*** Even if monetary policy moves are transmitted with some lag, banks are unlikely to match the RBI's rate cuts. In the last easing cycle (April 2012-June 2013), a 125bps cut in the repo rate, along with a 75bps cut in the CRR rate (200bps cut if the period is extended from Jan 2012-June 2013) led to a bank-base rate reduction of just 50bps**

*** Clearly more rate cuts and liquidity support measures would be needed to nudge banks toward lower rates in the coming months**

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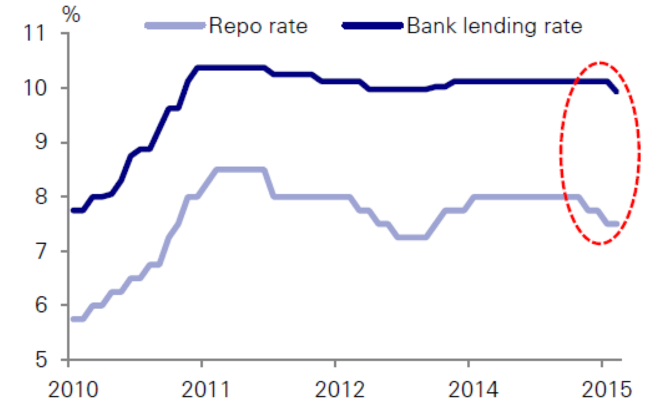
Historically, monetary policy transmission has been weak and delayed in India

Transmission evidence from past monetary policy cycles

Variation (% points)	Tightening Phase Phase I	Easing Phase Phase II	Tightening Phase Phase III	Easing Phase Phase IV*
Policy Rate (Repo Rate)	3.00	-4.25	3.75	-1.25
Cash Reserve ratio (CRR)	1.75	-0.75	-1.00@	-0.75
Call Rate	5.58	-7.19	5.66	-1.93
CBLO Rate	2.71	-4.57	5.29	-1.34
Market Repo Rate	3.37	-5.08	5.37	-1.52
3-Month CP Rate	8.19	-7.85	5.51	-3.11
3-Month CD Rate	2.02	-7.54	5.58	-2.95
5-Year Corporate Debt Yield	4.95	-3.49	0.86	-0.92
10-Year Corporate Debt Yield	6.70	-6.25	3.16	-1.11
5-Year G-Sec Yield	1.23	-0.36	0.92	-0.94
10- Year G-Sec Yield	0.72	0.07	0.44	-1.02
Modal Deposit Rate	2.38	-2.38	2.42	-0.16
Modal BPLR/Base Rate #	3.00	-2.00	2.75	-0.50

*Source: RB Bulletin: Interest rates and economic activity – Speech by Deepak Mohanty, Deutsche Bank. Note #: Base Rate since July 1, 2010. Phase I : Oct 26, 2005 to Oct 19, 2008; Phase II : Oct 20, 2008 to Mar 18, 2010; Phase III : Mar 19, 2010 to Apr 16, 2012; Phase IV : Apr 17, 2012 to Jun 30, 2013; @ CRR was cut to create the desirable liquidity conditions ahead of the repo rate cuts in Phase-IV. * Post July 15, 2013 period is not included when market interest rates responded to monetary measures aimed at addressing exchange rate volatility.*

Banks reducing lending rate in small clips and with a considerable lag



Source: CEIC, Deutsche Bank

Repo, CRR and bank base rate reduction in the last easing cycle (in bps)

Period	Repo	CRR	Bank base rate
Jan 2012-March 2012		-125	
Apr-12	-50		-13
Sep-12		-25	-13
Nov-12		-25	
Jan-13	-25		
Feb-13		-25	-15
March 2013-May 2013	-50		

Source: Deutsche Bank

Why is monetary policy transmission weak?

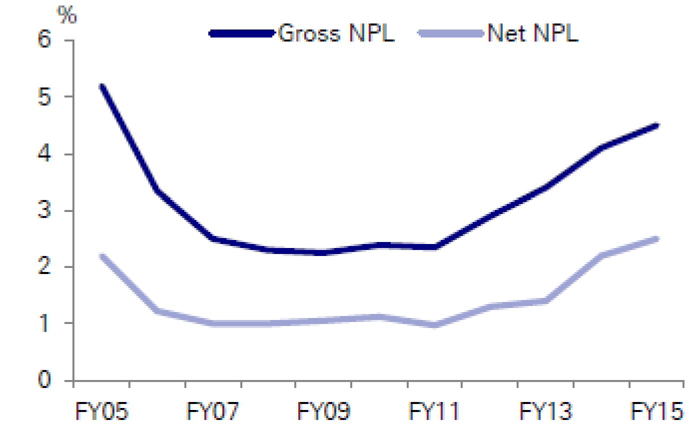
#1. Peculiarity of the funding structure: Banks find it more difficult to cut lending rates immediately following a cut in the policy rate because cost of deposits does not adjust commensurately and immediately given the fixed nature of deposit contracts. However, the banks can raise lending rates far more quickly after a policy rate hike, because loans are mostly at variable rates, and can be re-priced faster. There is a competitive constraint of reducing deposit rates as well. If bank deposit rates are reduced lower than small savings rates which are administratively fixed, there could be some deposit flight to the small savings schemes providing higher returns

#2. Reflection of risk-averse behavior: The banking system continues to be under stress due to rising non-performing loans, which along with restructured assets are estimated to be about 10% of total assets currently. Stressed loans are concentrated across five key sectors – infrastructure, iron & steel, textiles, aviation and mining – which constitute 24% of total advances and 52% of share in total stressed advances. Given this backdrop, it is natural to expect banks to be risk-averse and show reluctance in lending further to these sectors

#3. Lack of demand for credit: While the banks are not that eager to lend, the demand for credit from corporates also remain low, due to balance sheet concerns, difficulty in acquiring land for fresh green-field projects, low capacity utilization and lower working capital loan requirement, helped by falling oil prices

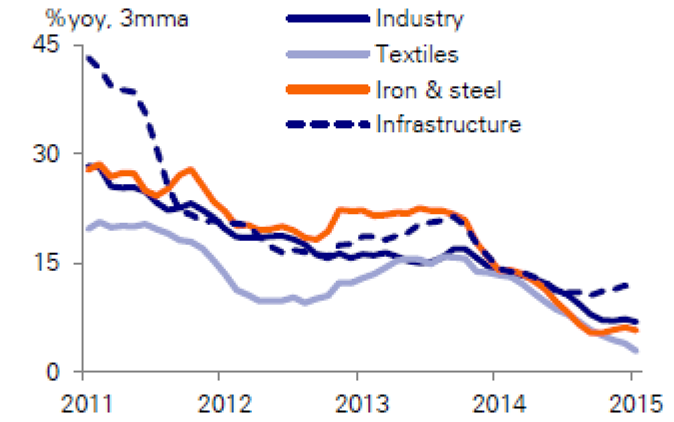
#4. RBI's liquidity management stance: Reluctance on RBI's part to cut the CRR or bring liquidity into a surplus mode, given uncertainty over inflation and fiscal outlook

Gross and net NPL* of the banking system – has steadily deteriorated in the last few years



Source: RBI, Deutsche Bank. Note: * does not include re-structured assets.

Iron & steel, textiles, infrastructure – weak credit growth



Source: RBI, Deutsche Bank

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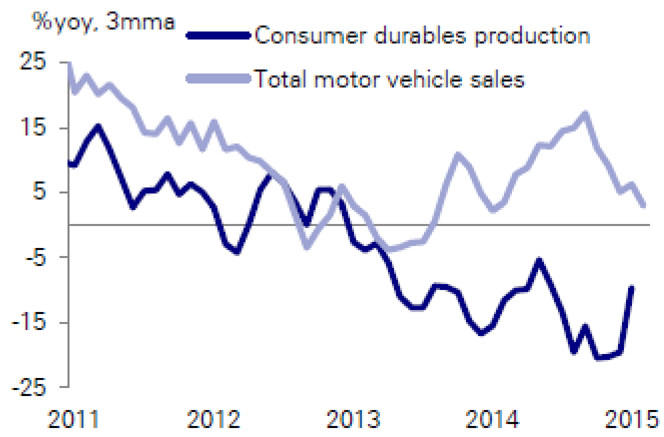
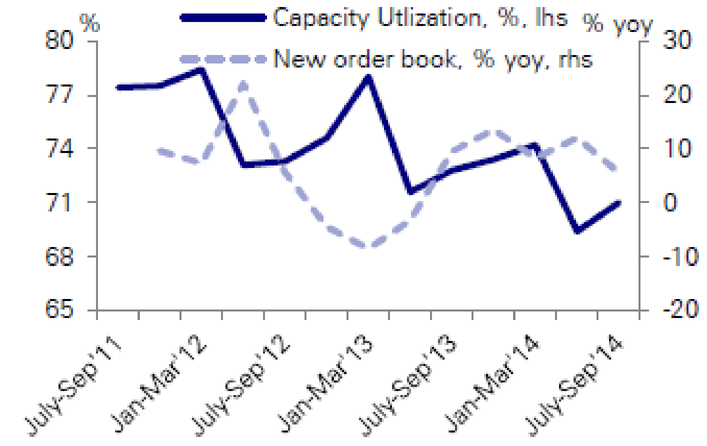
A positive demand shock is needed for the banking sector to get more proactive; RBI also needs to cut more

Consumer durables growth has collapsed; motor vehicle sales remain weak



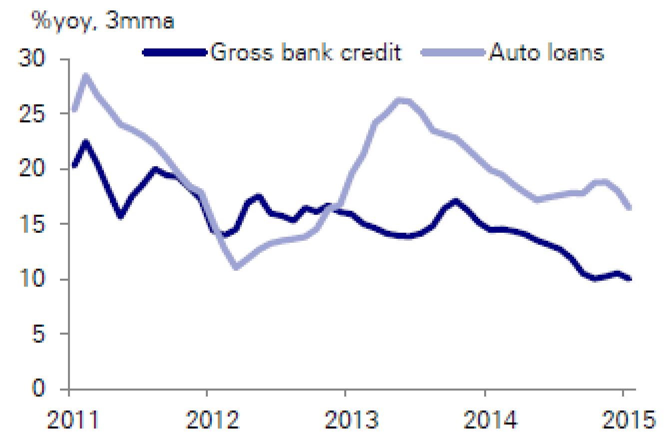
Source: RBI, Deutsche Bank

Capacity utilization remains low



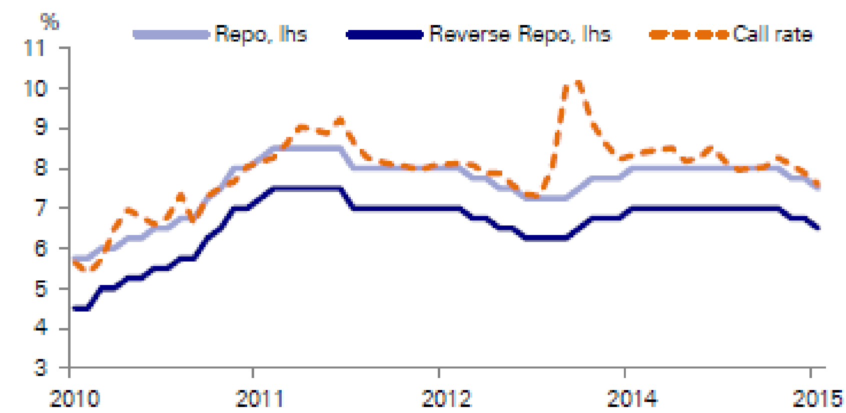
Source: RBI, Deutsche Bank

Bank credit and vehicle loans growth continue to decelerate, reflecting weak demand



Source: RBI, Deutsche Bank

RBI's stated objective is to keep the overnight call rate close to the policy repo rate; liquidity operations are conducted accordingly to achieve this objective



Source: CEIC, RBI, Deutsche Bank

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Monetary policy, direction, effectiveness, transmission

Inflation, rainfall, supply side reforms

Exchange rate, competitiveness, reserves

Demographics

Urbanization

Monsoon risk and policy response

* According to the Indian Meteorological Department, the probability of a poor monsoon is higher this year compared to last year, which ultimately turned out to be a drought year, with cumulative rainfall falling more than 10% in the June-Sep 2014 period

* In the event of a repeat poor monsoon outturn this year, agricultural sector growth will likely suffer, but not as much as in the previous decades, when bad monsoon evidently resulted in sharp decline in agricultural production

* This is due to i) reduced dependency of agriculture on monsoon rains with improvement in irrigation facilities; ii) fall in share of monsoon dependent Kharif crop; and iii) reduced dependence of rural households on core farming activities as their primary source of income

* A poor agricultural sector growth outturn is unlikely to have any material impact on overall GDP growth, given that agricultural sector now contributes less than 15% to total GDP

* Weak rainfall does not have to imply poor inflation outlook as well. If policy response through administrative measures is swift and effective, food price inflation could be kept in check, as was the case during the drought years of 2002 and 2004

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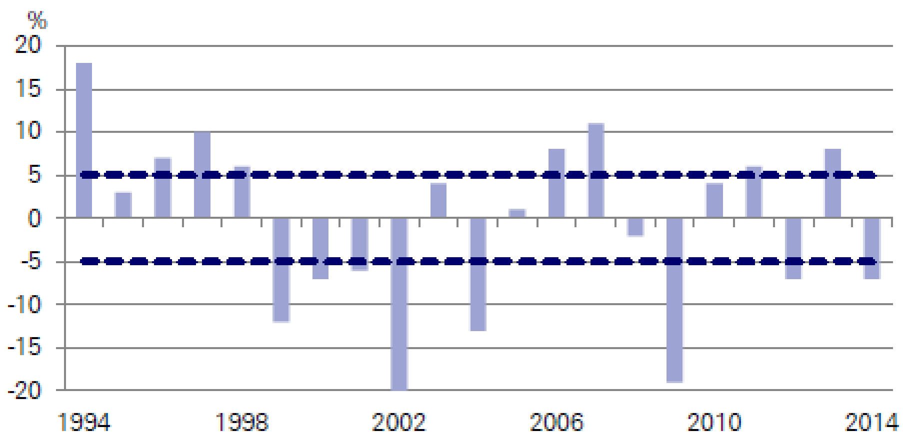
IMD's track record and El Nino's correlation with poor monsoon in India

IMD's forecast for the southwest monsoon (June-September): 2015 vs. 2014

Category	Rainfall Range (% of long period average)	Forecast Probability (%) for 2014	Forecast Probability (%) for 2015
Deficient	< 90	23	33
Below Normal	90 - 96	33	35
Normal	96 -104	35	28
Above Normal	104 -110	8	3
Excess	> 110	1	1

Source: IMD, Deutsche Bank. Note: The long period average of the season rainfall over the whole country for the period 1951-2000 is 89 cm.

Difference between IMD's provisional forecast and actual rainfall outcome



Source: IMD, Deutsche Bank

El Nino years vs. Indian monsoon and agricultural sector performance

	EL Nino years	Intensity of El Nino	Indian rainfall deviation from LPA	Agriculture GDP growth, %yoy
1	1951	moderate	-18.7	1.9
2	1952	weak	-8.2	3.1
3	1953	weak	9.8	7.5
4	1957	strong	-2.4	-4.1
5	1958	weak	9.8	9.8
6	1963	moderate	-2.1	2.4
7	1965	strong	-18.2	-9.9
8	1968	moderate	-10.3	0.0
9	1969	weak	0.2	6.3
10	1972	strong	-23.9	-4.4
11	1976	weak	2.5	-5.2
12	1977	weak	4.0	9.6
13	1982	strong	-14.5	0.6
14	1986	moderate	-12.7	0.6
15	1987	moderate	-19.4	-1.1
16	1991	moderate	-9.3	-1.4
17	1994	moderate	-0.9	5.2
18	1997	strong	2.2	-1.3
19	2002	moderate	-19.2	-4.9
20	2004	weak	-13.8	1.1
21	2006	weak	-0.4	4.6
22	2009	moderate	-21.8	1.0
23	2014	weak	-12.0	1.1

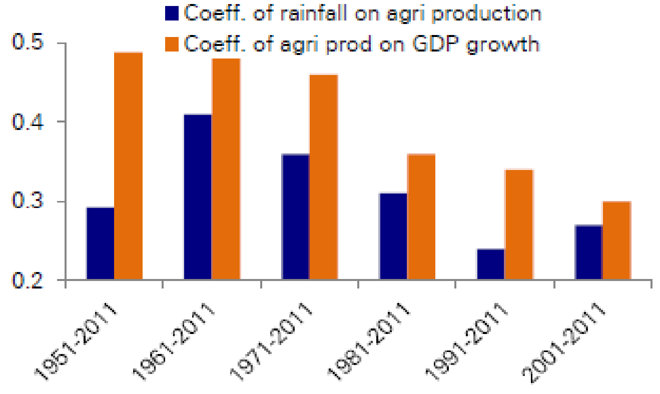
Source: Deutsche Bank. Note: A drought in India is defined as cumulative rainfall during June-September being 10% lower than the long period average (LPA). The long period average of the season rainfall over the whole country for the period 1951-2000 is 89 cm.

➢ **While IMD's forecast record has improved since 2010, the big misses have been more when actual rainfall has been deficient, rather than being excess. The forecast misses for the years 2002, 2004 and 2009 - which were characterized by severe drought - are particularly striking**

➢ **Historically, El Nino conditions have generally led to poor monsoon outcome in India, though not necessarily resulting in outright droughts (drought is defined as cumulative rainfall during June-Sept being 10% lower than the long period average)**

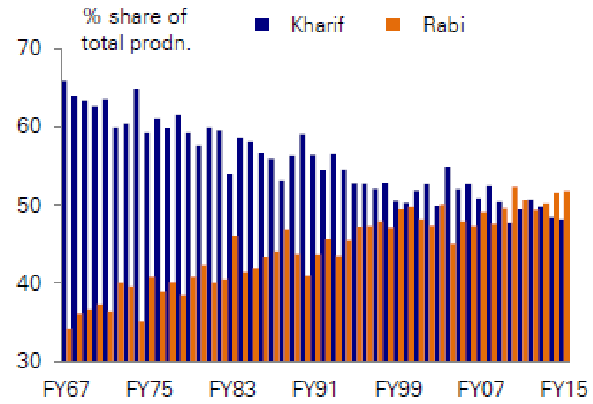
Monsoon's dependence on agriculture has reduced appreciably

Dependence of agricultural production on summer monsoon has reduced significantly



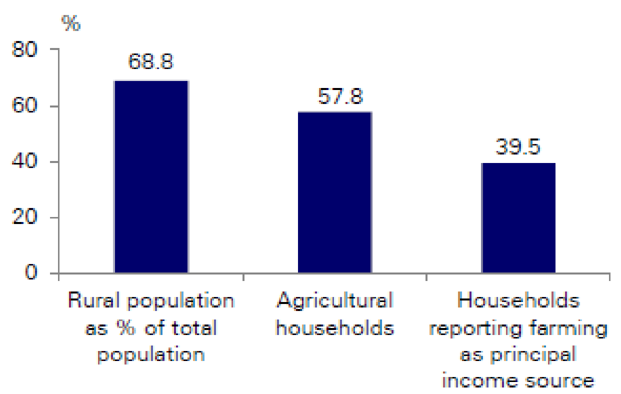
Source: IMD, CEIC, Deutsche Bank. Coefficient estimates of two regressions. First regresses agriculture production growth on rainfall deviation from long period average (LPA) during the periods specified. Second regresses overall real GDP growth on agriculture production growth.

Monsoon dependent Kharif crop's share in total production has fallen sharply over the decades, with a concomitant rise in the share of Rabi crop



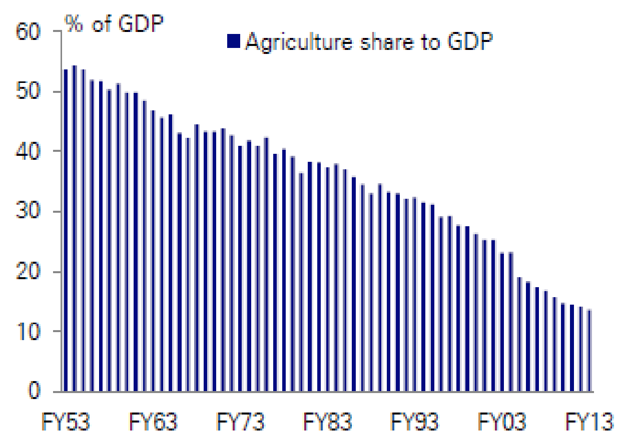
Source: CEIC,, Deutsche Bank

Out of 69% rural population and 58% of households engaged in agricultural activities, only 40% depend on farming as their principal source of income



Source: Census 2011, Situational Assessment Survey 2013, NCAER Report: Transformation in Indian agriculture, allied sectors and rural India, Dr. Anil K. Sharma, Deutsche Bank

Agriculture sector's contribution to overall GDP has fallen appreciably over the last several decades



Source: CEIC, Deutsche Bank

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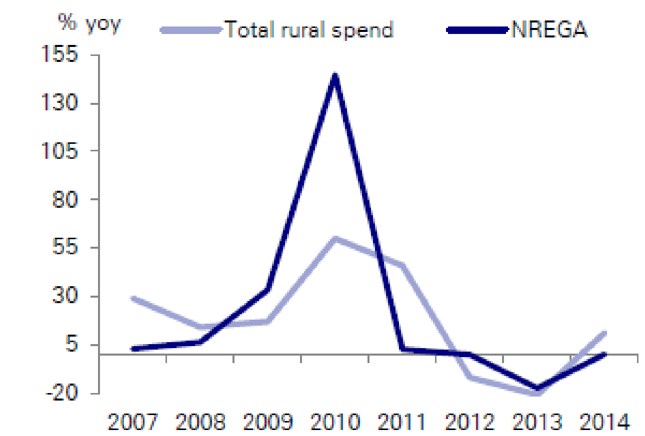
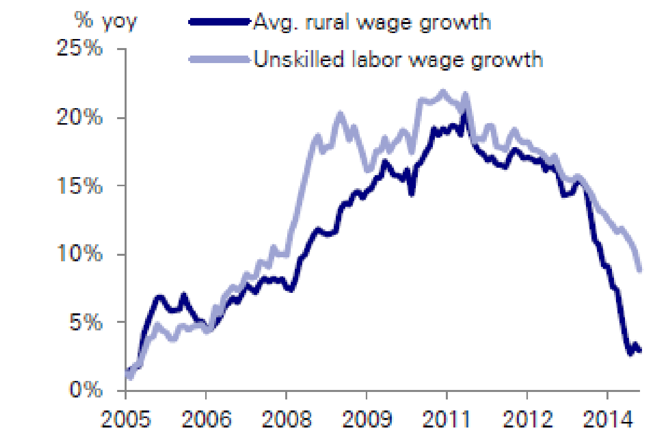
Rural consumption likely to slow down further

Govt's allocation on rural spending has moderated



Source: Various government budgets, Deutsche Bank

Rural wage growth has fallen sharply



Source: RBI, Deutsche Bank

State-wise data of area affected by recent unseasonal rains and hailstorms

	States	Area affected by unseasonal rainfall (mn hectares)	Region	State wise key crops grown and their share in total production
1	Gujarat	0.18	Central	Oilseeds (21%), cotton (30%), onion
2	Madhya Pradesh	0.57	Central	Pulses (26%), oilseeds (20%), wheat (15%)
3	Maharashtra	0.99	Central	Pulses (16%), sugarcane (22%), coarse cereals (15%), cotton (23%), oilseeds(16%), onion
4	Rajasthan	3.06	North West	Oilseeds (19%), wheat (9%), coarse cereals (15%), pulses (13%)
5	Haryana	2.22	North West	Wheat (12 %), rice (4%), cotton (7%)
6	Punjab	0.29	North West	Wheat (18%), rice (11%), cotton (6%)
7	Uttar Pradesh	9.52	North West	Wheat (32%), rice (14%), pulses (10%), sugarcane (39%), potato
8	Bihar	1.46	East/North East	Raw jute & mesta (17%), wheat (5%), potato
9	Andhra Pradesh	0.01	South	Rice (12%), cotton (20%), coarse cereals (13%)
10	West Bengal	0.13	East/North East	Rice (14%), raw jute & mesta (75%), potato
	Total	18.98		

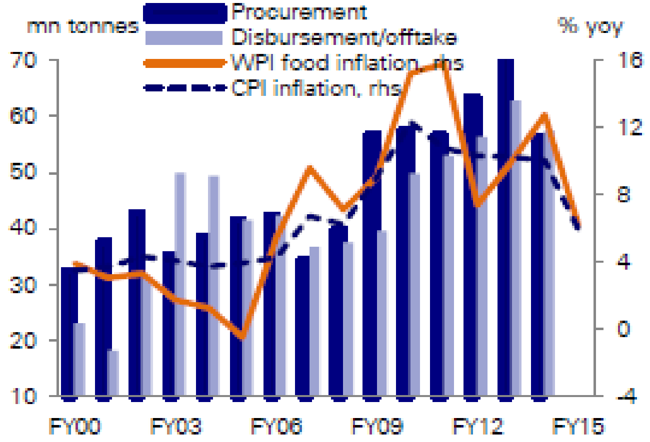
Source: Ministry of Agriculture, RBI, Deutsche Bank. Note: Data is based on information provided by state governments as on 24th April 2015

- **Episodes of two back to back drought years have been rare in India. With rural India already being affected from last year's drought and recent unseasonal rainfall, a likely poor summer monsoon this year will compound the problem further**

- **The fact that the government has not increased the budgetary allocation on rural spending meaningfully in recent years and rural wage growth is falling will likely slow down rural consumption further**

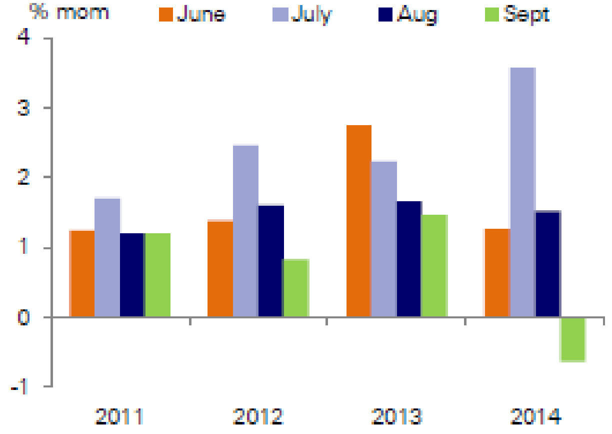
Effective policy response can prevent food price shock

A poor monsoon need not push up food inflation, if government responds swiftly (as was in 2002, 2004)



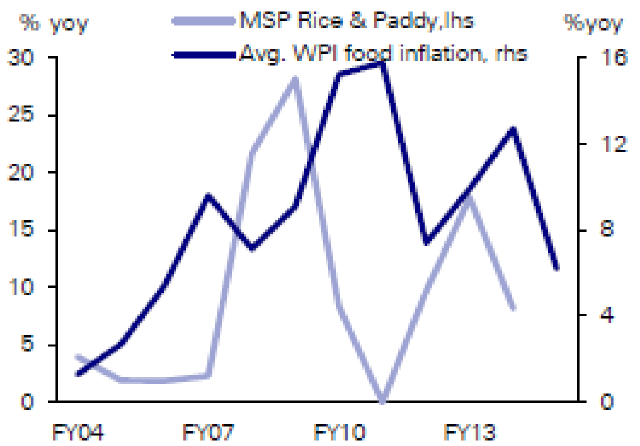
Source: CEIC, Ministry of Agriculture, Deutsche Bank.

Food prices typically tend to be high in July, but the spike in 2014 (a drought year) was striking



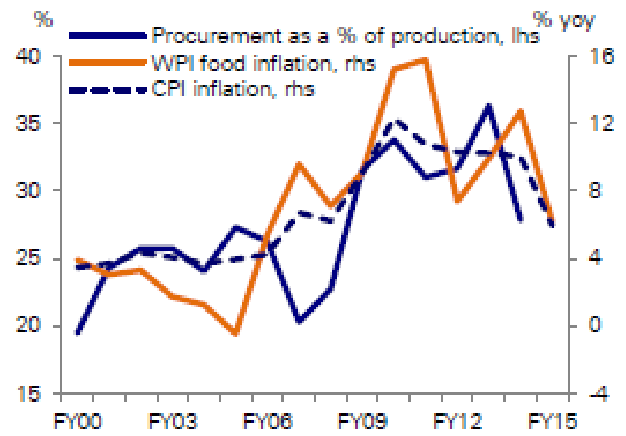
Source: CEIC, Deutsche Bank.

It is critical for the government to ensure that the rise in minimum support prices remain reasonable



Source: Ministry of Agriculture, CEIC, Deutsche Bank.

The government's procurement and pricing policy likely to have a direct bearing on food inflation



Source: Ministry of Agriculture, CEIC, Deutsche Bank.

➢ **There is no easy way to tell whether the authorities will be successful in keeping the lid on food prices (as it requires successful coordination between the central and various state governments), but if the administrative measures work, it will help reduce India's vulnerability to future food price shock appreciably and make the Reserve Bank of India's task of keeping CPI inflation in the 4-5% range a lot easier**

Administrative measures that have been put in place since last year

Recent steps taken by the Government to improve the availability and to contain prices of essential food items:

- States have been advised to allow free movement of fruits and vegetables by delisting them from the APMC Act.

- A Price Stabilization Fund (PSF) with a corpus of INR5bn has been approved for implementation aimed at regulating price volatility of agricultural and horticultural commodities both when there is price rise or vice-versa through procurement of farm produce, maintenance of buffer stocks and regulated release into the market.

- States have been advised to exempt levy of market fee on fruits and vegetables and to allow establishment of "Kisan Mandis"/ Farmers markets where producers and Farmer Producer Organizations (FPOs) can directly market their produce to wholesalers, organized retailers and ordinary consumers. Such alternative marketing channels promoted to reduce intermediaries and to contain marketing costs, are intended to benefit both farmers and consumers.

- Government is also encouraging production of horticultural crops through a centrally sponsored scheme, namely Mission for integrated Development of Horticulture starting in FY14/15.

- Authorized States/UTs to impose stock limits in respect of onion and potato for a period of one year with effect from 3rd July, 2014 under the Essential Commodities Act.

- Government has approved the release of additional five million tonnes of Rice to BPL & APL families in states pending implementation of National Food Security Act (NFSA).

- Advisory to State Governments issued to take action against hoarding & black marketing and effectively enforce the Essential Commodities Act, 1955 & the Prevention of Black-marketing and Maintenance of Supplies of Essential Commodities Act, 1980.

- Authorized States/UTs to impose stock limits from time to time in the case of select essential commodities such as pulses, edible oil, and edible oilseeds.

- Based on interaction with the State Governments/UTs on 4th July, 2014, a decision has been taken to amend the Essential Commodities Act to make hoarding and black marketing a grave offence and increase the period of detention to one year from existing six months.

- The Government has approved for the current year i.e. 2014-15 Open Market Sale of 10mn tons of wheat in the domestic market.

Source: Press Information Bureau of India, Deutsche Bank

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Exchange rate, competitiveness, reserves

Demographics

Urbanization

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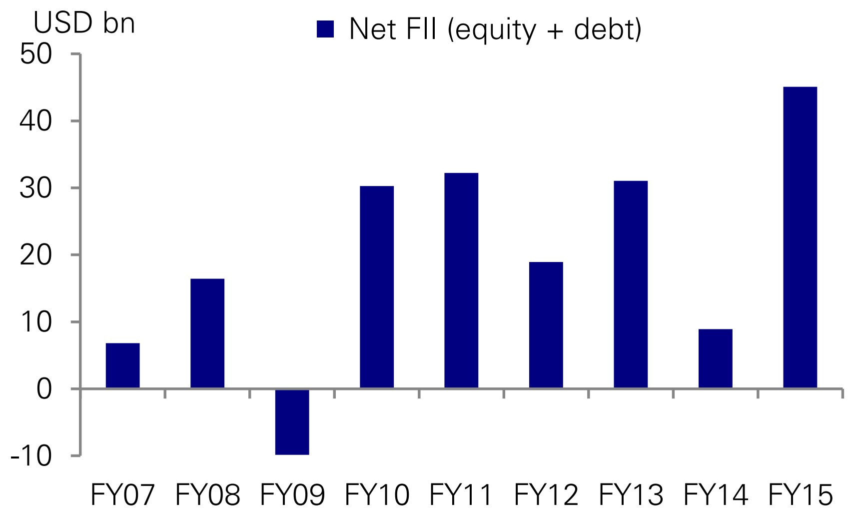
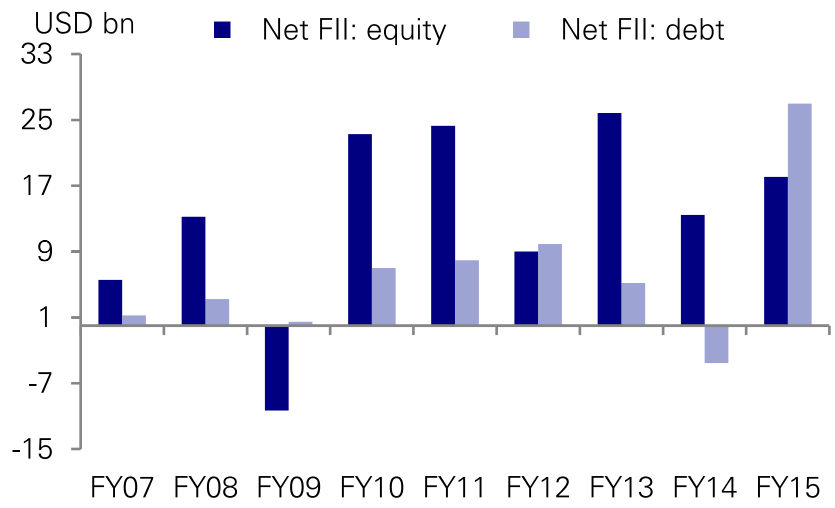
Capital inflows have surged in the last 12 months

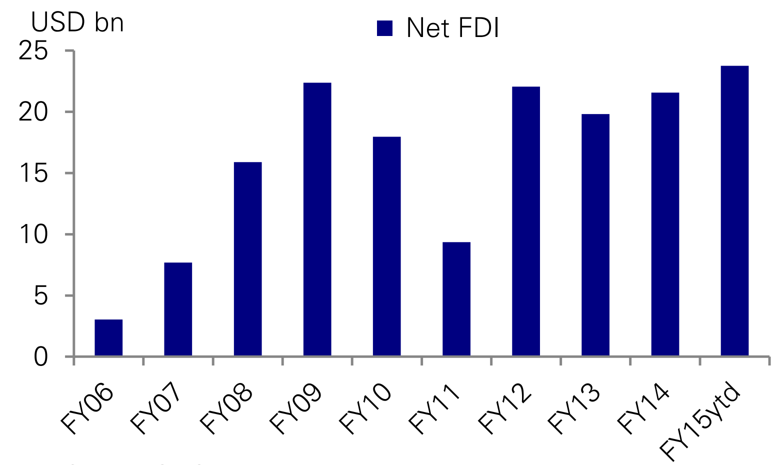


Source: CEIC, Deutsche Bank



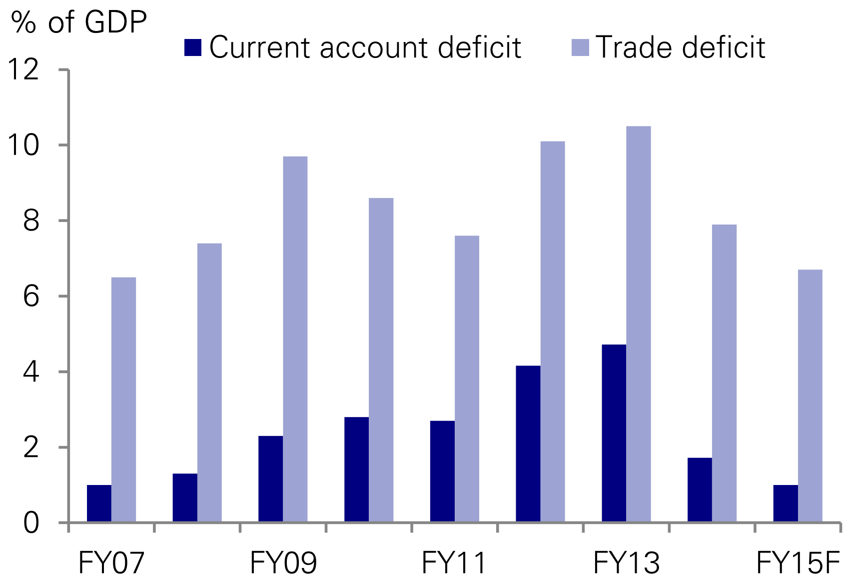
Source: CEIC, Deutsche Bank

- **Net FII inflows were USD46bn in FY15 vs. USD9bn in FY14**
- **Debt inflows were higher than that of equities in FY15 (USD27bn vs. USD18bn)**
- **Net FDI flows in the first nine months of 2014 (April-Dec) have surpassed total annual net inflows in the previous years**

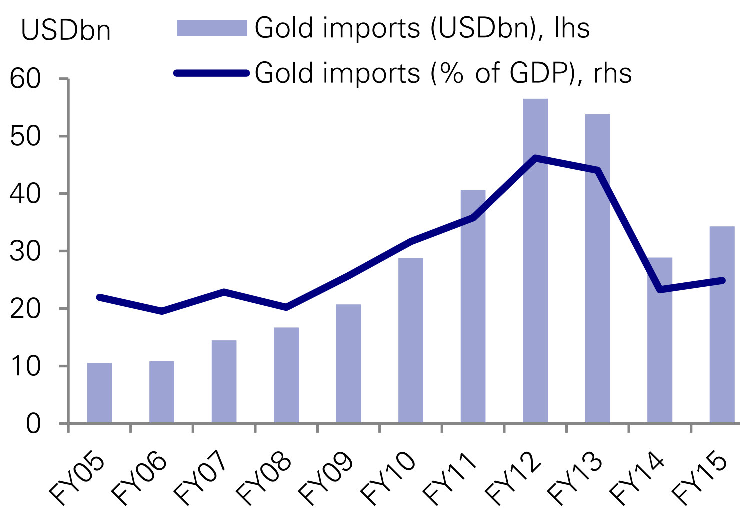


Source: CEIC, Deutsche Bank. Note: Year to date is April-Dec'2014

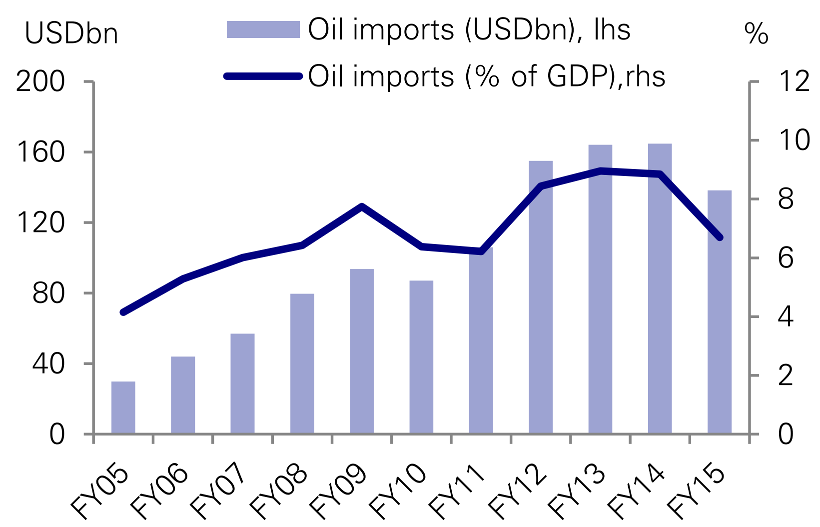
Current account and trade deficits have narrowed sharply, helped by lower oil and muted gold imports



Source: CEIC, Deutsche Bank



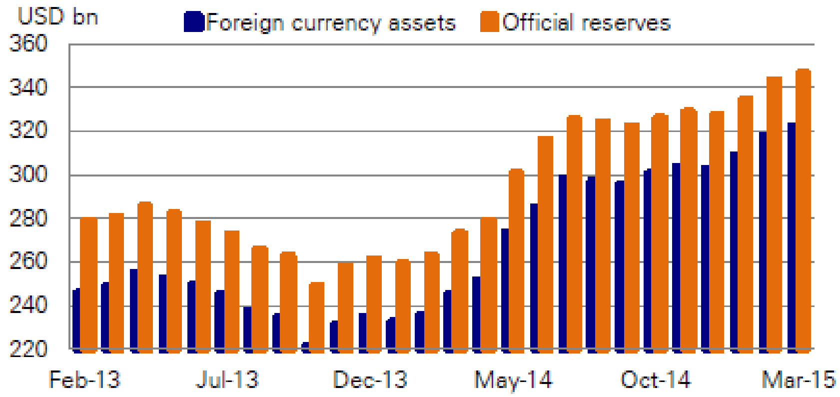
Source: CEIC, Deutsche Bank



Source: CEIC, Deutsche Bank

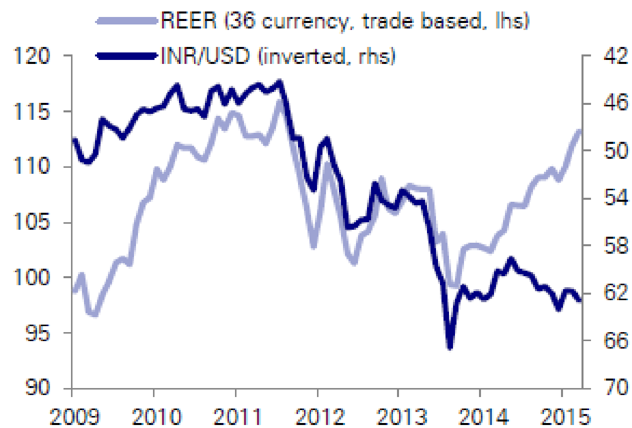
FX reserves have increased by USD100bn; rupee has appreciated in real terms

Foreign currency assets have risen by USD100bn since Oct 2013



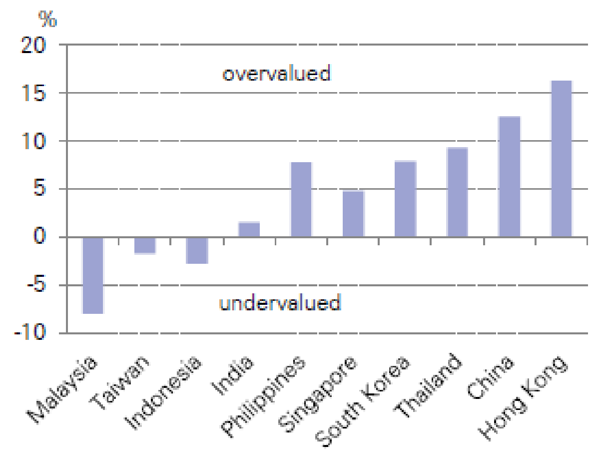
Source: CEIC, RBI, Deutsche Bank. Note: Reserves data have been adjusted for forwards liability

Rupee overvalued in real terms (RBI REER)



Source: RBI, CEIC, Deutsche Bank

Deutsche Bank behavioral equilibrium exchange rate (BEER) model – FX misalignment by country



Source: RBI, CEIC, Deutsche Bank.

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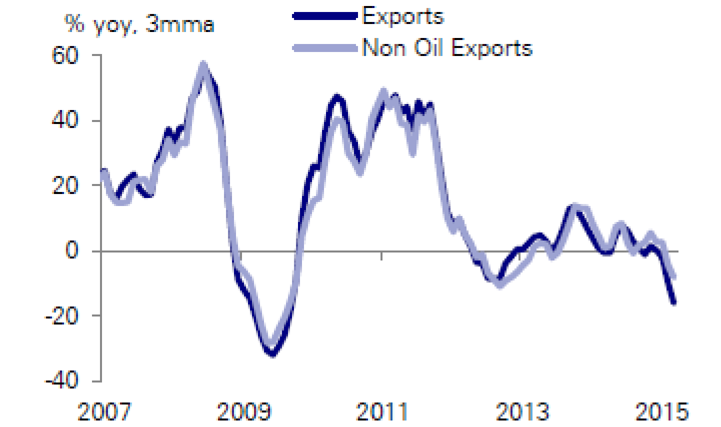
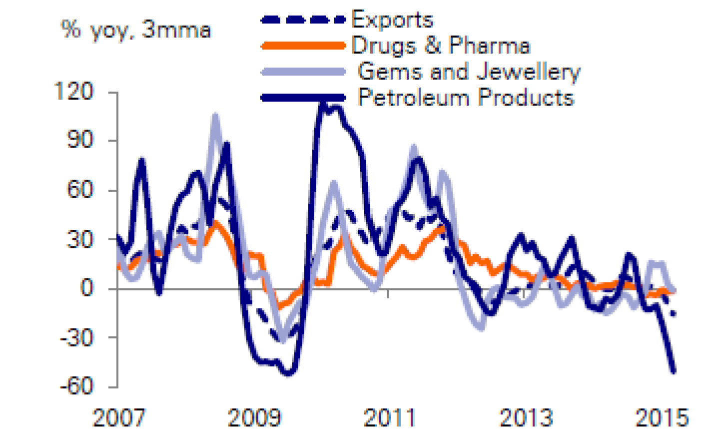
Exports have been exceptionally weak in Jan-March'15

Broad based slowdown in exports momentum



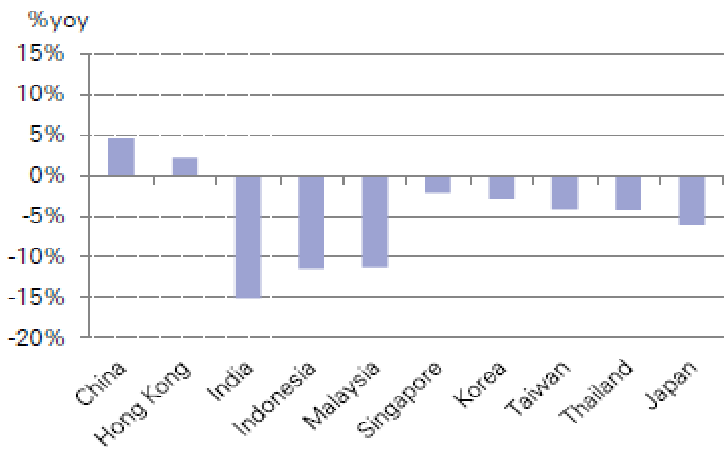
Source: CEIC, Deutsche Bank

Key components of exports



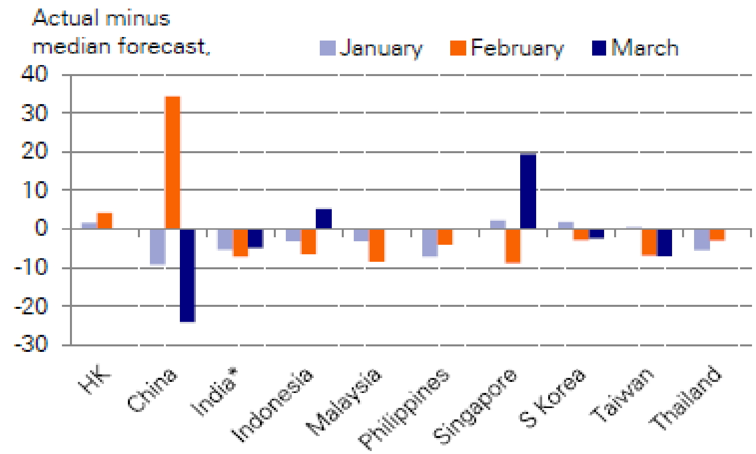
Source: CEIC, Deutsche Bank

A poor first quarter for exports regardless of commodities or manufacturing-oriented economies



Source: CEIC, Deutsche Bank. Jan-March exports yoy

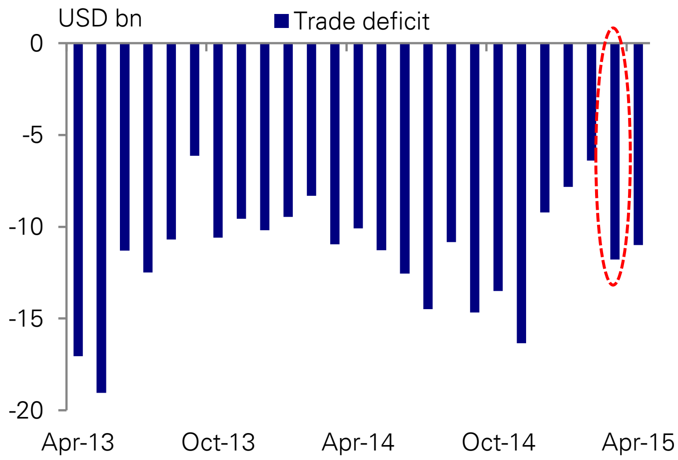
Negative exports surprise



Source: CEIC, RBI, Deutsche Bank. Exports growth is for Jan-March 2015, except for Hong Kong, Malaysia, Philippines and Thailand where trade data is only available till February 2015. Note: * For India, the figures are actual – DB forecast

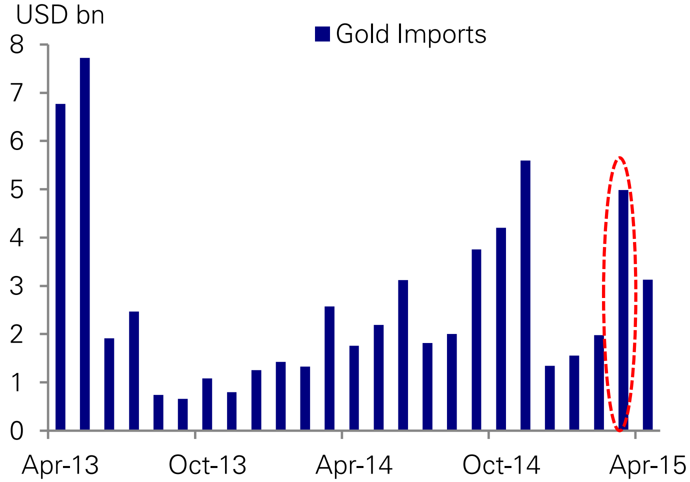
Sharp decline in exports and a spike in gold imports have led to a widening of trade deficit in March'15

Trade deficit widened by USD5bn in March from Feb…



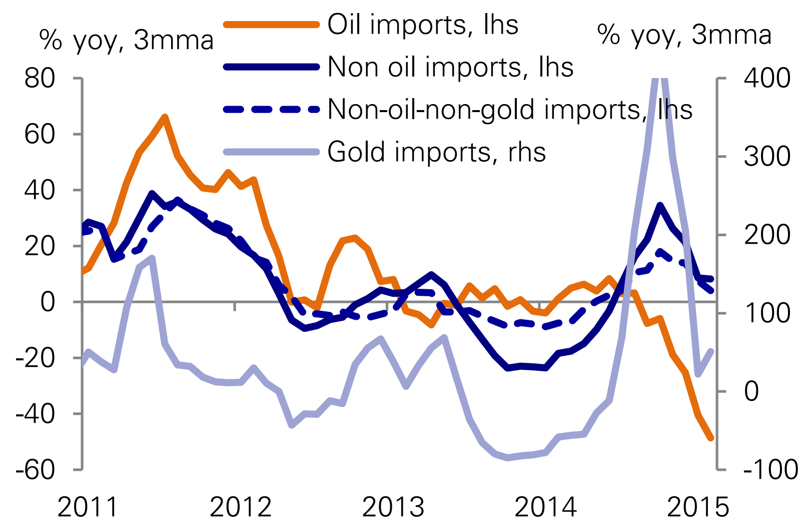
Source: CEIC, Deutsche Bank

…mainly due to a sharp spike in gold imports



Source: CEIC, Deutsche Bank

Barring gold, imports momentum remain weak



Source: CEIC, Deutsche Bank

Despite recent pick up in trade deficit, we expect current account deficit to be only 1.2% of GDP in FY16

Balance of Payments

USD bn	FY12/13	FY13/14	FY14/15F	FY15/16F	FY16/17F
Exports	306.6	318.6	333.0	341.3	369.5
Imports	502.2	466.2	471.0	494.4	544.1
Trade account	-195.7	-147.6	-138.1	-153.1	-174.6
% of GDP	-10.5	-7.9	-6.7	-6.8	-7.0
Invisibles, net	107.5	115.3	118.1	127.6	137.9
% of GDP	5.8	6.1	5.7	5.7	5.5
Current account	-88.2	-32.4	-20.0	-25.6	-36.7
% of GDP	-4.7	-1.7	-1.0	-1.2	-1.5
Capital account	89.3	48.7	70.7	70.3	70.1
% of GDP	4.8	2.6	3.4	3.1	2.8
Overall BOP	3.8	15.5	46.4	44.8	33.4

Source: RBI, CEIC, Deutsche Bank forecasts

- **We forecast current account deficit to be 1.2% of GDP in FY16, vs. 1.0% of GDP in FY15. This is better than RBI's sustainable level of current account deficit estimate (2.0-2.5% of GDP)**

- **We forecast INR/USD to be at 64 and 65 by end-Dec 2015 and end-Dec 2016 respectively. BOP is favorable for rupee but Fed liftoff related financial market volatility and the RBI's need to stem rupee overvaluation (in real terms) and strengthen reserve adequacy would likely lead to a slight nominal depreciation of the rupee going forward**

- **We expect FX reserves to go up by another USD100bn in the next 18-24 months**

Why FX accumulation needs to continue

* India's external position has improved significantly in the past two years, with gross official reserves rising to USD352bn as of end April 2015. This is a far cry from mid 2013, when reserves were declining and the currency was under considerable depreciation pressure

* Since then, through swap measures and direct intervention, RBI's foreign currency assets (excluding gold, IMF deposits, SDR and adjusted for forwards liability) have risen by over USD100bn

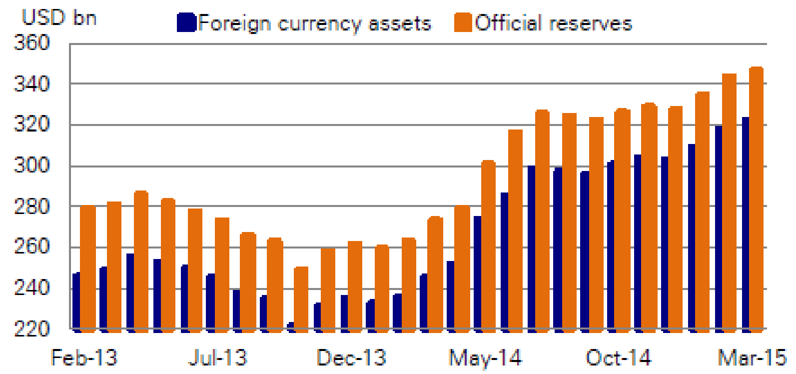
* India's import cover has improved to 9 months currently (from about 7 months in FY13), but the position is not as strong as it used to be 5 years ago. A higher level of insurance may well be necessary given the rapid build-up in external liabilities and heightened global risks of sudden stop in capital flows as Fed policy liftoff looms

* Competitiveness concerns and risk of a resurgence in gold and other consumer goods imports should continue to motivate RBI's policy of stemming currency appreciation (through intervention and reserves accumulation)

* Based on our projection of imports, gross official reserves would need to go up to about USD450bn by 2016 to maintain an import cover of 10 months. This implies scope for the Reserve Bank of India to increase reserves by another USD100bn in the next 18-24 months

Reserves are up by USD100bn in 18 months

Foreign currency assets have risen by USD100bn since Oct 2013



Source: CEIC, RBI, Deutsche Bank. Note: Reserves data have been adjusted for forwards liability

➢ **As per our estimate, India's foreign currency assets (excluding gold, IMF deposits, SDR and adjusted for forwards liability) have increased by USD100bn from the trough**

➢ **The appreciable increase in gross official reserves have been driven by i) large FCNR (B) flows, a swap scheme which was operationalized to stem the currency crisis in the third quarter of 2013; ii) persistent and aggressive FX intervention strategy of the RBI to prevent rupee from appreciating sharply; iii) valuation gains and iv) overall improvement in the Balance of Payments dynamic, led by a sharp improvement in the current account deficit profile**

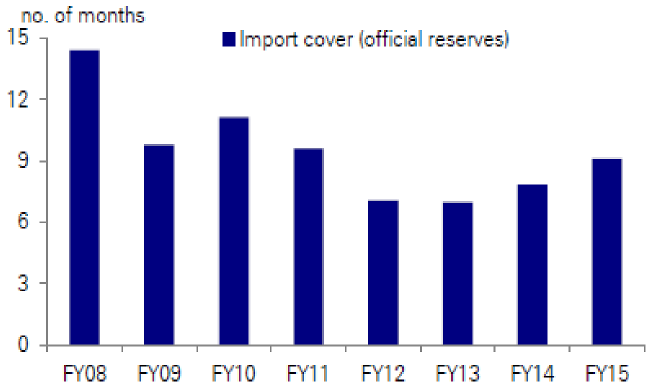
Gross Official Reserves, FX forwards outstanding and spot FX intervention

USD bn	Spot FX intervention	Forwards - RBI	Forwards -IMF	Gross FX reserves	Foreign currency assets
Jan-13	0.0	-12.8	-12.8	295.5	261.7
Feb-13	-0.3	-12.1	-12.1	290.9	257.9
Mar-13	0.8	-11.0	-11.0	292.0	259.7
Apr-13	0.5	-8.2	-8.2	293.9	263.3
May-13	-0.1	-5.8	-5.8	287.9	258.5
Jun-13	-2.3	-4.9	-4.9	282.5	254.4
Jul-13	-6.0	-4.7	-4.7	277.6	250.3
Aug-13	-2.5	-9.6	-9.1	275.5	247.4
Sep-13	-3.5	-14.5	-7.7	277.2	248.8
Oct-13	3.9	-32.5	-5.9	281.5	253.8
Nov-13	10.1	-32.6	-6.4	290.7	263.7
Dec-13	3.5	-32.6	-6.6	293.9	267.7
Jan-14	-1.9	-31.8	-5.9	291.1	264.6
Feb-14	-0.5	-31.3	-5.3	294.4	266.9
Mar-14	7.8	-31.0	-5.1	304.2	276.4
Apr-14	5.9	-32.1	-6.1	311.0	283.7
May-14	1.8	-11.5	14.5	312.2	285.3
Jun-14	0.6	-0.2	25.8	316.1	285.6
Jul-14	5.5	5.4	31.4	319.8	292.7
Aug-14	-0.5	5.8	31.8	318.4	291.4
Sep-14	1.4	8.4	34.4	313.8	287.4
Oct-14	2.7	10.2	36.2	315.9	290.4
Nov-14	3.1	13.2	39.3	315.6	290.8
Dec-14	6.7	6.9	32.8	320.6	295.9
Jan-15	12.1	5.6	31.5	328.7	303.3
Feb-15	7.9	5.8	31.8	337.7	312.2
Mar-15	7.7	8.3	34.3	341.6	317.3
April-15				352.0	327.2

Source: RBI, IMF, Deutsche Bank

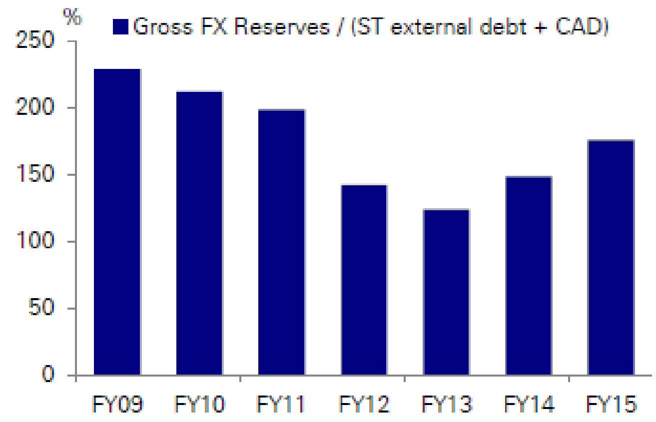
Reserves adequacy needs to be strengthened further

India's import cover has scope for further improvement



Source: CEIC, Deutsche Bank

Reserves adequacy needs to be strengthened further



Source: CEIC, Deutsche Bank

Cross country external debt comparison: (end 2014)

Countries	ST external debt, USD bn	% of GDP	LT external debt, USD bn	% of GDP	Total external debt, USD bn	% of GDP	ST as % of total ext debt	LT as % of total ext debt
India	86	4.3	376	18.9	462	23.2	18.5	81.5
Indonesia	55	6.2	238	26.8	293	33.0	18.8	81.2
Brazil	67	2.8	488	20.8	555	23.7	12.0	88.0
Turkey	133	16.7	269	33.8	402	50.5	33.0	67.0
Russia	62	3.3	588	31.6	650	34.9	9.5	90.5
South Africa	34	9.7	108	30.8	142	40.5	24.0	76.0

Source: World Bank Quarterly External Database, RBI, CEIC, Deutsche Bank

Residual maturity of external debt outstanding as on end-June 2014

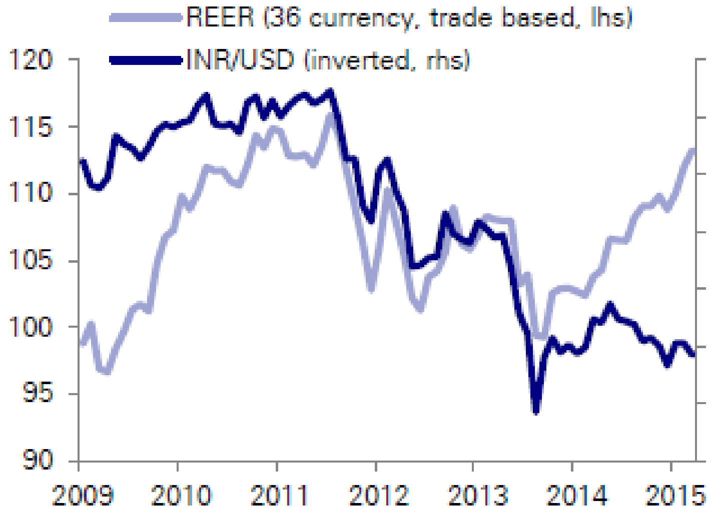
Components	Short-term up to one year	1 to 2 years	2 to 3 years	More than 3 years	Total
1. Sovereign Debt (long-term)	7.4	7.8	8.2	61.1	84.5
2. External Commercial Borrowings	24.6	25.2	24.0	97.7	171.5
3. NRI deposits {(i)+(ii)+(iii)}	55.0	9.6	26.7	14.9	106.3
(i) FCNR(B)	11.7	3.2	20.7	6.9	42.6
(ii) NR(E)RA	36.1	5.4	5.5	7.6	54.7
(iii) NRO	7.2	1.0	0.4	0.4	9.0
4. Short-term Debt (Original maturity)	87.9	-	-	-	87.9
Total (1 to 4)	174.9	42.7	58.8	173.7	450.1

Source: RBI, Deutsche Bank

- **While India's external debt dynamic is in line with EM peers, the ST external debt as a proportion of total debt has risen in recent years, and despite some improvement, the ratio remains higher than where it was prior to the GFC**
- **ST external debt on a residual maturity basis of 1-year currently stands at USD175bn. Gross FX reserves currently is 175% of the ST external debt + current account deficit combined, which is an improvement over FY13 lows, but we note that this number is lower than the past trend**
- **As the current account bottoms out, the ratio would likely worsen in the period ahead, underscoring the need for more reserves coverage**

Rupee overvaluation likely to be stemmed by RBI through FX accumulation strategy

Rupee overvalued in real terms (RBI REER)

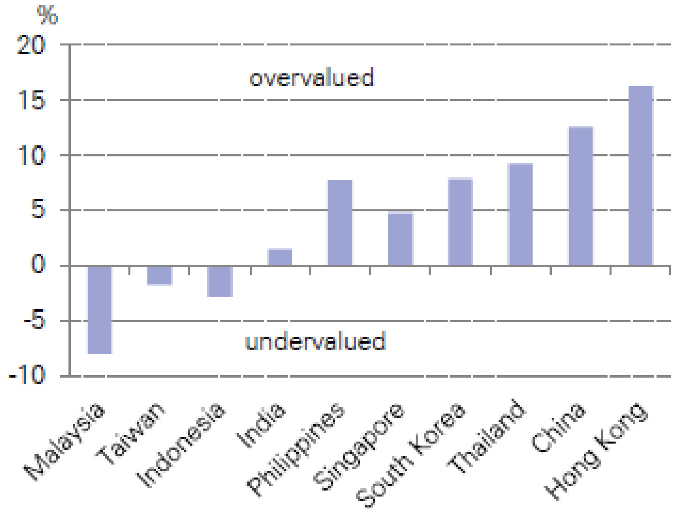


Source: RBI, CEIC, Deutsche Bank

➢ **Despite large scale intervention, exceptionally buoyant flows and high investor interest have led to the INR outperforming its peers lately, amounting to a sizeable appreciation of the REER. Competitiveness concerns and risk of a resurgence in gold and other consumer goods imports should continue to motivate RBI's policy of stemming currency appreciation (through intervention and reserves accumulation)**

➢ **Based on our projection of imports, gross official reserves would need to go up to about USD445bn by 2016 to maintain an import cover of 10 months. This implies scope for the Reserve Bank of India to increase reserves by another USD100bn in the next 18-24 months**

Deutsche Bank behavioral equilibrium exchange rate (BEER) model – FX misalignment by country



Source: RBI, CEIC, Deutsche Bank.

Reform update, short term growth outlook

A growth and investment model

Fiscal structural reforms

Monetary policy, direction, effectiveness, transmission

Inflation, rainfall, supply side reforms

Exchange rate, competitiveness, reserves

Demographics

Urbanization

India's rising population – boon or bane?

* India is placed to enjoy substantial demographic dividend in the coming years as its population composition shifts toward a lower dependency ratio. Between 2010 and 2030, India's working age population is projected to rise from 781mn to 1022mn, making it a fertile ground for expansion in large manufacturing and service industry activities, with substantial scope for economies of scale

* A decrease in dependency ratio tends to be associated with a rise in savings. The increased savings then manifests in a rise in investment, which in turn raises the economy's potential growth rate. This phenomenon can be observed in Japan from 1950 onward, and in China from 1980 onward. India appears to be on track to follow the same path

* Given its poor infrastructure and relatively low quality human capital, India's demographic dynamic raises the urgency of reforms. Improvements in education, healthcare, and employment opportunities are essential to prevent the rise of social divisions and tension. Adequately financing these improvements would be a function of better fiscal policy and governance. There are also substantial economic, environmental, and social challenges to managing the emerging population bulge

* Services sector will not be able to absorb the incremental labor force completely in the decades ahead. Manufacturing sector share needs to increase significantly to enjoy the fruits of positive demography. Further, 60% of the rise in India's population by 2025 will likely come from some of the poorest states: Uttar Pradesh, West Bengal, Bihar, Rajasthan and Madhya Pradesh

* As population increases sharply in these states in the decades ahead, the pressure on these respective state governments will mount to generate new employment and attract higher investments, failing which the incidence of poverty and human development conditions (already in a poor state) could worsen even further

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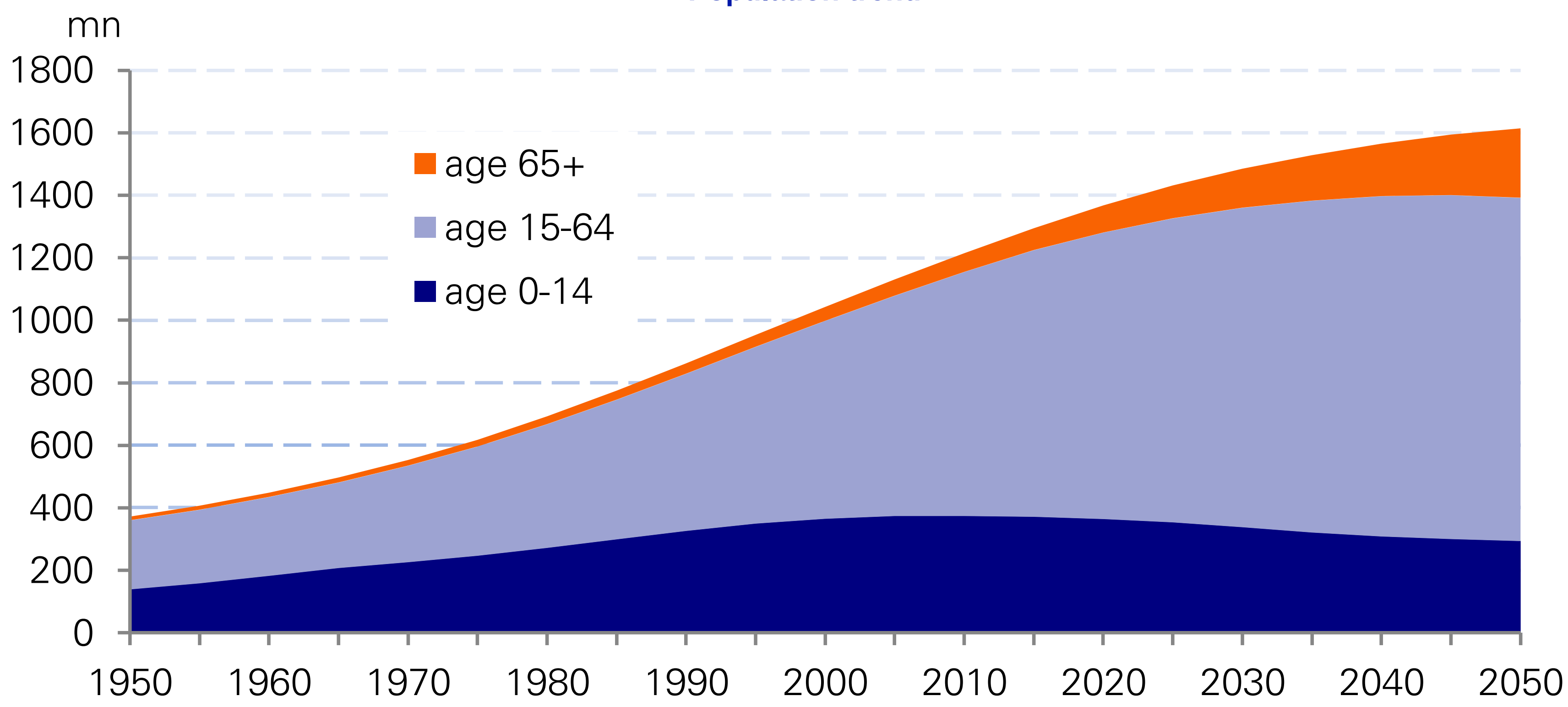
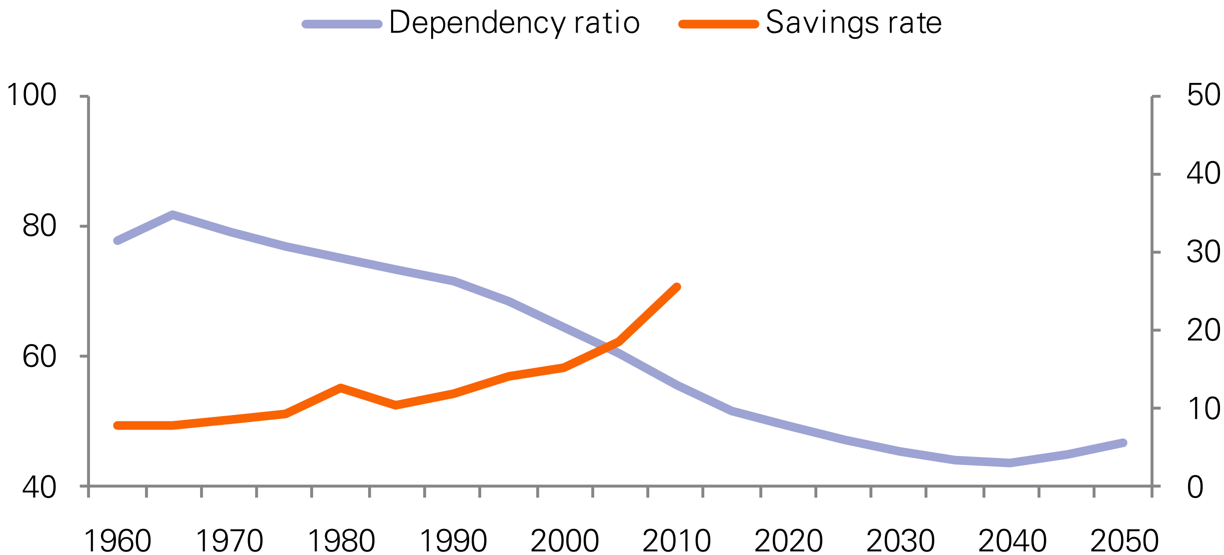
India’s population dynamic remains positive

Population trend



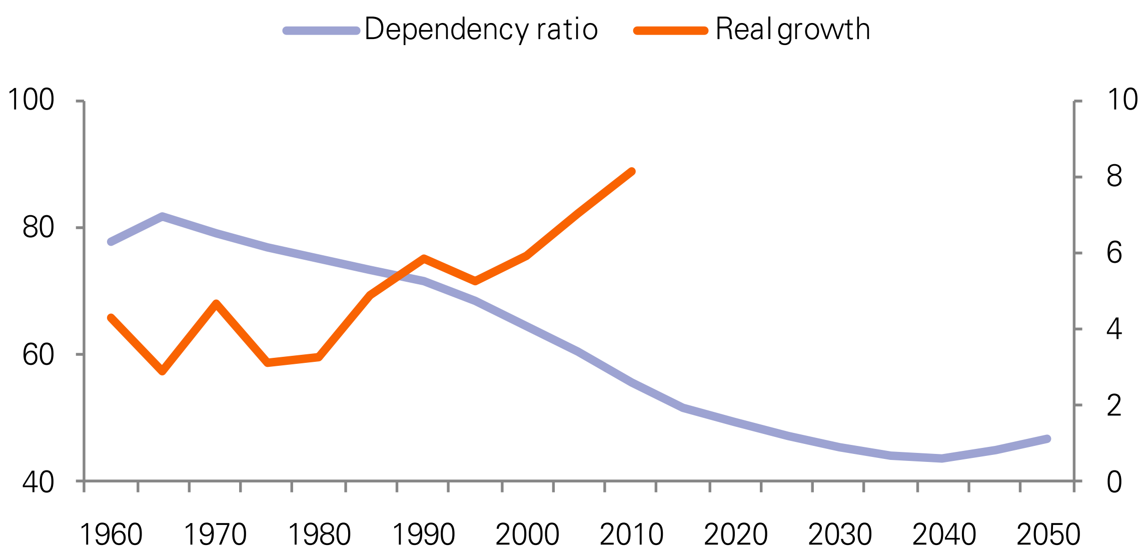
Source: United Nations Population database, Deutsche Bank. Note: Under a medium fertility rate scenario projected by the United Nations, India’s population between the age of 15 and 64 is slated to rise from 781 million to about 1 billion over the next 20 years, i.e. its labor force will rise by over 30%, making it bigger than China’s.

…ought to improve long-term potential growth



Source: United Nations Population database, CEIC, Deutsche Bank

- **Projected improvement in the dependency ratio should push up savings and investment, and therefore growth**



Source: United Nations Population database, CEIC, Deutsche Bank

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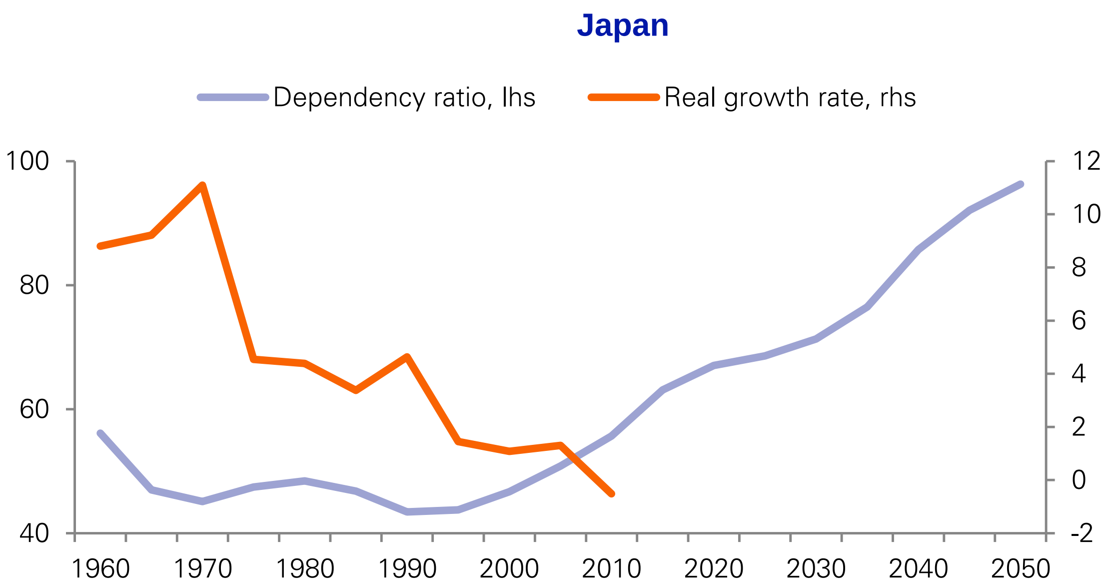
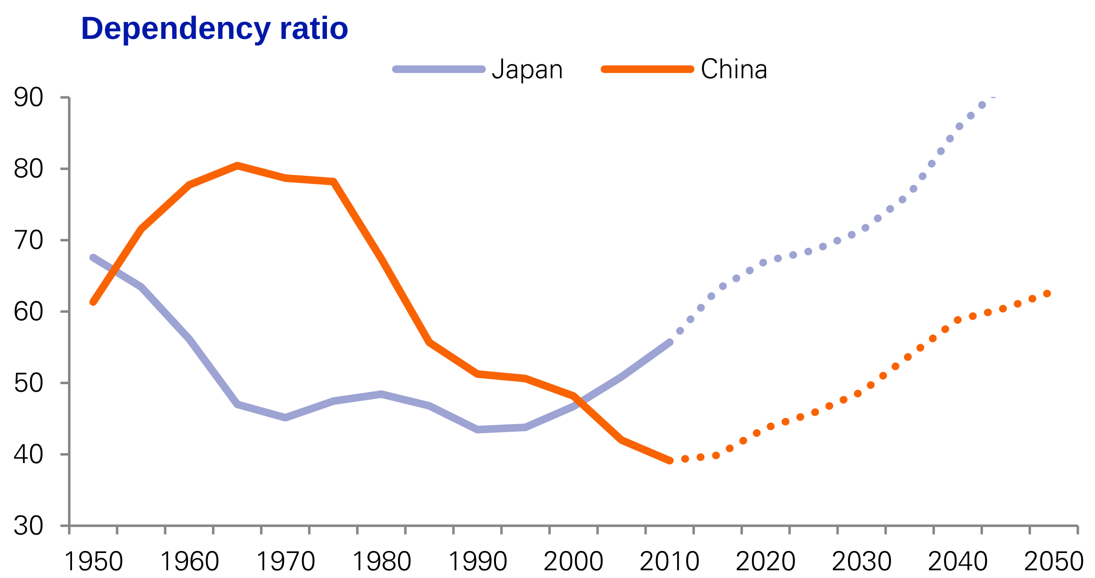
The opposite is likely for Japan and China



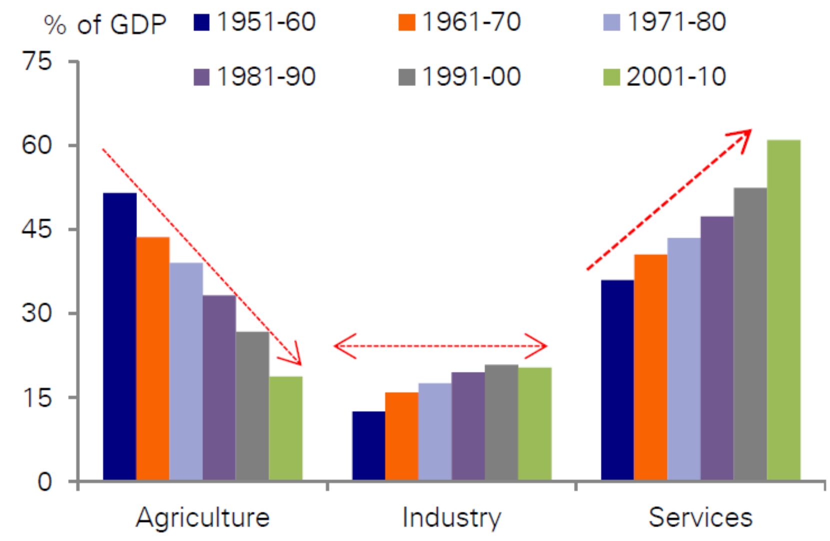
Source: United Nations Population database, CEIC, Deutsche Bank



Source: United Nations Population database, CEIC, Deutsche Bank

Re-balancing between services and manufacturing critical to reap benefits of a positive demography

Stagnant industrial sector



Source: CEIC, CSO, Deutsche Bank

Population (mn)	2001	2010F	2025F
Uttar Pradesh	166	197	246
Maharashtra	97	111	132
Bihar	83	96	113
West Bengal	80	89	100
Andhra Pradesh	76	84	94
Tamil Nadu	62	67	72
Madhya Pradesh	60	71	87
Rajasthan	57	67	81
Karnataka	53	59	67
Gujarat	51	58	69
Orissa	37	40	45
Kerala	32	34	37
Jharkhand	27	31	37
Punjab	24	24	31
Haryana	21	25	31
Chhattisgarh	21	24	28
Goa	1	2	2

Source: Office of the Registrar General of India, Deutsche Bank

- **Services sector will not be able to absorb the incremental labor force completely in the decades ahead**
- **Manufacturing sector share needs to increase significantly to enjoy the fruits of positive demography**
- **60% of the rise in India's population by 2025 will likely come from some of the poorest states: Uttar Pradesh, West Bengal, Bihar, Rajasthan and Madhya Pradesh**

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The power of urbanization

* It is an empirical truth, that by and large, the most economically prosperous countries are also highly urbanized. While urbanization may not be the only factor that makes a country rich, it is undeniably one of the key catalysts that help propel an economy to a higher growth trajectory.

* China's emergence as an economic superpower has occurred hand in hand with rapid urbanization – about 53% of China's population are urbanized now compared to only 18% in the late seventies

* As per the latest census report, India's urbanization rate has increased to just 31% in 2011, from about 28% in 2001. Not only the pace of urbanization is slow in India's case, the disparity between the different states as regards to the urbanization trend is also striking

* States such as Bihar (11.3%), Orissa (16.7%), Uttar Pradesh (22.3%), Chhattisgarh (23.2%), Jharkhand (24.1%), Rajasthan (24.9%), Madhya Pradesh (27.6%) – despite showing a rise in urbanization rate in the last decade – remain way below the national average rate of 31.2%

* On the other end of the spectrum, Tamil Nadu (48.5%), Kerala (47.7%), Maharashtra (45.2%) and Gujarat (42.6%) have a relatively higher urbanization rate

* Kerala has recorded the highest increase in urbanization rate in the last decade (from 26% in 2001 to 47.7% in 2011), while the least improvement has been in case of Bihar (+0.8%), a trend which is indeed worrisome given that Bihar has the lowest level of urbanization rate (11.3%) among the sixteen key states

* By and large, higher urbanization leads to lesser poverty, increased prosperity and improvement in development indicators as well. Of course there could be some outlier cases where a one to one correlation may become hard to establish, but the overall message is simple – "higher urbanization improves economic well-being"

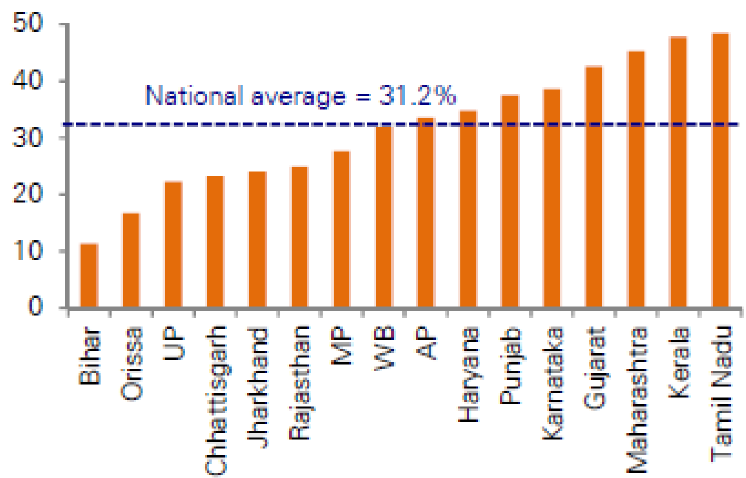
Urbanization trend – a snapshot

Urbanization trend in India: 2011 vs. 2001

mn	2001	2011	Increase/ decrease (-)
Total population	1029	1210	181
Rural	743	833	90
% of total population	72.2	68.8	
Urban	286	377	91
% of total population	27.8	31.2	

Source: Rural Urban Distribution of Population - India, Census of India 2011, Deutsche Bank

Urbanization trend of key Indian states



Source: Rural Urban Distribution of Population - India, Census of India 2011, Deutsche Bank

Urbanization trend – 2001 vs. 2011

KEY STATES	2001	2011	Increase
TAMIL NADU	43.9	48.5	4.6
KERALA	26.0	47.7	21.7
MAHARASHTRA	42.4	45.2	2.8
GUJARAT	37.4	42.6	5.2
KARNATAKA	34.0	38.6	4.6
PUNJAB	34.0	37.5	3.5
HARYANA	29.0	34.8	5.8
ANDHRA PRADESH	27.1	33.5	6.4
WEST BENGAL	28.0	31.9	3.9
MADHYA PRADESH	26.7	27.6	0.9
RAJASTHAN	23.4	24.9	1.5
JHARKHAND	22.3	24.1	1.8
CHHATTISGARH	20.1	23.2	3.1
UTTAR PRADESH	20.8	22.3	1.5
ORISSA	15.0	16.7	1.7
BIHAR	10.5	11.3	0.8

Source: Rural Urban Distribution of Population - India, Census of India 2011, Deutsche Bank

Higher urbanized states are relatively more prosperous

KEY STATES	Urbanization rate (%)	Literacy rate (%)	Decadal population growth rate (%)	Infant mortality rate (person per '000 birth)	% of BPL population	Avg. per capita exp./month (rural and urban avg.) Rs.
TAMIL NADU	48.5	80.3	15.6	31	11.3	2052
KERALA	47.7	93.9	4.9	12	7.8	2700
MAHARASHTRA	45.2	82.9	16.0	33	17.4	2191
GUJARAT	42.6	79.3	19.2	50	16.6	1951
KARNATAKA	38.6	75.6	15.7	45	20.9	2147
PUNJAB	37.5	76.7	13.7	41	8.3	2440
HARYANA	34.8	76.6	19.9	54	11.2	2636
ANDHRA PRADESH	33.5	67.7	11.1	52	9.2	2061
WEST BENGAL	31.9	77.1	13.9	35	20.0	1830
MADHYA PRADESH	27.6	70.6	20.3	70	31.7	1433
RAJASTHAN	24.9	67.1	21.4	63	14.7	1826
JHARKHAND	24.1	67.6	22.3	46	37.0	1407
CHHATTISGARH	23.2	71.0	22.6	57	39.9	1340
UTTAR PRADESH	22.3	69.7	20.1	67	29.4	1508
ORISSA	16.7	73.5	14.0	69	32.6	1368
BIHAR	11.3	63.8	25.1	56	33.7	1184

Source: Census of India 2011, Deutsche Bank

Urbanization and economic prosperity goes hand in hand

i) States that are less (more) urbanized have a lower (higher) literacy rate;

ii) States with a lower (higher) urbanization and literacy rate have recorded the highest (lowest) increases in the decadal population growth rate between 2001 and 2011;

iii) Infant mortality rate is higher (lower) in less (more) urbanized states;

iv) Incidence of poverty is higher (lower) in less (more) urbanized states;

v) States with lower level of urbanization rate are poorer than the more urbanized ones

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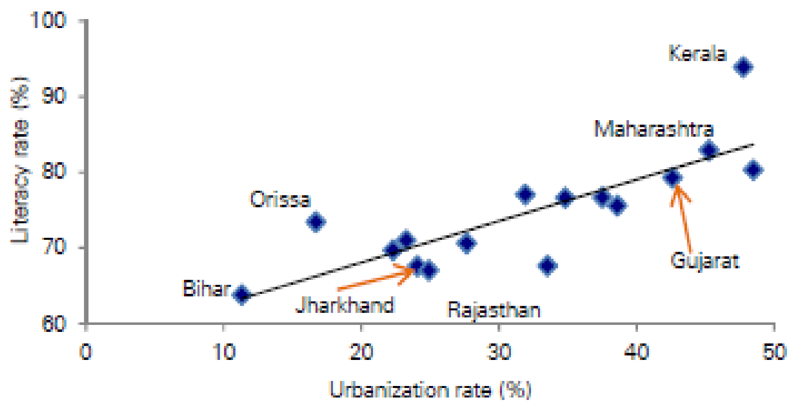
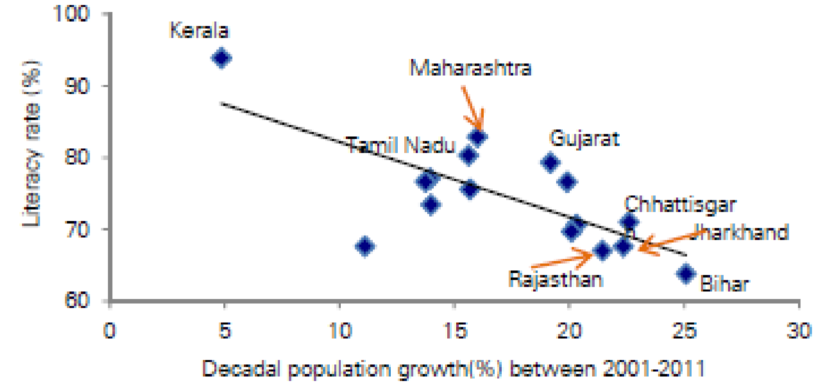
Higher urbanized states also have better development indicators

Urbanization and literacy rate



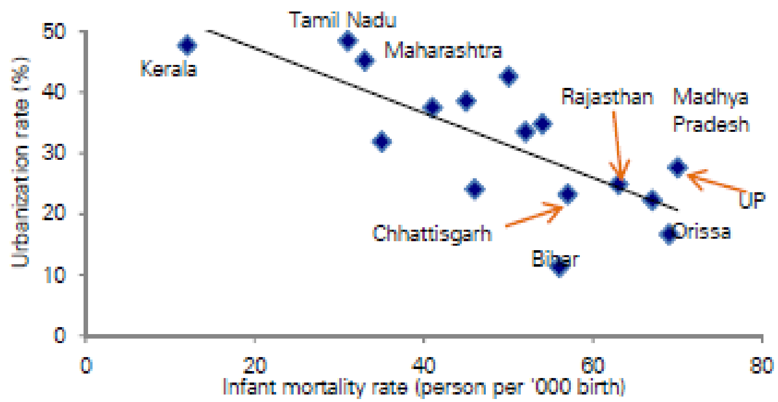
Source: Rural Urban Distribution of Population - India, Census of India 2011, Deutsche Bank

Urbanization and population growth rate



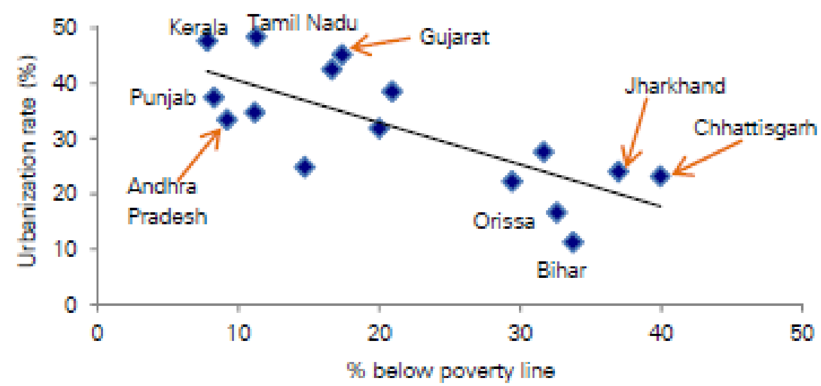
Source: Rural Urban Distribution of Population - India, Census of India 2011, Deutsche Bank

Urbanization and infant mortality rate



Source: Rural Urban Distribution of Population - India, Census of India 2011, Deutsche Bank

Urbanization and poverty rate



Source: Rural Urban Distribution of Population - India, Census of India 2011, Deutsche Bank

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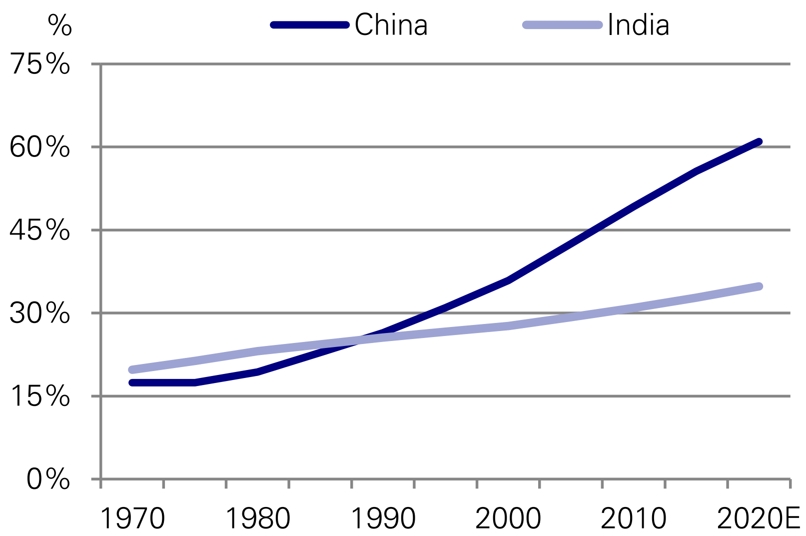
Urbanization and vehicle ownership – cross country trend

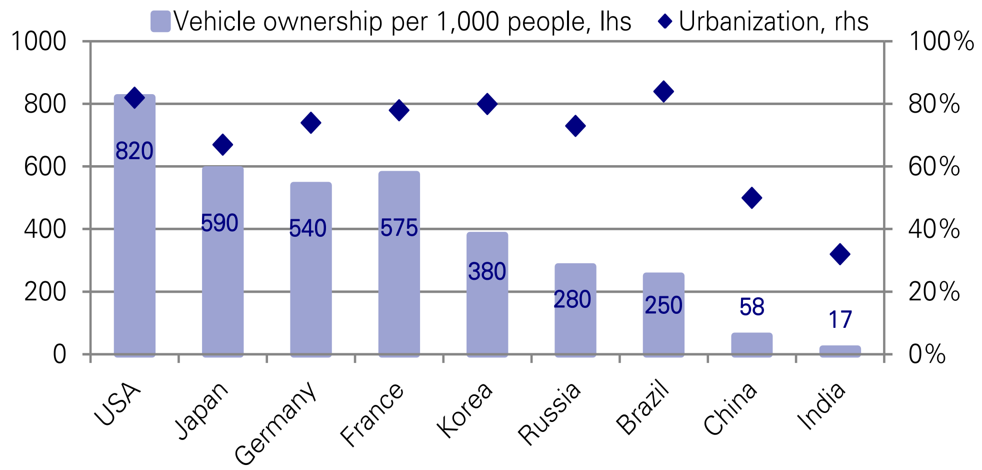
Urbanization trend



Source: CEIC, United Nations Department of Economic and Social Affairs

- **India's vehicle ownership lags China's due to lower urbanization; over the past decade, India's urbanization increased by 3ppt compared with 13ppt for China**
- **Indian PV market size at 2.5mn is significantly smaller than the Chinese market due to lower urbanization (31% for India vs. 53% for China)**

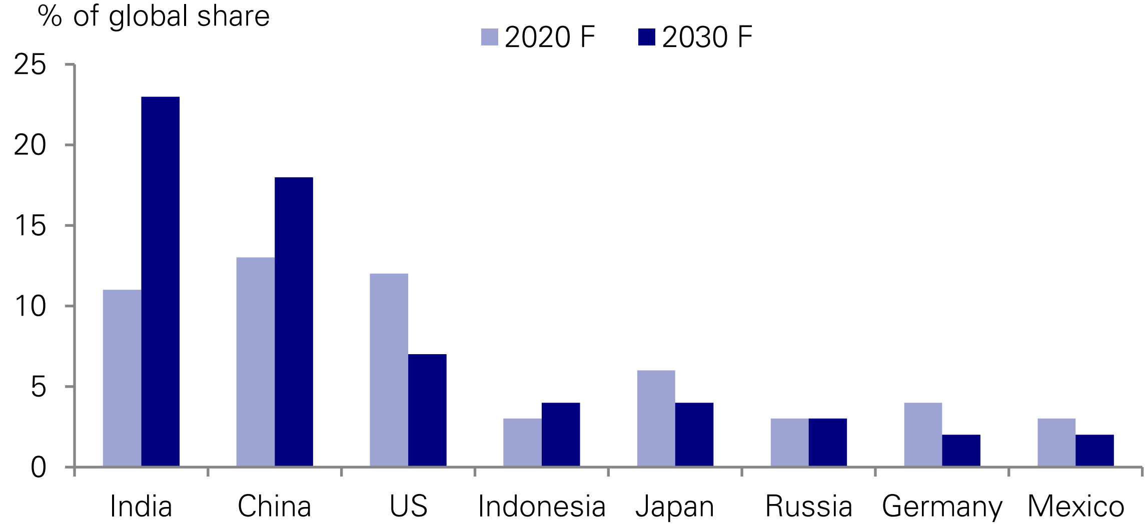
Vehicle ownership and urbanization ratio in major countries



Source: CIA World Factbook

Increased urbanization, among other factors, will likely lead to sharp increase in middle class consumption

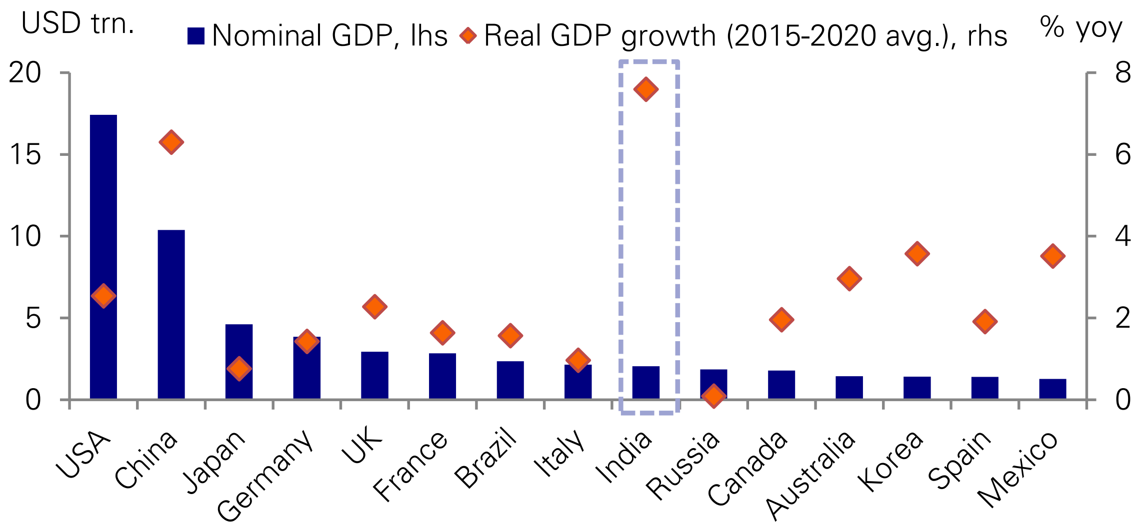
Middle-class consumption forecast



Source: Brookings Institution, Deutsche Bank. Note: People spending USD10 to USD100 a day (2005 PPP$) fall in the middle-class category

- **India is slated to become the leading source of middle-class demand in the coming decades**
- **By 2020, India is expected to account for 11% of global middle-class consumption, just behind China (13%) and US (12%)**
- **By 2030, India (23%) is expected to beat US (7%) and China (18%) to account for the biggest source of middle-class consumption demand in the world**

- **No country above USD1 trillion GDP is likely to grow as fast as India in the next 5-6 years**



Source: IMF, Deutsche Bank

Appendix 1

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