Engineering & Capital Goods

Counter-cyclical infrastructure spending to boost the economy not a realistic hope

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Several experts suggest a counter-cyclical infrastructure driven stimulus worth the size of 5-15% of GDP (as compared to estimated direct government-funded spend of below 3% in FY20) to bail out the economy. We took a deep dive into India's fiscal math just as we look at corporate finances to find that India does not have the fiscal space for such a stimulus as the debt overhang is not transient and may haunt until FY25E. Alternate funding options such as specialized domestic financial institutions to leverage funds and multilateral funding are still small (5-10% of spends currently). We expect infrastructure spending to stagnate from here (without even considering the execution challenges). Earlier, we had argued for picking stocks on attractive valuations but after the recent run-up, the stocks are no longer at bottom valuations. L&T, KNR Constructions and Kalpataru Power are our top picks only on the basis of relative comfort within the sector.

Key highlights from the report:

- The comparison of India's debt/GDP at ~60% with countries with debt/GDP of above 100% is unfair as India's tax/GDP is low at below 20%, compared with other countries at 35-50%. We, thus, believe that debt/revenue (currently at ~4x) is a better indicator of the fiscal stress than debt/GDP. We estimate India's debt/revenues to reach/exceed ~5x by FY23E, which was last witnessed in FY03 when the sovereign rating was junk.
- India's capex/revenue has been structurally declining over the decades (from ~45% in 80s, ~35% in 90s, 25% over 2000-10 and 22% over 2010-20). In fact, every crisis has structurally lowered the capex further as a share of government revenues.
- As highlighted by our economist Kruti Shah in her report, after the structurally rigid expenses of salaries, revenue expenditure, interest payments and subsidies, the government is not left with much for capex and has been borrowing even to service its interest cost. Meanwhile, states face a double whammy of low tax collections and falling revenue allocation from the Center.
- As a result, we estimate the combined infra spending by the Centre and States to decline to a 5.5% CAGR over FY19-25E from 21% over FY13-19. Historically, during such macro-environment, large and established players that could sustain the challenges, have gained the market share.

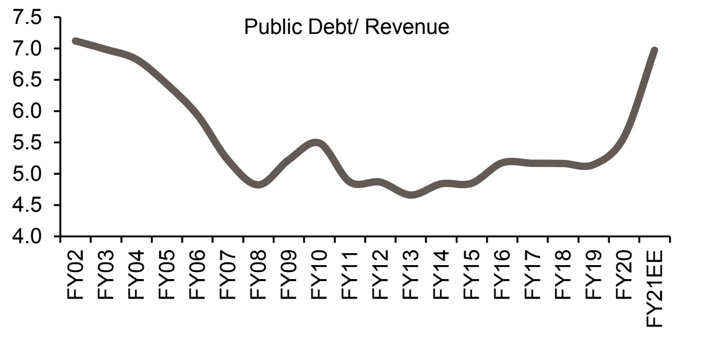
Valuations no longer compelling – LT, KNRC and KPP are top picks

- Given foreseeable challenges, no easy reforms forthcoming and recent run-up, valuations of the stocks in the sector are no longer compelling. We cut earnings estimates by 25%/15% for FY21-23E for most companies. Even the stocks that appear cheap on FY22/23E have earnings that benefit from existing strong order backlog, which may not sustain and thus, benefitting from a cyclical peak.
- Our top picks in the sector are now determined by relative safety rather than absolute growth potential: 1) L&T – medium-term pain offset by a likely market share gain and valuation comfort at ~10x adj. FY22E P/E (bottomed at 7x in 2008); 2) KNR Constructions – perhaps the only construction name to generate consistent OCF/FCF in the past 10 years – trading at 7x adj. FY22E P/E; 3) Kalpataru Power (upgrade from Hold) – improving balance sheet metric and steady medium term visibility – trading at 7x FY22E P/E.
- Our other Buy-rated stocks are PNC Infra and Triveni Turbine. We have a Sell rating on GE T&D, KEC International (both downgraded from Hold), ABB, Siemens, and Thermax on expensive valuations, and a Hold rating on BHEL, Cummins and Concor (all downgraded from Buy).

Please see our sector model portfolio (Emkay Alpha Portfolio): Engineering & Capital Goods (Page 42)

Story in Charts

Exhibit 1: India's capacity to support high levels of debt has been constrained by its ability to raise revenues…



Source: CMIE, Emkay Research

Exhibit 2: …but India's tax collection as % of GDP is among the lowest

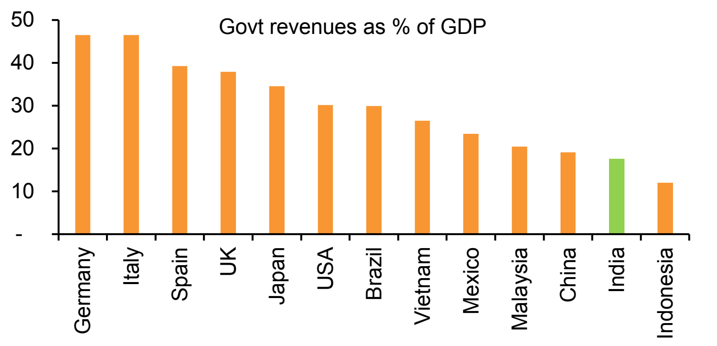


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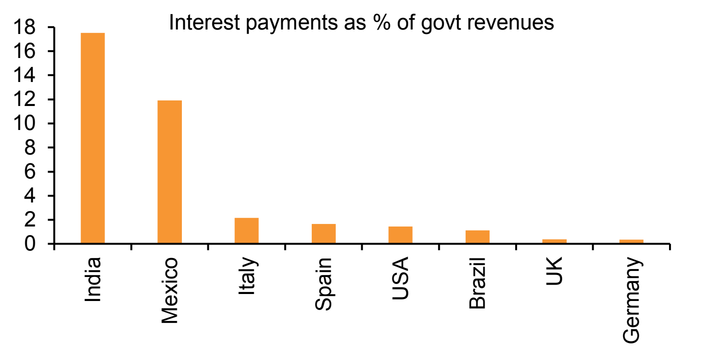
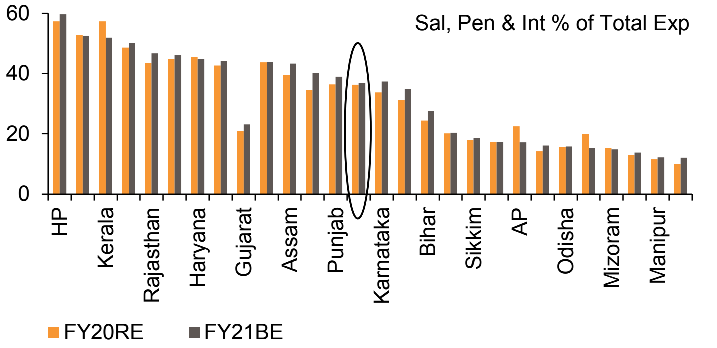
Exhibit 3: Interest payments form a high proportion of govt revenues for India and thus, eating away large chunk of revenues



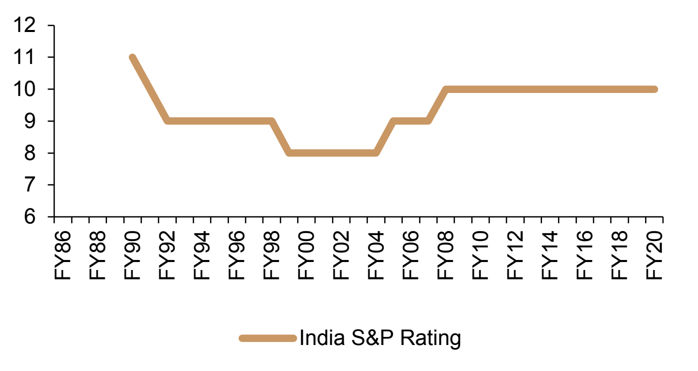
Source: CMIE, Bloomberg, Emkay Research

Exhibit 4: Salaries, Pension & Interest expenses form 39% of total expenses for States



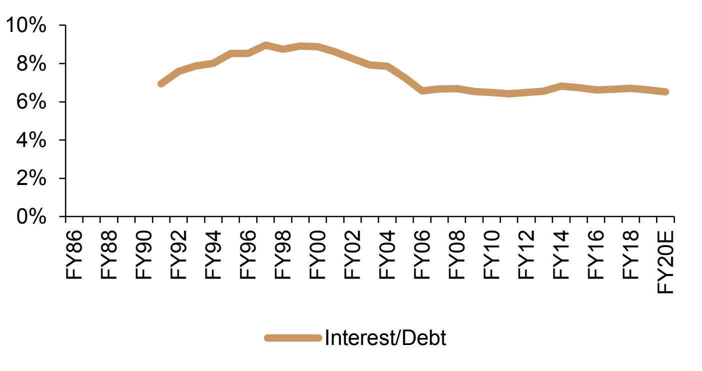
Source: State Budgets,, Emkay Research

Exhibit 5: India's sovereign credit rating over time ….



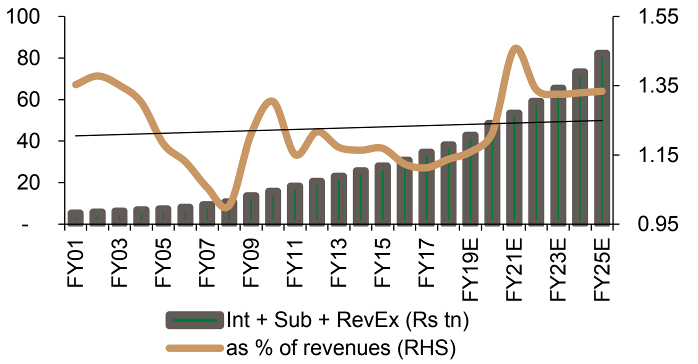
Source: Emkay Research, S&P
Rating scale on LHS refers to BBB as 11, BBB- as 10, BB+ as 9 and BB as 8

Exhibit 6: …has a clear inverse relation to its borrowing cost



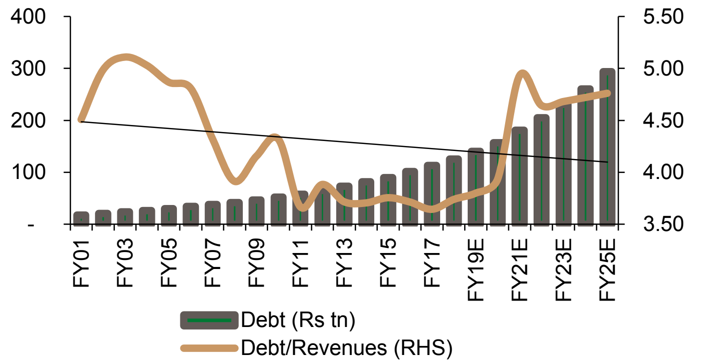
Source: Emkay Research, India Budget, RBI

Exhibit 7: Fixed expenses such as revenue expenditure, interest and subsidy are now more than the revenue



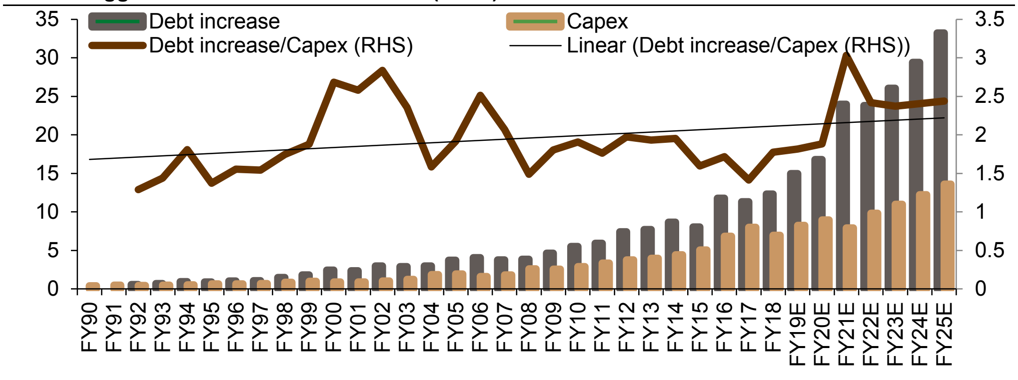
Source: Emkay Research, India Budget, RBI

Exhibit 8: Debt/revenues for India already inching up from FY17 lows and likely to revisit FY02-03 peaks when India was rated junk



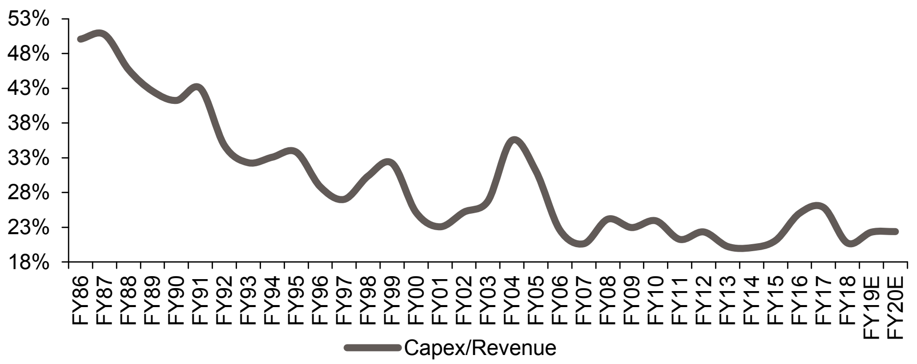
Source: Emkay Research, India Budget, RBI

Exhibit 9: Increasingly debt is being used for funding even the revenue deficit and not just capex – this will aggravate further over FY21-25E (Rs tn)



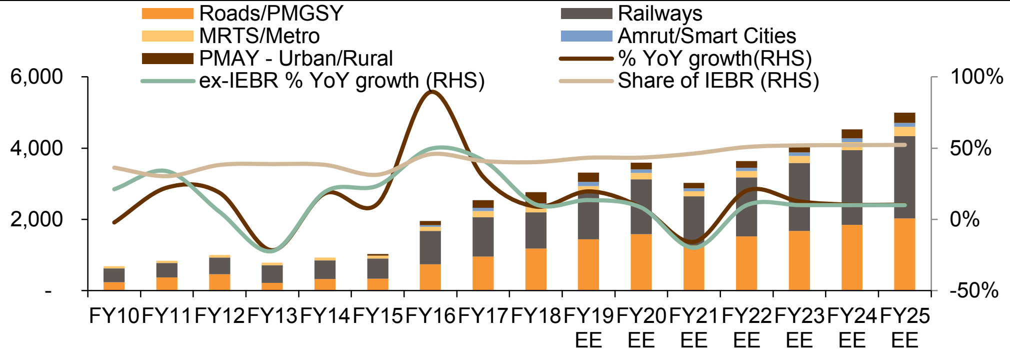
Source: Emkay Research, India Budget, RBI

Exhibit 10: Capex/revenue has been declining consistently – episodes of stressed public finances such as '98-'01 and GFC have aggravated the slide



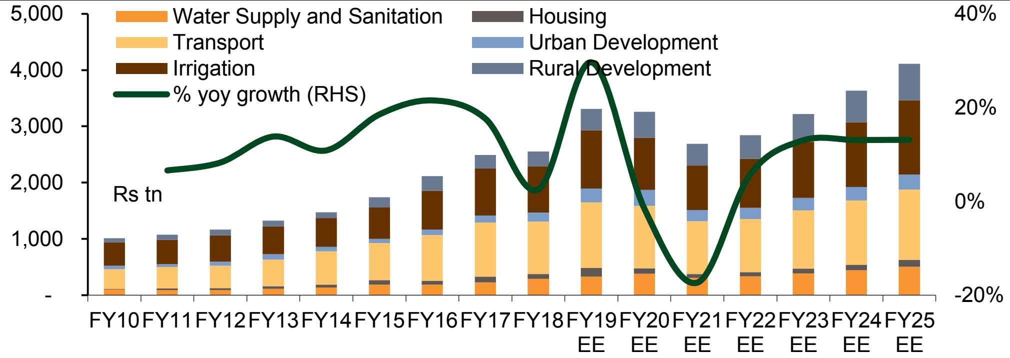
Source: Emkay Research

Exhibit 11: Central government spending on Infra capex growth rates slowing dramatically from FY16-17 peak even before Covid (Rs bn)



Source: India Budget documents, Emkay Research

Exhibit 12: We estimate State Infra capex to slow down from historical levels (Rs bn)



Source: RBI, Emkay Research

Exhibit 13: In the best-case scenario, we had estimated that 66% of NIP targets were feasible and now foresee risks to this as well

NIP details	Total planned spend		Historical trend					Future Annual run-rate	
Rs bn	**NIP**	**Emkay est.**	**FY16**	**FY17**	**FY18**	**FY19RE**	**FY20BE**	**NIP**	**Emkay est.**
Power	14,104	5,900					700	2,351	983
Renewable Energy	9,295	4,104					550	1,549	684
Atomic Energy	1,555	1,541					-	259	257
Petroleum and natural gas	1,946	1,500					-	324	250
Total energy	**26,900**	**13,045**					**1,400**	**4,483**	**2,174**
Roads	**20,338**	**16,994**	**1,552**	**1,920**	**2,115**	**2,678**	**2,832**	**3,390**	**2,832**
Railways	**13,676**	**12,000**	**935**	**1,099**	**1,020**	**1,334**	**1,561**	**2,279**	**2,000**
Ports	**1,212**	**1,009**					**121**		**168**
Airport	**1,434**	**1,434**					**188**		**239**
Urban - Amrut, Smart Cities, MRTS, affordable housing, Jal Jeevan Mission	**19,193**	**6,000**	**442**	**703**	**807**	**951**	**884**	**3,199**	**1,000**
Irrigation	**8,945**	**6,000**	**686**	**887**	**826**	**1,100**	**1,015**	**1,491**	**1,000**
Water and Sanitation	3,630	3,618	188	237	287	339	428	605	603
Rural Infrastructure	4,110	4,110	264	240	262	405	488		685
Total rural infrastructure	**7,739**	**7,728**					**916**	**1,290**	**1,288**
Digital infrastructure	3,097	3,205					839	516	534
Total agriculture and food processing infrastructure	1,687	606					89	281	101
Total social infrastructure	3,934	3,567					555	656	595
Total industrial infrastructure	3,150	1,582					172	511	264
Total	**111,304**	**73,169**					**10,572**	**18,551**	**12,195**

Source: MoF, Emkay Research

Exhibit 14: Implied FY22E valuations on our TP vs. long term 1 yr fwd mean – stocks no longer inexpensive

	P/E (x)				P/BV (x)			
Companies	**Target implied**	**LT avg**	**+1 STD**	**-1 STD**	**Target implied**	**LT avg**	**+1 STD**	**-1 STD**
ABB	34	57	83	31	4.1	7.1	9.5	4.7
BHEL	11	27	43	10	0.5	3	5.4	0.6
Concor	27	20	28	12	2.2	5.1	6.5	3.7
Cummins India	21	23	32	14	2.9	2.9	3.6	2.3
GE T&D India	45	33	51	15	2.9	6.2	9.2	3.1
Kalpataru Power	9	14	21	6	1.1	1.9	3	0.7
KEC International	11	15	20	9	2.0	2.1	3	1.3
KNR Construction	11	8	13	4	1.7	1.5	2.2	0.7
Larsen & Toubro	14	21	28	14	2.0	3.4	4.8	2.1
PNC Infratech	14	13	16	10	1.5	1.7	2.1	1.4
Siemens	29	52	83	21	2.9	7	10.3	3.7
Thermax	28	33	56	9	2.3	4.5	6.1	2.8
Triveni Turbine	17	30	38	21	4.4	9.6	11.4	7.9

Source: Company, Bloomberg, Emkay Research

Exhibit 15: Valuation comparison – unattractive ROE and growth profile will drive valuation stagnation

Company	CMP (Rs)	Mkt Cap (Rs mn)	Rating	Target Price (Rs)	ROE (%) FY21E	ROE (%) FY22E	P/E (x) FY21E	P/E (x) FY22E	Dividend Yield (%) FY21E	Dividend Yield (%) FY22E	FY20-23E CAGR Sales	FY20-23E CAGR EBITDA
ABB	949	201	SELL	794	5.8	12.7	94.4	40.3	0.3	0.7	5%	10%
BHEL	37	130	HOLD	37	-1.9	4.1	NM	11.0	3.1	6.2	11%	NA
Concor	380	231	HOLD	396	5.6	8.6	40.7	25.7	1.1	1.8	2%	-1%
Cummins India	449	124	HOLD	486	11.0	14.0	26.4	19.7	2.3	3.0	2%	7%
GE T&D India	108	28	SELL	87	-6.2	9.0	NM	55.7	2.1	2.7	4%	NA
Kalpataru Power	243	37	BUY	303	13.7	12.4	7.3	7.1	1.5	1.5	4%	2%
KEC International	308	79	SELL	271	16.9	18.3	15.5	12.4	0.9	0.9	4%	2%
KNR Construction	214	30	BUY	264	11.5	17.5	15.3	8.7	0.1	0.2	10%	7%
Larsen & Toubro	983	1,380	BUY	1,156	10.4	13.7	17.8	12.2	2.4	2.0	7%	8%
PNC Infratech	141	36	BUY	173	6.9	11.1	19.8	11.2	-	-	2%	-2%
Siemens	1,212	432	SELL	889	11.3	12.0	63.5	39.2	0.9	1.0	12%	22%
Thermax	749	89	SELL	644	5.4	8.3	50.9	32.1	1.3	1.4	1%	5%
Triveni Turbine	66	21	BUY	86	23.1	22.9	16.2	14.2	2.6	2.8	3%	8%

Source: Bloomberg, Emkay Research, Industry

Government lacks ability to revive economy with a counter-cyclical infrastructure spending

India at the risk of sovereign rating downgrade; cannot borrow more to fund an infrastructure stimulus

How sovereign ratings matter and the impact of rising debt and expenditure on rating

While it is obvious that growth and the rising fiscal stress are the key challenges for the Indian economy currently, it is often argued that counter-cyclical spending on infrastructure can bail out the economy from the pain.

We, therefore, look into the past such episodes of the fiscal stress and the government's ability then and now to go for such a counter-cyclical infrastructure spending as large as the National Infrastructure Pipeline that could possibly bail out the economy.

Before we discuss the government's current ability for such infrastructure capex, we look into the current fiscal stress and how that stacks up compared to the past. We also notice how India's sovereign rating is a function of its debt and debt servicing capability.

While traditional economists and mainstream media like to focus on debt as a % of GDP, we look at debt and servicing ability as a proportion of government revenues just as we would look at a company.

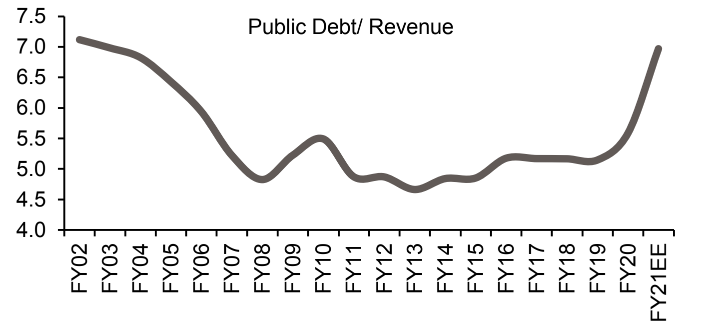
The purpose of this analysis is to illustrate a key difference between India and other countries in terms of the spending ability in context of the GDP.

While most large countries (especially developed) have announced huge stimulus packages (not necessarily infrastructure focused), sometimes even as large as 10-15% of GDP, India's stimulus package has been just 1% of GDP (in terms of direct cost to the government). There are also expectations that the government should indulge in a counter-cyclical infrastructure spending that could set the ball rolling for economic growth.

However, our economist Kruti Shah recently illustrated in her report *'Distressed public debt to leave limited room for growth stimulus'* that Indian government's revenues are significantly lower than other large/developed countries. As such, when one looks at debt/GDP, tax/GDP also becomes a key metric to evaluate or in effect debt/tax (revenues).

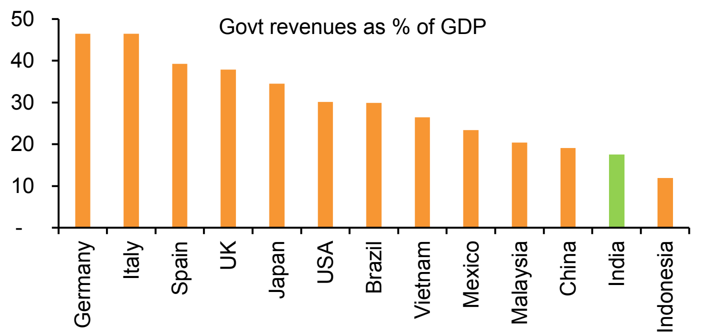
This is where India fares poorly compared to other countries as illustrated in charts below.

Exhibit 16: India's capacity to support high levels of debt has been constrained by its ability to raise revenues…



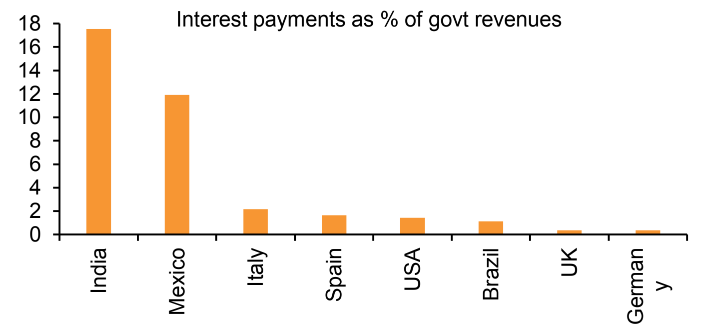
Source: CMIE, Emkay Research

Exhibit 17: …but India's tax collection as % of GDP is among the lowest



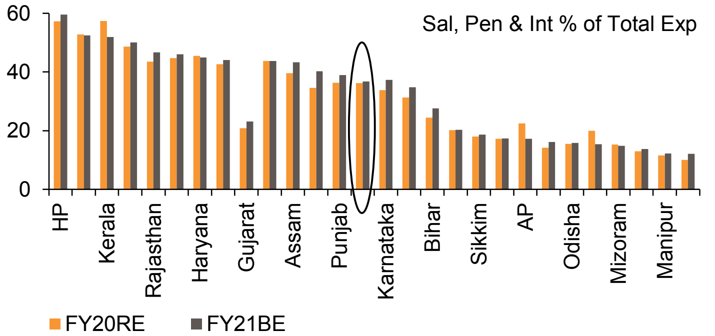
Source: CMIE, Bloomberg, Emkay Research

Exhibit 18: Interest payments form high proportion of govt revenues in case of India and thus, eating away large chunk of revenues



Source: CMIE, Bloomberg, Emkay Research

Exhibit 19: Salaries, Pension & Interest expenses form 39% of total expenses for States



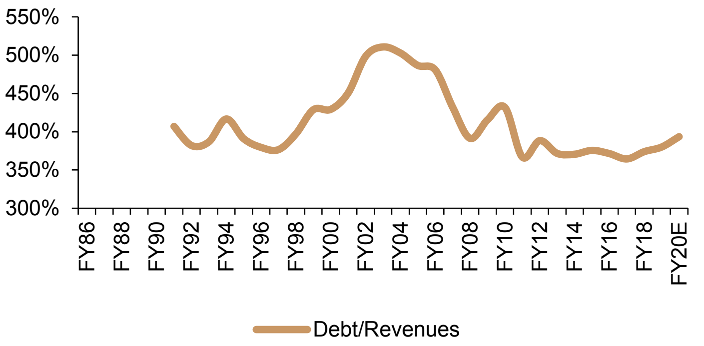
Source: State Budgets,, Emkay Research

Why does higher debt and interest cost matter for India? And how bad is it?

Just like corporates, high leverage and low debt servicing ability lead to a default risk. The government's balance sheet is also impacted the same way. As evident in Charts 20-22 below, higher debt/revenues and fixed costs as a share of revenues have had a direct correlation with India's sovereign ratings. Now, even as other countries are also resorting to higher debt/GDP, it may not translate into as high debt/revenue multiple as India or as low debt servicing capability as India and that is precisely why India is in a much more difficult situation.

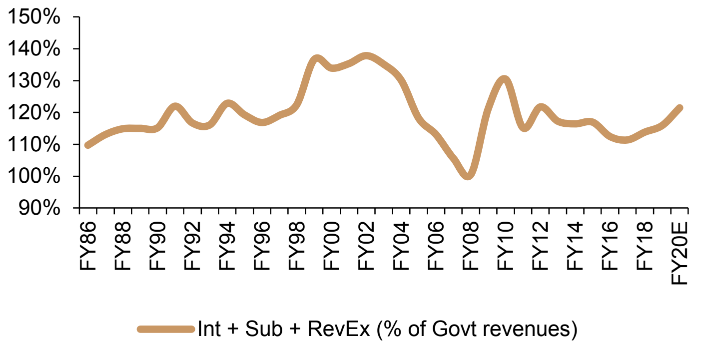
We also highlight in the Chart 23 how India's sovereign rating has an almost perfect inverse correlation with government interest expense/debt. Thus, to argue that India can raise its debt/GDP and at the same time enjoy lower cost on that debt would be optimistic, in our view.

Exhibit 20: Debt/revenue has a direct bearing on the rating…



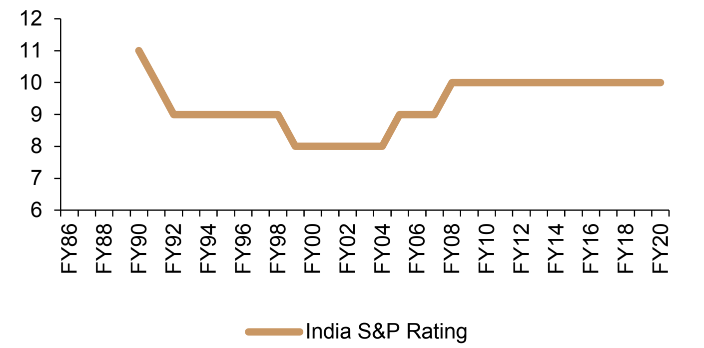
Source: Emkay Research, India Budget, RBI

Exhibit 21: …together with fixed costs such as interest, subsidies and revenue expenditure as a share of Govt revenues



Source: Emkay Research, India Budget, RBI

Exhibit 22: India's sovereign credit rating over time ….



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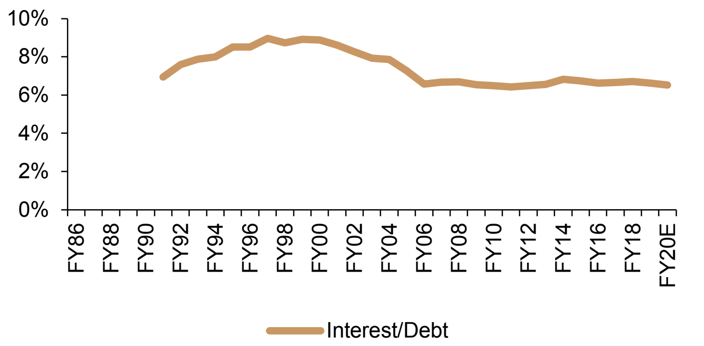
Rating scale on LHS refers to BBB as 11, BBB- as 10, BB+ as 9 and BB as 8

Exhibit 23: …has a clear inverse relation to its borrowing cost



Source: Emkay Research, India Budget, RBI

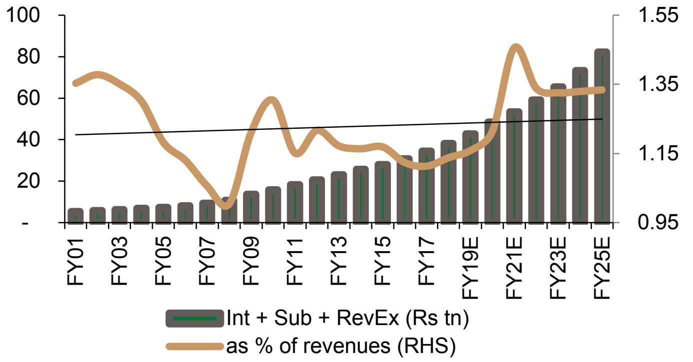
India's fiscal strength is deteriorating due to not only Covid-19 but also a structural issue, and will last for a while

As evident in Charts 24 and 25 below, India's debt/revenue and debt servicing ability were improving continuously until FY17. However, since then, a mix of factors such as subsidies and structurally rising revenue expenditure have deteriorated these debt metrics.

In fact, as depicted below, we estimate these debt metrics to worsen to FY02-05 levels, much greater than even the GFC.

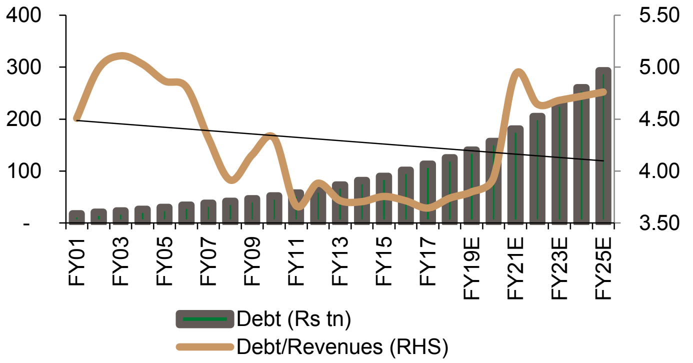
More importantly, while Covid-19 is a trigger, we highlight that the worsening of the fiscal math was evident post FY17 and will sustain until FY25 unless urgent measures are undertaken by the government to control the deterioration.

Exhibit 24: Fixed expenses such as revenue expenditure, interest and subsidy are now more than government revenue



Source: Emkay Research, India Budget, RBI

Exhibit 25: Debt/revenues for India already inching up from FY17 lows and likely to revisit FY02-03 peaks when India was rated junk

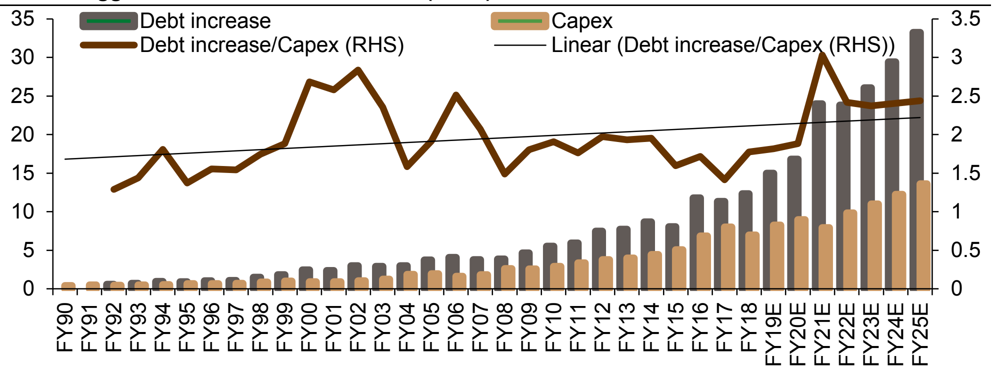


Source: Emkay Research, India Budget, RBI

Traditionally, the key reason for borrowing by the government has been to fund capex and was justified in that as it was productive expenditure. However, as Chart 26 illustrates, increasingly, the Government is borrowing to fund even its revenue expenditure, leaving a little room for borrowing for capex.

The trend of debt increase/capex has an upward slope suggesting that increasingly debt is not only funding more than just capex but it is worsening with every passing year. Our estimates suggest that over FY21-25E, this ratio will further aggravate as the government will have to borrow even more to service old debt and revenue expenditure.

Exhibit 26: Increasingly, debt is being used for funding even the revenue deficit and not just capex – this will aggravate further over FY21-25E (Rs tn)



Source: Emkay Research, India Budget, RBI

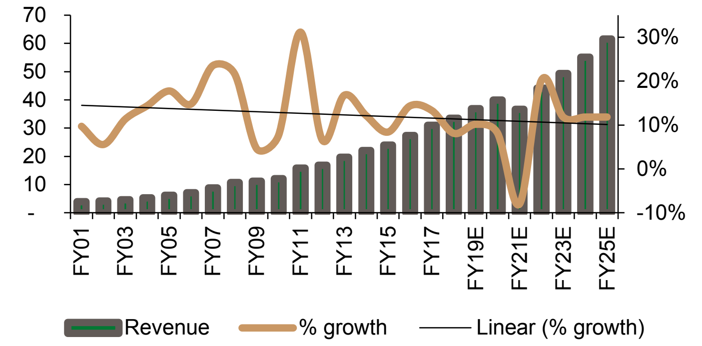
Impact of operating leverage from reducing fiscal space to leave nothing for infra spending

Analyzing government finances the way we analyze corporates

While traditional economists like to focus on debt as % of GDP, we look at debt and servicing ability as a proportion of government revenues just as we would look at a company. We use this to illustrate a key difference between India and other countries. For the purpose of our analysis, we have considered –

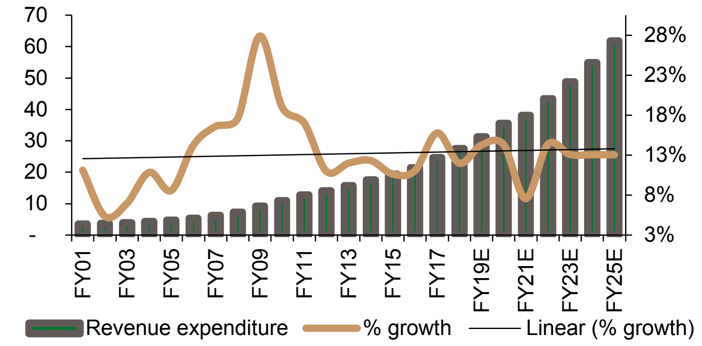
- Tax and non-tax income as revenue. Disinvestment proceed is treated as XO gains.
- Revenue expenditure (RevEx) excludes interest expense and subsidies.
- EBITDA is revenue minus revenue expenditure.
- PBT is EBITDA minus interest expense.
- PBT+XO gains is PBT + disinvestment proceeds.
- Debt/Revenues and 1-(Interest+Subsidy+RevEx/Revenues) are key metrics for evaluating debt servicing capability.

Exhibit 27: Downward trajectory for India's revenue growth (Rs tn)



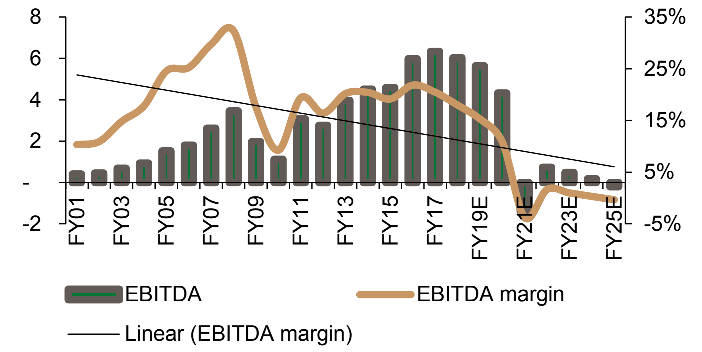
Source: Emkay Research, India Budget, RBI

Exhibit 28: …while revenue expenditure (Rs tn) growth on an upward slope



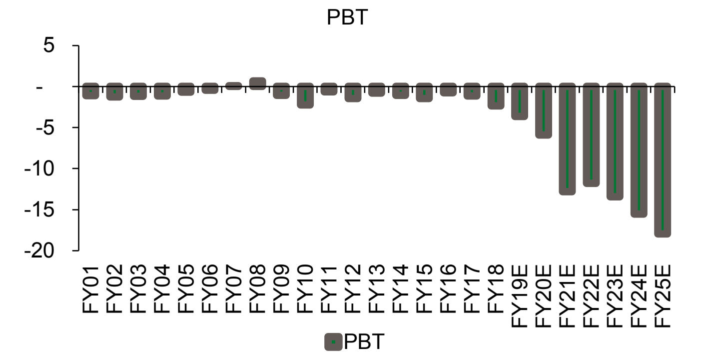
Source: Emkay Research, India Budget, RBI

Exhibit 29: High operating leverage leaves little as EBITDA (Rs tn)…



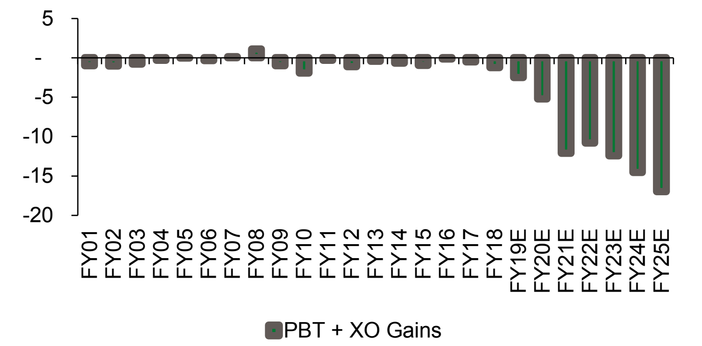
Source: Emkay Research, India Budget, RBI

Exhibit 30: …while PBT goes deep in the red (Rs tn)



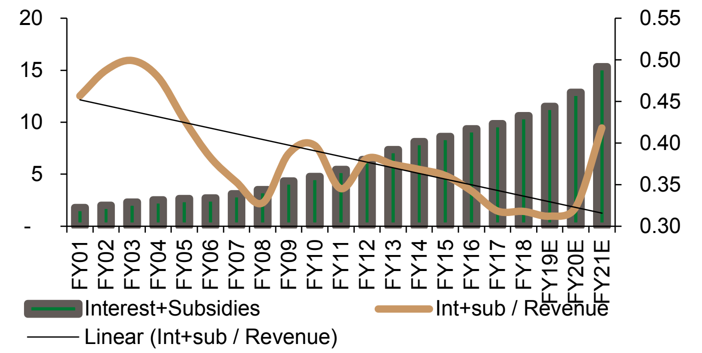
Source: Emkay Research, India Budget, RBI

Exhibit 31: XO Gains (Disinvestment) made up for PBT loss until FY17 but since then it is worsening uncontrollably (Rs tn)



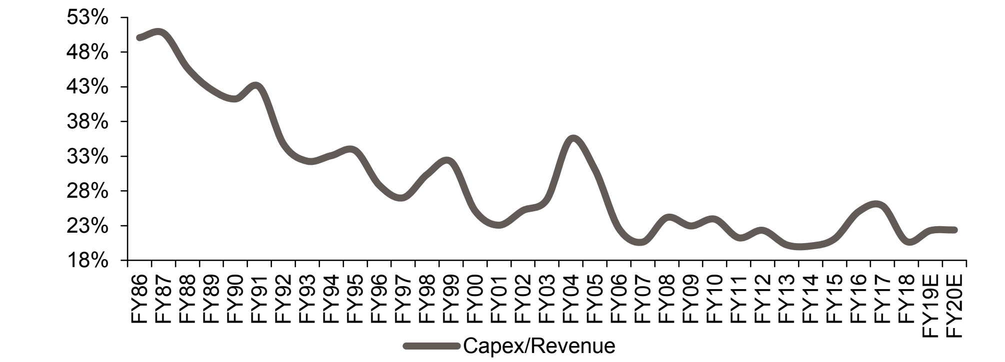
Source: Emkay Research, India Budget, RBI

Exhibit 32: Reducing subsidy (mostly Oil as food/fertilizer subsidy is stagnant) helped but Covid has thrown a spanner in the works (Rs tn)



Source: Emkay Research, India Budget, RBI

Exhibit 33: As a result, Capex/Govt revenue has been declining consistently – episodes of stressed public finances such as 98-01 and GFC have aggravated the slide



Source: Emkay Research

Distressed public debt to leave limited room for growth stimulus

Excerpts from our economist's report

India's Debt to GDP to rise to 88% in FY21

The rising scenario of elevated interest rates compared to declining nominal GDP growth and rising primary deficit is likely to elevate Debt/GDP to 88%. The concerning factor of widened government deficits for a prolonged time is not likely to aid in resuscitating growth.

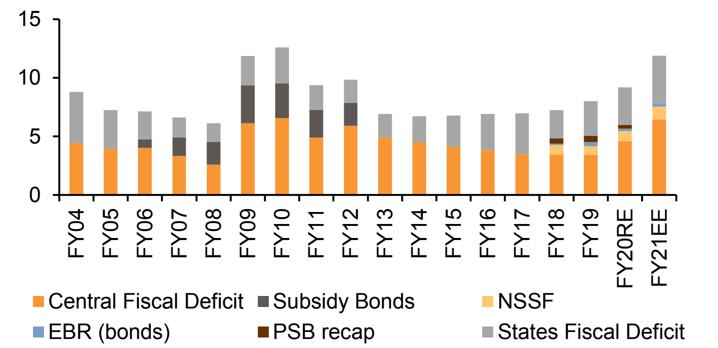
Based on the revised borrowing calendar of the Centre by Rs4tn and increased gross borrowing limit of states by another 2% (with caveats), we believe that the aggregate fiscal deficit is likely to rise to 12% of GDP. The 12-year high fiscal deficit would, however, be solely utilized to meet the revenues shortfall rather than stimulate the growth. Hence, this would have a lower multiplier on growth and would lead to elevated fiscal deficit for a long time. Based on the decline in FY21 GDP growth, widening primary deficit and elevated interest rates, public debt to GDP is likely to rise by 1500bps to 88% in FY21 and if the situation doesn't improve, it can touch triple digits by FY23. If the interest rate is lower than the growth rate of the economy, it will help offset the impact of the primary deficit on debt growth and keep a check on debt to GDP ratio. But in India, it is unlikely that the interest rates move to the sub-zero level.

For most of the countries, public debt to GDP is likely to be in triple digits in 2020, especially in developed economies. However, developed economies are not saddled with high interest cost to eat up the large part of tax revenues. Cost of borrowing in India is relatively higher. Here we are not saying that government should not come out with an effective package, we believe that the govt. needs to streamline the expenditure and prioritize expenditure with a higher multiplier.

The large part of government's tax revenues is used to service the debt payments. With the rising debt ratio and falling tax revenues, over 36% of the tax revenues would be used to meet the interest payments and that proportion will remain elevated.

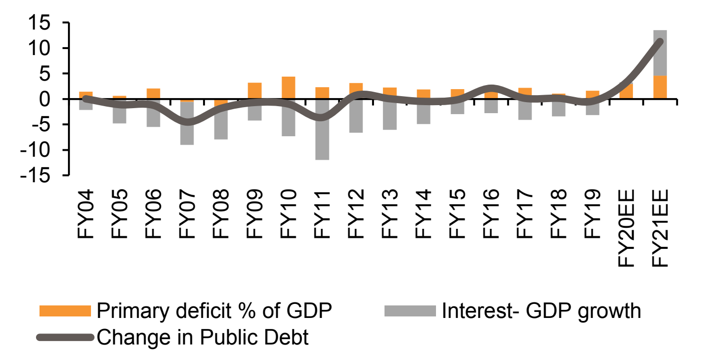
Also, the tax to GDP dropping to 12% in FY21EE from a peak of 15% in FY08 indicates that even with the recovery in growth translating to higher tax revenues would take a while. Especially, with the corporate tax cut having an insignificant impact on growth has led to a sharper drop in the tax buoyancy (especially stemming from lower tax buoyancy from states). The large part of expenditure is expected to be financed by market borrowing in FY21, which will increase the debt ratio - this debt would eventually reduce if it is utilized toward expenditure with higher and quick turnaround in multiplier which would in turn increase taxes and narrow the fiscal deficit gap.

Exhibit 34: Fiscal deficit to widen to 12% of GDP in FY21



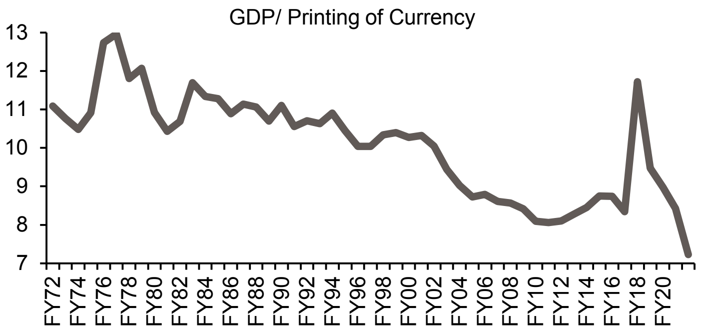
Source: CMIE, Emkay Research

Exhibit 35: Widening gap between GDP growth and interest rate and high primary deficit is likely to push debt at unsustainable levels



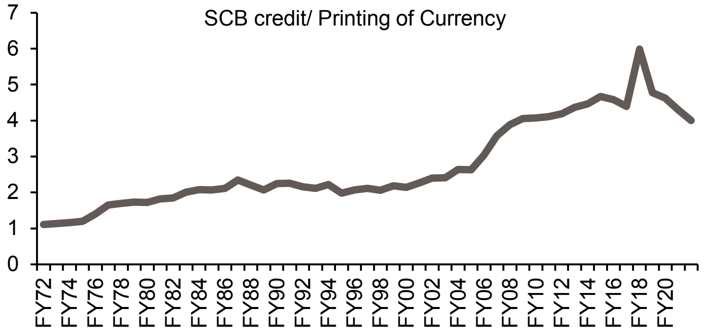
Source: CMIE, Emkay Research

Exhibit 36: We believe, the productive use of currency is likely to be lower as it will be used largely to finance the govt debt…



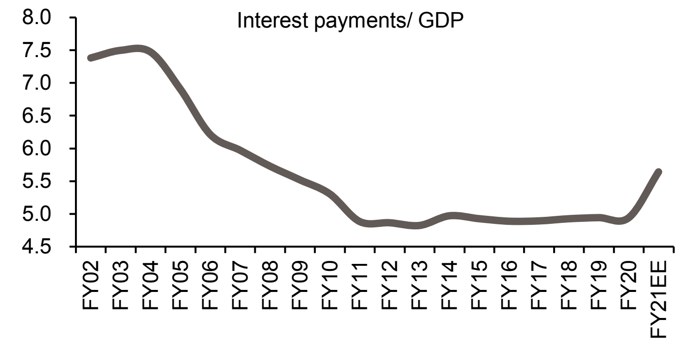
Source: RBI, Emkay Research

Exhibit 37: …which would also be reflected in comparatively lower credit multiplier (credit/ RBI balance sheet)



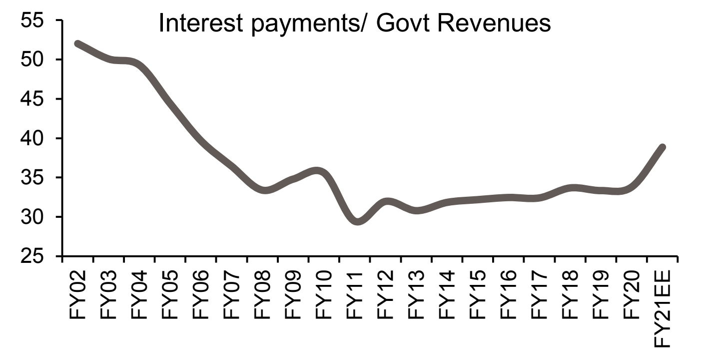
Source: RBI Emkay Research

Exhibit 38: Interest payments % of GDP to decline. FY20 onwards, it is expected to rise due to sharp fall in GDP



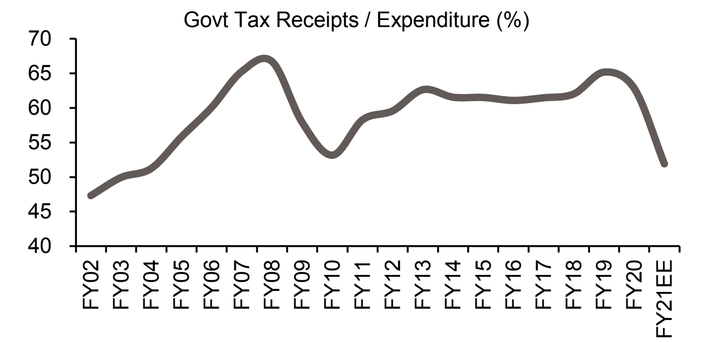
Source: CMIE, Emkay Research

Exhibit 39: Interest payments as % of Govt revenues has started to rise indicating large part of govt revenues is used to pay interest



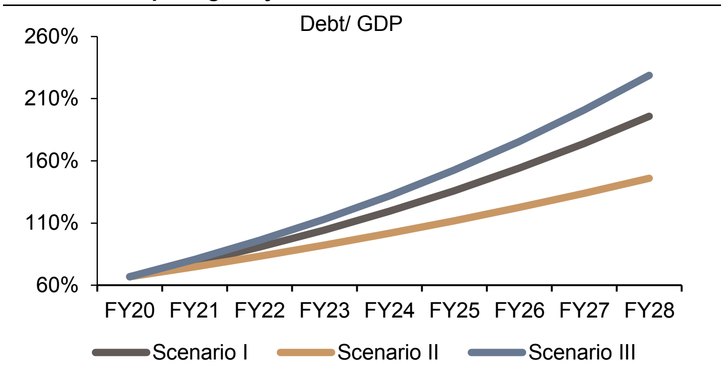
Source: CMIE, Emkay Research

Exhibit 40: Rising portion of expenditure is financed through borrowing and one offs like privatisation and telecom proceeds



Source: India Budget, State Budgets, Emkay Research

Exhibit 41: Debt to GDP to rise to 88% of GDP in FY21. If the nominal GDP trends below interest rates and primary deficit remains high, we would be in triple digits by FY24



Source: Domar Model, Emkay Research

Exhibit 42: FY21 fiscal deficit to widen further to 6.8% of GDP from 4.6% in FY20

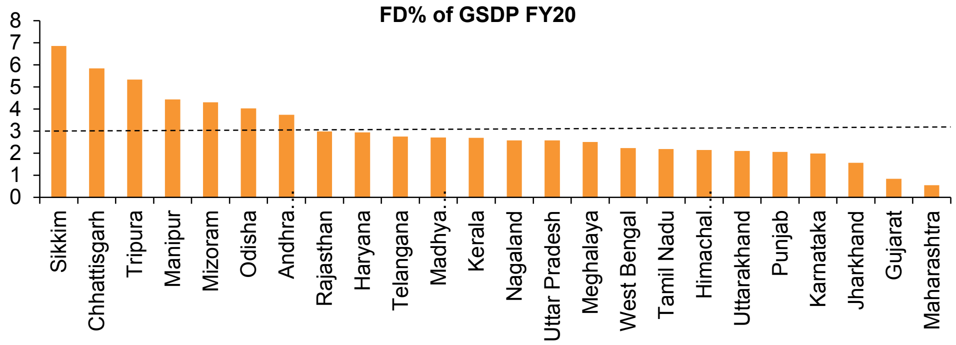
Rs. Bn	FY20	YoY (%)	FY20RE	Abs Change	FY21BE	YoY (%)	FY21EE	YoY (%)	Abs Change
Gross Tax Collection	**20,099**	**-3.4**	**21,634**	**-1,535**	**24,230**	**20.6**	**19,025**	**-5.3**	**-5,205**
Net Tax Revenue	**13,559**	**2.9**	**15,046**	**-1,487**	**16,359**	**20.7**	**13,158**	**-3.0**	**-3,201**
Direct Tax collections	**10,372**	**-8.7**	**11,700**	**-1,328**	**13,190**	**27.2**	**8,582**	**-17.3**	**-4,608**
Corporate Tax	5,569	-16.1	6,105	-536	6,810	22.3	4,166	-25.2	-2,644
Income Tax	4,803	1.5	5,595	-792	6,380	32.8	4,416	-8.1	-1,964
Indirect Tax Collection	9,726	3.1	9,934	-208	11,040	13.5	10,443	7.4	-597
Non-Tax Revenue	**3,262**	**38.4**	**3,455**	**-193**	**3,850**	**18.0**	**2,761**	**-15.4**	**-1,089**
Interest Receipts	116	-4.3	110	6	110	-5.0	105	-9.7	-5
Dividends and Profits	1,861	64.1	1,999	-138	1,554	-16.5	1,554	-16.5	0
Non Tax Revenue of U.T	17	-7.9	21	-4	23	32.4	20	12.1	-4
Other Non-Tax Revenue	1,267	17.1	1,325	-58	2,163	70.7	1,083	-14.6	-1,080
Non Debt Capital Receipts	**686**	**-33.3**	**816**	**-130**	**2,250**	**227.8**	**683**	**-0.4**	**-1,566**
Disinvestments	503	-46.9	650	-147	2,100	317.5	550	9.3	-1,550
Market Borrowing	**5,559**	**31.5**	**4,740**	**819**	**5,449**	**-2.0**	**9,728**	**75.0**	**4,279**
Total Expenditure	**26,864**	**16.0**	**26,986**	**-122**	**30,422**	**13.2**	**28,523**	**6.2**	**-1,900**
Total Revenue Expenditure	23,496	17.0	23,496	0	26,301	11.9	27,803	18.3	1,502
Total Capital Expenditure	3,367	9.4	3,489	-122	4,121	22.4	2,894	-14.1	-1,227
Revenue Deficit	**6,675**	**46.9**	**4,995**	**1,680**	**6,092**	**-8.7**	**13,433**	**101.2**	**7,341**
Fiscal Deficit	**9,356**	**44.1**	**7,668**	**1,688**	**7,963**	**-14.9**	**13,469**	**44.0**	**5,506**
Primary Deficit	**3,246**	**386.1**	**1,417**	**1,829**	**881**	**-72.8**	**5,748**	**77.1**	**4,866**

Source: India Budget, Emkay Research

Dire state of state finances in FY20; challenging to wade through FY21

Due to lower tax collection buoyancy in states, spending has dropped to a record low level. Particularly, spending has declined from capex side. This implies that despite strong transfer from the centre, state spending was restricted. Particularly, AP revenues were stressed and thus, it even impacted the spending.

Exhibit 43: Fiscal deficit for Sikkim, Chhattisgarh, Tripura, Manipur, Mizoram, Odisha & AP looked over stretched for FY20



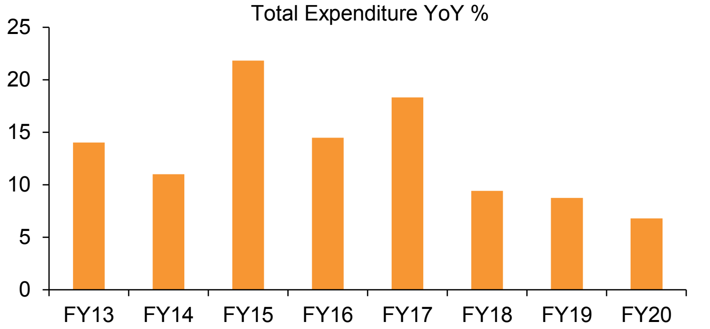
Source: State Budget, CAG, Emkay Research | Note: FD Up to Mar 20 for Chhattisgarh, Karnataka, Kerala, Odisha, Sikkim, Tripura, AP

Exhibit 44: Total expenditure and tax collection hit 8 year low level

Apr-Feb (%yoy Growth)	Total Expenditure	Revenue Exp	Capital Exp	Tax Revenue	Borrowings
FY13	14.0	14.7	9.4	17.6	-5.8
FY14	11.0	10.9	11.5	5.3	28.2
FY15	21.8	22.4	18.3	12.2	54.6
FY16	14.5	12.7	26.5	17.7	31.8
FY17	18.3	18.2	18.8	11.2	41.2
FY18	9.4	11.6	-3.6	11.8	-10.7
FY19	8.7	7.7	16.2	13.8	3.5
FY20	6.8	8.1	-2.0	0.4	22.9

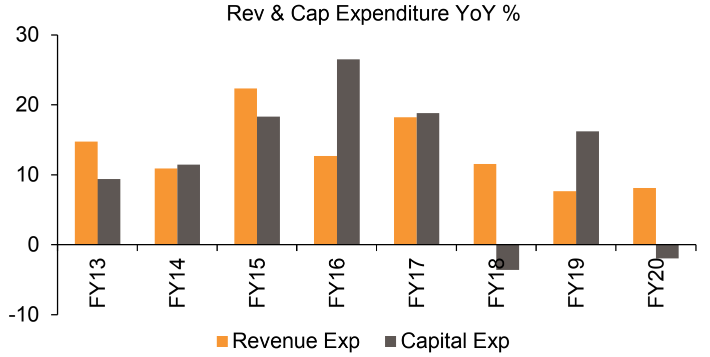
Source: Emkay Research | Note: updated up to Mar 20 for Chhattisgarh, Karnataka, Kerala, Odisha, Sikkim, Tripura, AP \ Rest states updated till Feb 20

Exhibit 45: Total Expenditure of 24 states grew by 6.8% in FY20, lowest in 8 years



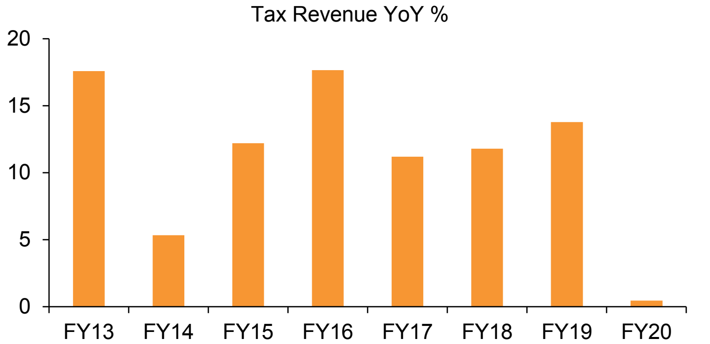
Source: CAG, Emkay Research

Exhibit 46: …Slower growth in total expenses majorly attributable to de-growth of 2% in Capital exp in FY20



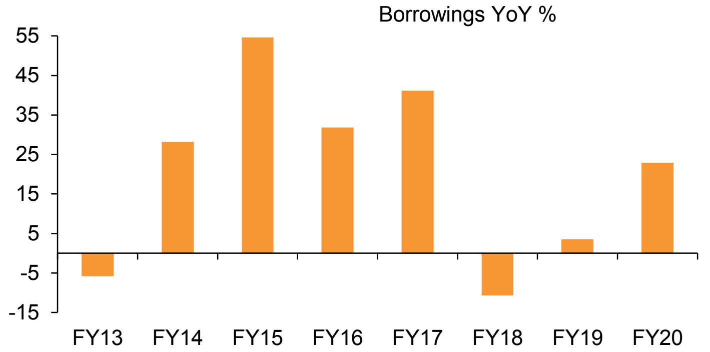
Source: CAG, Emkay Research

Exhibit 47: Tax Revenue of 24 states grew by a meagre 0.4% in FY20, lowest in 8 years



Source: CAG, Emkay Research

Exhibit 48: Growth in borrowings has been at 22.9% in FY20



Source: CAG, Emkay Research

Past episodes of fiscal stress suggest capex share in government spending deteriorating structurally

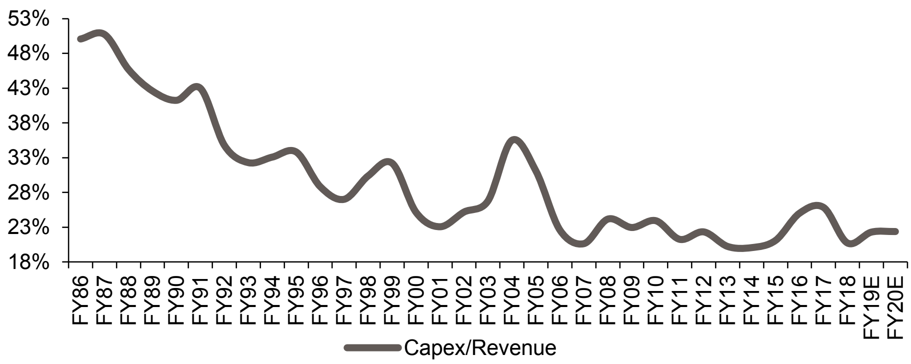
India does not have much history of counter-cyclical government spending on Infrastructure

- Combined capex by the Centre and states stagnated between FY98 and FY01 as that was also the time when high interest cost, sticky revenue expenditure and subsidy burden led to high fiscal deficit and public debt.
- Post FY01, capex revived sharply until FY04 at a CAGR of 27% as public finances gradually started reviving (though arguably the start of capex was counter-cyclical). However, the CAGR from FY98 to FY04 was still around the long-term mean of 14% over a 6-year period from the start of the worsening of public finances.
- Similarly, post the GFC in 2008, we note that capex growth dipped to a low 9% rate over FY08 to FY13 as against 27% growth in the two years preceding the GFC.

Every crisis has led to permanent deterioration in capex share of government spending

An interesting observation from the following chart is that whenever there has been a jump in the capex-to-revenue ratio (whether due to counter-cyclical spending or otherwise), subsequent declines had ensured that the ratio worsened more than the start of that spending spree. To illustrate, the bottom ratio was 27% in FY97 before going up to 32% by FY99 and ended lower at 23% in FY01. Similarly, from the lows of 21% in FY01, it went up to 36% in FY04 but ended up even lower than FY01 in FY07 at 21%. Every crisis has thus led to a permanent decline in this ratio by at least 2-3 ppt.

Exhibit 49: Capex/Govt revenue has been declining consistently – episodes of stressed public finances such as 98-01 and GFC have aggravated the slide



Source: Emkay Research

Centre's capex has shifted from Defence and Others to Roads and Railways over the past decade even as overall capex has consistently declined as a share of Central govt revenues; no more cushion from this shift for roads and railways

One of the notable features of the Centre's capex as a share of govt revenues has been a consistent declining trajectory over the decades. Despite that, key spend categories such as roads and railways have seen an increase, especially in the past decade.

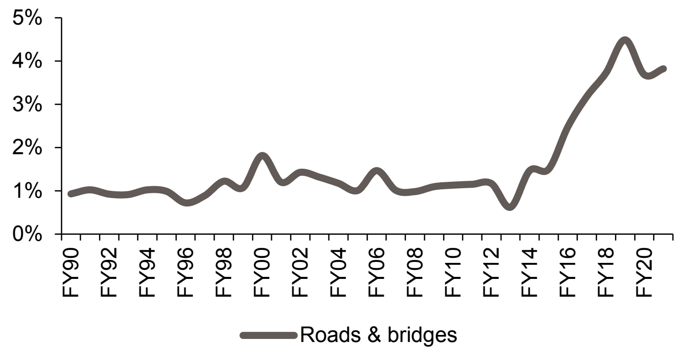
This is largely compensated by a decrease in the 'Others' category, which is essentially the difference of capex as reported in the budget documents and the key categories as we identify above. Without debating whether this 'Others' spend is productive or not (it may also be possible that some spending in the key categories is routed through 'Others'), we note that the 'Others' category spend as % of revenues has already declined substantially and stabilizing at those levels for some time now. Thus, the benefit, if any, of re-directing spend from 'Others' to more relevant categories of roads, railways, etc. has already materialized.

Going ahead, we believe that the overall capex trajectory will follow direct spending in the relevant categories such as roads, railways and defence.

Within roads, railways and defence, the share of revenue is approximately 4.5%, 3.5% and 6% respectively. Defence share has been falling from 9% levels but rising for roads.

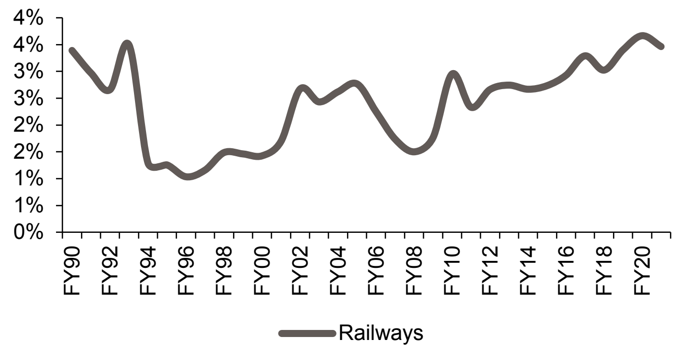
In a nutshell, even as the overall share of capex in government revenues has been consistently declining, we note that the decline in Others and defence categories has led to growth for roads and railways. However, we have possibly now reached a point where further such benefits for roads and railways may not be possible.

Exhibit 50: Road spending as a share of Central govt revenues has largely been stale, except during '98-'01 and then since FY15



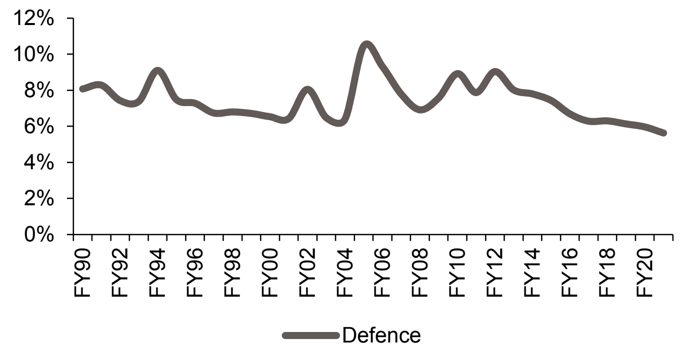
Source: Emkay Research, India Budget
Numbers above depict spending as a share of Central govt revenues

Exhibit 51: Railways spending by the Centre has risen consistently since '96 except during '05-08



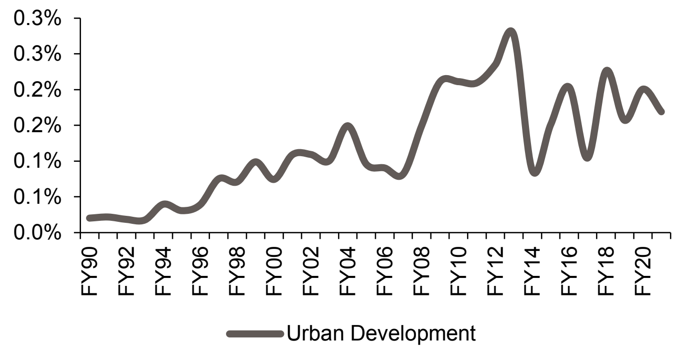
Source: Emkay Research, India Budget
Numbers above depict spending as a share of Central govt revenues

Exhibit 52: Defense Capex on the other hand has suffered



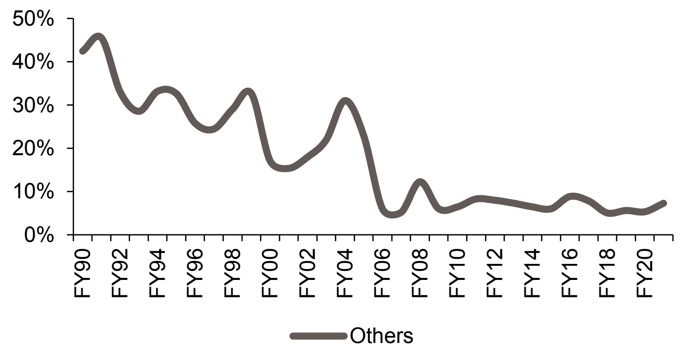
Source: Emkay Research, India Budget
Numbers above depict spending as a share of Central govt revenues

Exhibit 53: Urban development capex as % of revenue is picking up



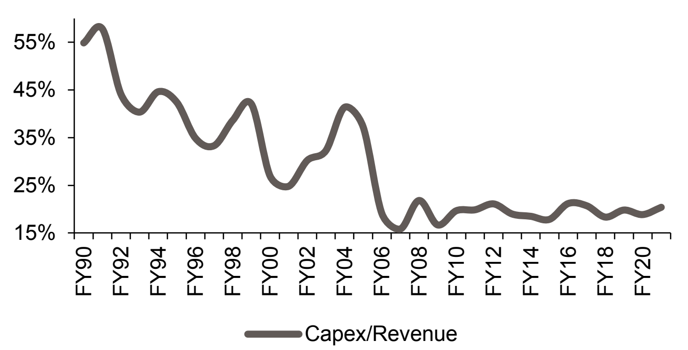
Source: Emkay Research, India Budget
Numbers above depict spending as a share of Central govt revenues

Exhibit 54: Capex other than for key Infra categories has consistently declined



Source: Emkay Research, India Budget
Numbers above depict spending as a share of Central govt revenues

Exhibit 55: Overall capex/revenue trajectory impacted more by 'Others' category than roads/railways/defense



Source: Emkay Research, India Budget
Numbers above depict spending as a share of Central govt revenues

State Infra capex has stagnated, except for volatility around fiscal stress episodes; transport, water and urban/rural development spends have gained

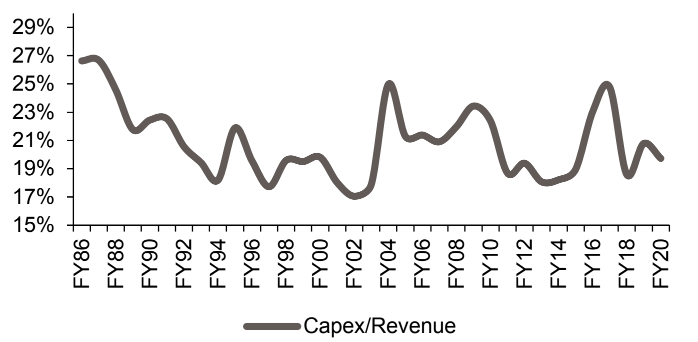
Unlike Centre capex/revenues, States capex/revenue has had a volatile trend. In the long term, the capex/revenue share has been stagnant rather than declining. Within that, transport, water supply and sanitation and urban/rural development spends have consistently grown.

Arguably, water supply & sanitation and urban/rural development spends have grown also partially because there was dedicated funding for some of these schemes by the Centre.

Irrigation and 'Others' category have seen a decline in capex/revenue share and have largely funded the water, transport and urban/rural development categories.

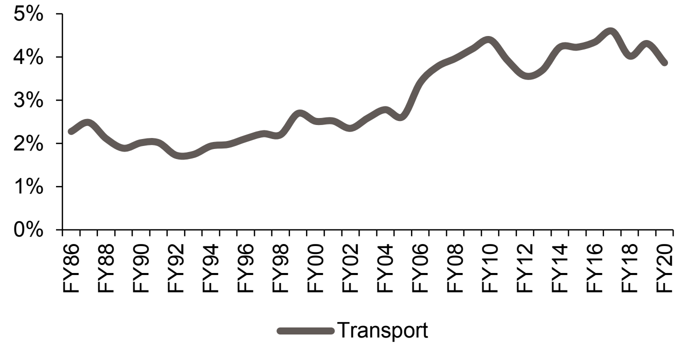
Overall, we note that the volatility in state capex/revenue coincides with fiscal stress episodes, suggesting a direct bearing on capex patterns at the state level.

Exhibit 56: Overall capex/revenue share for states has been volatile and stagnated as a trend



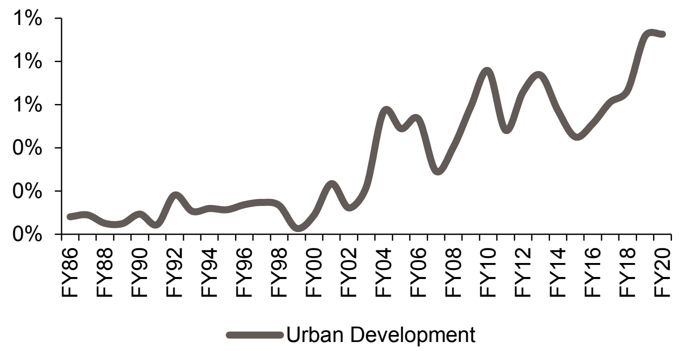
Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Exhibit 57: State road capex spend as % of revenues has increased



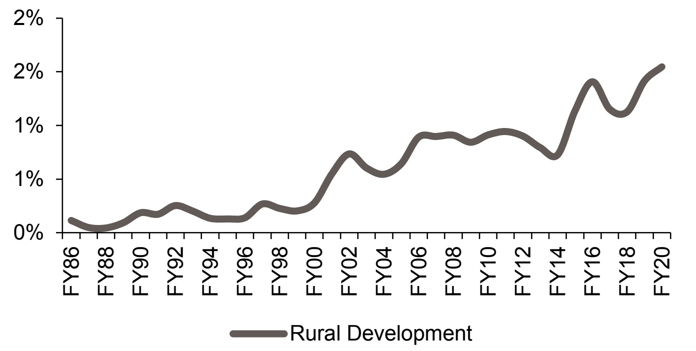
Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Exhibit 58: Urban development spend has been a focus area



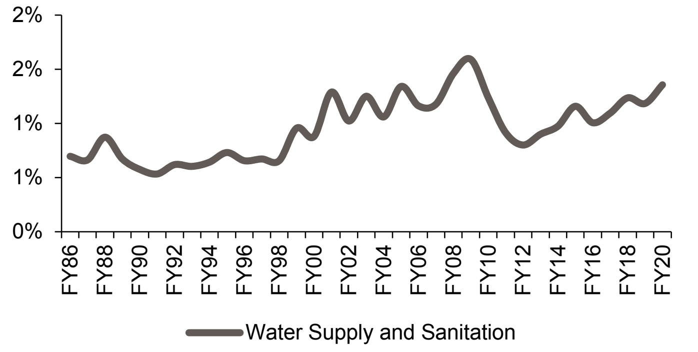
Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Exhibit 59: …along with rural development



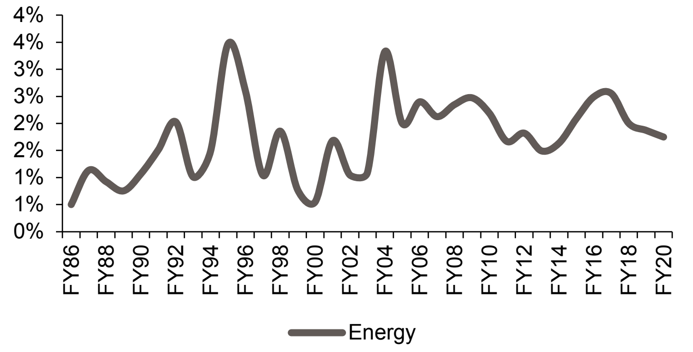
Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Exhibit 60: Water supply and sanitation spend has been inching up



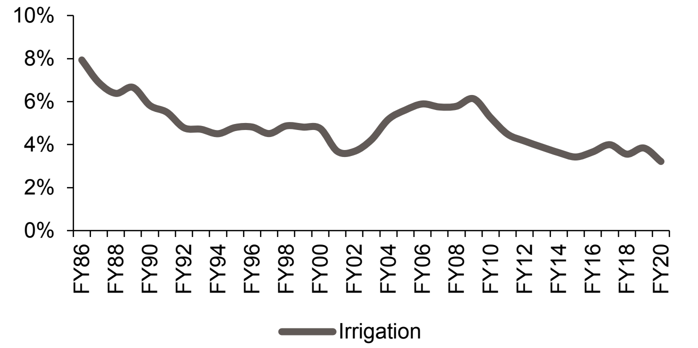
Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Exhibit 61: Energy spend share has stagnated



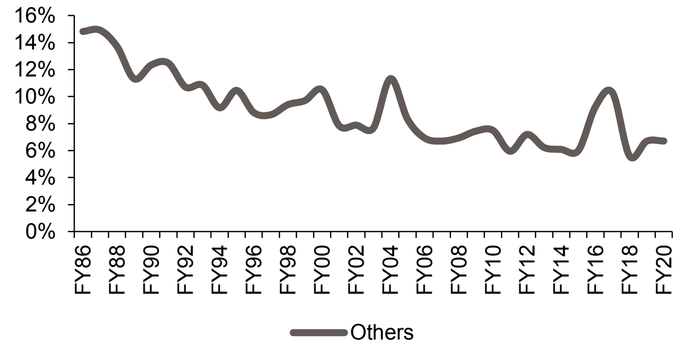
Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Exhibit 62: Irrigation spend share has been declining



Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Exhibit 63: …along with Others category



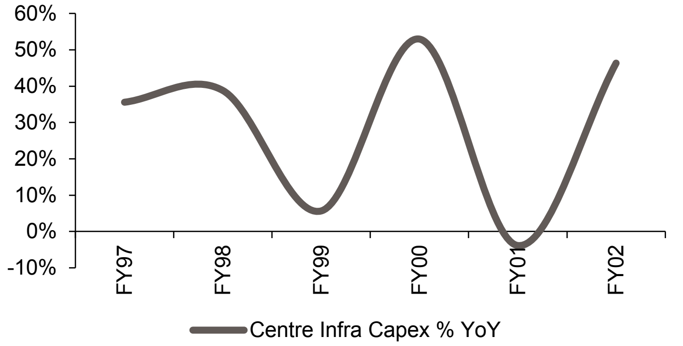
Source: Emkay Research, RBI
Numbers above depict spending as a share of State govt revenues

Comparison with Global Financial Crisis of 2008 and 1997-2003 slowdown

Is the current fiscal crisis similar to the post-GFC period or is it back to 1997-2003 slowdown? As the charts below illustrate, we are close to or even worse than the 1997-2003 slowdown and definitely much worse than the GFC.

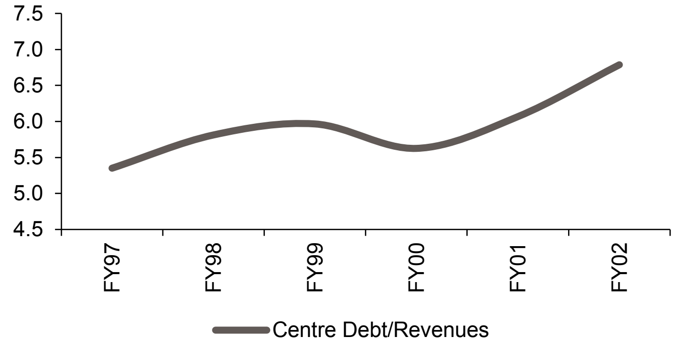
The slowdown of 1997-2003

Exhibit 64: Centre infra capex spend picked up from FY2000 due to a rather large spend program initiated in roads that sustained for a few years at the same absolute spend level as in FY2000



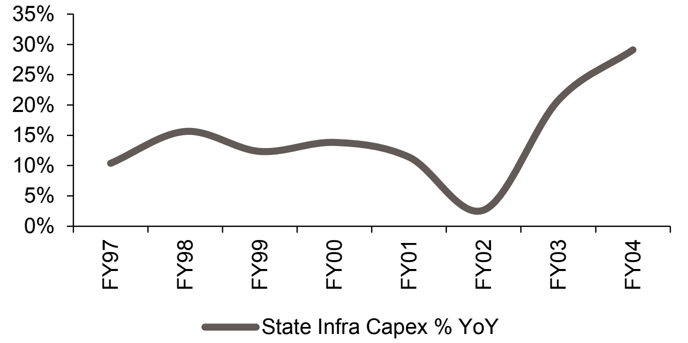
Source: Emkay Research

Exhibit 65: Centre debt/revenue peaked at 6.8x in FY02 and stabilized at 6.5x until FY05, but this ratio included the impact of the infrastructure spending pick-up from FY2000



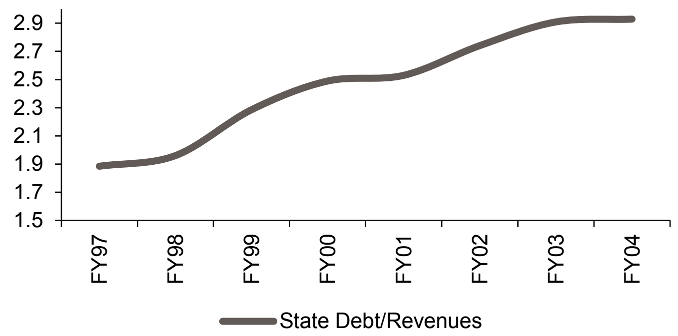
Source: Emkay Research

Exhibit 66: States' Infra Capex picked up only from FY03 after a long-drawn stagnation; even after the pick-up, the overall CAGR from FY98-04 was 15% in line with the long-term mean



Source: Emkay Research

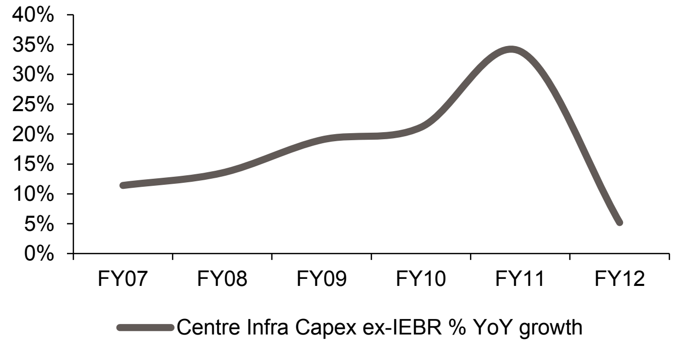
Exhibit 67: …just as with the Centre, States' debt/revenue metric also worsened until FY04 even as infra capex picked up in FY03 itself. Peak debt/revenue was 2.93x in FY04



Source: Emkay Research

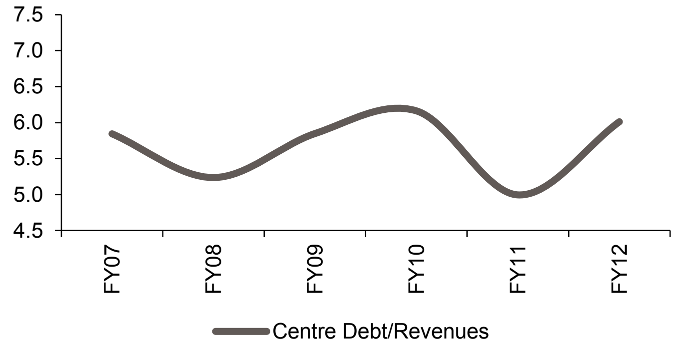
The Great Financial Crisis (GFC)

Exhibit 68: During the GFC, Centre's direct Infra capex spend continued unabated until FY11



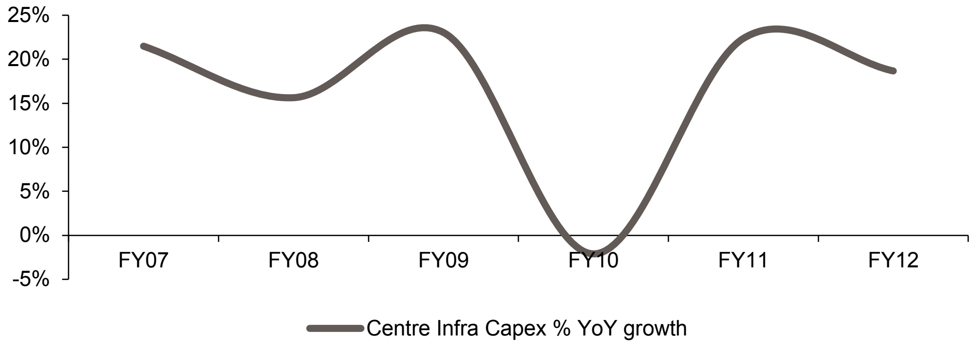
Source: Emkay Research

Exhibit 69: …largely because despite the revenue decline, Debt/revenue was not as big a challenge as FY01 or now



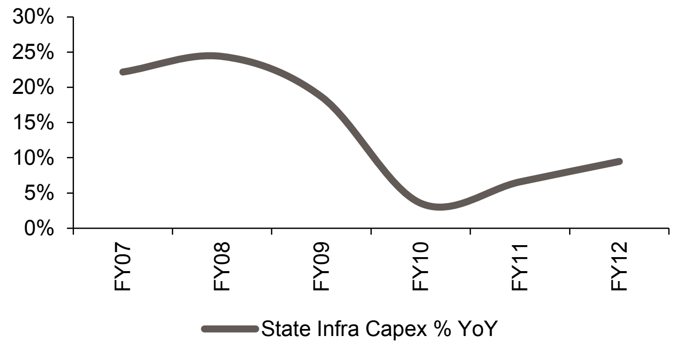
Source: Emkay Research

Exhibit 70: …it was only due to a sharp dip in IEBR funding driven projects that led to an overall dip in capex growth in FY10; recovery started from FY11



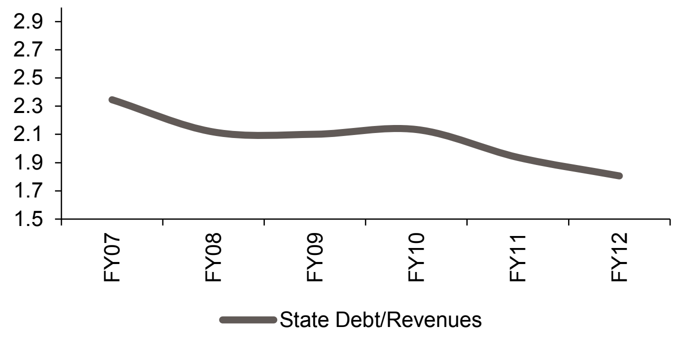
Source: Emkay Research

Exhibit 71: States' infra capex also was strong before the GFC and recovered after the FY10 blip, though at a slower pace



Source: RBI, Emkay Research

Exhibit 72: …this again was largely due to a declining Debt/Revenue trend for the States



Source: RBI, Emkay Research

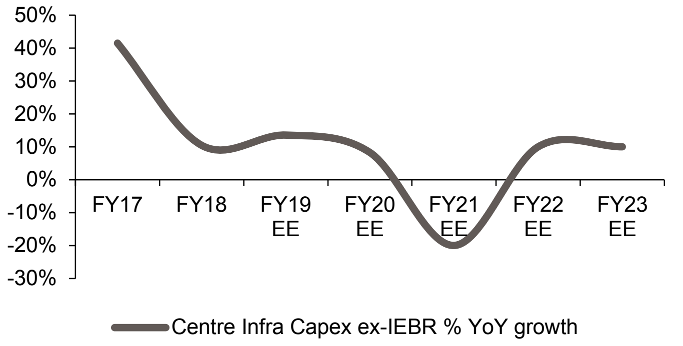
Current scenario

The current scenario is much worse than the GFC as key debt metrics are worse than that period and closer to that of 1997-2003 slowdown or possibly even worse than that. Even after the GFC, debt/revenue metrics for both the Centre and States were in a comfortable shape and trending downward, unlike both during 1997-2003 or now.

In fact, currently the debt/revenue metrics for the Centre and States will likely surpass the peak of 1997-2003 slowdown even without factoring in a counter-cyclical infrastructure spend (unlike 2000-2004 when roads and railways spend received a push from the Centre).

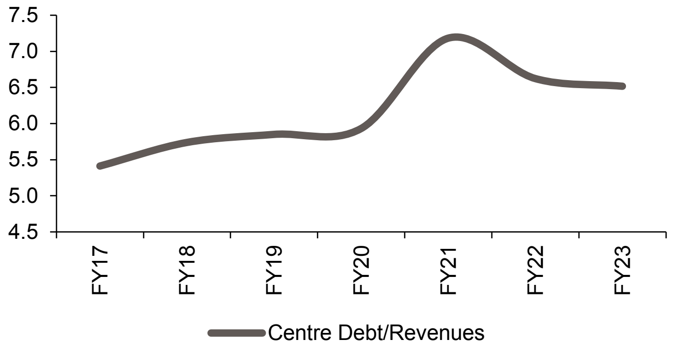
To recall, India was rated 'BB' by S&P during 1998-2004 as debt/revenue was uncontrollably high. It would be a challenge for India to remain at the lowest investment grade of 'BBB-' (current rating) and at the same time indulge in a counter-cyclical infrastructure spend driven stimulus to revive the economy.

Exhibit 73: Current trajectory for Centre's direct infra capex is on a decline and we optimistically expect base normalization by FY23



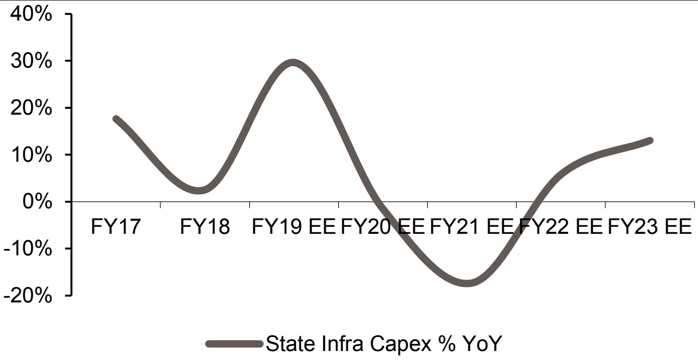
Source: RBI, Budget documents, Emkay Research

Exhibit 74: …even though on Debt/revenue metric, Centre will exceed the FY02 peak of 6.8x and stabilise at 6.5x at least



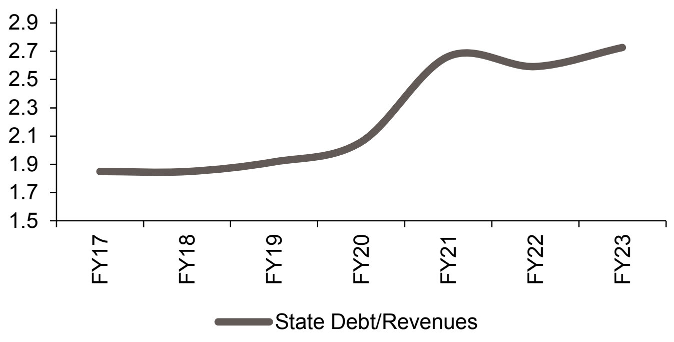
Source: RBI, Budget documents, Emkay Research

Exhibit 75: The current trajectory of States' spending was already on a decline going into Covid-19; FY22EE recovery is mostly due to low FY21EE base than a real recovery



Source: RBI, Emkay Research

Exhibit 76: States' Debt/Revenue metric will also likely reach the FY04 peak of 2.9x even without a major infrastructure capex push



Source: RBI, Emkay Research

Spending and new awards slowing dramatically from Centre and States

Central government-funded infrastructure capex growth peaked out in FY17 and has been falling since then

Infrastructure capex got a boost from the Central government-driven push FY15 onward, with FY16 and FY17 witnessing a jump over the previous years' spends. However, the government data on budget allocation shows that direct funding by the Central government toward infra capex has slowed considerably after FY17.

During this period, the government has also resorted to external budgetary resources (IEBR) for funding a large part of the infra spend (mostly roads and railways). However, based on the budget data, we find that apart from temporary blips, the share of IEBR in overall Central Government Infra capex has been around 40% over the past 10 years.

Importantly, we notice that growth rates in Central government infra spending have come off significantly. To illustrate, over FY13-17, Central government spending on infra capex (including IEBR and ex-IEBR) increased at a CAGR of ~33%, but this has dropped to 10.6% over FY17-21BE.

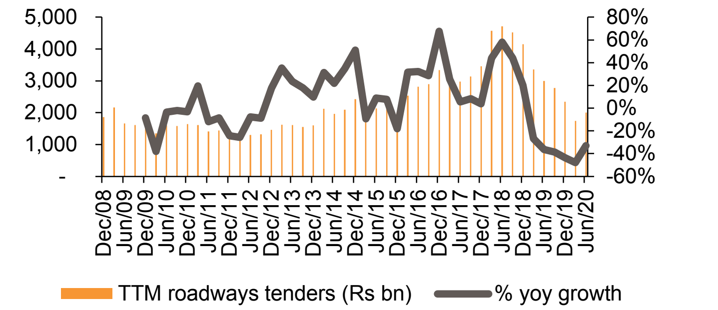
Unfortunately, the bulk of the slowdown is driven by the two largest spend buckets – roads and railways. As against a spend CAGR of 38% over FY13-19 for roads, it is estimated to slow down to 6.8% over FY19-21BE, with FY21BE effectively being flat over FY20RE. Similarly, railways spend is set to slow down to 3% growth in FY21BE vs. 24% spend CAGR over FY15-19.

Roads and railways together account for 86% of FY21BE spend of the Central government.

Our monthly infra award/tender tracker already suggests a 40%+ fall in the activity for over a year now

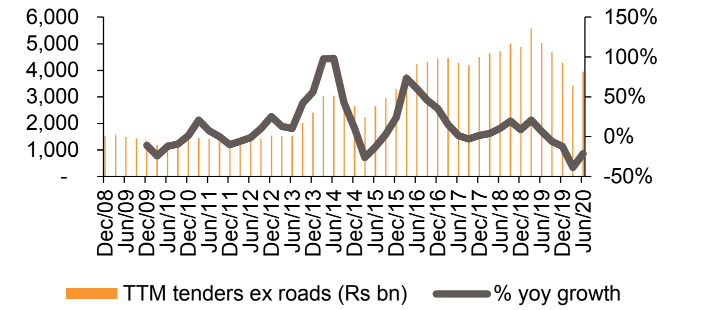
- Our monthly infra tracker on tender and award activity shows that TTM tendering activity is down 25% YoY. The decline was largely attributed to sectors such as Roadways, Community Services, Real Estate and Power Distribution.
- Similarly, the TTM awarding activity is down 40% YoY. The decline is spread across most of the major segments of infrastructure activity in India. Sectors that have reported major declines are Roadways (down 60% yoy), Power Distribution (down 52% yoy), Infrastructure (down 52% yoy) and Water Supply and Irrigation (down 45-50% yoy). Even Railways awards have declined 31% YoY over the past 12 months.
- Despite some pick-up on a YoY basis, in Apr-Jun'20, we note that the monthly run-rate is still down over 30% as compared to the run-rate in FY18-19.
- Below, we highlight TTM roadways (and ex-roadways) tenders, wherein the trends are broadly the same across segments. In particular, roadways has seen a significant drop in tenders and awards over the past 12 months.

Exhibit 77: Tender activity in Roads has collapsed since Mar-19…



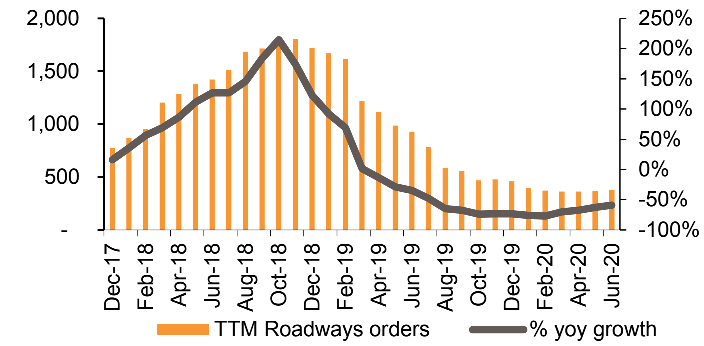
Source: Projects Today, Emkay Research

Exhibit 78: …while the rest of infra tenders are down 30-40%



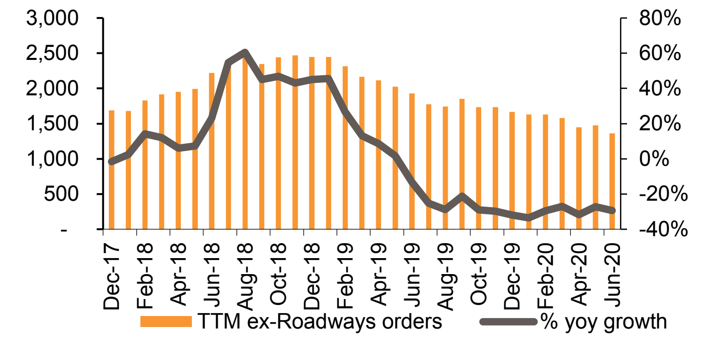
Source: Projects Today, Emkay Research

Exhibit 79: Award activity in roads is still down over 50% (Rs bn)



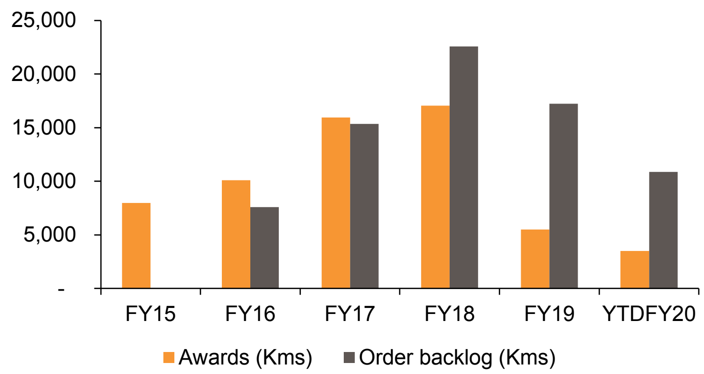
Source: Emkay Research

Exhibit 80: Ex-roads awards also down over 30% (Rs bn)



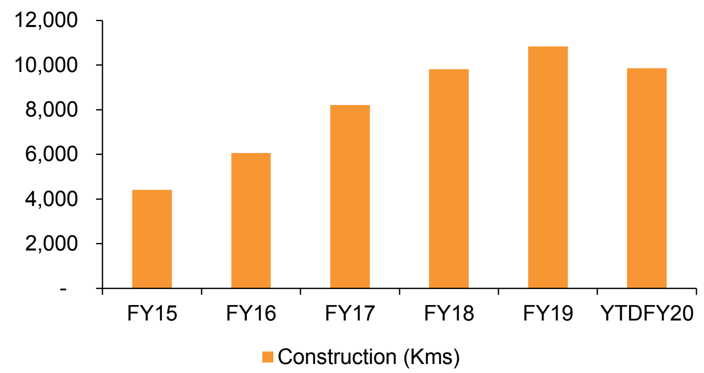
Source: Emkay Research

Exhibit 81: MoRTH awards have slowed down sharply since FY19, leading to a declining outstanding balance order book



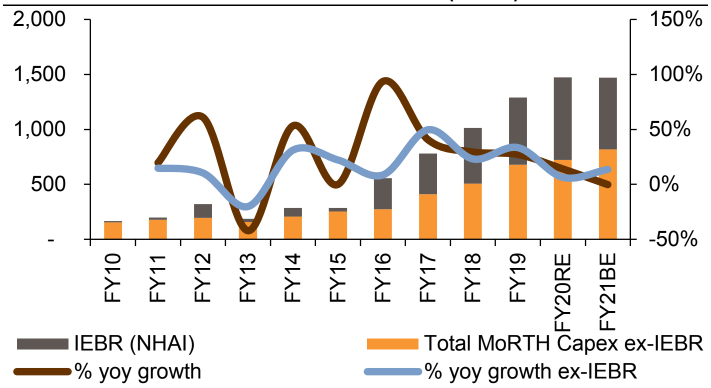
Source: MoRTH, Emkay Research
YTDFY20 is up to Dec-20

Exhibit 82: Pace of construction has also slowed but more slowdown in the offing as order book is down



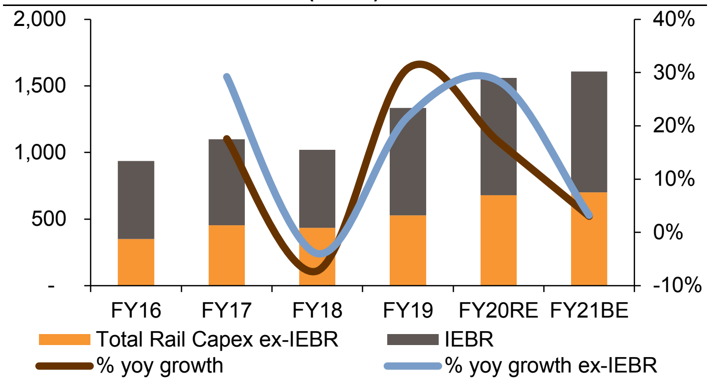
Source: MoRTH, Emkay Research
YTDFY20 is up to Dec-20

Exhibit 83: Central government road capex has slowed to -0.1% in FY21BE from a CAGR of 38% over FY13-19 (Rs bn)



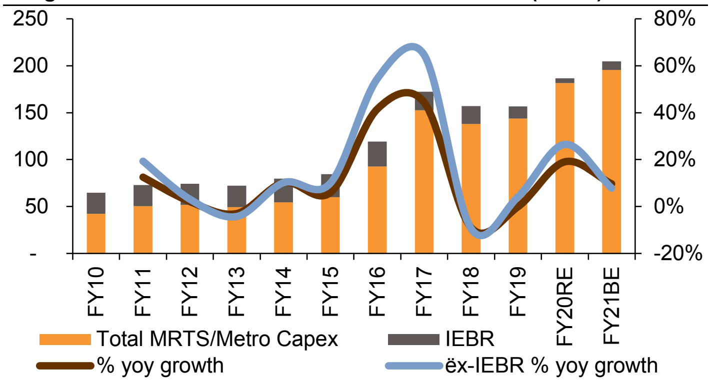
Source: India Budget Documents, Emkay Research

Exhibit 84: …while railways capex has slowed to 3% in FY21BE from a CAGR of 24% over FY15-19 (Rs bn)



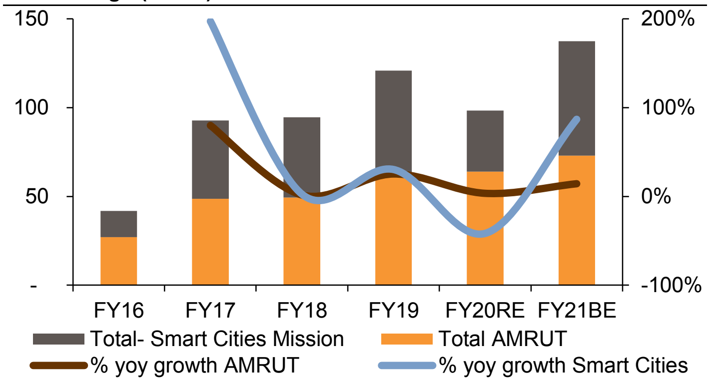
Source: India Budget Documents, Emkay Research

Exhibit 85: Central government funding on metro capex slowing to 4% growth over FY17-21BE from 24% over FY13-17 (Rs bn)



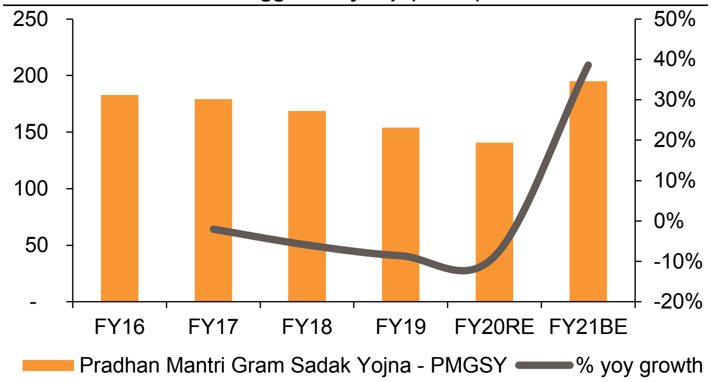
Source: India Budget Documents, Emkay Research

Exhibit 86: AMRUT/Smart Cities capex continues to grow on a small base though (Rs bn)



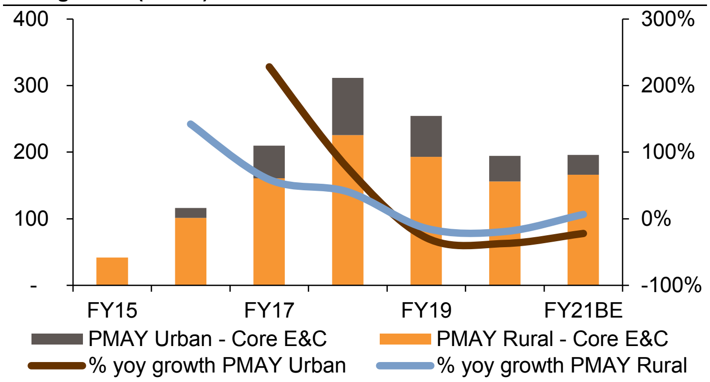
Source: India Budget Documents, Emkay Research

Exhibit 87: Spend on rural roads (PMGSY) has been declining since FY16 even as FY21BE suggests a jump (Rs bn)



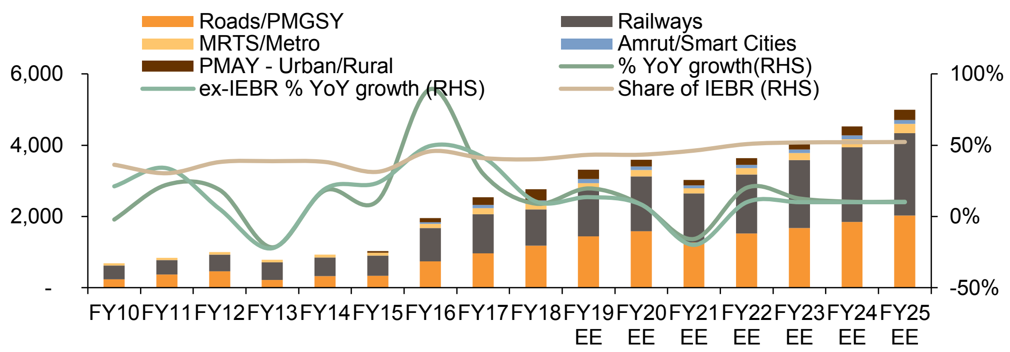
Source: India Budget Documents, Emkay Research

Exhibit 88: PMAY spend also peaked out in FY18 and has been falling since (Rs bn)



Source: India Budget Documents, Emkay Research

Exhibit 89: Central government spending on Infra capex growth rates slowing dramatically from FY16-17 peak even pre-Covid (Rs bn)

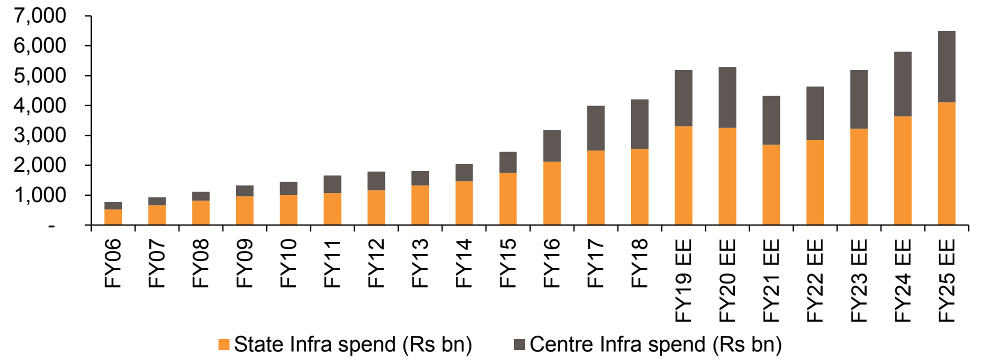


Source: India Budget documents, Emkay Research

State infra capex supported growth until FY19 after Centre slowed down, but even that is slowing now

From a peak of 73% share in combined infra spend, States has now seen see their share fall to ~62% in FY20 and we estimate this to stagnate at these levels here onwards. In FY21-22, we expect the share to temporarily dip further to ~60% on account of double whammy from low tax collections and low devolution from Centre.

Exhibit 90: State Infra spend now stagnating post FY19



Source: Emkay Research, India Budget, RBI

According to RBI data on State finances, the overall spend by all the states on infrastructure (housing, urban development, water supply & sanitation, irrigation, energy and transport) saw a 16.1% CAGR over FY16-19. However, for FY20, the budgeted spend on these categories for all the states suggests a 4.5% decline over FY19 (RE).

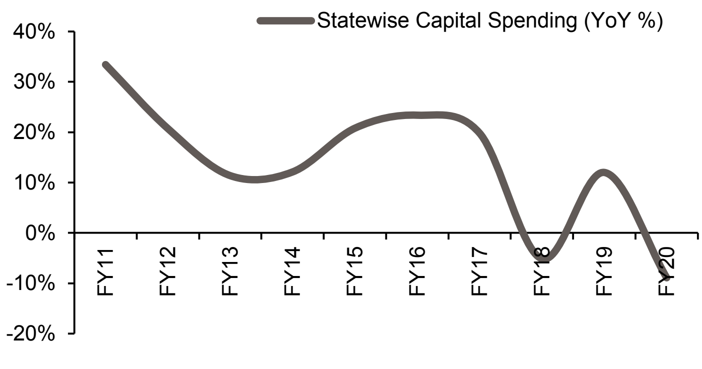
- Within this, for FY20, Water Supply & Sanitation is budgeted for the fastest growth at 26%, followed by Urban Development spend at 11%, while other spend categories are estimated to decline (e.g., Housing at -28%, Irrigation at -8%, Energy at -26% and Transport at -1%).
- To illustrate, Water Supply & Sanitation (12%), Transport (35%), Irrigation (29%) and Energy (12%) account for almost 90% of the infra capex for these states.
- As per the RBI's report, the key reason for the curtailment in infra capex by the states is to maintain their fiscal deficit target, which in turn is emanating from a shortfall in receipts.
- Of the Top-10 states that account for over 70% of the total Infra spend by all states, a major decline is budgeted by Uttar Pradesh (-18.2%), Maharashtra (-21.2%) and Rajasthan (-7.1%).
- For Maharashtra, the 21.2% cut in infra capex is led by an across-the-board cut in spending. For UP, the cut is largely driven by low spending on Energy (-52%) and Transport (-5%).
- Low spending on Irrigation in Telangana (-52%) is among the other reasons for the decline in Infra spend at an overall level.

Exhibit 91: Budgeted Infra capex by all the States for FY20 declines 4%; actual spend may dip further as fiscal stress has worsened

Total Infra spend (Rs mn)	FY16	FY17 (RE)	FY18 (A)	FY19 (RE)	FY20 (BE)	CAGR FY16-20	% of overall	FY20 Growth (%)
Uttar Pradesh	468,629	492,944	273,211	692,600	566,204	5%	16%	-18%
Karnataka	140,437	170,048	217,234	258,468	295,216	20%	9%	14%
Gujarat	167,410	170,363	200,583	234,896	245,013	10%	7%	4%
Tamil Nadu	133,896	179,895	153,711	171,845	235,174	15%	7%	37%
Maharashtra	151,163	160,092	177,177	266,489	210,038	9%	6%	-21%
Odisha	141,287	156,306	180,447	191,725	203,084	9%	6%	6%
Madhya Pradesh	118,269	189,829	242,173	179,182	198,157	14%	6%	11%
Bihar	97,195	162,627	169,316	166,592	168,332	15%	5%	1%
Andhra Pradesh	123,569	117,599	98,115	162,931	167,085	8%	5%	3%
Rajasthan	186,320	146,824	161,703	164,134	152,177	-5%	4%	-7%
Rest of the States	591,979	863,364	881,471	1,138,883	1,025,752	15%	30%	-10%
Total	**2,320,152**	**2,809,890**	**2,755,140**	**3,627,745**	**3,466,234**	**11%**	**100%**	**-4%**

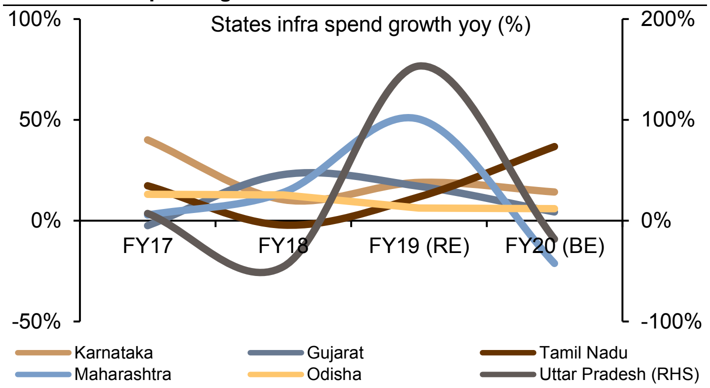
Infra defined as Cumulative spend on Housing, Transport, Water Supply & Sanitation, Irrigation, Energy and Urban Development; States represented in order of overall share.
Source: RBI, Emkay Research

Exhibit 92: Capital spending by 22 key States has slowed significantly in FY20



Source: Emkay Research

Exhibit 93: All but one of the Top 6 States by way of Infra spend slowed their spending in FY20



Source: RBI, Emkay Research

Exhibit 94: UP and Maharashtra are the key spenders and are cutting spend across most segments of Infrastructure capex, except Rural development (Rs mn)

Rs mn	Maharashtra		Uttar Pradesh	
	FY19 (RE)	FY20 (BE)	FY19 (RE)	FY20 (BE)
Water	325	-	25,725	66,473
Housing	1,427	3,025	124,012	72,698
Transport	112,655	100,203	236,375	225,646
Urban Development	20,593	3,701	9,189	12,618
Irrigation	124,941	100,823	79,796	84,212
Rural Development	15,927	79,435	41,853	51,451
Total	**275,869**	**287,187**	**516,949**	**513,098**

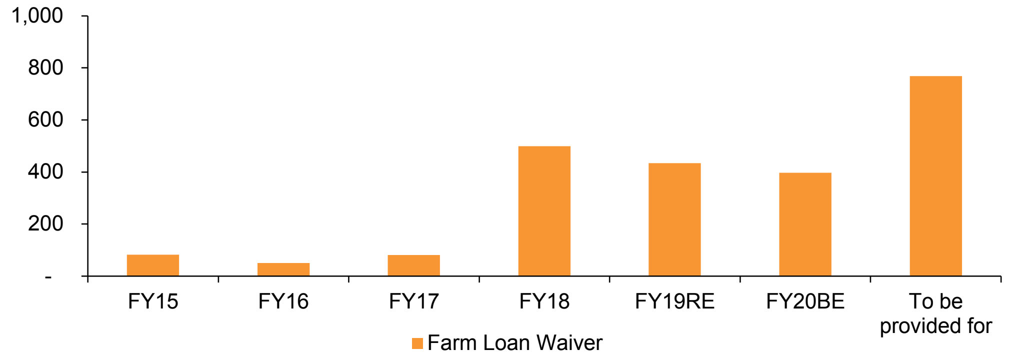
Source: Emkay Research, RBI

States' capacity to continue with strong Infra capex growth reducing

As compared with a cumulative infra capex of ~Rs3.5tn by all states budgeted for FY20BE, the total farm loan waiver announced so far since FY15 totaled Rs2.31tn. Of this, Rs1.54tn has so far been provided for until FY20BE, while the remaining will reflect in future state budgets. In addition, the trend of announcing farm loan waivers has picked up the pace in the past few years, along with the amount, by states going into elections. For example, farm loan waivers worth Rs410bn announced in FY15, while the amount surged to Rs950bn in FY19.

Unfortunately, the farm loan waivers are announced by the states that are large infrastructure spenders, thereby restricting the scope for infra spend going forward. On a recurring basis, it seems states will have to bear an incremental amount of Rs400-500bn of farm loan waivers and Rs150-300bn of income support schemes every year, which would comprise almost 20% of the total infra spend by all states put together.

Exhibit 95: Rising farm loan waiver and income support schemes account for as much as 20% of infra capex (Rs bn)



Source: RBI, Emkay Research

Exhibit 96: Full impact of farm loan waivers announced by various states yet to be provided for (Rs bn)

State	Year of Announcement	Amount Announced	Amount Provided in the Budget					
			FY15	FY16	FY17	FY18	FY19 RE	FY20 BE
Andhra Pradesh	FY15	240.0	40.0	7.4	35.1	36.0	8.8	-
as % of State GDP	-	-	*-0.9*	*-0.1*	*-0.6*	*-0.6*	*-0.1*	-
Telangana	FY15	170.0	42.5	42.5	29.6	40.2	-	60.0
as % of State GDP	-	-	*-1.0*	*-0.9*	*-0.6*	*-0.7*	-	*-0.9*
Tamil Nadu	FY17	52.8	-	-	16.8	18.7	8.8	8.1
as % of State GDP	-	-	-	-	*-0.2*	*-0.2*	*-0.1*	*-0.1*
Maharashtra	FY18	340.2	-	-	-	150.2	65.0	4.1
as % of State GDP	-	-	-	-	-	*-0.8*	*-0.3*	-
Uttar Pradesh	FY18	363.6	-	-	-	211.0	55.0	6.0
as % of State GDP	-	-	-	-	-	*-2.0*	*-0.5*	*-0.1*
Punjab	FY18	100.0	-	-	-	3.5	55.0	30.0
as % of State GDP	-	-	-	-	-	*-0.1*	*-1.4*	*-0.7*
Karnataka	FY19	440.0	-	-	-	39.2	119.7	126.5
as % of State GDP	-	-	-	-	-	*-0.4*	*-1.1*	*-1.0*
Rajasthan	FY19	180.0	-	-	-		30.0	32.4
as % of State GDP	-	-	-	-	-	-	*-0.4*	*-0.4*
Madhya Pradesh	FY19	365.0	-	-	-	-	50.0	80.0
as % of State GDP	-	-	-	-	-	-	*-0.9*	*-1.4*
Chhattisgarh	FY19	61.0	-	-	-	-	42.2	50.0
as % of State GDP	-	-	-	-	-	-	*-1.8*	*-2.0*
Total	**-**	**2,312.6**	**82.5**	**49.9**	**81.5**	**498.8**	**434.5**	**397.0**
As % to States' GDP			*0.1*	*0*	*0.1*	*0.3*	*0.2*	*0.2*

Source: RBI, Emkay Research

Total capital outlay for Top-10 infra spending States already accounts for more than their gross fiscal deficit

As we highlight in Exhibit 97:, due to various social sector commitments, the Top-10 infra spending states have seen non-infra spend outpacing the former. While cumulative Infra spending has seen a CAGR of 9% over FY16-20BE for these states, non-infra capex has risen at a 17% CAGR during the same period.

Simultaneously, we also note that the total capital outlay for these states already exceeds their gross fiscal deficit (GFD), suggesting limited headroom available for further growth in capex unless the GFD were to come down through other measures.

For that, we then look at the composition of GFD for these states in Exhibit 98:, where we find that the bulk of the GFD is contributed by the capital outlay. Most states have a parallel revenue deficit too, which tends to be sticky as it is almost impossible to control revenue spending (mostly recurring expenses such as staff salaries, interest payments, etc.). Thus, the only way GFD could remain in control is by way of a reduction in the capital outlay. As discussed above, given the focus on non-infra spending within the capital outlay, it is more probable that infra spending will take a knock going forward.

It further does not help that the GFD for the States is any ways going up across the board since FY18 and is now inching closer to the threshold of 3% in FY19.

According to the RBI, while the States have done well so far in keeping GFD below the 3% threshold, they have not built enough cushion for macroeconomic threats.

In its study of State Finances 2019, the RBI has made observations on States' track record of keeping GFD under the 3% threshold, which may impact the infra spending outlook. As per the RBI, the States recorded an improvement in FY18 vs. FY17 and remained well within the threshold of 3% in FY19. A similar outcome is budgeted for FY20 (BE). However, some important features of these budget outcomes are noteworthy:

- Fiscal improvement has hinged upon expenditure curtailment, and in particular, capital expenditure, which has negative output effects.
- Committed expenditures are on a rising trend, driven by interest and pension payments.
- Debt liabilities have been rising over FY16-19 and are likely to remain around 25% of GDP in FY20, clearly making the sustainability of debt the main medium-term fiscal challenge for states.
- States have budgeted prudently for FY20 but macroeconomic risks to their combined budget estimates appear to be slanted to the downside. The loss of momentum in economic activity needs to be reversed soon, otherwise it can have revenue implications for State budgets, if not complemented by extra efforts toward revenue mobilization. If they do not materialize, **cuts in expenditure to meet the fiscal targets may become inevitable**. This can feed an ever-tightening vicious spiral of austerity, deepening the economic downturn which, in turn, cramps fiscal revenues and forces further expenditure reductions and so on.
- In the case of states, there can be large macroeconomic spillovers from the spending retrenchments with states' capital and developmental expenditure accounting for close to two-thirds of the combined expenditure.

Exhibit 97: Top-10 States based on Infra spending

Rs bn	Infra spend	Spend CAGR (FY16-20 BE)		Fiscal deficit	Capital Outlay	Capital Outlay/ GFD	Infra spend/GFD
FY20 (BE)		Infra	Non-Infra				
Uttar Pradesh	566	4.8%	2%	469	776	166%	121%
Karnataka	295	20.4%	8%	421	401	95%	70%
Gujarat	245	10.0%	11%	313	328	105%	78%
Tamil Nadu	235	15.1%	16%	442	313	71%	53%
Maharashtra	210	8.6%	25%	602	407	68%	35%
Odisha	203	9.5%	19%	189	245	130%	108%
Madhya Pradesh	198	13.8%		18%	335	104%	62%
Bihar	168	14.7%	16%	161	366	227%	105%
Andhra Pradesh	167	7.8%	95%	353	323	92%	47%
Rajasthan	152	-4.9%	8%	327	195	60%	47%
Total	**2,440**	**9.0%**	**17%**	**3,596**	**3,688**	**103%**	**68%**

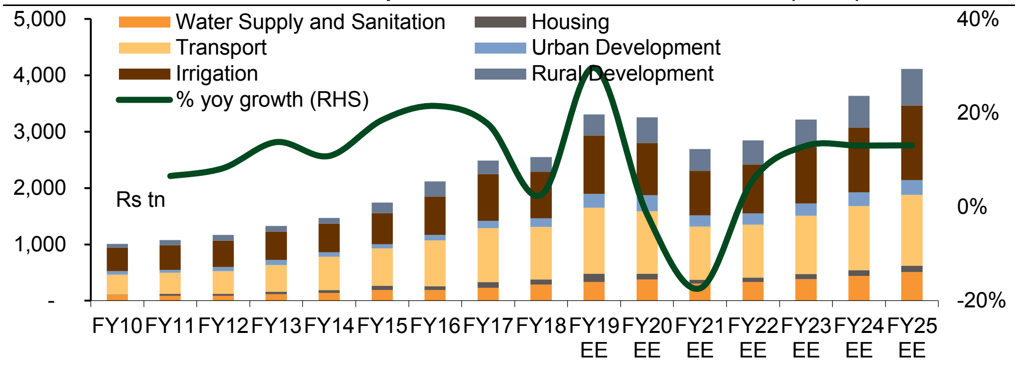
Source: Emkay Research, RBI

Exhibit 98: GFD breakdown for Top-10 States - Except UP and Bihar, most states have a revenue deficit too; GFD as % of state GDP on the rise for all states except Andhra Pradesh

Rs bn	Revenue Deficit	Capital Outlay	Net Lending	Non-debt Capital Receipts	Gross Fiscal Deficit (GFD)	Revenue Deficit/GFD	GFD as % of State GDP		
							FY18	FY19	FY20BE
Uttar Pradesh	-278	776	-30	-	469	-59%	2.0	3.0	3.0
Karnataka	-3	401	23	1	421	-1%	2.3	2.9	2.5
Gujarat	-29	328	13	-	313	-9%	1.6	2.1	1.8
Tamil Nadu	143	313	-14	-	442	32%	2.7	2.7	2.4
Maharashtra	198	407	-3	-	602	33%	1.0	2.1	2.0
Odisha	-65	245	9	-	189	-35%	2.1	2.9	3.5
Madhya Pradesh	-7	335	-7	-	321	-2%	3.1	3.5	3.5
Bihar	-215	366	10	-	161	-134%	3.0	4.6	2.8
Andhra Pradesh	18	323	12	-	353	5%	4.0	3.6	3.3
Rajasthan	270	195	-138	0	327	83%	3.0	3.4	3.2
Total	**32**	**3,688**	**-123**	**1**	**3,596**	**1%**	2.4	2.9	2.6

Source: Emkay Research, RBI

Exhibit 99: We estimate State Infra capex to slow down from historical levels (Rs bn)



Source: RBI, Emkay Research

What does this mean for NIP?

Downside risk to our National Infrastructure Pipeline estimates, which already factored in only 66% feasibility in the best case scenario

- The National Infra Pipeline provides visibility for a future pipeline. Pre-Covid-19, we had estimated that ~66% of this capex was feasible in the best case scenario assuming business-as-usual. However, we now foresee downside risk to these estimates.
- Our estimate of Rs73.17tn of capex under the NIP did not assume any adverse impact from the current worsening of the macroeconomic situation, leading to a further cut in infra spending by Centre and States. At the same time, we also did not assume any major policy changes or infrastructure push by the government by foregoing the fiscal deficit concerns.
- Importantly, our estimated annual run-rate of Rs12.2tn of infra capex anyways compared with FY20BE likely run rate of Rs10.6tn, suggesting only a ~5% CAGR over FY20-25E.
- We had taken into account the FY19 run rate of spending in these segments and accordingly built the base for future spending. Admittedly, the list of projects where the government is planning this spend is still not available publicly and that hampers our estimate.
- The biggest discrepancy between our estimates and NIP estimates relates to the capex in Power and Urban development segments, where we are lower by 52% and 69%, respectively.
- Our estimates suggest an optimistic 18% CAGR in power capex over FY20-25, 9% in Railways and 14% in rural infrastructure. On the other hand, we are building in no growth in Road and Irrigation capex over FY20BE and a 4% CAGR over FY20-25E for urban development.
- Funding for NIP, however, would be a key threat to our estimate of 66% feasibility of these targets.

Exhibit 100: In the best case scenario, we had estimated 66% of NIP targets were feasible

NIP details	Total planned spend		Historical trend					Future Annual run-rate	
Rs bn	**NIP**	**Emkay est.**	**FY16**	**FY17**	**FY18**	**FY19RE**	**FY20BE**	**NIP**	**Emkay est.**
Power	14,104	5,900					700	2,351	983
Renewable Energy	9,295	4,104					550	1,549	684
Atomic Energy	1,555	1,541					-	259	257
Petroleum and natural gas	1,946	1,500					-	324	250
Total energy	**26,900**	**13,045**					**1,400**	**4,483**	**2,174**
Roads	**20,338**	**16,994**	**1,552**	**1,920**	**2,115**	**2,678**	**2,832**	**3,390**	**2,832**
Railways	**13,676**	**12,000**	**935**	**1,099**	**1,020**	**1,334**	**1,561**	**2,279**	**2,000**
Ports	**1,212**	**1,009**					**121**		**168**
Airport	**1,434**	**1,434**					**188**		**239**
Urban - Amrut, Smart Cities, MRTS, affordable housing, Jal Jeevan Mission	**19,193**	**6,000**	**442**	**703**	**807**	**951**	**884**	**3,199**	**1,000**
Irrigation	**8,945**	**6,000**	**686**	**887**	**826**	**1,100**	**1,015**	**1,491**	**1,000**
Water and Sanitation	3,630	3,618	188	237	287	339	428	605	603
Rural Infrastructure	4,110	4,110	264	240	262	405	488		685
Total rural infrastructure	**7,739**	**7,728**					**916**	**1,290**	**1,288**
Digital infrastructure	3,097	3,205					839	516	534
Total agriculture and food processing infrastructure	1,687	606					89	281	101
Total social infrastructure	3,934	3,567					555	656	595
Total industrial infrastructure	3,150	1,582					172	511	264
Total	**111,304**	**73,169**					**10,572**	**18,551**	**12,195**

Source: MoF, Emkay Research

Govt's funding assumption for NIP is aggressive and challenging

- As per the Ministry of Finance presentation, the assumed shares of Centre/State/Private sector in the NIP target of Rs111tn stand at 39%/40%/21%. We believe that this is a very aggressive assumption across all spenders.
- We illustrate that the government has assumed a 21.5% CAGR in capital outlay by Centre over FY20-25 and similar growth in both budgetary support for infrastructure spend as well as IEBR funding. Though this compares favorably with a ~24% CAGR in spend by the Centre over FY13-20BE (of which 27% IEBR and 22% budgetary support), it seems very aggressive when looked at against the near-term growth over FY17-20BE of just 13% CAGR (of which 16% IEBR and 10% budgetary support).
- Further, the worsening macroeconomic outlook does not justify the aggressive assumption of 12.2% nominal GDP CAGR over FY20-25.
- On our estimate of Rs73tn of capex under the NIP and assuming a similar Centre/State/Private split, the capital outlay CAGR for the Centre asks for a 13% CAGR.
- In reality, we believe that demand for Centre/State outlay will be even higher as in the MoF's assumption, there is a huge reliance on the private sector in the Roads and Power sectors, both of which may disappoint significantly.
- As such, the reliance on innovative methods of external funding is key. As we highlight next, while some of these models are now being explored, the pick-up has been gradual and is unlikely to compensate for the slowdown in the Centre/State budgetary support.

Exhibit 101: Government's funding plan for NIP is based on aggressive assumptions

Rs tn	FY19 RE	FY20 BE	FY21	FY22	FY23	FY24	FY25
Total Capital Outlay by Centre (Infra) A	3.54	3.77	4.58	5.56	6.76	8.21	9.97
Budgetary support (infra) B	1.39	1.53	1.86	2.25	2.74	3.33	4.04
C=B/A	39%	41%	41%	41%	41%	41%	41%
Budgetary Support/GDP (D=B/E)	0.73%	0.74%	0.82%	0.89%	0.96%	1.03%	1.11%
Incremental budgetary support/GDP vs FY20			0.07%	0.14%	0.21%	0.29%	0.36%
GDP in Rs tn (E)	190	205	227	254	286	323	365
% GDP growth assumed by Govt		8%	11%	12%	13%	13%	13%

Source: MoF, Emkay Research

Innovative funding models needed to mitigate Government dependency on infra capex still in a nascent stage

- Innovative models sought to fund future capex on infra such as InvITs, TOT and SPV level fund raise, however, recent trends suggest that this would still form a miniscule portion of the overall requirement.
- An analysis of the funding patterns of public capex in key categories such as transport, water and T&D suggests that the dependency on multi-lateral agencies and bond issuances is rising. For example:
  - Most of the metro projects are being funded largely by funds/loans from multi-lateral agencies such as JICA and World Bank. (Exhibit 49; 40-60% of funding secured from multi-lateral agencies).
  - The NHAI has explored raising funds through the TOT model and bond issuances rather than relying on govt funding alone but has succeeded only partially so far (Exhibit 51).
  - Municipalities are increasingly trying to tap money from the bond market by municipal bond issuances but have had a patchy track record.

Metro and DFC projects largely funded through multilateral agency borrowings

Over the past few years, alternative sources of funding have been on a rise to finance infrastructure projects. There has been a shift in project funding being through the government budget to other sources such as external/multilateral borrowing, muni bonds (bonds issued by Municipal Corporation), PPP model and the monetization of assets. Most of the large infrastructure projects such as Dedicated Freight Corridor (DFC), Bullet Train Project, Metros, etc. are primarily funded via multilateral borrowings.

Exhibit 102: 40-60% of a Metro project cost is funded by multilateral agencies

Metro Project	% of total Cost funded by multi-lateral agencies
Delhi Metro- Phase 1	60.0
Delhi Metro - Phase 2	54.5
Delhi Metro - Phase 3	48.6
Mumbai Metro - Line 3	57.2
Ahmedabad	56.3
Chennai	58.5
Lucknow	50.9
Kochi	42.2

Source: Emkay Research

Exhibit 103: Both legs of the DFC are primarily funded by multilateral agencies

DFC Corridor	% of total Cost funded by multi-lateral agencies
Western Freight Corridor	100
Eastern Freight Corridor	65

Source: Emkay Research

Deep earnings cut again for the entire sector

Exhibit 104: Changes in Emkay revenue estimates

Revenue (Rs mn)	FY21E			FY22E			FY23E		
	Earlier	Revised	% chg.	Earlier	Revised	% chg.	Earlier	Revised	% chg.
ABB	70,729	61,230	-13%	83,203	76,849	-8%	93,502	88,439	-5%
BHEL	227,697	227,697	0%	299,318	299,318	0%	322,066	322,066	0%
Concor	67,576	53,495	-21%	78,130	63,291	-19%	NA	70,633	-
Cummins India	42,212	40,237	-5%	51,187	50,755	-1%	57,433	56,333	-2%
GE T&D India	34,151	29,184	-15%	37,507	34,852	-7%	NA	38,278	-
Kalpataru Power	84,840	81,862	-4%	87,262	85,880	-2%	NA	94,171	-
KEC International	119,241	118,446	-1%	135,229	128,869	-5%	NA	139,358	-
KNR Construction	27,509	25,239	-8%	35,636	32,943	-8%	NA	33,268	-
Larsen & Toubro	1,432,714	1,432,714	0%	1,781,344	1,781,344	0%	1,913,166	1,913,166	0%
PNC Infratech	43,979	38,668	-12%	56,287	51,627	-8%	NA	52,149	-
Siemens	126,082	99,810	-21%	139,858	126,972	-9%	156,470	141,903	-9%
Thermax	52,912	46,460	-12%	60,790	56,069	-8%	NA	59,866	-
Triveni Turbine	6,919	7,929	15%	8,850	8,459	-4%	9,541	9,246	-3%

Source: Company, Emkay Research, Bloomberg

Exhibit 105: Changes in Emkay EBITDA estimates

EBITDA (Rs mn)	FY21E			FY22E			FY23E		
	Earlier	Revised	% chg.	Earlier	Revised	% chg.	Earlier	Revised	% chg.
ABB	5,660	2,826	-50%	7,406	6,681	-10%	8,554	7,974	-7%
BHEL	-146	-146	0%	21,305	21,305	0%	22,785	22,785	0%
Concor	16,532	10,204	-38%	20,009	13,940	-30%	NA	15,847	-
Cummins India	3,810	4,300	13%	5,903	6,434	9%	7,623	7,709	1%
GE T&D India	1,405	-1,007	-172%	2,996	2,845	-5%	NA	3,699	-
Kalpataru Power	8,179	8,857	8%	7,563	8,781	16%	NA	9,207	-
KEC International	11,376	11,516	1%	13,173	12,389	-6%	NA	13,285	-
KNR Construction	5,094	4,278	-16%	7,220	6,197	-14%	NA	6,267	-
Larsen & Toubro	155,302	155,302	0%	198,988	198,988	0%	220,564	220,564	0%
PNC Infratech	5,484	4,563	-17%	8,099	6,876	-15%	NA	7,062	-
Siemens	13,906	7,960	-43%	15,317	13,458	-12%	17,114	15,671	-8%
Thermax	4,288	2,824	-34%	5,279	4,366	-17%	NA	5,140	-
Triveni Turbine	1,128	1,813	61%	1,909	1,943	2%	2,051	2,126	4%

Source: Company, Emkay Research, Bloomberg

Exhibit 106: Changes in Emkay PAT estimates

PAT (Rs mn)	FY21E			FY22E			FY23E		
	Earlier	Revised	% chg.	Earlier	Revised	% chg.	Earlier	Revised	% chg.
ABB	3,888	2,131	-45%	4,854	4,988	3%	5,665	5,894	4%
BHEL	-5,416	-5,416	0%	11,770	11,770	0%	14,414	14,414	0%
Concor	10,645	5,678	-47%	13,280	9,017	-32%	NA	10,265	-
Cummins India	4,164	4,711	13%	5,974	6,305	6%	7,401	7,391	0%
GE T&D India	-23	-1,992	NM	1,285	496	-61%	NA	1,429	-
Kalpataru Power	4,526	5,177	14%	3,902	5,269	35%	NA	5,694	-
KEC International	4,715	5,098	8%	6,419	6,394	0%	NA	7,546	-
KNR Construction	2,474	1,976	-20%	4,004	3,475	-13%	NA	3,689	-
Larsen & Toubro	77,356	77,356	0%	112,669	112,669	0%	129,942	129,942	0%
PNC Infratech	2,683	1,824	-32%	4,332	3,209	-26%	NA	3,305	-
Siemens	11,274	6,795	-40%	12,344	11,012	-11%	13,877	12,656	-9%
Thermax	2,703	1,657	-39%	3,380	2,628	-22%	NA	3,279	-
Triveni Turbine	785	1,313	67%	1,417	1,496	6%	1,554	1,683	8%

Source: Company, Emkay Research, Bloomberg

Exhibit 107: Changes in Emkay TP/rating

Companies	Target Price (Rs)			Rating	
	Earlier	Revised	% Change	Earlier	Revised
ABB	766	794	4%	SELL	SELL
BHEL	37	37	1%	BUY	HOLD
Cummins India	448	486	8%	BUY	HOLD
Container Corporation	436	396	-9%	BUY	HOLD
GE T&D India	85	87	2%	HOLD	SELL
Kalpataru Power	198	303	53%	HOLD	BUY
KEC International	175	271	55%	HOLD	SELL
KNR Construction	256	264	3%	BUY	BUY
Larsen & Toubro	1,103	1,156	5%	BUY	BUY
PNC Infratech	151	173	15%	BUY	BUY
Siemens	920	889	-3%	SELL	SELL
Thermax	600	644	7%	SELL	SELL
Triveni Turbine	88	86	-2%	BUY	BUY

Source: Emkay Research

Valuation: After recent pull-back, sector is no longer attractive, especially given sharp capex slowdown

Since the bottom formed earlier this year, most stocks in our sector have rallied 25-40% with a few exceptions. Meanwhile, continued lockdown scenario has led to further downgrade of earnings estimates for the sector as a whole. As discussed earlier, rising worries on the fiscal stress for the government is an incremental pain in the medium term and could threaten to derail expectations of a capex revival. As such, the stocks have only turned more expensive despite rising uncertainty.

While we have reduced FY22E earnings for most of the companies in the sector by 20-25%, we downgrade GE T&D and KEC International to Sell from Hold and BHEL, Cummins India and Concor to Hold from Buy. Our top picks are L&T, KNR Constructions and Kalpataru Power which despite the adverse environment stand out on relative strength.

Exhibit 108: Implied P/E and P/BV (FY22E) on our TP vs long term 1 yr fwd mean

	P/E (x)				P/BV (x)			
Companies	**Target implied**	**LT avg**	**+1 STD**	**-1 STD**	**Target implied**	**LT avg**	**+1 STD**	**-1 STD**
ABB	34	57	83	31	4.1	7.1	9.5	4.7
BHEL	11	27	43	10	0.5	3	5.4	0.6
Concor	27	20	28	12	2.2	5.1	6.5	3.7
Cummins India	21	23	32	14	2.9	2.9	3.6	2.3
GE T&D India	45	33	51	15	2.9	6.2	9.2	3.1
Kalpataru Power	9	14	21	6	1.1	1.9	3	0.7
KEC International	11	15	20	9	2.0	2.1	3	1.3
KNR Construction	11	8	13	4	1.7	1.5	2.2	0.7
Larsen & Toubro	14	21	28	14	2.0	3.4	4.8	2.1
PNC Infratech	14	13	16	10	1.5	1.7	2.1	1.4
Siemens	29	52	83	21	2.9	7	10.3	3.7
Thermax	28	33	56	9	2.3	4.5	6.1	2.8
Triveni Turbine	17	30	38	21	4.4	9.6	11.4	7.9

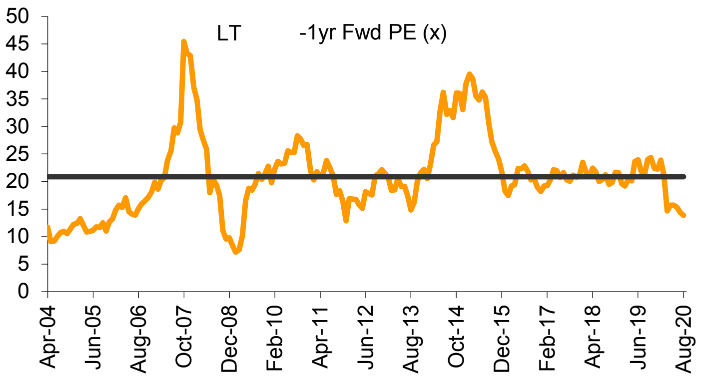
Source: Company, Bloomberg, Emkay Research

Exhibit 109: Valuation comparison

Company	CMP	Mkt Cap		Target	ROE (%)		P/E (x)		Dividend Yield (%)		FY20-23E CAGR	
	(Rs)	(Rs mn)	Rating	Price (Rs)	FY21E	FY22E	FY21E	FY22E	FY21E	FY22E	Sales	EBITDA
ABB	949	201	SELL	794	5.8	12.7	94.4	40.3	0.3	0.7	5%	10%
BHEL	37	130	HOLD	37	-1.9	4.1	NM	11.0	3.1	6.2	11%	NA
Concor	380	231	HOLD	396	5.6	8.6	40.7	25.7	1.1	1.8	2%	-1%
Cummins India	449	124	HOLD	486	11.0	14.0	26.4	19.7	2.3	3.0	2%	7%
GE T&D India	108	28	SELL	87	-6.2	9.0	NM	55.7	2.1	2.7	4%	NA
Kalpataru Power	243	37	BUY	303	13.7	12.4	7.3	7.1	1.5	1.5	4%	2%
KEC International	308	79	SELL	271	16.9	18.3	15.5	12.4	0.9	0.9	4%	2%
KNR Construction	214	30	BUY	264	11.5	17.5	15.3	8.7	0.1	0.2	10%	7%
Larsen & Toubro	983	1,380	BUY	1,156	10.4	13.7	17.8	12.2	2.4	2.0	7%	8%
PNC Infratech	141	36	BUY	173	6.9	11.1	19.8	11.2	-	-	2%	-2%
Siemens	1,212	432	SELL	889	11.3	12.0	63.5	39.2	0.9	1.0	12%	22%
Thermax	749	89	SELL	644	5.4	8.3	50.9	32.1	1.3	1.4	1%	5%
Triveni Turbine	66	21	BUY	86	23.1	22.9	16.2	14.2	2.6	2.8	3%	8%

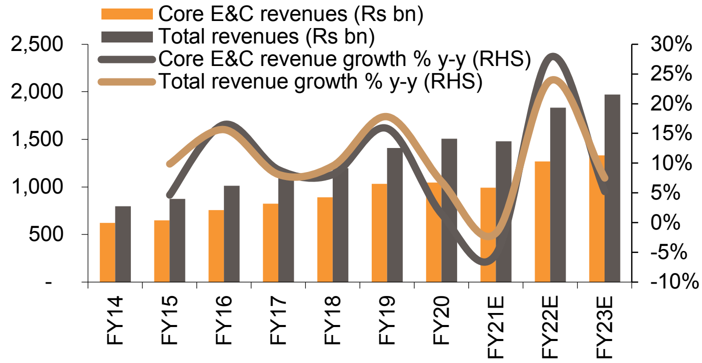
Source: Bloomberg, Emkay Research

Exhibit 110: L&T is trading only slightly higher than its 2008 low



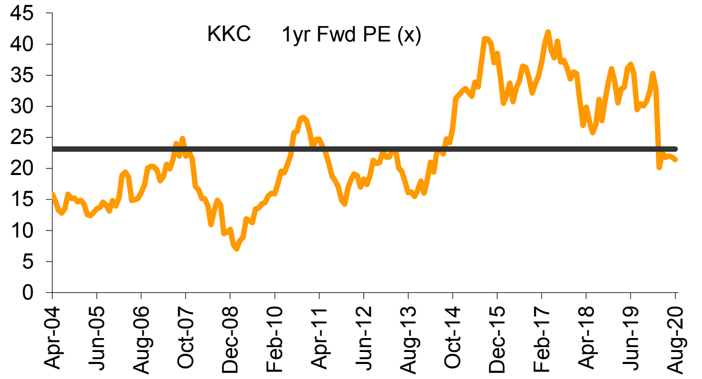
Source: Company, Emkay Research, Bloomberg

Exhibit 111: L&T – Core E&C growth to revive but at a slower pace



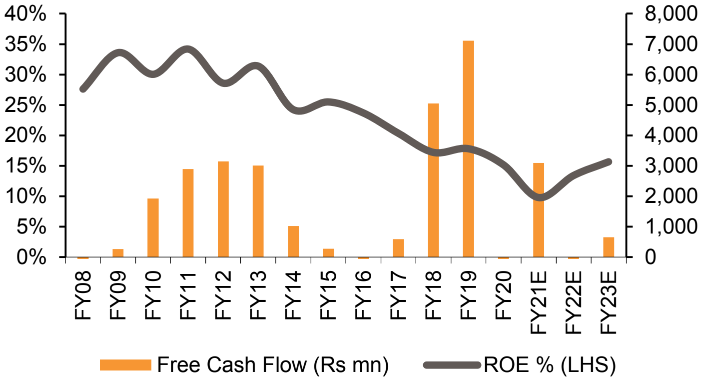
Source: Company, Emkay Research

Exhibit 112: Cummins India valuation now close to long term mean



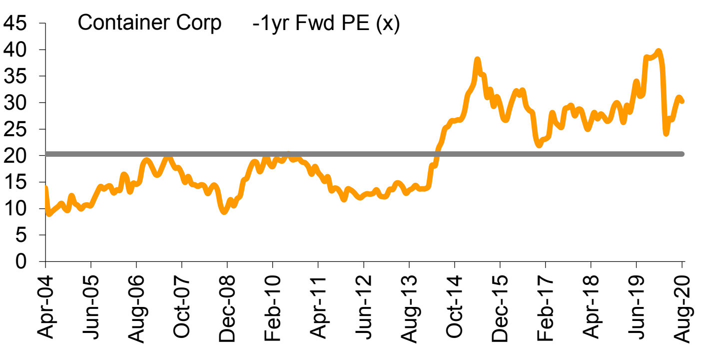
Source: RBI, Budget documents, Emkay Research

Exhibit 113: …despite strong return metrics, FCF and ~4% div yield



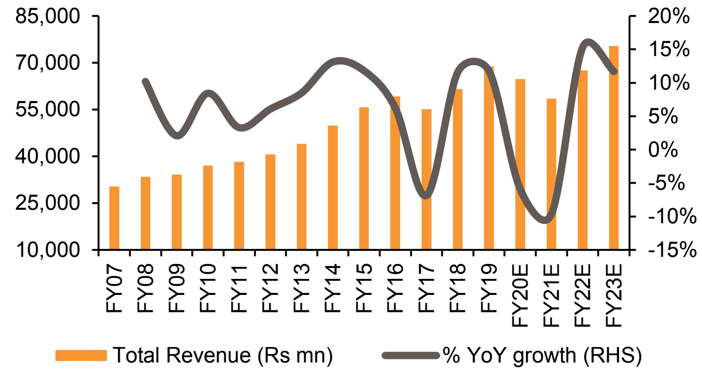
Source: Company, Emkay Research

Exhibit 114: Concor valuations have recovered from 6-year low and are now sufficiently above mean



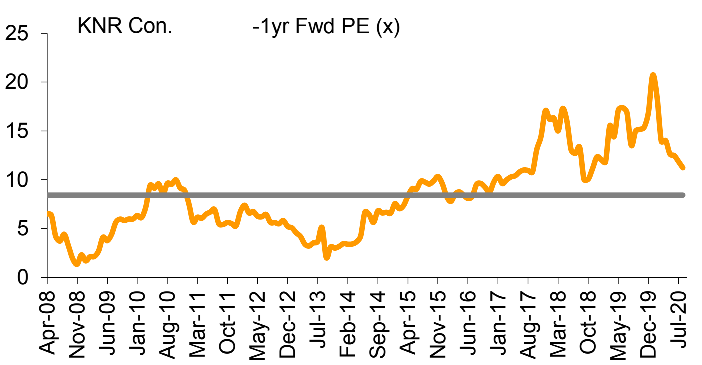
Source: Company, Emkay Research, Bloomberg

Exhibit 115: … Concor's revenues (Rs mn) will likely recover swiftly post Covid-19 but hinges on domestic and global trade recovery



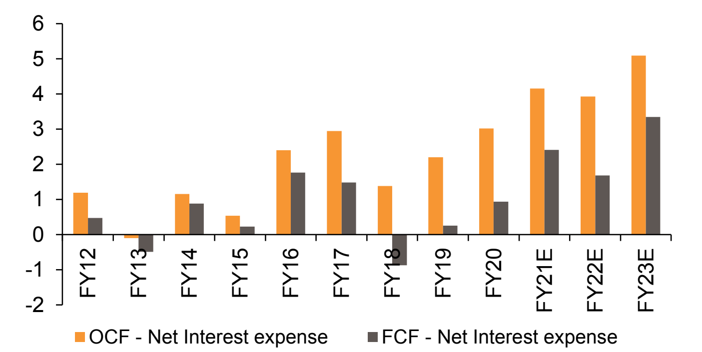
Source: Company, Emkay Research

Exhibit 116: KNR is now trading above its long-term mean P/E; we still like it due to its proven cautious strategy and as it is …



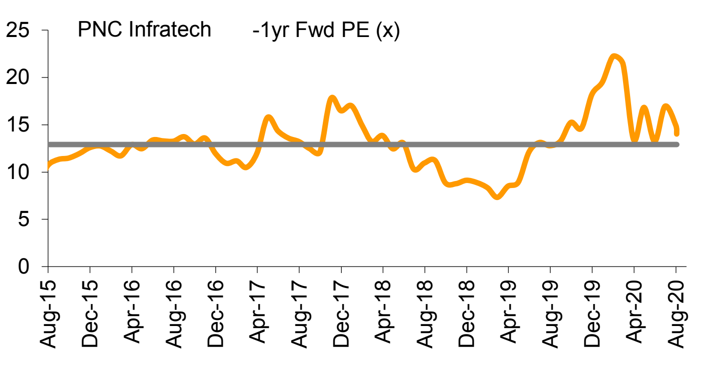
Source: Company, Emkay Research, Bloomberg

Exhibit 117: … perhaps the only construction company to generate consistently positive OCF/FCF (Rs bn) over past 10 years



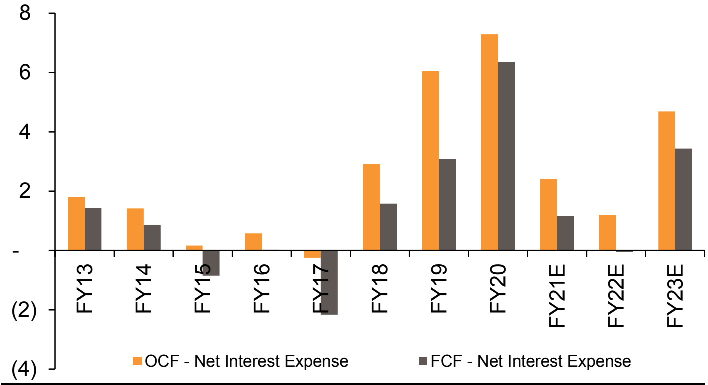
Source: Company Emkay Research

Exhibit 118: PNC Infratech trading at close to mean valuations



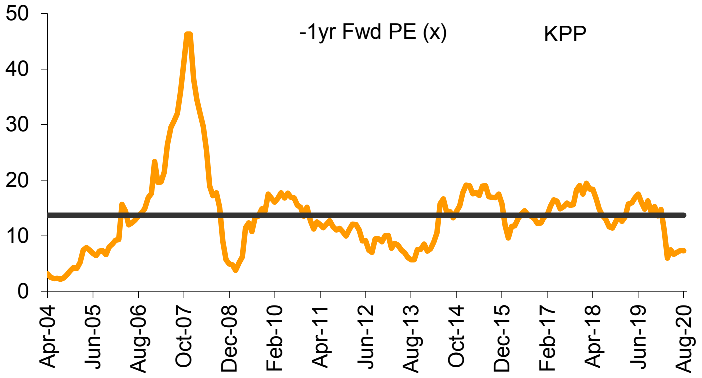
Source: Company, Emkay Research, Bloomberg

Exhibit 119: …with a reasonable track record of positive OCF/FCF (Rs bn)



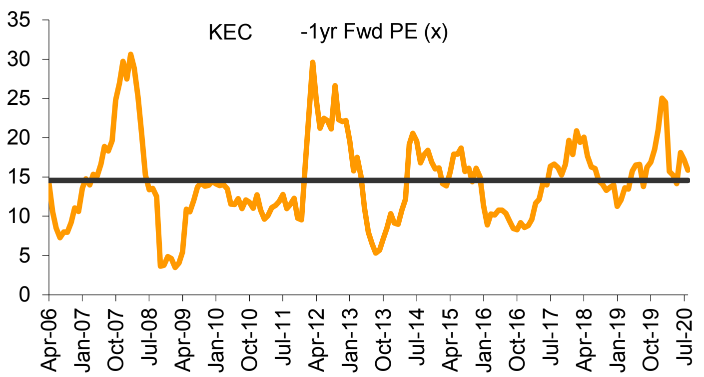
Source: Company, Emkay Research

Exhibit 120: Kalpataru Power is inexpensive compared to history



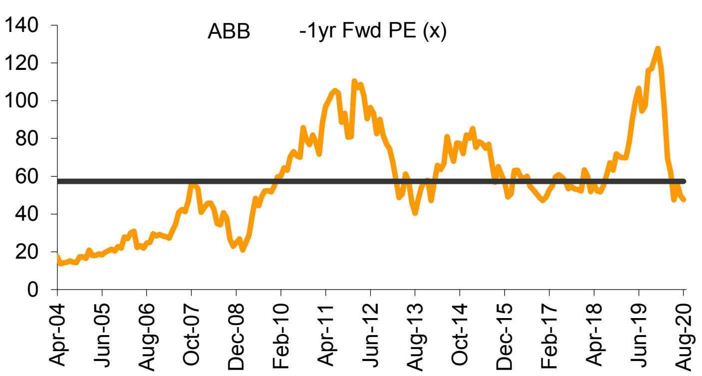
Source: Company, Emkay Research, Bloomberg

Exhibit 121: KEC International is no longer inexpensive now and close to its long term mean



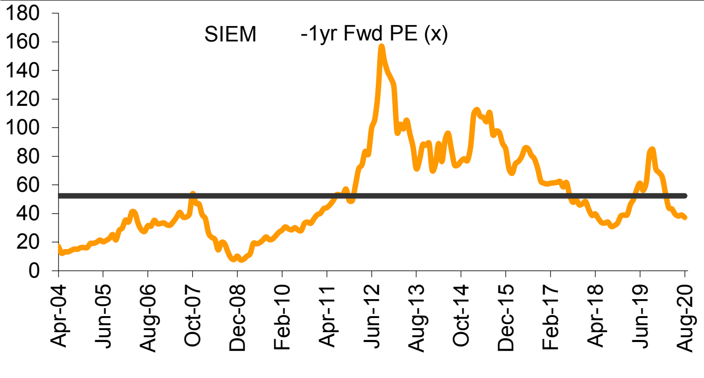
Source: Company, Emkay Research, Bloomberg

Exhibit 122: ABB – while valuations have corrected, it remains expensive; average P/E over FY04-08 was ~26x vs. 40x now



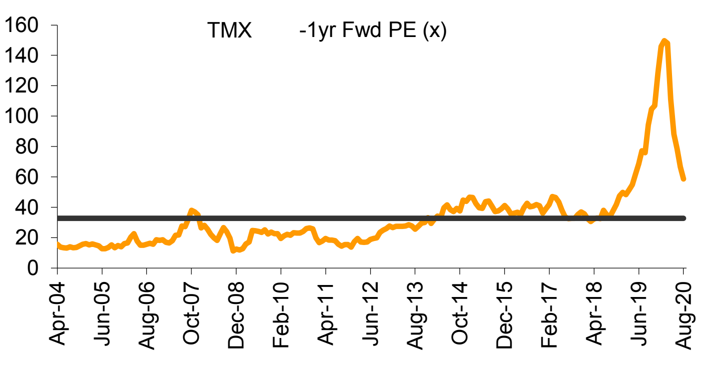
Source: Company, Emkay Research, Bloomberg

Exhibit 123: Siemens – average 1-year forward P/E over FY04-08 was ~28x vs. ~33x now



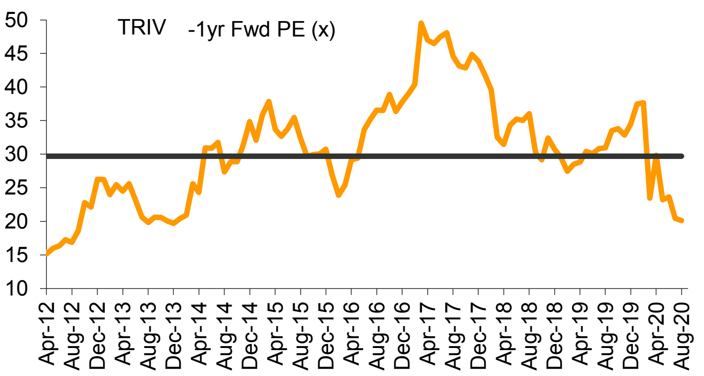
Source: Company, Emkay Research, Bloomberg

Exhibit 124: Thermax is still expensive



Source: Company, Emkay Research, Bloomberg

Exhibit 125: Triveni Turbines at a historical low valuation



Source: Company, Emkay Research, Bloomberg

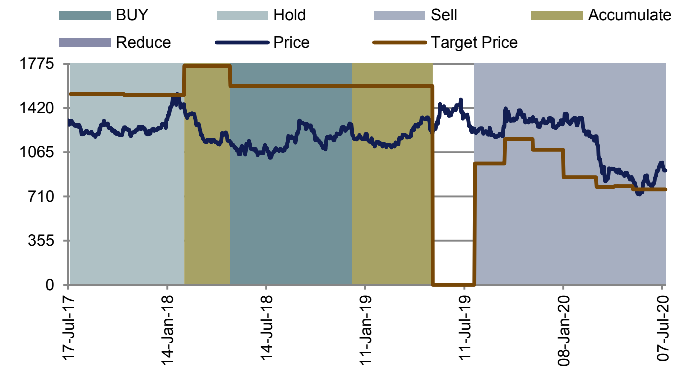
ABB

RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
17-May-20	823	766	12m	Sell	Amar Kedia
14-May-20	836	766	12m	Sell	Amar Kedia
12-May-20	852	791	12m	Sell	Amar Kedia
10-Apr-20	927	791	12m	Sell	Amar Kedia
08-Mar-20	1,192	788	12m	Sell	Amar Kedia
07-Feb-20	1,329	863	12m	Sell	Amar Kedia
08-Jan-20	1,311	863	12m	Sell	Amar Kedia
06-Dec-19	1,299	1,085	12m	Sell	Amar Kedia
26-Nov-19	1,274	1,085	12m	Sell	Amar Kedia
14-Nov-19	1,323	1,085	12m	Sell	Amar Kedia
13-Nov-19	1,348	1,085	12m	Sell	Amar Kedia
14-Oct-19	1,331	1,170	12m	Sell	Amar Kedia
23-Sep-19	1,399	1,170	12m	Sell	Amar Kedia
17-Sep-19	1,203	975	12m	Sell	Amar Kedia
30-Jul-19	1,223	975	12m	Sell	Amar Kedia
02-Jul-19	1,441	-	12m	UR	Amar Kedia
14-May-19	1,238	-	12m	UR	Amar Kedia
27-Feb-19	1,103	1,596	12m	Accumulate	Amar Kedia
18-Dec-18	1,201	1,596	12m	Accumulate	John Perinchery
31-Oct-18	1,152	1,596	12m	Buy	John Perinchery
09-May-18	1,141	1,596	12m	Buy	John Perinchery
14-Feb-18	1,416	1,758	12m	Accumulate	John Perinchery
30-Jan-18	1,446	1,524	12m	Hold	John Perinchery
27-Oct-17	1,265	1,524	12m	Hold	John Perinchery
21-Jul-17	1,317	1,533	12m	Hold	John Perinchery

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



Source: Bloomberg, Company, Emkay Research

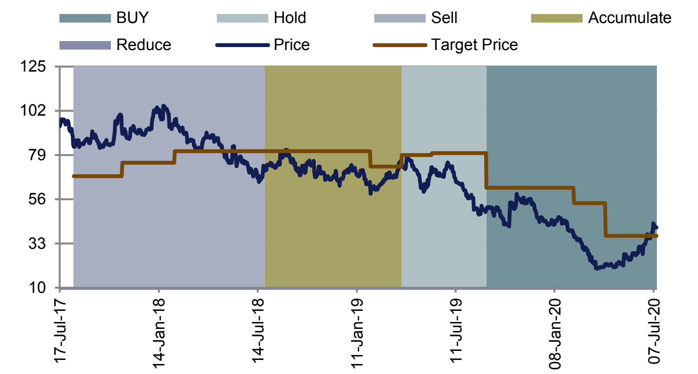
BHEL

RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
14-Jun-20	31	37	12m	Buy	Amar Kedia
11-Jun-20	30	37	12m	Buy	Amar Kedia
17-May-20	27	37	12m	Buy	Amar Kedia
12-May-20	22	37	12m	Buy	Amar Kedia
04-May-20	24	37	12m	Buy	Amar Kedia
10-Apr-20	22	37	12m	Buy	Amar Kedia
08-Mar-20	30	54	12m	Buy	Amar Kedia
12-Feb-20	36	54	12m	Buy	Amar Kedia
07-Feb-20	40	62	12m	Buy	Amar Kedia
06-Dec-19	47	62	12m	Buy	Amar Kedia
26-Nov-19	54	62	12m	Buy	Amar Kedia
14-Nov-19	54	62	12m	Buy	Amar Kedia
13-Nov-19	55	62	12m	Buy	Amar Kedia
18-Oct-19	54	62	12m	Buy	Amar Kedia
14-Oct-19	43	62	12m	Buy	Amar Kedia
23-Sep-19	52	62	12m	Buy	Amar Kedia
17-Sep-19	49	62	12m	Buy	Amar Kedia
05-Sep-19	51	62	12m	Buy	Amar Kedia
02-Jul-19	72	80	12m	Hold	Amar Kedia
28-May-19	73	80	12m	Hold	Amar Kedia
14-May-19	64	79	12m	Hold	Amar Kedia
03-Apr-19	74	79	12m	Hold	Amar Kedia
05-Feb-19	59	73	12m	Accumulate	Amar Kedia
26-Oct-18	68	81	12m	Accumulate	John Perinchery
27-Jul-18	71	81	12m	Accumulate	John Perinchery
30-May-18	83	81	12m	Sell	John Perinchery
12-Feb-18	98	81	12m	Sell	John Perinchery
30-Jan-18	102	75	12m	Sell	John Perinchery
08-Nov-17	90	75	12m	Sell	John Perinchery
11-Aug-17	83	68	12m	Sell	John Perinchery

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



Source: Bloomberg, Company, Emkay Research

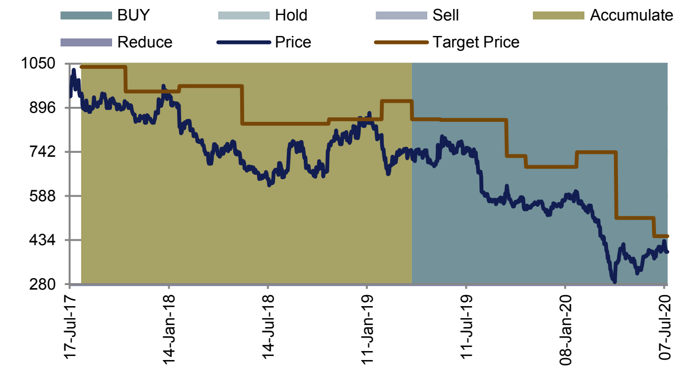
Cummins India

RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
18-Jun-20	370	448	12m	Buy	Amar Kedia
11-Jun-20	396	511	12m	Buy	Amar Kedia
17-May-20	338	511	12m	Buy	Amar Kedia
12-May-20	354	511	12m	Buy	Amar Kedia
10-Apr-20	353	511	12m	Buy	Amar Kedia
08-Mar-20	504	741	12m	Buy	Amar Kedia
07-Feb-20	558	741	12m	Buy	Amar Kedia
29-Jan-20	601	741	12m	Buy	Amar Kedia
06-Dec-19	521	689	12m	Buy	Amar Kedia
26-Nov-19	566	689	12m	Buy	Amar Kedia
14-Nov-19	560	689	12m	Buy	Amar Kedia
28-Oct-19	546	689	12m	Buy	Amar Kedia
14-Oct-19	573	727	12m	Buy	Amar Kedia
23-Sep-19	624	727	12m	Buy	Amar Kedia
17-Sep-19	561	853	12m	Buy	Amar Kedia
02-Jul-19	779	853	12m	Buy	Amar Kedia
25-May-19	758	853	12m	Buy	Amar Kedia
14-May-19	698	855	12m	Buy	Amar Kedia
03-Apr-19	728	855	12m	Buy	Amar Kedia
27-Feb-19	722	919	12m	Accumulate	Amar Kedia
07-Feb-19	770	919	12m	Accumulate	Amar Kedia
02-Nov-18	768	855	12m	Accumulate	John Perinchery
28-May-18	710	840	12m	Accumulate	John Perinchery
02-Feb-18	829	972	12m	Accumulate	John Perinchery
27-Oct-17	912	952	12m	Accumulate	John Perinchery
07-Aug-17	946	1,038	12m	Accumulate	John Perinchery

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



Source: Bloomberg, Company, Emkay Research

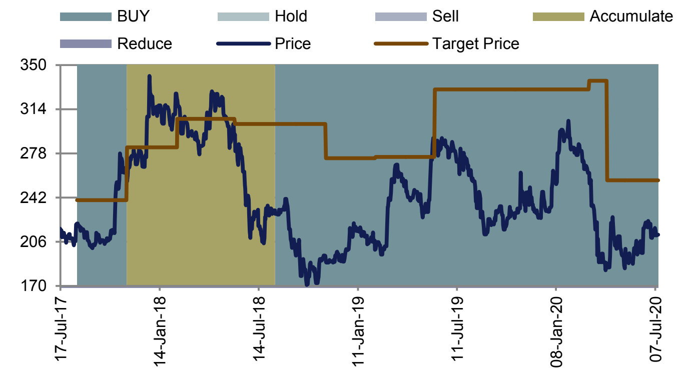
KNR Constructions

RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
11-Jun-20	202	256	12m	Buy	Amar Kedia
17-May-20	195	256	12m	Buy	Amar Kedia
12-May-20	184	256	12m	Buy	Amar Kedia
10-Apr-20	185	256	12m	Buy	Amar Kedia
08-Mar-20	262	337	12m	Buy	Amar Kedia
12-Jun-19	288	330	12m	Buy	Viral Shah
31-May-19	280	330	12m	Buy	Viral Shah
12-Feb-19	200	275	12m	Buy	Shreyans Mehta
13-Nov-18	190	274	12m	Buy	Shreyans Mehta
13-Aug-18	229	302	12m	Buy	Shreyans Mehta
31-May-18	293	302	12m	Accumulate	Shreyans Mehta
15-Feb-18	322	306	12m	Accumulate	Shreyans Mehta
15-Nov-17	255	283	12m	Accumulate	Shreyans Mehta
16-Aug-17	221	240	12m	Buy	Shreyans Mehta

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



Source: Bloomberg, Company, Emkay Research

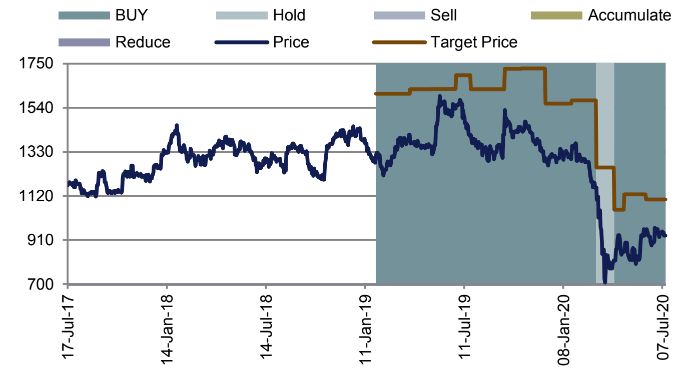
Larsen & Toubro

RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
11-Jun-20	930	1,103	12m	Buy	Amar Kedia
07-Jun-20	955	1,103	12m	Buy	Amar Kedia
17-May-20	864	1,127	12m	Buy	Amar Kedia
12-May-20	815	1,127	12m	Buy	Amar Kedia
28-Apr-20	857	1,127	12m	Buy	Amar Kedia
10-Apr-20	813	1,055	12m	Buy	Amar Kedia
08-Mar-20	1,159	1,255	12m	Hold	Amar Kedia
07-Feb-20	1,299	1,575	12m	Buy	Amar Kedia
23-Jan-20	1,332	1,575	12m	Buy	Amar Kedia
06-Dec-19	1,291	1,559	12m	Buy	Amar Kedia
26-Nov-19	1,363	1,726	12m	Buy	Amar Kedia
14-Nov-19	1,380	1,726	12m	Buy	Amar Kedia
23-Oct-19	1,432	1,726	12m	Buy	Amar Kedia
15-Oct-19	1,432	1,725	12m	Buy	Amar Kedia
23-Sep-19	1,529	1,725	12m	Buy	Amar Kedia
17-Sep-19	1,314	1,627	12m	Buy	Amar Kedia
23-Jul-19	1,410	1,627	12m	Buy	Amar Kedia
02-Jul-19	1,564	1,694	12m	Buy	Amar Kedia
26-Jun-19	1,551	1,694	12m	Buy	Amar Kedia
14-May-19	1,342	1,629	12m	Buy	Amar Kedia
12-May-19	1,356	1,629	12m	Buy	Amar Kedia
03-Apr-19	1,378	1,627	12m	Buy	Amar Kedia
12-Mar-19	1,389	1,606	12m	Buy	Amar Kedia
27-Feb-19	1,285	1,606	12m	Buy	Amar Kedia
31-Jan-19	1,314	1,606	12m	Buy	Amar Kedia

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



Source: Bloomberg, Company, Emkay Research

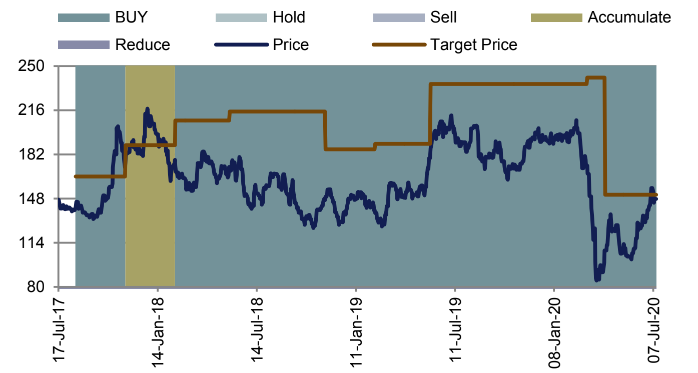
PNC Infratech

RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
11-Jun-20	127	151	12m	Buy	Amar Kedia
12-May-20	106	151	12m	Buy	Amar Kedia
10-Apr-20	108	151	12m	Buy	Amar Kedia
08-Mar-20	173	241	12m	Buy	Amar Kedia
27-May-19	187	236	12m	Buy	Viral Shah
15-Feb-19	137	190	12m	Buy	Shreyans Mehta
16-Nov-18	150	186	12m	Buy	Shreyans Mehta
09-Aug-18	165	215	12m	Buy	Shreyans Mehta
25-May-18	169	215	12m	Buy	Shreyans Mehta
15-Feb-18	173	208	12m	Buy	Shreyans Mehta
16-Nov-17	179	189	12m	Accumulate	Shreyans Mehta
17-Aug-17	141	165	12m	Buy	Shreyans Mehta

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



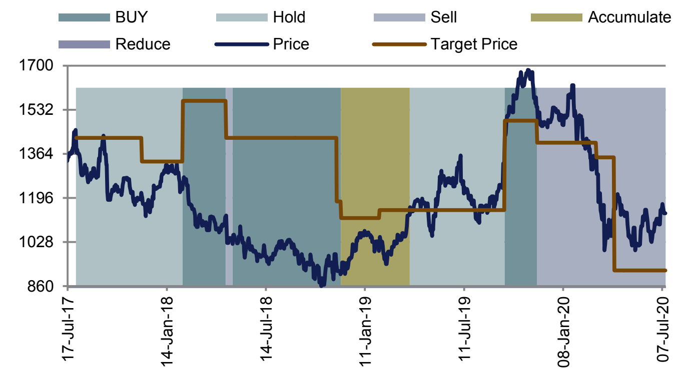
Source: Bloomberg, Company, Emkay Research

Siemens
RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
11-Jun-20	1,069	920	12m	Sell	Amar Kedia
17-May-20	1,083	920	12m	Sell	Amar Kedia
12-May-20	1,015	920	12m	Sell	Amar Kedia
10-Apr-20	1,155	920	12m	Sell	Amar Kedia
08-Mar-20	1,339	1,350	12m	Sell	Amar Kedia
07-Feb-20	1,507	1,406	12m	Sell	Amar Kedia
06-Dec-19	1,475	1,406	12m	Sell	Amar Kedia
26-Nov-19	1,494	1,406	12m	Sell	Amar Kedia
21-Nov-19	1,543	1,406	12m	Sell	Amar Kedia
14-Nov-19	1,613	1,490	12m	Buy	Amar Kedia
15-Oct-19	1,592	1,490	12m	Buy	Amar Kedia
23-Sep-19	1,445	1,490	12m	Buy	Amar Kedia
17-Sep-19	1,243	1,150	12m	Hold	Amar Kedia
02-Jul-19	1,327	1,150	12m	Hold	Amar Kedia
14-May-19	1,090	1,150	12m	Hold	Amar Kedia
03-Apr-19	1,161	1,150	12m	Hold	Amar Kedia
27-Feb-19	979	1,150	12m	Accumulate	Amar Kedia
06-Feb-19	1,021	1,150	12m	Accumulate	Amar Kedia
28-Nov-18	909	1,119	12m	Accumulate	John Perinchery
28-Nov-18	909	1,119	12m	Accumulate	John Perinchery
20-Nov-18	935	1,182	12m	Buy	John Perinchery
14-May-18	1,021	1,425	12m	Buy	John Perinchery
02-May-18	1,129	1,425	12m	Sell	John Perinchery
12-Feb-18	1,256	1,566	12m	Buy	John Perinchery
30-Jan-18	1,289	1,335	12m	Hold	John Perinchery
29-Nov-17	1,203	1,335	12m	Hold	John Perinchery
01-Aug-17	1,397	1,425	12m	Hold	John Perinchery

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



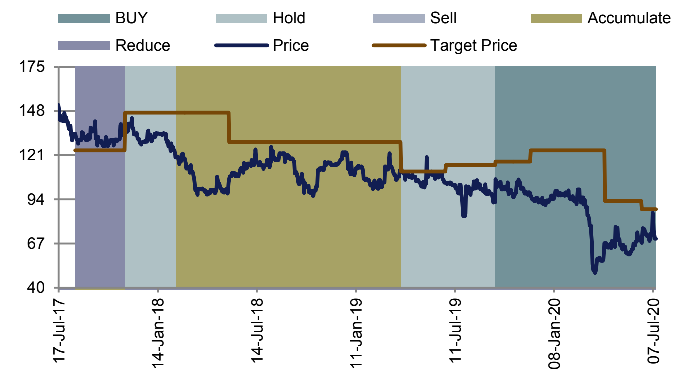
Source: Bloomberg, Company, Emkay Research

Triveni Turbine
RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
16-Jun-20	67	88	12m	Buy	Amar Kedia
11-Jun-20	69	93	12m	Buy	Amar Kedia
12-May-20	63	93	12m	Buy	Amar Kedia
10-Apr-20	67	93	12m	Buy	Amar Kedia
08-Mar-20	89	124	12m	Buy	Amar Kedia
07-Feb-20	95	124	12m	Buy	Amar Kedia
06-Dec-19	95	124	12m	Buy	Amar Kedia
26-Nov-19	96	124	12m	Buy	Amar Kedia
17-Nov-19	98	117	12m	Buy	Amar Kedia
15-Oct-19	104	117	12m	Buy	Amar Kedia
23-Sep-19	106	117	12m	Buy	Amar Kedia
17-Sep-19	96	115	12m	Hold	Amar Kedia
02-Jul-19	104	115	12m	Hold	Amar Kedia
24-Jun-19	104	115	12m	Hold	Amar Kedia
14-May-19	105	111	12m	Hold	Amar Kedia
03-Apr-19	115	111	12m	Hold	Amar Kedia
04-Dec-18	115	129	12m	Accumulate	John Perinchery
02-Nov-18	112	129	12m	Accumulate	John Perinchery
24-May-18	107	129	12m	Accumulate	John Perinchery
16-Feb-18	120	147	12m	Accumulate	John Perinchery
15-Nov-17	140	147	12m	Hold	John Perinchery
16-Aug-17	134	124	12m	Reduce	John Perinchery

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



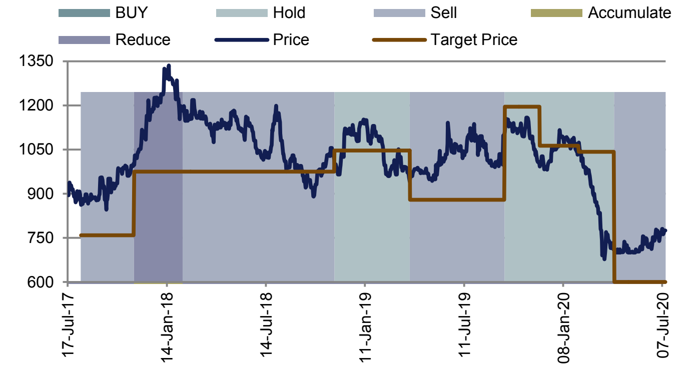
Source: Bloomberg, Company, Emkay Research

Thermax
RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
11-Jun-20	719	600	12m	Sell	Amar Kedia
17-May-20	700	600	12m	Sell	Amar Kedia
12-May-20	703	600	12m	Sell	Amar Kedia
10-Apr-20	710	600	12m	Sell	Amar Kedia
08-Mar-20	872	1,042	12m	Hold	Amar Kedia
07-Feb-20	1,043	1,042	12m	Hold	Amar Kedia
05-Feb-20	1,073	1,042	12m	Hold	Amar Kedia
06-Dec-19	986	1,063	12m	Hold	Amar Kedia
26-Nov-19	992	1,063	12m	Hold	Amar Kedia
14-Nov-19	1,069	1,195	12m	Hold	Amar Kedia
15-Oct-19	1,116	1,195	12m	Hold	Amar Kedia
23-Sep-19	1,112	1,195	12m	Hold	Amar Kedia
17-Sep-19	1,005	879	12m	Sell	Amar Kedia
02-Jul-19	1,055	879	12m	Sell	Amar Kedia
14-May-19	951	879	12m	Sell	Amar Kedia
03-Apr-19	950	879	12m	Sell	Amar Kedia
16-Nov-18	1,000	1,047	12m	Hold	John Perinchery
22-May-18	1,154	975	12m	Sell	John Perinchery
12-Feb-18	1,181	975	12m	Sell	John Perinchery
15-Nov-17	998	975	12m	Reduce	John Perinchery
10-Aug-17	862	759	12m	Sell	John Perinchery

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



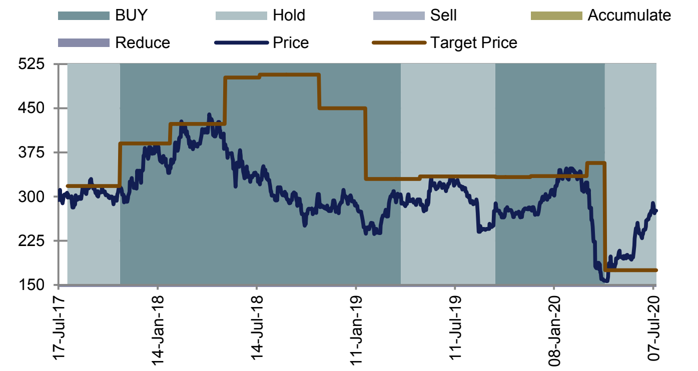
Source: Bloomberg, Company, Emkay Research

KEC International
RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
11-Jun-20	237	175	12m	Hold	Amar Kedia
17-May-20	199	175	12m	Hold	Amar Kedia
12-May-20	195	175	12m	Hold	Amar Kedia
10-Apr-20	157	175	12m	Hold	Amar Kedia
08-Mar-20	324	357	12m	Buy	Amar Kedia
07-Feb-20	348	335	12m	Buy	Amar Kedia
06-Dec-19	272	335	12m	Buy	Amar Kedia
26-Nov-19	279	335	12m	Buy	Amar Kedia
14-Nov-19	278	333	12m	Buy	Amar Kedia
14-Oct-19	282	333	12m	Buy	Amar Kedia
23-Sep-19	288	333	12m	Buy	Amar Kedia
17-Sep-19	250	334	12m	Hold	Amar Kedia
02-Jul-19	331	334	12m	Hold	Amar Kedia
14-May-19	277	334	12m	Hold	Amar Kedia
08-May-19	295	334	12m	Hold	Amar Kedia
03-Apr-19	298	330	12m	Hold	Amar Kedia
27-Feb-19	263	330	12m	Buy	Amar Kedia
29-Jan-19	237	330	12m	Buy	Amar Kedia
05-Nov-18	291	450	12m	Buy	John Perinchery
19-Jul-18	321	507	12m	Buy	John Perinchery
17-May-18	388	502	12m	Buy	John Perinchery
06-Feb-18	348	423	12m	Buy	John Perinchery
30-Jan-18	351	390	12m	Buy	John Perinchery
06-Nov-17	316	390	12m	Buy	John Perinchery
02-Aug-17	298	318	12m	Hold	John Perinchery

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



Source: Bloomberg, Company, Emkay Research

Emkay Alpha Portfolio – Engineering & Capital Goods

Analyst: Amar Kedia

Contact Details

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Sector

Engineering & Capital Goods

Analyst bio

Amar Kedia holds a Post Graduate Diploma in Management from IIM Lucknow and comes with a cumulative 15 years of research experience. His team currently covers 14 stocks in the Indian Engineering and Capital Goods sector.

EAP sector portfolio

Company Name	BSE200 Weight	EAP Weight	OW/UW (%)	OW/UW (bps)	EAP Weight (Normalised)
Engineering & Capital Goods	**2.47**	**2.02**	**-18%**	**-44**	**100.00**
ABB	0.08	0.00	-100%	-8	0.00
BHEL	0.08	0.05	-38%	-3	2.00
Cummins India	0.10	0.05	-51%	-5	2.00
GE T&D India	0.00	0.00	NA	0	0.00
Kalpataru Power	0.00	0.05	NA	5	2.00
KEC International	0.00	0.00	NA	0	0.00
KNR Constructions	0.00	0.05	NA	5	2.00
Larsen & Toubro	1.98	1.73	-13%	-25	70.00
PNC Infratech	0.00	0.05	NA	5	2.00
Siemens	0.18	0.00	-100%	-18	0.00
Thermax	0.05	0.00	-100%	-5	0.00
Triveni Turbine	0.00	0.05	NA	5	2.00
Cash	**0.00**	**0.44**	**NA**	**44**	**18.0**

Source: Emkay Research

** Not under coverage: Equal Weight*

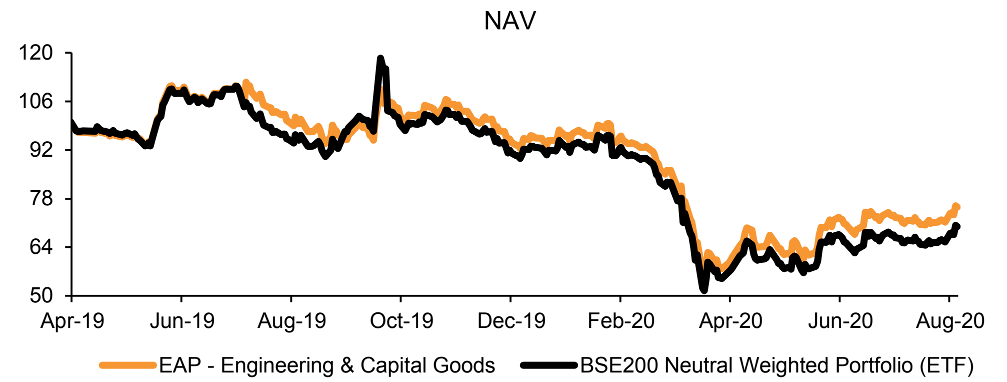
High Conviction/Strong Over Weight   High Conviction/Strong Under Weight

Sector portfolio NAV

	Base					Latest
	1-Apr-19	11-Nov-19	14-Feb-20	15-May-20	15-Jul-20	14-Aug-20
EAP - Engineering & Capital Goods	100.0	103.1	93.7	65.3	70.9	75.5
BSE200 Neutral Weighted Portfolio (ETF)	100.0	100.2	90.3	61.1	65.2	70.0

**Performance measurement base date 1st April 2019*
Source: Emkay Research

NAV chart



Source: Emkay Research

Please see our model portfolio (Emkay Alpha Portfolio): SMID

Please see our model portfolio (Emkay Alpha Portfolio): Nifty

"Emkay Alpha Portfolio – SMID and Nifty are a supporting document to the Emkay Alpha Portfolios Report and is updated on regular intervals"

Emkay Rating Distribution

Ratings	Expected Return within the next 12-18 months.
BUY	Over 15%
HOLD	Between -5% to 15%
SELL	Below -5%

Completed Date: 18 Aug 2020 09:07:11 (SGT)
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