December 02, 2024

Dear Investor,

<u>It is a new world out there!</u>

Is there something common among:

i. Near death of Byju, funded by some well know global VCs as 'the Edtech Company' in India
ii. HUL, Nestlé India and Britannia attributing recent softness in their sales to the economic woes of the middle- and lower-income people in Indian metros and mini – metros
iii. Recent Nobel prizes awarded to technologists for applying maths to the design of drugs and neural networks

All the above phenomena go beyond the conventional wisdom. In our opinion, recent technological advances have accelerated democratization, in respect of access and affordability, of every product and services offering. Also, this has helped to improve operational efficiency for any thoughtful organization, sometimes upsetting the existing order in the business.

In this Newsletter, we will be sharing with you some of our observations about the newness of things we see out there. This includes my recent chance interactions with three worker-level men and three young aspiring girls in Bihar, and a bit of theory of operational efficiency.

<u>Operational Efficiency and the Market</u>

In the modern finance theory, market efficiency requires both allocational and operational efficiencies. In an allocationally efficient market, scarce capital and other resources are optimally allocated to productive investments in a way that benefits everyone. In a market, perfect operational efficiency requires transaction costs to be zero. In real life, no market has zero transaction cost due to friction inherent in the process of transaction. One needs to analyse these two efficiencies separately in case of any investee company. An organisation may have divergent operational efficiency across different market segments. In comparison to larger banks, a small finance bank usually has higher operational efficiency in the MFI segment, but lesser in case of the SME segment.

Before 1992 capital market reforms, access to capital was the dominant key factor in Indian businesses. Post – reforms, with the opening up of various product-markets in India, operational efficiency has been gaining in importance. In case of service – oriented businesses, operational efficiency has emerged as the key success factor. In our previous Newsletters, we discussed such seminal steps as the key "Moments".

We also have been mentioning a weak consumer protection moment in India as a drag to the efficiency of the overall markets in India. Recent actions, in case of Ola Electric and some coaching institutes, by the recently activated Central Consumer Protection Authority (CCPA) came to us as a pleasant surprise. However, unless a strong consumer movement comes up in India, we won't include this as another 'Moment 'of ours.

Also, we think that more finesse in the functioning of various. Indian institutions would add to operational efficiency in Indian businesses and economy. In case of businesses where existing regulations are complex and often outdated, operational efficiency suffers. Education, healthcare, and real estate businesses in India are such examples. Even now, capacities in such businesses remain highly fragmented. Also, consumer-centricity is quite weak in these. These businesses keep on having periodic bouts of controversies.

<u>How does the operational efficiency affect our choice of investee firms</u>

Your investment portfolio has a bias for firms in services business or having services as a key ingredient in their offering. We realise that at present we are at the cusp of transformational shift in case of any service-oriented business. AI and digitization have added a lot of malleability to business models of financial institutions, retail as well as wholesale. This shift is most pronounced in case of banks due to them being in the business of information. The evolving technological advancements will keep on generating alternates in everything a bank undertakes. This poses great challenges as well as possibilities for a thinking bank.

HDFC Bank and Axis Bank, major private banks in your investment portfolio, are now spending 8–10% of their operational expenses on technology. This figure is quite similar to % expenses currently being incurred by banks in the developed countries. However, cost of quality techies remains significantly lower in India compared to that in the developed markets. Also, Indian banks are not saddled with legacy IT platforms, as has been the case of banks in the developed markets. Hence, we would like to think that leading Indian private banks are likely to improve operational efficiency significantly more than banks outside India. Moreover, larger private banks in India have more of management intent to accelerate a wholesome upgradation of the technology, analytics, and process architecture, compared to PSBs, smaller banks and even leading NBFCs in India. Leading Indian private banks are also a better magnet for tech talent. We do have a preference for private Indian banks in your investment portfolio. In fact, recent years, productivity, improvement figures in Table 1, below validate our viewpoint.

Table 1: Productivity Improvement in leading Indian Private Banks in recent years

Advances per employee (Rs. in crores)	Mar-21	Mar-22	Mar-23	Mar-24
HDFC Bank	20.55	20.68	20.11	22.78
ICICI Bank	16.87	14.74	13.94	13.83
Kotak Mahindra Bank	7.52	7.99	9.29	7.11
Axis Bank	16.76	17.89	19.50	19.44

We are yet to discover a similar urge, among non – tech and non – bank firms in India, to adopt tech upgradation as in case of our top banks. A recent comment in The Economist told us the same:

"AI adoption today remains largely confined to narrow applications within existing operations, such as a financial-services firm using an AI app for fraud detection. Most firms do not have the data infrastructure required to train custom firm-specific models. To unlock AI's full potential, more fundamental changes will be required." - The Economist, November 23, 2024, Pg. 65

In case of any investee company, we try to go deep into the operational efficiency aspects. It requires field research and understanding of organizational processes. Moreover, we have to figure out how much the senior team understands and practices technology. Can the Management harness mathematics for its business?

<u>Recent Nobel Prizes for physics and chemistry – Dawn of a new era</u>

This year, Nobel prize for chemistry was awarded to U.S. scientists David Baker and John Jumper and Britain's Demis Hassabis. Half the prize was awarded to Baker "for computational protein design," while the other half was shared by Hassabis and Jumper "for protein structure prediction". We reproduce below select comments about their work:

In 2003, Baker was able to use amino acids, often described as life's building blocks, to design a new protein that was unlike any existing one. That opened the door to the rapid creation of different proteins for uses in areas such as pharmaceuticals, vaccines, nanomaterials and even tiny sensors.

He developed computational tools that now enable scientists to design spectacular new proteins with entirely novel shapes and functions, opening endless possibilities for the greatest benefits to humankind," Heiner Linke, Chair of the Nobel Committee for Chemistry,

In 2020, Hassabis and Jumper presented an AI model called AlphaFold2. With its help, they have been able to predict the structure of virtually all the 200 million proteins that researchers have identified, the academy said." – Financial Express, Johan Ahlander and Niklas Pollard, Oct 09, 2024

This year, the Nobel Prize for Physics was awarded to Geoffrey Hinton, and John Hopfield. The pioneering work Geoffrey Hinton did was on deep learning in the 1980s and '90s. It underpins the most powerful AI models in the world today. John Hopfield invented a type of pattern-matching neural network that could store and reconstruct data. Hinton built on technology, known as a Hopfield network, to develop backpropagation, an algorithm that lets neural networks learn.

Both the above Nobel Prizes reflect using mathematics for solving important problems related to biology and neural thinking-type applications. In a way, these researchers have considerably narrowed the gap between mathematical modelling of RNAs and discovery of drugs for very difficult health problems. We are delighted to see the above progress along with recent stride being made in the area of artificial intelligence, AI.

"It is interesting to note that generative artificial intelligence, GNI, has individuals as more eager early adopter companies. Seem to be largely at the stage of pilot projects, before fully implementing the GNI technology." – The Economist, November 9 –15, 2024, pg. 52

These advancements signal increasing democratization of GNI, leading to significant empowerment of curious individuals. We may recall that earlier big innovations, like PCs/internet/mobile phones/social media, did help a lot to improve processes-to-accesses in our life. The compounding effect of these innovation, plus GNI, for individuals and the society is likely to be immense, to say the least. In our own research, our access to high-quality data has improved a lot with the usage of AI. Even better, our analysts are able to undertake Python programming with the help of codes generated using AI! Obviously, demand for professional coders may get affected in the future. Even the need for outsourced analytics could come down a lot. For us, the major gains are our much-improved control over access to data and analytics ,more than cost savings. Won't this be equally true for any thinking organization, and individuals? To us, this heralds a new world of a high intelligence!

<u>In any business, more so in the investment business, one needs to have a reasonable scope to make mistakes</u>

We focus a lot on the: (i) mind of the management, and (ii) innovations taking place in our investee companies. One keeps on hearing about attention deficit due to information overload. However, now a days, we find the increasing pace of innovation all around requiring a lot more attention and focus from our minds. Consequently, our assessment of key success factors and assumptions regarding future cash flows of our investee companies keeps on getting more fluid. This is a big challenge as well as big opportunity in our research. While we will keep on learning and thinking, having a reasonable scope to make mistakes during our learning phase becomes increasingly more critical in our business. We expect you to stand by with us in this aspect of our investment management for you.

We need to be mindful of unknown risks specific to each of your investee company. Valuation of a firm needs to factor this element. Would the business model of a firm have adequate innovation capacity to navigate adroitly, while confronted by unanticipated developments. In fact, almost each of your investees has come up with good business and financial performance in recent quarters and year. In our research we consistently discover that our investee companies have done well despite trying circumstances. So far have been very pleased by the all-round innovations exhibited by your investee companies.

<u>Table 2: Net Profit growth – over the last 3 years/1year</u>

EPS Growth Rate %			
Period	Chanakya Capital	Nifty 50	Outperformance/(Underperformance)
Sept. 24 vs Sept. 23 (YoY)	47.8	20.35	27.42
Sept. 24 vs June 24 (QoQ)	30.5	1.25	29.21

A recent article in The Economist quite resonates with our newfound appreciation of mistakes:

"Even the most prolific blunderers can go on to do great things Mistakes are the portals of discovery," wrote James Joyce in "Ulysses".

Mistakes are unavoidable. But they are rarely the end of the story.

In her book Ms Edmondson argues that neither people nor organisations can learn if they deny that an error has happened. Instead, failures need to be carefully and dispassionately examined. That may mean having a process in place to signal when things have gone awry. Workers on Toyota's production lines, for instance, can pull a cord to raise the alarm when problems arise at its car factories, allowing the team to work out what has gone wrong and where.

Drugmakers, too, have processes in place to learn from failures. Ms Edmondson describes the example of Eli Lilly, today the world's most valuable drugmaker. After the firm discovered that a chemotherapy drug called Alimta it had spent vast sums developing was unsuccessful, the physician who conducted the trials pored over the results to understand what had gone wrong. He spotted that although some patients had benefited from the drug, those with a folic-acid deficiency had not. Simply adding supplements to the drug in subsequent trials greatly reduced the treatment's toxicity and improved the survival rate of patients. Alimta went on to be a blockbuster for the business." – The Economist, Howler horror, Nov 7th, 2024, pg. 56&57

<u>Demand for FMCG products down in metros and mini – metros in recent months – noise or signal?</u>

In the recent quarter, except for P&G India, every large FMCG company in India came out with weak financial results. Their respective management attributed it to high inflation and low growth in income of other than high-income people living in metros and mini – metros. While we have been trying to understand what really is going on, we still lack clarity about the underlying causes, whether temporary or structural.

Over the last one-year, increased inflation has increased due to weak monsoon in 2023, leading to higher prices of food items, including vegetables. This is expected to begin moderating in coming months. However, at least we in Chanakya PMS are not convinced about middle- and lower-income people living in metros and mini-metros cutting down on consumption of food products. We believe that in recent years a structural shift has been underway in urban centres with increasing penetration by modern retail chain and e-commerce. The leading FMCG companies have been offering significant discounts on sales through these two channels. In case of personal care products, for years new marketers with focused product offerings have been chipping away market share from the existing market leaders.

While the leading FMCG companies have advanced their hypothesis about weakening purchases in large urban centres, it remains to be empirically validated. In fact, Indian market remains flooded with anecdotes, but with limited empirical validation. Hence it is heartening to learn that the Central Government has recently initiated measures to improve statistical data collection, analysis and dissemination:

"A push for change has come from the top. Officials in the Prime Minister's Office (PMO) and the finance ministry seem to have realized that India's statistical crisis has hurt the credibility of official numbers. A roadmap for statistical reforms was prepared by the Economic Advisory Council to the Prime Minister (EAC-PM). This was followed by discussions with key stakeholders, A key pain point in India's data ecosystem relates to the use of administrative datasets. Different ministries tend to have different definitions and metadata standards, making it difficult to get datasets to talk to each other.

Mospi officials are now trying to rope in state statistical bureaus to help generate district-level estimates for new surveys and meet the growing demand for granular data." – Statistical reform has begun, Mint, Pramit Bhattacharya, 13 Nov 2024

Our counter – view is based also on our field research. To quote from one of our recent internal research report by Varsha:

"Private labels in every category is shamelessly placed next to the brands. Don't miss the `easy to understand', product- wise branding (What happened to the concept of umbrella branding)– simple and straight to the `functional' point. Home Ninjas to fight stains, Oils from the `First crop', Imli tree pickles/ spices etc.

"The macro, socio- economic shifts are evident. Premiumisation or aspirations for the masses are a chicken and egg phenomenon.

Innovation to Commerce – Strategy of driving volumes thru penetration. These companies have created a supply model and the market for the next billion. Prestige brands products at wholesale prices."

The life and aspirations of the young girls and an auto rickshaw wallah in Patna

Recently, articles in respected media have been suggesting that India might not attend its full economic potential due to low participation of women in its workforce. Interestingly, the same issue of The Economist also has a view as well as a counter – view about this:

"India's workforce remains only three-quarters of the size of China's, partly because it includes so few women. Social trends can change. But on some projections, India's labour force will not surpass China's until the 2050s. Even then, India will account for a smaller share of the global workforce than China does today. That will make it harder for India to become the world's workshop." – The Economist, Nov. 21st, 2024, A new Asian Pecking Order, pg. 54

"In 2018 the statistics office of the government of India released the first "periodic labour force survey", designed to provide quarterly and annual snapshots of employment in the country. That year the proportion of women aged 15 and above who were in work was a miserable 23.3%, far below the global average of 53%. By contrast, the labour-force participation rate (LFPR) among Indian men was 75.8%.

But the rate has picked up healthily every year since, rising to 41.7% in the latest survey released in September. For a country marked by deep gender inequality, a change this rapid and in the correct direction seems like unalloyed good news. Is it?

The other, more optimistic, explanation is that women are taking advantage of new opportunities. The government is serious about getting more women into the workforce, says Ms Deshpande, and has been pushing schemes to promote self-employment. Women have received more than two-thirds of loans under a government microfinance scheme aimed at encouraging non-farm businesses in rural areas.." –The Economist, Nov 21st, 2024, pg. 21 & 22

My understanding of this issue is based on recent field trips. During my last trip to Patna in August 2024, I met an auto rickshaw wallah person and three young Bihar girls in a shared auto rickshaw ride. I was touched by their aspirations:

<u>Sanjay Paswan, Auto driver</u>: He worked with J.K. Industries for around 8-9 years before was asked to opt for VRS. He was in sales and distribution function there and was doing quite well, yet! Then he started a grocery store, did well but had to close it down during Covid-19. He lost Rs. 2 lakhs in woodwork. Then he got into auto business. A year back, his younger son took coaching in physics from Byju. They lost Rs. 30,000 and didn't benefit at all. Now his young son doesn't want to study after class 8. He wants to set up a grocery store.

<u>Sarasvati:</u> She is a fresh lawyer, was going to Delhi for a job interview. She earned a law degree from an ordinary law college in Pune. She wants to get out of Bihar. She lacks confidence due to her weak education and not to so supportive environment in Bihar. She finds young girls in Bihar wanting to do something in life.

<u>Shilpa and her friend</u>: I met them during a shared auto-ride on Boring Road in Patna. Both were cribbing about their boss. They were working in a real estate firm, where customers hardly kept their promise. Their management keeps on pressurizing them excessively to sell. Both are also studying in a professional course in Patna, and their job is part-time to support them.

Both of them come from family of farmers in small towns in Bihar. Both of them want to do something, but are not sure about what exactly. It was wonderful to meet them. These two young Bihari girls, despite belonging to very traditional families, are working the way ambitious girls strive in a metro like Bombay! However, these girls are unable to shift outside Bihar for study or job. Their parents tell them to get married first, in case they want to go out of the state of Bihar for further studies or a job.

In my trip to Patna in the mid of November 2024, I met a construction worker returning from Oman to his hometown in Bettiah in Bihar. While he earns well in Oman, he doesn't enjoy the place. On my query about his return plan to Oman, he surprised me by telling that he would be working now in Europe! In my return flight, I met another Bihari person from Jehanabad, once a hotbed of caste wars and Naxalite activities. He works as a diamond polisher in Surat. What a wonderful change these two men represent - from the unruly dens of Bihar to be working in a global market – place! It signals that the young generation of both, labour and aspiring professionals, even in the hinterland of India have begun joining the front – stream of jobs in India. However, shift to a higher orbit of overall development and prosperity requires a much higher quality of institutions and economic eco – system in India.

Overall Performance of the Chanakya PMS compared to Benchmark

In the current financial year, the overall performance of our investments portfolios is given below in Table 3.

Table 3: Chanakya PMS - Investment Performance as on November 28, 2024

Period	Portfolio (In %)	Nifty 50 TRI (In %)
1 Month	-0.33	-1.61
3 Months	-1.33	-4.39
6 Months	8.52	5.26
1 Year	24.79	21.65
2 Years	25.18	14.76
3 Years	22.68	13.32
5 Years	22.22	15.83
Since Inception (13.08.2018)	17.04	13.77

Source: HDFC Fund Accounting

The above return numbers validate efficacy of our long-term investment process you will shortly have an on – line access to “wealth connect” software, allowing you real time view of your investment portfolio, along with risk and relative performance measures like Sharpe ratio, Treynor ratio and Jensen Alpha. You may like to verify whether these ratios place us in good light!

Portfolio Composition and Risk

In our portfolios, top 10 stocks accounted for 67.46% of the total investment. The overall sectoral break-up of our investment portfolio is given in Table 4.

Table 4: Chanakya PMS - Portfolio Sectoral Allocation as on November 28, 2024

Sector	Allocated Portfolio %
Banks & NBFCs	47%
Holding Companies	14%
Industrials	10%
Metals & Minerals	9%
Auto & Auto components	7%
Consumer Goods	2%
Logistics	2%
Others	8%

Source: HDFC Fund Accounting

Compared to portfolio composition on April 30, 2024, weights of holding companies and industries have gone up by 2% and 3% respectively, while weight of Others has come down by 5%. There shifts are primarily due to movement of prices of stocks. We think that your investment portfolio continues to generate returns significantly higher than the market portfolio, while taking lower level of risk.

With best regards,
Rajesh Tiwari

And on behalf of the new world out there,

Gautami Desai and Team Chanakya