

Opinion

SATURDAY, JANUARY 5, 2019

GST revenues a worry, need to tighten policing

While govt plans large hike in exemption limit, the real need is to start invoice-matching to improve compliance

WITH GST COLLECTIONS falling for the second month in a row after crossing ₹1 lakh crore in September, and monthly collections now at ₹96,783 crore for April-December—that's 11% lower than the budget target of ₹1.1 lakh crore per month in FY19—it is clear there will be a big slippage in GST collections, by around ₹80,000-100,000 crore assuming a reasonable step-up in revenues over the next three months. At 7.6% over the same period last year, the growth in GST revenues is even below that of nominal GDP. Whether growth picks up now is unclear since the last cut in GST rates will get reflected in the numbers for the next few months. While higher collections for direct taxes—direct taxes grew 16.7% over April-September 2018 compared to the corresponding period the year before, against the budget target of 11.5% for FY19—will make up for part of the shortage in GST revenues, it is almost certain the fiscal deficit will slip unless there is a cut in expenditure since there is a shortfall in some other revenues as well.

While, in retrospect, it appears as if the budget targets were unnecessarily stiff, it is important to keep in mind that, when the estimates were made, it was assumed that there would be increased buoyancy due to invoice-matching since the government had planned to implement the detailed filing of invoices; that, however, got postponed after the GST system was unable to take the load initially and, later, the government decided to go slow as the protests gathered pace. While there are sharply divergent numbers on GST evasion—one Lok Sabha reply puts this at ₹12,767 crore for April to November and another at ₹38,896 crore for April to October—there is no way of knowing how much of the evasion has been captured.

Sadly, at a time when the government should be putting in all efforts to strengthen the GST intelligence and surveillance system—including the use of smart analytics—as prime minister Narendra Modi said the other day, the plan is to increase the reporting threshold for GST from an annual turnover of ₹20 lakh right now to ₹75 lakh. According to the data presented before the group of state finance ministers who were asked to examine the threshold issue, while roughly a fourth of the 1.2 crore firms registered under GST have a turnover of ₹20 lakh to ₹1 crore, they account for just 5% of GST collections. While this is being used to justify the increase in the exemption limit, as FE has pointed out before—in the case of income taxes, 65% of returns filed for FY17 were by those who earned less than ₹5 lakh a year, they accounted for just 38% of the income declared; in terms of actual tax collections, it will be much lower since the tax rate is just 10%. Instead of increasing the threshold, a better idea would be to let firms with a turnover of, say, ₹75 lakh file a simple form with just the name of the firm, GST number, annual revenue and tax paid once every six months. Since larger firms, with a turnover of more than ₹75 lakh file invoices for both their sales as well as purchases, if these smaller firms are dealing with them, their invoices will in any case be available, making it easy to catch lack of compliance there as well. In election season, however, the Central government is probably more keen on eliminating any anti-GST sentiment and, so, prefers hiking the exemption threshold.

Pvt capex outlook poor

M&A activity must be encouraged to save assets & jobs

IT IS NO secret the private sector hasn't been spending on new projects for at least four years now. The big spender has been Reliance Industries which has invested close to ₹2 lakh crore in its telecom enterprise and other telecom players have had relatively small surpluses to plough back into their businesses. Consequently, it comes as no surprise that the country saw fresh investments of just ₹1 lakh crore in the December 2018 quarter. The amount is not to be sneezed at, but it is a fall of more than 50% both sequentially and y-o-y. And it is the smallest quarterly amount since mid-2004. What's worse, the value of stalled projects rose slightly in Q3FY19.

To be sure, some chunky investments have been made by big business houses in the steel and cement sectors. For instance, in the last six months, a clutch of acquisitions has taken place via the IBC route—Ultratech has bought Binani Cement while Tata Steel has snapped up Bhushan Steel. Earlier, Ultratech had bought some cement units from the Jaypee group. This process will continue since the courts continue to work on the resolution of stressed assets via the IBC. Moreover, given businesses remain stressed and RBI is clear the stringent norms for debt defaults enforced by it will be implemented, one can expect the future of more companies to be decided in the courts.

While it may not mean fresh capacity, M&A activity is to be encouraged because it often helps save precious assets and, more importantly, jobs. Unfortunately, the story in India, over the past four or five years, has been one of wealth destruction. Several hundred companies have been wound down or liquidated primarily because the projects have suffered from lack of fuel linkages or have not received the necessary clearances or because promoters have defaulted on their loans. Take the case of Lanco Infratech which is in the process of being liquidated. There may be more to come because companies remain stressed. A Credit Suisse (CS) analysis for the September 2018 quarter suggests only a slight improvement in the debt profile of companies. The share of debt with an interest cover (IC) of less than one was 41% compared with 43% in the June quarter. The improvement resulted partly from the acquisition of Bhushan Steel by Tata Steel. The stress in the telecom sector, CS noted, had intensified with nearly all telecom debt (ex-Jio) in its sample having an IC of less than one. With several real estate developers having reported a rise in debt levels in Q2FY19, and with transaction volumes muted, this sector could be in trouble. Unless there are signs aggregate demand is picking up pace, which it is not, capex will crawl.

Books Value

India's aid to Afghanistan stretches far beyond just the "library" Trump seems to believe it has funded

US PRESIDENT DONALD Trump recently mocked Indian prime minister Narendra Modi, saying that the latter told him that India had funded a library, which amounted to "five hours of what we (the US) spend (Afghanistan)". Trump made the claim at a press conference where he was defending his push for the US to spend less on overseas. Trump's decision to pull the US out of Afghanistan, even those sympathetic to the American president believe, will destabilise the region. But, those concerns notwithstanding, everyone—other than Trump, of course—has been left scratching their heads because no library project in Afghanistan has been funded by India in recent years. Also, contrary to what Trump is convinced is the size of India's spending in Afghanistan, India remains the largest development donor to the country ravaged by decades of war, including the one waged by the US.

India's infrastructure development assistance includes the 42MW India-Afghanistan Friendship Dam or Salma dam that supplies water for irrigating 75,000 hectares, and the new Afghan Parliament building. India is also in a tripartite agreement with Iran and Afghanistan to develop Iran's Chabahar port, and this will see Indian investment of \$11-billion in developing mining in Afghanistan apart from a further \$2-billion investment in developing supporting infrastructure in Afghanistan. More than 3,500 Afghans are undergoing training programmes in India, and the Indira Gandhi Institute of Child Health, a 400-bed hospital, is the main medical facility in Afghanistan that treats about 300,000 children every year. Notwithstanding the size of India's aid to Afghanistan, or even the library that Trump seems to see as India's only contribution, it is bizarre—and downright clownish—to underplay the benefit of a library anywhere in the world, even in an area ravaged by conflicts. To be sure, there are other priorities that must take precedence in war-torn countries like Afghanistan, but it is an investment for the future, for hope of normal times returning. India may not be investing as much as the US does on stationing armed forces in Afghanistan, but the latest round of war was started by the US, in a bid to punish Al Qaeda; in the process, it wrecked the country and now wants to leave democracy's fragile hold over the country in a lurch.

NO PROOF REQUIRED

INDIA DOES NOT NEED 12 MILLION JOBS A YEAR – IT NEEDS LESS THAN 5 MILLION. A LARGE PART OF THE SO-CALLED JOBS CRISIS IS BECAUSE OF DEMAND FOR GOVERNMENT JOBS, NOT JOBS PER SE

Gender equality & government jobs

AS AND WHEN the NSSO employment-unemployment report for 2017/18 is released (the new name is Periodic Labour Force Survey) we will learn about the employment situation in India circa 2017/18, i.e. the total number of jobs created between the last NSSO survey of 2011/12 and 2017/18. The survey will not tell us how many jobs were created in 2017/18; for that we have individual non-NSSO surveys and methods, the most prominent being the estimates based on EPFO data and CMIE data. The latter two vary by a significant amount with the former suggesting that around 7-10 million jobs were created in 2017/18, and the latter indicating that virtually no jobs were created (actually a decline of 0.5 million).

Tirtha Das and I, in a report prepared for the PMEAC (available on EAC website and here, ssbhalla.org/paper/employment/) indicate that the PLFS data are likely to report that employment (by the commonly used measure according to 'principal status') in India in 2017/18 was around 448 million in 2017/18, a 20 million jobs increase between 2011/12 and now. How good is this job creation and how does it compare with what happened earlier? These questions gain salience as 2019 is an election year and one in which job creation is being hotly debated. There are several reasons to expect that job creation between 2011/12 and 2017/18 is to be much less than that created between 2004/5 and 2011/12. As many domestic and international experts have speculated, job creation worldwide is less now because of robots (artificial intelligence) and a decline in global GDP growth. These international factors are not the concern of those looking for a job, who are naturally upset if there aren't enough jobs in the economy. This can have political consequences, and one has to note only the shrill campaign by the Congress party (and its supporters) in constantly asking—where are the jobs?

The attached graphic provides some background data on the Indian economy for the 40-year period, 1983 to 2023. These data shed some light (only the 2017/18 data are estimates) on the job situation in the economy, past and present, and whether the present conventional (collective) wisdom (CW) on the Indian job economy is supported by the evidence (facts). An important political (and economic) question is—how many jobs need to be created in India to keep the unemployment rate constant at low, historical rates. The CW is that India needs 8 million jobs a year; Raghuram Rajan, distinguished economist and former governor of RBI, believes that India needs to "employ 12 million people coming into

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the labour force every year" (speech at Berkeley on December 10, 2018). Our analysis shows that both CW and Rajan are way off the mark.

The attached graphic presents some data on India's employment scene. Column 6 reports the population increase for those >=15 years, the 'base' for which employment and related variables are estimated. Between 2004/5 and 2011/12, annual population increases were observed in the 15+ million range. If the Rajan estimate was correct, then 75% of these individuals had a job or were looking for a job; this large ratio has never happened in India, but has been observed on a consistent basis in Bangladesh and Nepal (and some east Asian economies like China and Thailand). Column 7 reports the average increase in labour force (and, therefore, 'jobs needed') on an annual basis during NSSO survey years 1983 to 2017/18. The maximum increase in labour force observed was for the period 1993/94 and 2004/5—around 8.6 million jobs a year. During the recent 2011/12 and 2017/18 period, jobs needed were only 4.6 million a year.

What has been observed, and much talked about, is the precipitous drop in women's LFPR from 29.4% in 1983 to 23.4% in 2011/12. Education is very relevant for calculations of LFPR because of the very definition of Labour Force. Education and labour force participation are mutually exclusive—if one is above 15 years of age and enrolled in school (or college), one cannot be in the labour force—and vice-versa.

Estimates of labour force are dependent on the labour force participation rates (LFPR) for both men and women. For men, the LFPR is somewhere in the 90s; for women, historically and worldwide, the LFPR is much lower. The LFPR of women has to do with their education and income level as well as societal factors more specific to India than many other economies (marriage, caste, child rearing, etc). Amongst these, education is a very important factor, both for reasons of definition and in determining attitudes towards work (general expectation is that women's LFPR has a U shape, both with respect to education and family income).

It is the education profile of women that has changed drastically over the years and it is increases in education enrollment that is causing the jobs needed to fall to such lows. For the major education age-group of 15-24 years, only 16% of the Indian population was enrolled in school or college in 1983, and of these students, women constituted 28%. For 2017/18, the latest year for which reliable estimates are available, enrollment within the 15-24 age-group was more than 50% and within this group, women comprised 48%. Within a very few years, it is very likely that women students will outnumber male students, a pattern already evident in most parts of the world.

This educational expansion has consequences for estimates of labour force, and, hence, jobs needed. Observe the following. Female population above 15 years of age was 412 million in 2011/12, and had a labour force participation rate

of 21.3%, a decline of 8.1 percentage points from the level of 29.4% in 1983. If the female LFPR rate had not declined, there would have been (29.4*412) or 12.1 million women in the labour force. Instead, we observe that the labour force consisted of (21.3*412) or 8.8 million. The 'missing from labour force women' are, therefore, 3.3 million. Educational enrollment of women was 7 million in 1983 and 42 million in 2011/12, an increase of 35 million. In other words, the increase in educational enrolment of women explains the entire decline in labour force participation rate of women observed between 1983 and 2011/12!

The above calculations shed considerable light on estimates of labour force growth and 'jobs needed'. Our calculations show that Indian labour force increased at the rate of only 4.6 million a year between 2011/12 and 2017/18. For these six years, total needed job expansion was only 28 million. Our estimate is that around 20 million jobs will have been provided during these six years. How good is this job performance? Compared to the super GDP growth era of 2004/5 and 2011/12, absolutely superlative. During those seven UPA years, only 10 million jobs were provided or just 1.4 million jobs a year; the recent six-year period (half these years under NDA) is likely to have provided 3.3 million a year, or more than twice the rate observed in the bumper UPA growth years.

It is political season, so exaggerations of achievements are inevitable. It is interesting to note that, while all the talk about jobless growth is going on presently, in reality, the real jobless growth occurred during the tenure of UPA-I and UPA-II. If we were to divorce ourselves from politics, we will observe the following. Firstly, the labour force in India has educational achievements of the youth heretofore unmatched in our own history, and is very comparable to the best in the world. (This of course abstracts from the important quality of school considerations, a subject on which we have little data). Secondly, gender equality among the newly educated is now a reality, and we should emphasise that fact, and understand its implications, rather than spend ideological time expressing dismay over the lack of equality in India. The argument should shift from there are no jobs to why does the government continue to provide above market wages, and pensions, and benefits, to several employees—this causes excess demand for government jobs, and the appearance of 'jobless growth'. A large part of the so-called jobs crisis is because of demand for government jobs, not jobs per se. And yes, let us also appreciate that India does not need 12 million jobs a year—it never has.

Population, education, and labour force in India, 1983-2023

NSSO survey year	Population (million)	School enrolment (million)	Labour force (million)	Employment (million)	Change in population (mn per year)	Change in labour force (mn per year)
1983	455.6	25.6	276.1	268.2		
1993/94	579.4	43.7	338.4	329.6	12.4	6.2
1999/00	665.2	54.2	390.5	380.0	14.3	8.7
2004/5	741.7	63.5	433.1	419.2	15.3	8.5
2009/10	818.1	89.8	440.1	429.5	15.3	1.4
2011/12	848.3	100.1	441.1	428.6	15.1	0.5
2017/18	937.3	136.0	468.7	448.0	14.8	4.6
2023	1,020.5				13.9	

Source: NSSO data and computations reported in Bhalla-Das
Notes: Jobs needed are equal to change in labour force under assumptions of constant unemployment rate. Calculations are for population aged 15 and above

Tech's biggest worry isn't Apple

Apple cut its inventory to the lowest since June 2017. Despite the shock guidance cut, which sent shares down 10% on Thursday, the Cupertino-based company is relatively better prepared than others in the industry

TIM CULPAN
Bloomberg

BACK ON AUGUST 28, I sounded a warning. Storm clouds are brewing over the global technology industry. Worryingly, Apple Inc. is among the healthiest in the sector. When I first ran the numbers on a selection of nine companies—a mix of branded electronics, product assemblers, and chipmakers—I concluded that the decade-long tech party looked headed for a nasty hangover. I've now added September-quarter figures to the same analysis, which includes inventory levels, turnover and cash conversion cycles. The situation is even uglier than four months ago.

Apple's warning this week that it won't meet revenue guidance proves the initial concerns to be true, but it is only a small part of the industry's woes. The company's Chinese nemesis Xiaomi Corp. could be in trouble. By the end of September, the maker of smartphones had increased inventories 62% since December 2017 and 22% since June 30. Lest you're tempted to dismiss that as a seasonal inventory build, its 5.3 billion yuan (\$770 million) rise in inventory during that period exceeds the 4.9 billion yuan growth in hardware sales.

Apple, by contrast, cut its inventory to the lowest since June 2017. That includes a 19% reduction from a year prior, which is a better basis of comparison since it accounts for the annual pre-release build

cycle. This means that despite the shock guidance cut, which sent shares down 10% on Thursday, the Cupertino-based company is relatively better prepared than others in the industry. Intel Corp. and Samsung Electronics Co. don't look too bad. Yet Samsung's inventory turnover, cash-conversion cycle and inventory-to-cash metrics are all moving in the wrong direction.

A greater worry is the Taiwanese assemblers Hon Hai Precision Industry Co. (aka Foxconn), Pegatron Corp. and Wistron Corp. Between them, they cover most major electronics brands including Apple, Sony Corp., Nintendo Co., HP Inc. and Dell Technologies Inc. Add Lenovo Group Ltd. to that mix and you have a continued rise in inventories that can't be supported by the current global economic environment.

Over the next week the picture for Taiwanese companies will become clearer as they report December monthly sales (due by the 10th of each month), and ergo fourth-quarter revenue. In November, Bloomberg News's Debby Wu reported Foxconn was telling managers

that deep cost cuts are coming. Just recently I was told that its non-Apple smartphone division, FIH Mobile Ltd., laid off whole teams of people in Taiwan, with struggles at the company's HMD Global Oyj-Nokia venture amongst the reasons. Foxconn executives declined to comment as of writing. Such trimming may not be enough to save tech companies' bottom lines. As my colleague Shira Ovidewrote, Apple CEO Tim Cook offered some lacklustre strategies for combating the slowdown at his own company. Others in the industry seem equally bereft of ideas.

While inventories and cash-conversion numbers are historical snapshots, they can also be used as leading indicators for net income. Because the tech industry moves quickly, unsold product left on the shelves too long becomes worthless. And if December and March quarter sales aren't enough to justify those escalating stockpiles, massive asset write-offs will ensue.

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LETTERS TO THE EDITOR

Sen's films will live on

In the demise of filmmaker Mrinal Sen, the film world has lost a doyen of Bengali and world cinema. The Dadasaheb Phalke award winner was the last of the triumvirate of directing icons including Satyajit Ray and Ritwik Ghatak and it goes without saying that the three some laid the foundation for a parallel cinema movement in India. The auteur, who began the "new wave of Indian cinema" with Bhuvan Shome, firmly put India on the film map of the world with some hard-hitting movies like the Bengali film Kharij, which won the jury prize at the 1983 Cannes Film Festival, Kandahar (The Ruins), Mrigayaa, Akash Kusum, Ek Din Pratidin, Interview, Calcutta 71 and Padatik—to name only a few. His films will live on in the hearts of cine buffs
— Ravi Chander, Bengaluru

Ram temple verdict

The statement of prime minister Narendra Modi on the Ram temple issue that the government would wait for the SC verdict is most welcome. This statement has been appreciated from all communities, irrespective of caste and religion. I hope the SC judgment will be accepted without any 'its and but's'
— Najmul Sherazi, Mumbai

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How digitisation leads to more agile commodities trading

With digitisation of commodity transactions and storage, industry can take a big leap forward if the data can be appropriately collected and harnessed using big data and AI/machine learning

WITH THE DEVELOPMENT of transparent markets for trading multiple asset classes from commodities and bonds to stocks, the data that gets generated in the process has immense value in itself for decision-making. It can be used in varied activities from mining and production to manufacturing, alas apart from trading decisions! Rightly so, the British mathematician Clive Humby (2006) projected that "Data is the new Oil." Data available from and for the commodity markets today continues to grow at an unprecedented pace, thanks to the increasing trend of digitisation of commodities value chain and the transparency that it enables. Most of such data still remains unstructured and unharvested. Refinement of this data gathered so from the value chain through use of data science and its use can be a game-changer in today's cutting-edge competitive commodity markets.

According to an estimate of the government of Singapore, about \$10 trillion worth of commodities are produced and consumed per annum globally. With each commodity comes its own set of challenges from the way it is produced/mined, refined/processed, traded, marketed and managed in terms of digitisation and transparency of the value chain. On top of that, driven by supply-demand fundamentals along with geopolitics and several other factors, volatility is the only constant in the cyclical commodity markets and so are the risks associated with business decisions of the stakeholders. For commodity stakeholders who generally operate on thin margins, situations of price instability make risk management inevitable. The multi-trillion-dollar global commodity trading industry trades financial contracts with underlying commodities that are crucial inputs for much of the manufacturing sector, such as crude oil, copper, cotton, etc. These markets not only provide advance signals, but also facilitate risk management by them, and thereby play a vital role in greasing the wheels of the economy.

For investment banks that support healthy existence of such financial markets in commodities, back-office work is vital to efficient management of theirs and that of their customer positions in the markets. Gone are the days when back-office work for position management in investment banks involved large capital expenditures and a long time

period. Position management can now be done seamlessly across the life cycle of a traded commodity position with the help of agile technologies like big data, blockchain, machine learning, artificial intelligence (AI), robotics, etc, which provide for efficient estimate of demand and price swings. It is, therefore, imperative that we are aware of these technologies and know how they can impact the world of commodities.

Big data
In simple terms, big data is literally a big or massive amount of raw, unstructured and unformatted data that updates constantly to uncover patterns and relationships, thereby empowering decision makers to make the right decisions based on real-time analytics-based insights. Big data can be defined by its volume, variety and velocity of its collection. Its harnessing is likely to be the next frontier in tech-

nology essential for competition and efficiency. Here, 'data' can mean anything from structured databases to written data, text, photos and videos, which would need specialised software for converting into utilisable data points for the purpose of decision making.

Price movements, changes in market cycles, new regulatory frameworks, etc, create millions of individual data points that can be processed to provide effi-

cient inputs into decision making not only for back-office managers, but also for the markets and may even provide sufficient policy inputs at the commodity-economy level. Besides, efficient use of these data can provide feedback on market conduct and help commodity traders in making efficient decisions about entry or exit points. Wide-scale adoption of big data can provide for competitive businesses in the economy and hence the competitiveness of the economy itself.

Blockchain

An important contribution that comes from the creation of Bitcoin is the distributed ledger called the 'blockchain', which, in simple terms, is a distributed database shared across a defined network. Each computer across this network has a copy of this database and every bit of information is mathematically encrypted and named a 'block', and a chain of such 'blocks' not only validates transactions, but also the storage of the underlying asset. A World Economic Forum survey (2015) suggested that 10% of global GDP worth of economic transactions will be stored using blockchain technology by 2027, including the trail of transactions leading up to their current ownership.

For commodities with a physical dimension and quality parameters that help price them, adoption of blockchain in transactions and storage will enhance efficiency in execution of commodity transactions and storage with the associated information set. Blockchain has the ability to bring all the stakeholders of the commodity market together to prevent fraud, eliminate third-party, speed up clearing, thereby improving transactional efficiency and financialisation while bringing in operational efficiency in the value chain. Further, blockchain-based transactions will enhance regulatory filings and reporting by improving market transparency and auditability. The fact that the commodities industry

has woken up to this potential has been visible in attempts to deploy blockchain across commodities/verticals such as power, diamonds, food and oil. Large trading houses such as Gunvor, Koch, Trafigura and Mercuria have started trials using blockchain technology for settling their back-office trades.

AI and machine learning

Machine learning or AI, by definition, is the implementation of computer software that can learn autonomously. Machine learning and AI can offer new opportunities to improve process performance and realise significant cost savings to market stakeholders. To achieve the final objective, AI/machine learning uses the structured big data and learnings by linking patterns with the fundamentals and price movements with appropriate level of noise reduction and normalisation, thus improving the decision-making process and thereby improving efficiency across commodity corporates that use AI/machine learning. A predetermined logic based on AI/machine learning will allow traders take instantaneous decisions on commodity curves and settle trades, and therefore enhance transactional efficiency in the markets.

The way forward

With the help of the emerging trend of digitisation of commodity transactions and storage, industry can take a big leap forward if the same data can be appropriately collected and harnessed using big data and AI/machine learning. Increasing adoption of blockchain in storage and transaction of physical commodities would not only enhance transactional efficiency in the markets,

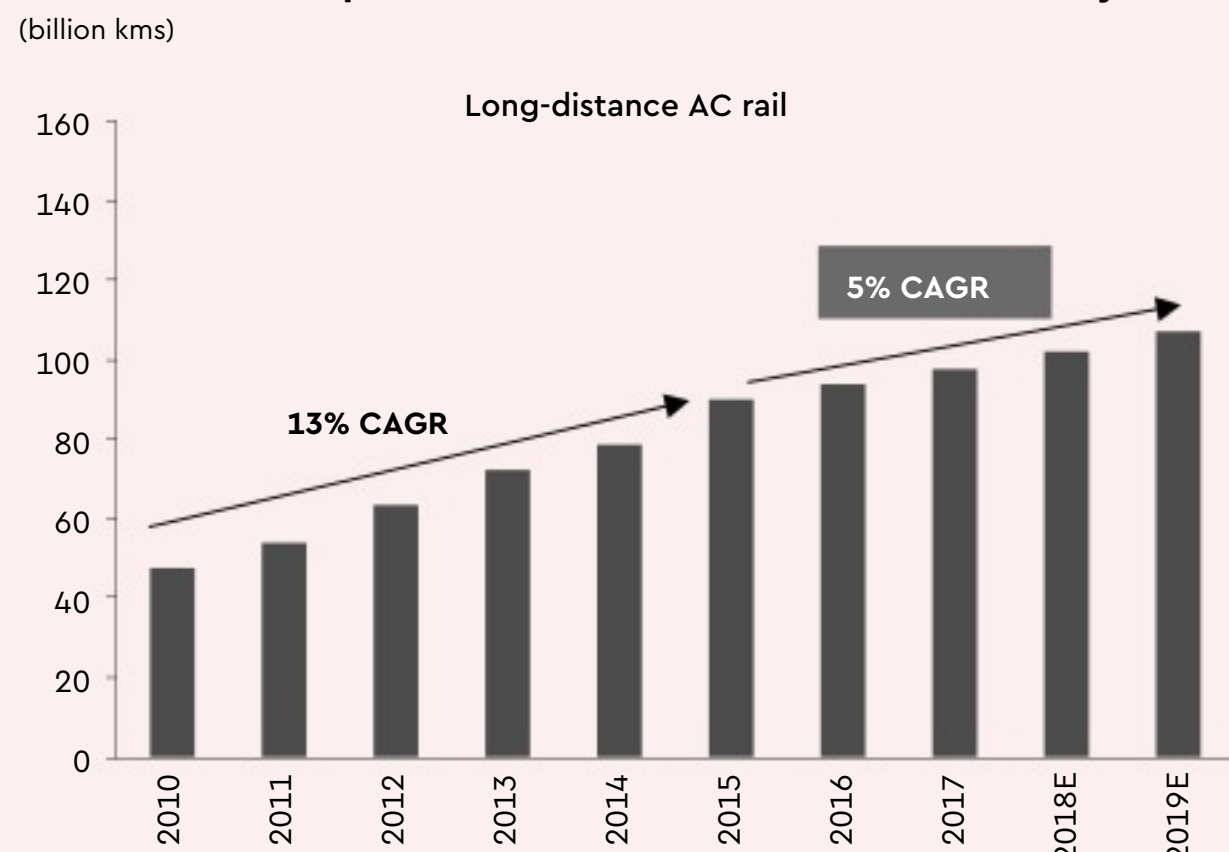
but also generate adequate data to be used for corroboration with other big data to help AI/machine learning to further efficiency in market-based financial transactions. As each of these technologies are interdependent on each other to bring about holistic transformation in the underlying markets, it is essential to have a policy regime that not only financially supports developers and users of the technology, but also provides supporting policy environment in terms of its implementation. Further, public institutions in commodity storages would also be actively encouraged to take advantage of digitisation, and also provide for enhanced transparency for efficient decision making in the markets. As in society, harnessing strengths of digitisation of commodities will help us move on the path to becoming 'price-setters' in the global markets.



ILLUSTRATION: ROHNIT PHORE

DATA DRIVE

Air travel has outperformed AC rail travel in the last four years



A breath of fresh air for airlines?

WHILE MANY AIRLINES IN India are reporting losses, air travel has significantly outperformed long-distance AC railway travel over the last four years—airlines have garnered around 80% share in growth volumes of long-distance AC railway travel.

A Kotak Institutional Equities research shows that, in the four years to FY19, airlines will see a CAGR volume growth of 20%, as compared to 5% CAGR for the Indian Railways. In the four-year period, airlines have reduced their pricing by almost 20%, as compared to a static base pricing of the Indian Railways. Moreover, airlines have benefited in volumes because of the railways' flexible-pricing scheme.

The good performance of the airlines has come at the cost of profitability—as

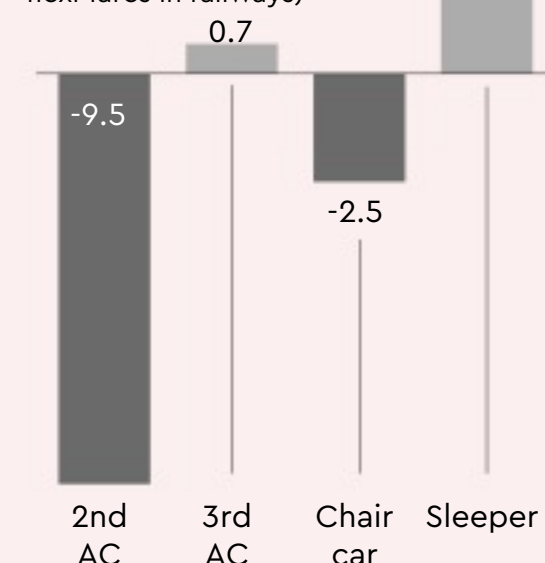
their tariffs have grown at around 2% CAGR over the past nine years, and input costs grew 5% during the period. The report underlines that with the shift of growth in volumes to airlines, they may hike prices.

There is inelasticity of demand for air travel against the price increase—a 20% hike in prices led to a modest 4% decline in volumes in FY13. However, what may moderate the pace of price increase by airlines is the recent relaxation by the Indian Railways of its flexi-fare scheme.

Data also show that the growth in the domestic air volume has moderated to 11% year-on-year in November 2018 (it was 13% year-on-year in October 2018), after growing 20% over H1FY19. The moderation, according to the report, is driven by the top-50 routes, with other routes growing over 20% on yearly basis.

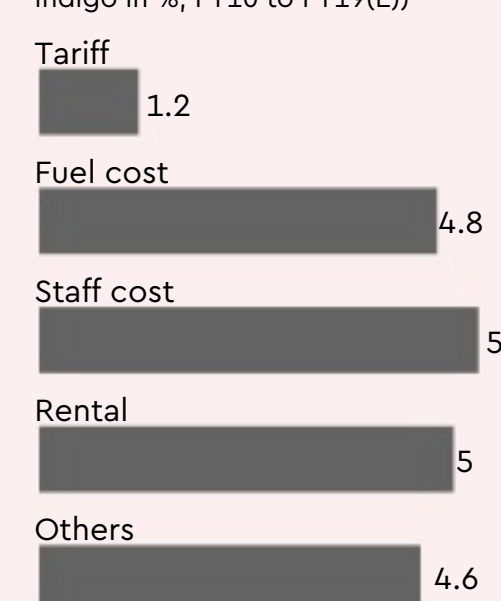
Railways benefitted from flexi-fare schemes in sleeper class

(% variation of passenger count impacted by flexi-fares in railways)



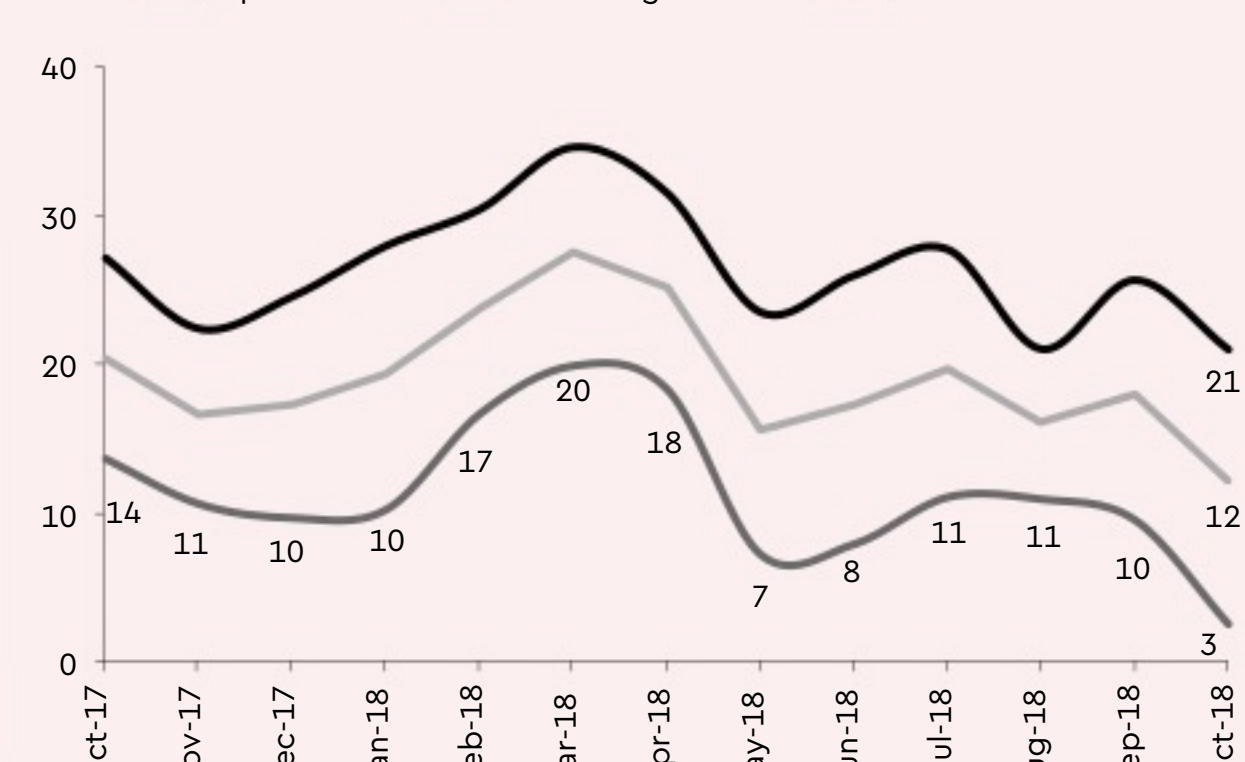
Airlines have grown tariff at much below the cost of inflation

(CAGR of per unit revenue and cost for Indigo in %; FY10 to FY19(E))



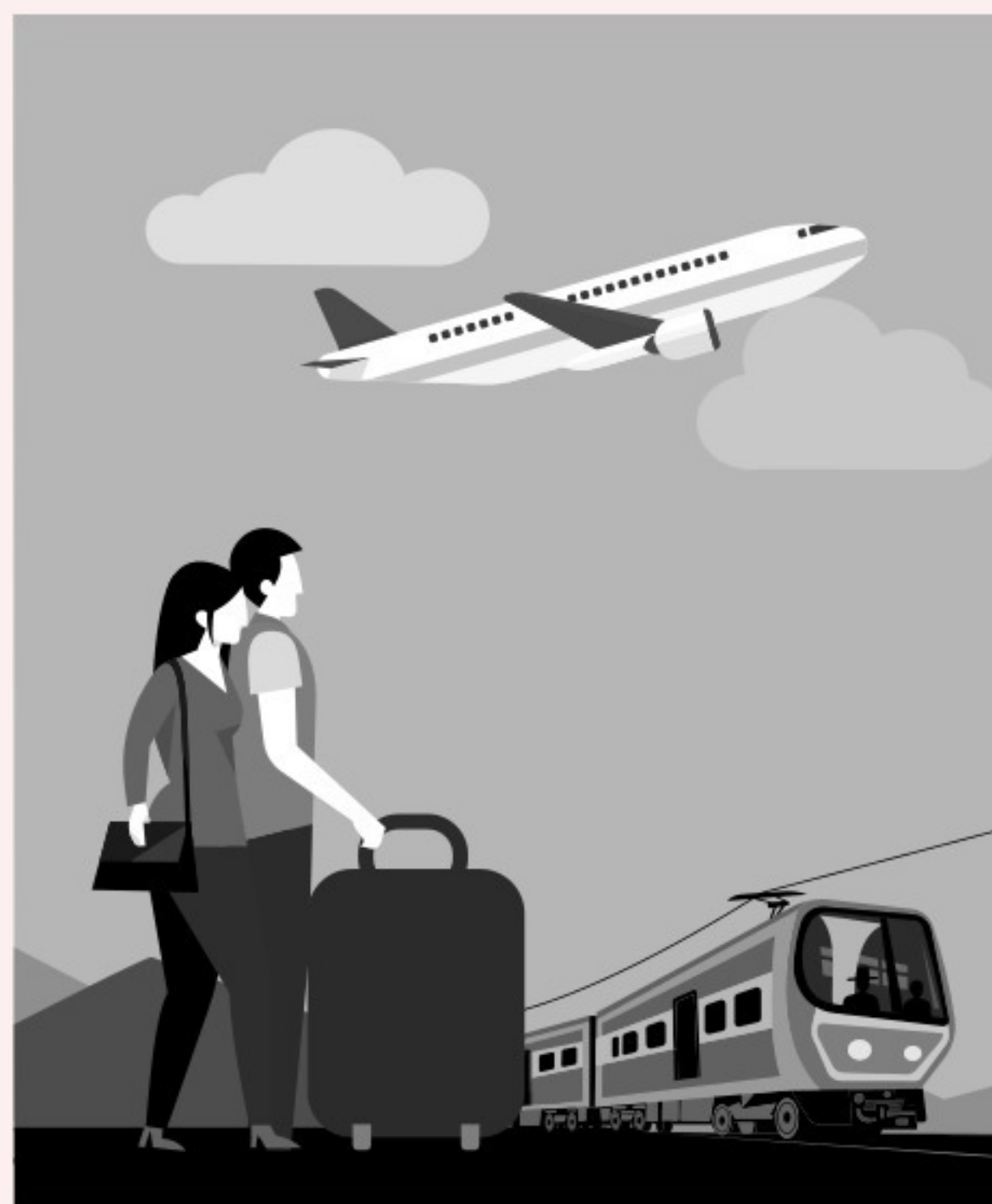
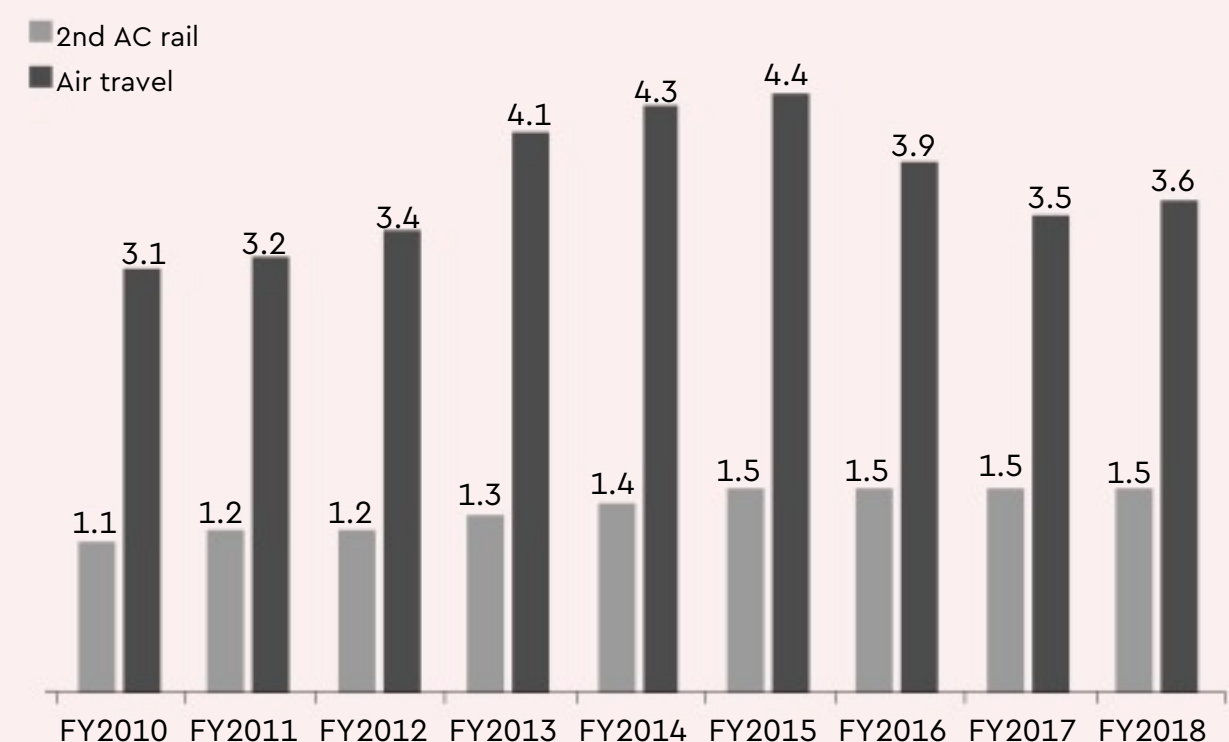
Growth in the passenger traffic for top 5% routes has moderated

(in %) — Top 50 routes — Remaining routes — Total



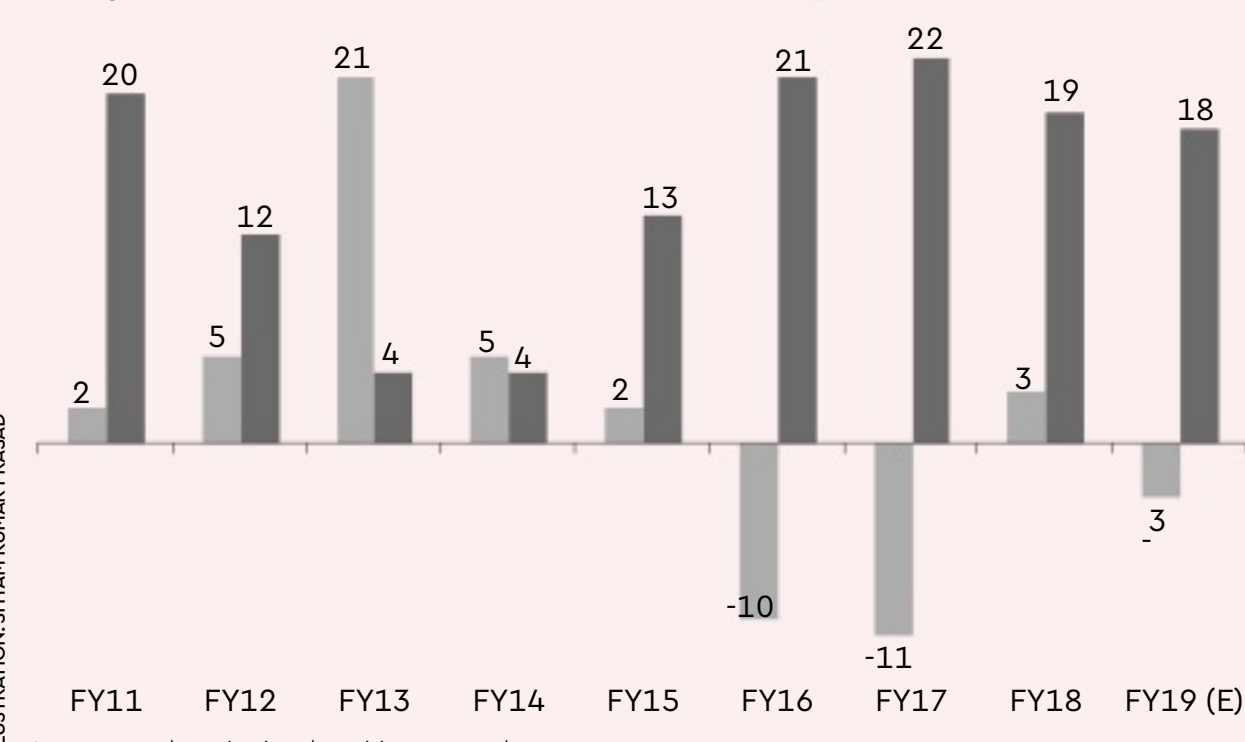
Airlines have reduced tariff, rail fare remains static

(₹ per pax km)



Inelasticity of demand for air travel against price increase

(% chg in volumes for air travel and in tariff, %)



Source: Kotak Institutional Equities Research