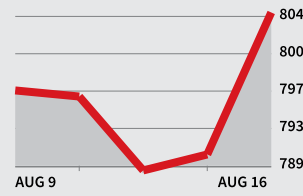


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| Nifty 50 | 24541.15 | +173.65 |
| P/E Ratio (Sensex) | 23.58 | +0.21 |
| US Dollar (in ₹) | 83.96 | -- |
| Gold Std 10 gm (in ₹) | 70321.00 | +937 |
| Silver 1 kg (in ₹) | 81510.00 | +1247 |

BRANDLINE.

D23, the Disney fan event in Anaheim California, brings all its brands under one roof to enthrall fans **p6**



QUANTUM.

How ionic liquids could be the ‘customisable’ solution for battery recycling woes **p7**

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Govt may take offer-for-sale route to reduce stake in GIC Re

AWAITING A PUSH. A possible rating upgrade by AM Best may provide a boost to reinsurer

Piyush Shukla
K Ram Kumar
Mumbai

GIC Re, India's largest re-insurer, is preparing for a possible offer-for-sale (OFS) by the Government, with the likelihood of a credit rating upgrade by AM Best seen acting as a tailwind.

Currently, the Government has 85.78 per cent stake in the company. For a company to be listed and continue to be listed, it must have a minimum public shareholding of 25 per cent.

In a reply to a question on the possibility of the Government diluting its stake in GIC Re, Chairman & Managing Director Ramaswamy N, said: “We are ready, but it's not our call. There are two ways of doing it. We can issue more equity so that the Government's share comes down. But, currently, we don't need capital. From a solvency perspective, we are in a very good position. So we will not be issuing equity.”

“What will happen is the



This year, hopefully, we will be close to about ₹42,000-43,000 crore (in gross premium collection). That is a substantial growth for us.

RAMASWAMY N,
GIC Re, Chairman and Managing Director

government will bring down its stake possibly via OFS route...As a company, we are ready for the process.”

ROAD SHOWS

In fact, GIC Re has conducted multiple road shows. In October 2023, it held a domestic road show, engaging with investors, analysts and other stakeholders, showcasing its growth story, profitability track record and diversified business.

The solvency ratio, which is a measure of capital adequacy, of the Corporation rose to 3.36 per cent as of



RATING UPGRADE

Referring to the need for a good credit rating for writing international business, the GIC Re chief said: “This year, we are hoping to be back to “A-” credit rating from “BBB”. Our profitability and combined ratio are good.

“Last year, they (AM Best, world's largest credit rating agency specialising in the insurance industry) gave us a double push — the outlook on the rating improved from “BBB+ with negative outlook” to “BBB+ with positive outlook”. We did not go to stable, we came directly to positive. Now, we are only one notch below “A-”.

The Corporation, which got listed on the exchanges on October 25, 2017, via an initial public offer aggregating ₹11,176 crore, has shared its financial performance data with the credit rating agency for a possible rating upgrade.

Once the company's rating is upgraded, it expects to start growing its international book from January 1, 2025.

June-end 2024 from 2.88 per cent as of June-end 2023. Insurance regulator IRDAI has set a minimum solvency ratio of 1.50 for insurers.

GROSS PREMIUM

Ramaswamy expects 15-16 per cent growth in gross premium in FY25. Last year, GIC Re's gross premium was at ₹37,182 crore.

“This year, hopefully, we will be close to about ₹42,000-43,000 crore (in gross premium collection). That is a substantial growth for us. We are confident of achieving it,” he said.

Two major export promotion schemes likely to get extension

Amiti Sen
New Delhi

Two important export promotion measures — the Remission of Duties and Taxes on Exported Products (RoDTEP) scheme and the Interest Equalisation Scheme (IES) — are likely to be extended to help exporters retain their competitiveness in a choppy global market, sources said.

The RoDTEP scheme, under which all embedded input duties and taxes paid during manufacture of an exported product are reimbursed, is valid till September 30, 2024. But it is set to be extended for all 10,000 plus product lines that are currently covered under it.

“The extension of RoDTEP is likely to be at least for the fiscal year 2024-25 and may even be beyond it depending on funds,” an official tracking the matter told *businessline*. Certain iron and steel items not covered under RoDTEP are likely to continue to be excluded.

A meeting of the Quarterly Monitoring Committee for RoDTEP and the RoSCTL schemes headed by the Finance Secretary will take place soon where a call will be



taken on RoDTEP extension and its duration, the official added.

“Our review suggests that if exports continue to grow slow, we can manage with available funds of ₹16,075 crore for 2024-25. However, if there is substantial growth in exports we will need to ask for more funds. But we foresee some savings under RoSCTL,” the source said.

The Rebate of State & Central Taxes and Levies (RoSCTL) scheme is for exports of made-up articles and garments, and is similar to RoDTEP scheme.

TEXTILE EXPORTS FLAT

“Textile exports are almost flat this year, so the 10 per cent enhancement in outlay they got in the Budget, of about ₹800 crore, should be available for RoDTEP. But

the decision has to be taken by the Finance Secretary-led committee,” the source explained.

An early decision is also likely on the extension of IES, which has lapsed for the 410 beneficiary sectors (non-MSME) on June 30, 2024. Only a two-month extension was given to the MSME sector which will lapse this month-end. Under the scheme, loans are extended at a subsidised rate determined by the government to beneficiary exporters.

FINAL NOTE

“A final note seeking extension of the interest subvention scheme for all beneficiaries covered under the lapsed scheme, will be soon presented before the Expenditure Finance Committee and then to the Union Cabinet. The Commerce Department wants a five-year extension but a final decision will be taken by the EFC and the Cabinet.

Goods exports in the April-July 2024-25 period grew 4.15 per cent (year-on-year) to \$144.12 billion, while in July, exports dipped 1.4 per cent to \$33.98 billion affected by geo-political turmoil and increased protectionism.

SC takes cognisance of Kolkata doctor rape-murder case

Our Bureau
Kolkata

The Supreme Court has taken *suo motu* cognisance of the gruesome rape and murder of a junior woman doctor at Kolkata's RG Kar Medical College and Hospital, amid massive mass protests across the country over the heinous crime.

A three-judge Bench presided by Chief Justice DY Chandrachud will hear the matter on August 20.

Details on p10

Govt wants to supply coal on-demand

Rishi Ranjan Kala
New Delhi

In a major reform push for the coal sector, the government aims to overhaul the decades-old production and supply structure with better access to commercial mines through a national coal exchange that will eventually offer the dry fuel on an on-demand basis to consuming industries, particularly MSMEs.

Details on p3



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Horror in hospital

Kolkata episode points to political, institutional decay

The gruesome rape and murder of a doctor in Kolkata’s RG Kar Medical college and the subsequent vandalism of its premises raise serious questions over the rule of law in West Bengal under the Mamata Banerjee-led government. It is just as well that the Supreme Court has taken suo motu cognisance and will be hearing the case on August 20.

The immediate issue that has outraged the entire country is the sheer brutality to which the doctor was subjected and the callousness with which the hospital administration subsequently dealt with it. The central figure here is former college principal Sandip Ghosh who initially attempted to dismiss the brutal rape and murder under his watch as a suicide (this is akin to custody crime, under institutional watch) and then took to victim shaming by reportedly asserting that “it was irresponsible of the girl to go to the seminar hall alone at night”. The prime suspect arrested for having assaulted her, Sanjay Roy, seemed to have free access to the hospital as a civic volunteer and was known among the doctors as a local power broker. The obvious political patronage extended to Sandip Ghosh, who was immediately awarded with the plum position of the principal of Calcutta National Medical College and Hospital after his resignation from RG Kar Medical College, does not portray the State government in good light. Trinamool Congress’ attempts to blame the Opposition for having organised an attack on the hospital and the protesting doctors on the night of August 14, are unconvincing. The Chief Minister cannot duck the blame here, particularly as she holds both Home and Health portfolios.

The incident has sparked widespread protests. Protesting doctors have raised questions not just about the nefarious manner in which this particular medical college was being run (with allegations of an organ, sex and drugs racket), but also about the glaring flaws in healthcare systems that expose both doctors and patients to mortal danger. In the case of RG Kar Medical College, the ongoing CBI probe would unravel whether the junior doctor was a victim of a security lapse that exposed her to a heinous assault, or a victim of a macabre racket which she was threatening to expose.

The doctors’ agitation also gives rise to larger questions on the abysmal working conditions, overall. Women healthcare professionals are vulnerable to violence given the poor infrastructure and security systems in medical facilities. They sleep in seminar rooms, unoccupied OPD rooms and inpatient beds in the wards because there are not enough doctors’ duty rooms, even when they are working double shifts for 48 hours. Toilets are not gender segregated. The specific case involving corruption and political linkages of the accused in the RG Kar Medical college needs to be extensively probed and the guilty punished. The structural issues highlighted by the doctors’ struggle need to be addressed if women’s safety is to be ensured in medical institutions.

POCKET

RAVIKANTH



‘If it’s Tuesday it must be Belgium’

Public officials, accused of wrongdoing, must step aside till their names are cleared. But this option is not without problems

LINE& LENGTH.
TCA SRINIVASA RAGHAVAN

The recent allegations made by the short seller Hindenburg against the SEBI chairperson Madhabi Puri Buch, and the sanction given to prosecute the Karnataka Chief Minister, has reopened, for the umpteenth time, a centuries old moral dilemma: fight or flee?

That is, if a person is accused of some wrongdoing or professional impropriety, how should he or she respond?

The story of Ram asking Sita to undergo trial by fire to prove her purity after a dhobi had said intemperate things about her is one instance. Another is from the writings of the Greek philosopher Plutarch who quotes Julius Caesar as saying that his wife, Pompeia, must be above suspicion. After saying that Caesar had divorced her.

However, as an aside, it must be noted that in the old days a similarly high moral standard wasn’t applied to men who made the rules. They exempted themselves.

But since 1950 or thereabouts this kind of equivalence has been applied, or sought to be applied, equally. There are therefore a large number of males in public office who have had to give up their positions after some doubt was cast on their integrity.

There are very compelling and several precedents to indicate what Ms Puri should have been asked to do, namely, if not quit, at least go on leave, till she was fully in the clear. That is, neither fight nor flee, just live to fight another day.

There is, however, another aspect to these incidents. Such high moral stances can leave a permanent impression in the public mind that the person is actually guilty and that the sacrifice is only a smokescreen. This is a real risk that everyone would like to avoid.

This is the ‘admission of guilt’ problem that all public servants have to face. They are damned if they do and damned if they don’t. This kind of situation makes no distinction between criminal acts, indiscretion and impropriety.

The last two are really tough because



GREY AREAS. A high moral stance by a public official can sometimes leave the impression of ‘admission of guilt’ by the people complicating the matter. The line between criminal acts and indiscretion gets blurred. /ISTOCKPHOTO

both involve judgment, not evidence. There are no fixed yardsticks for them like what we have for criminality.

THE CREDIBILITY ISSUE
In the end, it all boils down to the available evidence in the case of criminality, and the degree of credibility in the case of propriety and/or indiscretion.

The other difference is that while adducing evidence has a clearly laid out process and procedure, impropriety is entirely a matter of credibility. Who is more likely to be believed: the accused or the accuser?

That’s where circumstantial evidence plays a critical role, that is, the ‘smoking gun’ problem. This is that if the gun still has smoke coming out of the barrel, it’s certain that it was fired recently.

But was it fired by the person who is

While adducing evidence for criminal acts has a clearly laid out process and procedure, impropriety is entirely a matter of credibility.

holding it? That’s only a presumption. It’s very likely to be true but not a hundred percent certain. Hence the question of benefit of doubt: should the person be given it or not? This is a matter of judgment.

That is why the need for an unbiased inquiry becomes important. There simply has to be one. It mustn’t ever be avoided when high public office is involved.

The usual demand for a joint parliamentary committee is intended to fulfil that need. However, as the committee has only politicians, it can’t be unbiased.

Plus in the case of Ms Buch, it’s probably overkill. A retired Supreme Court judge of impeccable reputation would probably be quite enough.

POST HOC, ERGO PROPTER HOC
One of the commonest mistakes made in social discourse, especially on social media, is the ‘post hoc, ergo propter hoc’ fallacy. It means “After this, therefore because of this”.

The fallacy arises from establishing a false causality.

It’s different from ‘cum hoc, ergo propter hoc’ or ‘along with this, therefore because of this’ where if two

things happen simultaneously, it is assumed that one caused the other.

The problem in both cases is that causality is established by assumption rather than proof. The operative word in such cases is ‘must’. ‘This’ must be the case because of ‘that’.

The accusation against Rajiv Gandhi in the Bofors case by two prominent newspapers, that he had taken a bribe, was just that. Eventually, it was found that there was no evidence of this. The Congress, at least, should remember this.

But public servants can also often act against their self-interest. Ms Buch needed to have disclosed to the Supreme Court what Hindenburg has now revealed. She didn’t. This was an error of judgment that can easily be construed as mala fide in some sense.

Such episodes tend to be judged by the principles of justice. Actually, however, when it’s not evidence but credibility that’s to be weighed, the principles of fairness are more important.

Though these are fully established now, they are rarely employed in public discourse because embedded anchoring biases are ever present. It’s the ‘If it’s Tuesday it must be Belgium’ problem.

SC order on GM crops can be implemented

Past experience shows that a consultative process can help in drafting a policy on GMOs

Kavitha Kuruganti

A two-judge Bench of the Supreme Court recently delivered a split verdict on the matter of Genetically Modified Organisms (GMOs) in our food and farming systems. The divided view was mainly around GM Mustard; the matter will now go to another bench to be constituted by the Chief Justice.

However, all other matters related to GM crops will now go to the people’s court, so to speak. The Bench, in its judgment on July 23, 2024 directed that the Ministry of Environment, Forest and Climate Change (MoEFCC) should evolve a national policy on GM crops, preferably within four months, and in consultation with all stakeholders.

Implementing this order may not appear to be easy but in reality is highly doable in this case because of earlier deliberative democratic processes on GM crops.

These earlier processes were run by credible independent committees, and in the case of Bt brinjal, the then Environment Minister Jairam Ramesh. He held seven consultations in early-2010 with the help of a civil society organisation, wherein around 7,000 citizens participated with 9,000 written inputs.

He contacted State governments and got their written inputs. These consultations ended in an indefinite moratorium being placed on Bt brinjal commercial release.

In 2003, the Union Ministry of Agriculture set up a Task Force on

Agricultural Biotechnology led by Dr MS Swaminathan for formulating a draft long-term policy and for recommendations to harmonise decision-making across ministries.

The Task Force consulted representatives of industry, State governments, civil society, mass media and farmers’ groups, through 11 meetings between August 2003 and February 2004. Animal husbandry and fisheries were also included in the policy, in addition to aspects like Liability, Compensation, Biosecurity Compact, Right to Information, Trade Security etc.

The Task Force stated that the bottomline for any biotechnology regulatory policy should be the safety of the environment, the well being of farming families, the ecological and economic sustainability of farming systems, the health and nutrition security of consumers, safeguarding of home and external trade and the biosecurity of our nation.

In 2012, the Parliamentary Standing Committee on Agriculture chaired by Basudeb Acharya presented its 37th report titled ‘Cultivation of Genetically Modified Food Crops – Prospects and Effects’, after studying the subject over 27 sittings lasting more than 60 hours, from March 4, 2010 to August 3, 2012, examining 467 memoranda running into nearly 15,000 pages. This Committee interacted with State governments, and made study visits to different parts of the country.

It heard 50 individuals representing public sector scientists, farmers’ organisations, multiple academies of science, industry players, activists, and



NO TO GM. A file photo of a protest march in New Delhi

officials who tendered oral evidence before the Committee (verbatim recording of evidence was 863 pages-long).

One of the key recommendations of this Committee with regard to a statutory biotechnology regulator was that it is too small a focus in the vast canvas of biodiversity, environment, human and livestock health and a multitude of other such related issues. This Committee therefore recommended an all-encompassing statutory Biosafety Authority, to be set up after widespread debate amongst all stakeholders.

PARLIAMENTARY PANEL

Another Parliamentary Standing Committee on Science and Technology, Environment and Forests studied ‘Genetically Modified Crops and Impact on Environment’ in 2016-17. This Committee also heard views of multiple ministries, civil society representatives and experts, held a consultation in

Chennai, and presented its report after 11 sittings.

This Committee concluded that unless the biosafety and socio-economic desirability, taking into consideration long-run effects, is evaluated by a participatory, independent and transparent process and a retrieval and accountability regime is put in place, no GM crop should be introduced in India.

The SC-appointed Technical Expert Committee (TEC) also ran consultative processes in 2012-13, and held at least eight meetings with various departments/ministries, agricultural scientists, seed industry representatives etc. The independent experts of the TEC gave a unanimous report recommending amongst many other things a ban on herbicide tolerant crops as well as crops for which India is the Centre of Origin or Diversity, and a 10-year moratorium on Bt food crops.

They pointed out that India does not carry out need-based assessment of GM technology taking into account alternatives available in each case. The TEC recommended that India establish a collaboration with Norway to evolve a comprehensive regulatory system including to assess socio-economic impacts.

The processes run by different high-level bodies as shown above demonstrate that it is indeed possible to draft a policy through widespread consultations. What’s more, the reports of these bodies can form the guidance for the policy to be drafted now.

The writer works on issues of sustainable agriculture and farmers’ rights

✉ LETTERS TO EDITOR Send your letters by email to bleditor@thehindu.co.in or by post to ‘Letters to the Editor’, The Hindu Business Line, Kasturi Buildings, 859-860, Anna Salai, Chennai 600002.

Workplace and women’s safety

Amid the nationwide protests, the Supreme Court has taken suo motu cognisance of the recent rape and murder case at RG Kar Medical college and Hospital in Kolkata. It is a small victory for the protestors across the country for speedy justice against the crime and the Bengal government’s failure to address the issue properly, stand beside the victim’s family, and provide efficient safety to the women in the State. After Kolkata Police’s lackadaisical approach, the High Court intervened to hand over the case to the CBI, and now SC’s intervention will definitely

be crucial. The Indian Medical Association has also written to Prime Minister Narendra Modi, demanding the fundamental right to life. There must be strict rules in place for doctors’ safety, and the Centre should look into the fact that incidents like these do not occur. There must also be swift and stringent punishment for the perpetrators of such heinous crimes. Sumit Saha New Delhi

Landmark elections

It is with reference to the news ‘Valley on a high over J&K Assembly

election announcement’ (August 18). The long-awaited elections in Jammu and Kashmir have finally been announced. The election marks a crucial moment for the region that has seen profound changes since the abrogation of Article 370 in 2019. These elections are particularly significant as these are the first since the bifurcation of the State into two Union Territories, Ladakh and J&K. The demand for restoration of statehood could alter the dynamics of election. Political parties both national and regional undoubtedly leverage this issue to galvanize

support. P Victor Selvaraj Tamil Nadu

Democracy blooms in J&K

The declaration of the three-phase polls in Jammu & Kashmir may have surprised many in political spectrum but the Centre had made it explicitly clear after delimitation process was accomplished. The recent repeated terror attacks across LoC in Jammu region failed to deter the Election Commission in its pledge to restore the State Govt in the JK. The new State government has the biggest challenge of choking

terrorism, empower the youth, develop the remote areas of the State. The politics of Jammu & Kashmir has undergone paradigm shift in the last decade. The Central rule for an indefinite period creates distrust and alienation among the people. People must identify the deep state forces and realise what and who kept the State on the boil. Kashmir belongs to and loved by the entire country. The assembly elections provide the opportunity to the people to regain their past fortunes. Vinod Johri Delhi

Watson’s tale of courage

How mental strength made him a better cricketer

PK Ajith Kumar

Shane Watson witnessed one of cricket’s greatest tragedies unfolding on the field. He was one of the players at the Sydney Cricket Ground when Phillip Hughes was felled by a bouncer during a Sheffield Shield match in late 2014.

The talented opener, who played for Australia in 26 Tests and 25 ODIs, died at a hospital two days later.

Watson feared it could happen to him, too. All it could take is just one ball. Watson overcame that trauma. He became an even better cricketer, in fact. In the book, *The Winner’s Mindset*, he tells us how.

MORE THAN SELF-HELP
This is no autobiography, though. It is, if you want to be precise, a self-help book. But to call it just that would be unfair.

It offers some fascinating insights not just from Watson, one of cricket’s finest all-rounders of his generation, but from some of the greatest cricketers of all time — Viv Richards, Ricky Ponting and Rahul Dravid. The author tells us, in vivid details, how by mentally becoming stronger his career was transformed, though that happened towards the end of it.

Watson has had a career that most cricketers would be proud of. He made 10,950 runs and took 291 wickets for Australia across formats. He was part of the Australian team that won two World Cups. Two of the teams he played for won the IPL – Rajasthan Royals in the inaugural edition of the tournament in 2008 and then Chennai Super Kings in 2018.

It was an exceptional innings by Watson that won CSK the final against Sunrisers Hyderabad. He was 36 then. At the Wankede Stadium in Mumbai, chasing SRH’s 178 for six, he had begun slowly, without scoring any run for the first 10 balls he faced.

He saw his opening partner Faf du Plessis getting out, playing a shot he normally would not have. He had done that because Watson had not been scoring fast enough.

Negative thoughts – such as guilt – could have impacted him, but he did not allow that. He went on to play one of the greatest IPL innings ever – 117 not out off just 57 balls.

It remains one of the greatest in the history of the IPL.

It also exemplifies best what he learnt about the mind, from Dr. Jacques Dallaire, a US-based



Title: The Winner’s Mindset
Author: Shane Watson
Publisher: HarperCollins
Price: ₹499

mental skills guru based. It was a chance encounter with Will Power, an Australian race driver – he underwent a harrowing experience similar to Watson’s – that made him take a plane to Charlotte, North Carolina.

MENTAL TECHNIQUES
The lessons that Watson learnt and his own experiences as one of the world’s best cricketers make *The Winner’s Mindset* different from the usual self-help books. Watson’s brutal honesty – while talking about the demons he faced, his insecurities, his failures, and the mistakes he made as an athlete from a psychological point of view – helps, too.

The book, not surprisingly, would appeal more to cricketers or people who follow it closely. But Watson is addressing a wider audience. He gives tips about getting the best out of oneself by applying various mental techniques.

He mostly draws from his own experiences, like when he was overexerting himself, mentally and physically, ahead of an important match, and how playing a song in his head helped him focus while he batted. But he also tells us what the legends of the game did: Richards concentrated on chewing a gum, synchronising it with the tapping of his bat; Ponting asked the umpire how many balls remained in an over though he knew it himself.

On the team bus, Brett Lee would watch a video of himself destroying the batters with his express bowling.

The Australian quick wasn’t being self-indulgent, he was watching the best version of himself before a big match. Watson hadn’t known that at the time.

A reel history of Tamil Nadu

The author traces the cinematic journey of Kamal Haasan within Tamil Nadu’s socio-political milieu

BOOK REVIEW.

Naveen Chandra

Don’t read this book if you want to learn about Kamal Haasan, the person, more than what you already know, for you’ll be disappointed. Read this, instead, for a wonderful, thoroughly researched, deep dive of the major movies he worked in, how he selected his stories and worked his craft to delight audiences over the last six-and-a-half decades.

The book illustrates how film directors built with him through their films, a highly engaging social and political narrative about Tamil Nadu, reflective of the times they lived in.

K Hariharan, a national award-winning film director, has painstakingly detailed this cinematic journey. Hariharan chooses 40 films for this task, from the 260-odd that Kamal has done in his career. He focuses on the plots of these stories rather than the process of making them and that is why the book is such a delight, as one learns about the underlying political and social messages that the films conveyed through their principal character, played by Kamal Haasan.

Hariharan begins the book with an analysis of five of the 28 films Director K Balachander made with Kamal in the initial years of his career. He takes you into the origins of the films that benchmarked some of the ideological issues that dominated the Tamil political discourse in those times including the non-Brahmin movement.

Balachander uses Kamal Haasan to create a conscious and empathetic perspective of the urban, alienated life people had begun living in the tumultuous 70s. In films like *Aval Oru Thodar Kathai*, he pitches Kamal as a

rationalist against the unforgiving nature of patriarchy by casting him as a hero surrounded by women struggling for independence from the restrictive clutches of tradition.

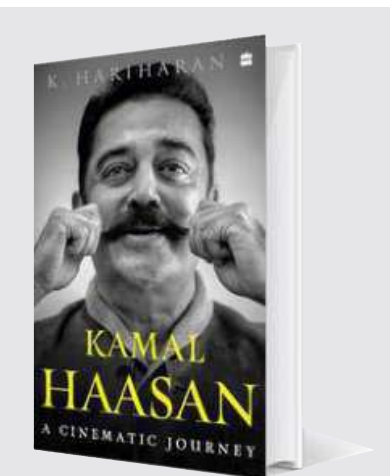
In the film *Apoorva Raagangal*, the falling apart of the utopian dream of a casteless Tamil society forms the backdrop of the film which stars both Kamal and Rajinikanth.

Balachander’s films *Moondru Mudichu* and *Manmadha Leelai*, explore why a woman is a piece of property in a marriage and why society questions a woman’s legitimacy to articulate her sexual desires, even as it is perfectly fine for a man to do so. Kamal was frequently placed right in the middle of such feminist discourse of Balachander’s films, which explains his fan following amongst both men and women.

DIVERSE FILMS
Over several chapters, Hariharan analyses Kamal’s growth as an actor through his diverse films with different directors; Balachander for intellectual urban stories, Bharatiraja for rural themes, Balu Mahendra for women-centric films, Singeetham Sreenivasarao for comedies and SP Muthuraman for commercial masala films.

Sagara Sangamam, a terrific highly detailed plot of unrequited love and *Pushpak*, India’s only silent film till date, a dark and grim romantic thriller about the haves and the have nots are amongst my favourite Kamal films; and Hariharan doesn’t disappoint in providing perspective that enriched my understanding of them.

Hariharan shares an interesting anecdote about the film *Puspkak*. Quite comically for a silent comedy film, without a single spoken word, it was required to be certified by the Censor board multiple times in all Indian languages with titles changed each time



Title: Kamal Haasan: A Cinematic Journey
Author: K Hariharan
Publisher: Harper Collins India
Price: ₹489

ABOUT THE AUTHOR
Graduating in Direction from the FTII (1976), Hariharan Krishnan has made nine feature and over 350 short and documentary films. His films have won national awards and been selected at international festivals too.

and ended up National award for best film in Kannada!

Hariharan points out how, in a lot of ways, in a one-of-its-kind generational shift, Kamal, on the one hand, took on the mantle from Sivaji Ganesan, doing the largely social message laden thematic films, while Rajinikanth, on the other, stepped into the shoes of MGR, creating one formulaic, commercial

blockbuster after another to achieve superstardom.

As the century turned over, Kamal began to play roles in films like *Indian*, *Uttama Villian* and *Virumandi* that addressed larger social evils rather than individual angst.

From playing a dwarf, a woman, a blind man or twins, triples or even 10 different roles in one film, Kamal Haasan, will always be the true *Behroopiya*.

For most part, Hariharan’s analysis of films is interesting fodder for thought and sheds new light on some of Kamal’s films we have seen and enjoyed.

Occasionally, Hariharan goes off the mark. In his analysis of *Swati Mutyam*, he equates the character’s travails to the emergence of NTR in Telugu politics, likening him to the principal character who came out of the oyster and glistened like a pearl. A very stretched and unbelievable argument.

Even his Spartacus analogy of the three films produced by Kamal himself, *Mahanadi*, *Kuruthipunal* and *Indian*, on the theme of emotional enslavement, seems quite a force fit.

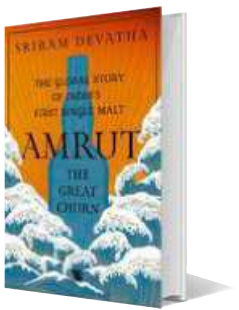
The book could have done with a much better collection of photos, instead of just the publicly available posters; some photos of his dramatic moments on screen would have added to the narrative.

There’s also nothing about his craft, how he gets into character or how he can emote so well, endearing himself to his audiences.

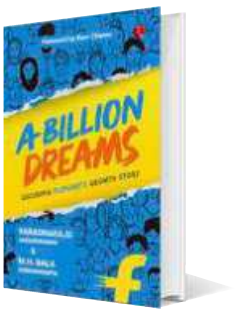
With three big releases in 2024, *Kalki*, *Indian* and *Thug Life*, Kamal Haasan is still as prolific as he was when he started out. Get the book to discover how his films provide an incisive insight into Tamil history and culture.

The reviewer is the Founder & CEO of 91 Film Studios which produces and distributes feature films in Indian regional languages

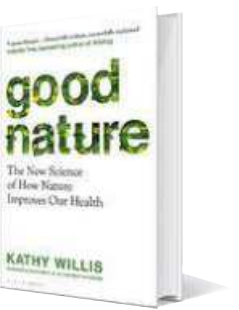
NEW READS.



Title: Amrut — the Great Churn: The Global Story of India’s First Single Malt
Author: Sriram Devatha
Publisher: Westland Business
The tale of how a home-grown whisky brand attained international cult status



Title: A Billion Dreams: Decoding Flipkart’s Growth Story
Authors: Varadharaju Janardhanan, M.H. Bala Subrahmanya
Publisher: Rupa Publications
The story of the home-grown Flipkart that understood the power of the Internet



Title: Good Nature: The New Science of How Nature Improves Our Health
Author: Kathy Willis
Publisher: Bloomsbury
This book brings the laboratory to our lives, evoking the thrill of scientific discovery, and out into the natural world

TWENTY YEARS AGO TODAY.

August 19, 2004

Posco, BHP Billiton have big plans in Orissa
South Korea’s steel maker Posco and Australia’s mining major BHP Billiton have jointly approached the Orissa government with a proposal to set up a 10-million tonne integrated steel plant in the State. Apart from this the two foreign giants have submitted proposals for iron ore mining and setting up of a coke plant.

Duties on petrol, diesel cut Consumers spared of price hike
The consumer will be spared any hike in prices of petrol and diesel following today’s decision to reduce the duties on the petroproducts. In the case of LPG and kerosene, the Government does not intend to allow oil companies to raise prices, even as today’s duty reductions will still leave the public sector oil companies selling these products at a loss.

‘Govt to wait for CAG report on Centaur deal’
The Government will wait for the Comptroller and Auditor General of India’s report on the disinvestment of Centaur Hotel in Mumbai before deciding on the ‘discomforting aspects’ of the sale concluded during the NDA regime, said the Finance Minister, Mr P. Chidambaram.

Short take

The paradox of booming markets, tepid profits

Sachin Gupta

In the backdrop of the Bangladesh crisis and the Hindenburg report on SEBI, three other critical issues deserve our attention: Q1 revenue and profit trends, the slowdown in credit growth, and the potential long-term impact of the reversal of the ‘Yen carry trade’ on global financial markets and the Indian economy.

Firstly, the Q1 results have revealed a concerning trend: revenue growth has remained in the single digits, while profit growth has been even more subdued. This performance contrasts sharply with the high trading price-to-earnings (PE) multiples in the Indian stock markets.

The disparity between these low growth figures and high market valuations suggests increasing pressure on corporations to deliver significantly higher growth rates to meet investors’ elevated expectations.

Secondly, credit growth rate has softened to 13.9 per cent in the April-June quarter from 16.3 per cent (Q-o-Q). This is driven largely by low growth in loans to Non-Banking Financial Companies (NBFCs) and unsecured loans. This can largely be explained by the regulatory actions taken by RBI limiting the bank’s credit to NBFCs and unsecured loans. In addition, there is also a supply side issue.

Most banks are witnessing a sharp rise in their credit-deposit ratio (CD ratio), which indicates the limited headroom for

the banking sector to fund credit growth.

Additionally, contrary to expectations of softening interest rates, banks have begun raising rates, albeit gradually.

Even if the RBI cuts rates during H2 of FY25, it may not lead to a broad reduction in the overall interest rates. The high CD ratio will likely keep pressure on banks to maintain higher lending rates, potentially further slowing credit growth.

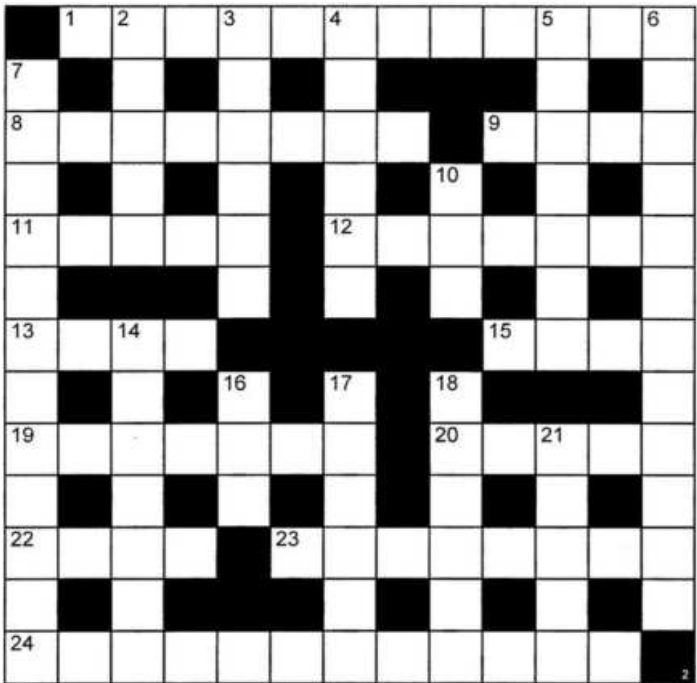
Lastly, the Bank of Japan’s decision to raise interest rates from 0 to 0.25 per cent has had significant repercussions. The sharp downturn that followed this announcement was driven by fears that the ‘Yen carry trade’ — where investors borrow cheaply in yen to invest in higher-yielding markets like the US —

would need to be unwound.

While markets stabilised, the long-term implications could be substantial. Japanese investors, active in India’s BFSI sector, may pull back as the interest rate differential narrows and the yen appreciates, potentially reducing the flow of much-needed foreign capital into India. In summary, we are witnessing modest revenue and profit growth, declining credit growth, and ongoing global turbulence in geopolitics and financial markets. While these issues are not yet severe concerns, they signal a time for caution, especially given the high multiples at which Indian markets are currently trading.

The writer is Chief Rating Officer, CareEdge Ratings

BL TWO-WAY CROSSWORD 2506



EASY

ACROSS

1. Bird that returns to the loft (6,6)
8. Last ten years of century (8)
9. Take moving pictures (4)
11. Italian city, industrial centre (5)
13. Get rid of; arrange, settle (7)
13. Sword used in fencing (4)
15. Maintenance (4)
19. Bosun’s pipe (7)
20. Prefix signifying beyond (5)
22. Marsh, water grass (4)
23. Arrogantly self-confident (8)
24. Meeting requirements (12)

DOWN

02. Proprietor (5)
03. Having mind bent on (6)
04. Covetous, avaricious (6)
05. Typical example, personification (7)
06. Registration displays on car (6,6)
07. Stating it differently (2,5,5)
10. Take advantage of (3)
14. Needing immediate attention (7)
16. Pen for swine (3)
17. Shakespeare’s Two Gentlemen of here (6)
18. Pail (6)
21. More accurate (5)

SOLUTION: BL TWO-WAY CROSSWORD 2505

ACROSS 1. Ferret 8. Neigh 9. Abscond 11. Drifters 12. Swore 15. Lame 16. Pit 17. Lime 19. Heaps 21. Vigorous 24. Periwig 25. Rival 26. Lights
DOWN 2. Elbow 3. Recorder 4. Tend 5. Snuff 6. Hike 7. Thus 10. Drawing up 12. Sale 13. Sleeping 14. Less 18. Drill 20. Print 21. Vary 22. Give 23. Seal

NOT SO EASY

ACROSS

01. Men hoping I go wrong with bird returning to loft (6,6)
08. Last decade of century in which temperature soars (8)
09. Layer of dust seen in picture theatre (4)
11. In Italy one may be seen in a variety act (5)
12. Arrange for posse to follow girl, in short (7)
13. Weep, especially when withdrawing sword from it (4)
15. Preserve the most important part of fortification (4)
19. It may be blown during the time it goes round the street (7)
20. Last month ran endlessly beyond its prefix (5)
22. Plant it in musician’s embouchure (4)
23. The male fowl is certain to be offensively self-confident (8)
24. As it’s put out, the plant must be made acceptable (12)

DOWN

02. Naval captain from the West involved in the Nore trouble (5)
03. The meaning of it is the camper’s situation (6)
04. To be eager to get too much 22 is, in a guy, non-u (6)
05. The height of excellence may be to omit it in 13 endlessly (7)
06. Car’s identification by bumpers lent a varied form to them (6,6)
07. Say it a different way or drown it? She might! (2,5,5)
10. Employment by Union seldom encourages beginners (3)
14. Next American private turning east first needs urgent action (7)
16. Where swine is concerned it sounds like an eyesore (3)
17. Two gentlemen came into play from here over an altercation (6)
18. Agent’s sort of shop that, when kicked, died (6)
21. Being closer to the fact, is loyal to the Right (5)

ON THE CAMPAIGN TRAIL.

The monsoon is still active across India, and equally it has rained campaigns. After a brief dry spell, brands have found their muse in Independence Day, finding different ways to pay ode to the country. For others, the festive spirit has inspired a creative burst, with brands showing different facets of sibling love in their Raksha Bandhan campaigns.

Restless but responsible

The government's *HarGhar Tiranga* campaign has got the nation buying flags on Independence Day — but then the flag gets discarded and thrown carelessly. Enter denim brand Spykar's I-day campaign, which urges Indians to uphold the dignity of the national flag. Conceptualised and produced by Brandmovers Interactive India, it is a call to action as it shows youth in their trendy cargoes picking up discarded flags and pocketing them. Spykar has also launched a Raksha Bandhan campaign called *Threads of Love* that cleverly puns on the threads that go into the making of denim and the threads of love that tie siblings.

The homecoming

MakeMyTrip's Independence campaign, made in collaboration with the Ministry of Tourism, is aimed at NRIs, inviting them to come and see their homeland's transformation. In the words and voice of Gulzar Saab, "*kinna hua hai inn dino badlav toh dekho, tum apne ghar mein laut kar aao toh dekho*," exhorts the film, as it shows progress through flyovers, bridges and the natural beauty of the country with every modern amenity on tap.

Sanskrit for security

Axis Bank's Independence Day campaign is totally out of the box. It promotes Sanskrit and suggests using words from the language as passwords thereby showing how modern problems can have ancient solutions. Blending tradition with technology, through a Sanskrit professor we get to hear the beauty of the language and how in an era of growing cyber crimes, it can protect us. The bank has created a website www.sanskritpassword.com, where you can translate an English word into Sanskrit.

A sweet AI twist

Cadbury has made festival campaigns an art. Its Raksha Bandhan campaign is a bit too saccharine but comes with an interesting and useful AI creative twist. Cadbury Celebrations' *#CreatingMemoriesNeverClicked* campaign calls siblings to turn uncaptured moments into cherished keepsakes. The brand has rolled out a user-friendly microsite, where individuals can transform precious, undocumented moments from their memory into realistic photos. On the campaign website-www.cadburycreatingmemories.com, siblings can share their cherished memories that best define their bond, along with accompanying photographs. Using cutting-edge technology, including AI, a personalised image of the memory is then recreated. Developed by Ogilvy India, the site features facial restoration, out-painting and de-aging to ensure a high-quality and enjoyable experience.

Rakhi rap

Two brands go the rap route in their Raksha Bandhan campaigns. Zepto and The Man Company both use rap-based ad films to bring to you the complicated sibling relationship of rivalry and fights galore but affection at the core. The Man Company's rap video features an all-female cast, and is voiced by Mumbai-based rapper Krantinaari. It is catchy and has you smiling as it offers a playful, authentic take on the brother-sister duo. Directed by Nikhil Mehrotra and conceptualised by Gurugram-based creative agency Hashtag Orange, the video captures the essence of modern sibling bonds — equal parts love, rivalry and unwavering support, and at the same time weaves in the brand's core proposition of challenging conventional masculine narratives. Zepto's "*Rakhi Aapki, Lifafa Humara*" campaign is a twist on the *shagun ka lifafa* and also through a rap film shows the teasing nature of sibling relationships.

NUGGETS.

Ad Club launches The TAC Academy

The Advertising Club has forged a deal with the Institute of Practitioners in Advertising (IPA) to offer global courses at special prices to its members under the aegis of The TAC Academy. The Ad Club is an industry body representing the interests of professionals in the marketing, advertising and media world. There will be early bird and bulk discounts available on the courses. Among the certifications available are the Foundation Certificate, which will teach newcomers to advertising and marketing communications how to write strategies that sell, the roles of different media, how to use data and how to measure the success of your work, and Digital Performance Essentials Certificate — which allows you to master the basics in digital performance marketing. In addition there are other certifications such as on Media Research and Communications Planning.

Stitching up big growth

India's \$130 billion lifestyle market, with fashion accounting for nearly 80 per cent and the rest beauty and personal care segment, is expected to grow at 10-12 per cent CAGR, to reach \$210 billion over the next five years, largely led by the organised segment. India's e-lifestyle market is poised to grow from \$16-\$17 billion in 2023 to \$40-\$45 billion in 2028. These are some of the findings of a study by Bain & Company and Myntna titled '*E-Styling India: Decoding India's Online Fashion and Lifestyle Shopping Trends*'. The report says that the growth in e-lifestyle will be enabled by the easing of short-term inflationary pressures, combined with structural and favourable demand shifts, such as rise in income, growth of fashion forward, digital native Gen-Z shopper base, as well as an increase in demand for organised/branded products.

FANS AND FRANCHISES

D23 dazzles with tantalising Disney magic

TIMELESS CHARM. At the biennial expo in Anaheim, the House of Mouse brings out all its brands under one roof to enthrall fans

Meenakshi Verma Ambwani

“Where else can you be 50-year-old, wear Mouse ears or dress as your favourite Disney character and be free to be a child again, without being judged!” exclaims Corey Wylde, looking at-home, dressed as Donald Duck, at the Anaheim Convention Centre in California. Her 22-year-old daughter looked pretty as a picture dressed as Belle, the Disney princess.

The Florida resident and her family were attending D23: The Ultimate Disney Fan Event for the fourth time. “We visit the Disney theme parks every other month. It’s our ‘Happy Place’. So coming to D23 is a no-brainer,” she says.

Wylde is part of a global community of Disney, Pixar, Star Wars and Marvels fans attending the glittering three day-event.

The biennial expo, which is full of razzmatazz, attracts Disney loyalists from far and near as the company brings all its properties — from Walt Disney Animation Studios, Marvel, Lucasfilm, Disney Parks to National Geographic — under one big roof. Fans and journalists get to hear big reveals, soak in immersive experiences, consumer products, presentations and panel discussions.

INCOMING!

The name “D23” pays homage to the journey that began in 1923 when Walt Disney opened his first studio in Hollywood. D23 is



ULTIMATE PLAYGROUND. Fans cosplay their favourite characters at the D23 THE WALT DISNEY COMPANY

the official club for fans and this event has been organised since 2009.

At the 2024 edition of D23, key announcements included news about over 25 new movie and series titles besides expansion plans for Disney experiences including theme parks and cruises among others.

From *Moana 2* and *Frozen-3* to *Toy Story-5* to *Avatar: Fire & Ash*, the new titles included future projects across Walt Disney Animation Studios, Pixar Animation Studios, Lucasfilm, Marvel Studios, Searchlight Pictures and 20th Century Studios.

Among the announcements that created a big buzz among fans was when Disney unveiled the trailer of *Mufasa: The Lion King*, a 3D CGI film and Pixar's flash about *Incredibles 3*, the next

instalment in the beloved animated superhero franchise. The entertainment major also marked the announcement of the release of *Frozen 3* in 2027, with the launch of the concept art, evoking fans' interest. The fan event was held close on the heels of the entertainment major delivering two blockbusters in the first half of the year with *Inside Out 2* and *Deadpool & Wolverine*. It was also a full display of the strength of its brands, which resonates with consumers across age-groups and interests.

Bob Iger, CEO, the Walt Disney Company, who came to the D23 for the first time in five years, stressed during his address that the company's focus has been to tell stories in the “most modern, relevant, compelling ways” that appeal to both

“young and the young at heart”.

“Our deep bond with fans, forged over a century of storytelling, is stronger today than ever before, driven by the unmatched strength of our creative studios, the wide appeal of our brands and franchises, and innovative ways that we bring our stories to life in our theme parks and experiences,” he said.

He added, “The world needs to be entertained, maybe even more so now than ever before, and we take that responsibility seriously.”

WHAT MAKES A HIT

At the Studio Creative panel, the top honchos of various studios including the likes of Alan Bergman, Co-Chairman, Disney Entertainment; Pete Doctor, Chief Creative Officer, Pixar; Jennifer Lee, Chief Creative Officer, Walt

A ‘Hearty’ addition to the exploding pet food market

Chitra Narayanan

Furry companions never had it so good. Till a few years ago, you could count the number of pet food brands on one paw, with Pedigrees and Whiskas from Mars International having a big share of the market. Now, the pet care shelves are suddenly crowded with many more brands from several global biggies as well as the gourmet offerings from a host of Indian start-up brands such as Drools, Kennel Kitchen, Goofy Tails and Henlo that are cooking change in the category.

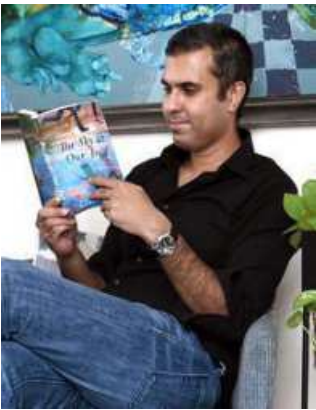
This June saw the introduction of yet another pet nutrition brand — Hearty, from Heads Up For Tails (HUFT), which runs a chain of pet product stores, and is one of the most funded start-ups in the category. While Hearty, which is dry food for dogs, is its kitchen line, it also has a fresh food line — Sara's Wholesome.

Excerpts from an interview with Samarth Narang, CEO of HUFT.

The pet food market has suddenly exploded. Is there space for so many brands?

I see this a little bit differently, for two reasons. One is that there are very few people who are making the product which is right for the pet. A lot of them are making the product which is right for their P&L. And hence, there is absolutely no consistency in quality. Whereas for us, this has been in the making for several years, so much so that we have set up our own facilities before even selling an ounce of food, to be able to cater and build the right product.

We are sourcing chicken from farms, which are a few kilometres away from the factory, using the finest cut and going through the baking process. We run this facility every day and produce only enough for one to two weeks at a time so that it's



Samarth Narang, CEO, HUFT

absolutely fresh. The second thing is, today, for anybody to go and scale a business, you need a distribution network. And we have a fairly widespread distribution network of 93 stores, so we can actually influence the parents and showcase to them what we're doing. In fact, 52 per cent of the products that we sell are Heads Up For Tails branded,

and that's important to us.

Will you also offer a cat food line?

We already do cat treats. We are also launching our own cat food in January next year, for which tasting and trials are underway. We want to give it three or four months to see how cats react to our food before we launch it in the market.

Branded pet food tends to be prohibitively costly. How are you pricing it?

I agree with you that the biggest inhibitor today on explosive growth in India is cost.

We are 30 per cent cheaper than their (foreign brands) price. As we scale up, our next endeavour would be to bring this price down further, to 40 per cent lower than their price. And then possibly build another brand in the economy range. We have already started that with fresh food. It's a brand called NutriWag.

What is the opportunity size of the market in India?

The realistic number of the pet care market is close to ₹7,500 - ₹8,000 crore. I have extrapolated this by speaking to a lot of people and looking at the revenue numbers of various players. Pet food is the largest share of it. It's about 60 per cent of that.

One reads that, in China, the pet care market has seen an explosive growth. Will India follow that route?

China is a very interesting market, because 10 years ago, it didn't exist. And then it just exploded where it's a \$30 billion market now.

But, in China, the affordability is a lot more than India. So I think we still have to wait a few more years before we see an explosion like that here. But we are ready. It may take two years. It may take four years. But it'll come.

many apps that offer inspiration by having balanced business needs with protection of user interests. The digital world of apps is relatively new, and this is a subject that is not necessarily on top of every marketer's mind. In addition, the actual app interfaces are created not by marketers but by specialist designers, hence both constituencies need to be aware of how best to pursue ethical design. I asked Manisha Kapoor, the CEO and Secretary General of ASCI, what was her most important takeaway from this report. She said, “Every good marketer wants to make the online space a safe and trusted environment for consumers. The question on top of their minds is — how do we go about doing this? This report is a good starting point to answer this question.” Nothing is more important to the success of brands than the trust which they enjoy from all their stakeholders, and in particular from their customers. In today's digital world, ethical online interface design is an important component in winning and retaining customer trust.

Harish Bhat is an avid marketer and bestselling author. He was previously the Brand Custodian at Tata Sons. These are his personal views.

Dark patterns and digitally conscious products

To gain and retain customer trust, brands have to focus on ethical design in their apps

THE CURIOUS MARKETER

HARISH BHAT

A recent report by the Advertising Standards Council of India (ASCI), in collaboration with Parallel, a product design studio, highlights the use of deceptive patterns by many leading Indian apps. This study is a limited body of research that aims to serve as a starting point on this important issue. It analysed 12,000 screens across 53 leading Indian apps in nine different industries, and highlighted the use of one or more of 12 deceptive patterns in most of these apps.

What are deceptive or dark patterns? ASCI's guidelines on this subject, issued in June 2023, says: “Dark commercial patterns are business practices employing elements of digital choice architecture, in particular in online user interfaces, that subvert or impair consumer autonomy, decision making or choice.”

INTERFACE INTERFERENCE

For instance, an app may highlight certain parts of the screen by using contrasting colours,

whereas it may hide other parts of the screen by using colours that merge into each other. This could potentially result in many users being subliminally directed towards the choice contained in the highlighted section, even though this choice may not be their preferred option. Such a deceptive pattern is called “Interface Interference”, and the ASCI study found that over 45 per cent of all leading Indian apps have instances of such interference.

Yet another example of deceptive patterns is “Confirm shaming” — using guilt or social pressure to manipulate users into confirming an action on the app. To quote an interesting example mentioned in the report, an app that markets a software product could offer two choices to the user. The first choice being “Upgrade now” and the second choice being, “I don't want a smarter software”. Clearly, there is an intention to make the user feel guilty whenever they go with the second choice.

A third illustration of deceptive patterns is “Basket sneaking”, where an unwanted item is added to a consumer's online shopping cart without their explicit consent. For instance, a donation to a charity or cause may be added by the app to the user's basket by default, and the



HIDDEN TRAPS. Deceptive patterns erode trust in digital platforms

user would then have to take the effort to remove this if he or she does not wish to make the contribution.

TRICKS AND TRAPS

The report highlights a total of 12 deceptive patterns which were studied, including the three mentioned above. Some other deceptive patterns which many online users will easily recognise are Privacy Deception (getting users to unknowingly share more personal data than they really intend to), Drip Pricing (revealing additional fees gradually throughout the purchase process, thus making the final fees much higher than originally quoted) and the Subscription Trap (leading users into subscribing to a recurring

service without fully grasping all details of the commitment they are making).

This is an important study because it helps sensitise marketers to the deceptive patterns that could, knowingly or unknowingly, find their way into app interfaces. It would be worthwhile for every brand with a digital interface to study the guidelines issued in this regard by ASCI and by the Department of Consumer Affairs of the Government of India. Also, as a first step, marketers could use available resources, such as the Conscious Patterns website highlighted in the report, to test their apps and obtain a “conscious score” for themselves.

On this website, marketers can also study examples of

FROM THE LABS.

Porous xerogel dressing

Researchers have developed a porous xerogel dressing incorporating silica nanoparticles and calcium, that can help blood clot rapidly and provide relief for excessive bleeding. The composite showed significant improvement in rate of blood clotting in comparison to commercial dressing.



Uncontrolled hemorrhage is one of the leading causes of traumatic death resulting from accidents or injuries and during military or surgical operations. More than 40 per cent of trauma deaths are due to severe loss of blood.

In an attempt to reduce this blood loss, the Agharkar Research Institute, Pune, has developed a highly porous spongy xerogel hemostatic dressing. It is supplemented with substances that bind to a receptor inside a cell (agonists) like silica nanoparticles (SiNPs) and calcium. Scientists from the institute studied composite material and found that it increased the blood clotting index by 13-fold in comparison to commercial dressing clotting capacity.

The well-characterised xerogel showed presence of multiple pores of around 30 gm size that contributed to the high absorbance capacity of the dressing. The supplements improved the clotting capacity and resulted in quick absorbance of blood.

Platelets are an important component of blood and contribute to the blood clotting process. The xerogel hemostatic dressing showed enhanced platelet aggregation due to the development of well-formed pseudopodia in the activated platelets, resulting in agglutination which plays a major role in the clotting process. The dressing can provide a potential hemostatic solution to reduce blood loss, disability and mortality during surgery and trauma care.

Cost-effective biosurfactants

Biosurfactants, a healthier substitute for synthetic surfactants useful for the food industry, can be produced using green



substrates from agro-industrial waste. Surfactants are molecules that slither across surfaces of oil and water or air and water to form an

emulsion. They are very useful in the food industry as lubricants and foamers to emulsify fats in batters, improve shelf life, as dispersing agents and retain moisture. However, the accelerated usage of synthetic food additives and emulsifiers in dietary goods has led to imbalances in the microbiome of the body, gut-related disorders and affect the intestinal barrier permeability leading to declination of beneficial microbiota. Therefore, an alternative option is essential.

Microbial biosurfactants obtained from various microbial sources are very stable in a wide range of pH, temperature and salinity, making them suitable for food applications. Since biosurfactants are eco-friendly and do not impart toxic effects; therefore, they can be considered safe for human consumption.

A research group led by Prof Ashis K Mukherjee, Director, IASST, Prof MR Khan and Anushree Roy from IASST, Guwahati, critically analysed the application of biosurfactants in food industries, highlighting the challenges in the large-scale commercialisation of biosurfactants. In the food industry, besides bakeries and salad dressings, biosurfactants can be used for heavy metal removal from vegetables to boost immunity in fish, providing a protective effect against the pathogen.

The study explores using green substrates from agro-industrial waste for cost-effective biosurfactant production, utilising genetic engineering, recombinant DNA technologies, and nanotechnology to improve yield, says a press release.

M Ramesh

There is a growing body of scientific literature that thinks that ‘ionic liquids’ (IL) might just be the solution (pun intended) to the problem of extracting valuable metals from used batteries. ILs, sometimes colourfully described as ‘designer solvents’, could be the battery recycler’s dream-come-true.

That ‘battery recycling’ is an emerging, growing industry is not in doubt. A November 2023 report of Avendus Capital noted that the demand for lithium-ion batteries would touch 235 GWhr by 2030; the recycling industry would grow in sympathy, to 23 GWhr, worth \$1 billion. Since batteries account for not less than 30 per cent of the cost of an electric vehicle, extracting metals such as lithium, nickel, cobalt and manganese from used batteries is useful.

While there are many ways of mining battery waste, the one that is commonly used is ‘hydrometallurgy’ — essentially ‘dissolve and separate’ which sometimes uses harmful chemicals. Now scientists are saying that ionic liquids, known for a century, could find a new purpose in extracting useful metals from used batteries.

WHAT ARE IONIC LIQUIDS?

Liquids are typically composed of electrically neutral molecules. In contrast, ionic liquids (ILs) are made entirely of ions — positively charged cations and negatively charged anions.

Usually, cations and anions should cling together to form neutral molecules. But in ILs they don’t, because of the asymmetry of cations and anions. ILs are essentially salts that are liquid at temperatures below 100 degrees. Typically, salts are solids at such temperatures and require a large



amount of heat to melt. Ionic liquids are highly adaptable, non-volatile liquid salts with a wide range of industrial and scientific applications. Their unique properties, such as low melting points and tunability, make them valuable in areas like green chemistry, electrochemistry and materials science. By selecting different cations and anions, the physical and chemical properties of ionic liquids — such as viscosity, density, solubility and conductivity — can be precisely tailored for specific applications.

In other words, you can create your own IL for a specific use, by picking up cations and anions off-

the-shelf. Such ILs are called ‘task-specific ionic liquids’ (TSILs). By carefully selecting a combination of cations and anions to create a salt with desired properties. Horsers for courses, you can design ILs for extracting a certain metal.

ILs are environment-friendly and can dissolve a wide range of substances — organic, inorganic and polymeric. “Creating new cations and anions, and incorporating suitable functional groups can impart the exact physical properties essential for each application at the core of the ILs designing process,” says a review study conducted by a group of scientists from

CSIR and IIT-Madras. “With appropriate design, ionic liquids can exhibit advantages such as low volatility, high stability, a wide liquid range, high conductivity and high solubility,” the study says.

“Due to its heterogeneous composition, discarded rechargeable batteries (LIBs, NiMHs) are difficult to separate for nickel, cobalt, lithium, manganese, zinc and copper, says Prof Tamal Banerjee of the Department of Chemical Engineering, IIT Guwahati. “New cations and anions within new solvents such as ionic liquids have gained huge interest,” he observes, in a write-up in IIT-M TechTalk.

WOW. Timeless transactions



Team Quantum

How were commercial transactions conducted 3,500 years ago? What did people buy, how did they pay and in what manner did the acknowledgement of payment come? To find answers for these intriguing questions, one must dig deep.

Dig they did, in Turkey’s Reyhanli district, but for an entirely different reason. Workers engaged in restoration work after the deadly earthquake of February 2023 were digging through the rubble when they chanced upon a curious object — a small clay tablet. It measured 4.2 cm in length, 3.5 cm in width, was 1.6 cm thick and weighed 23 grams. There was something etched on the surface. They turned it over to the authorities and

it went into the hands of archaeologists.

It turns out that the tablet was actually a receipt, made out 3,500 years ago, for a purchase of large number of wooden tables, chairs and stools, and mentioned the names of the buyer and the seller. The furniture did not survive the passage of time, but the receipt did.

The receipt is in the Akkadian language, which has been deciphered. The script is one of the world’s ancient ones, in what is called ‘cuneiform writing’. This, though, is not a unique discovery — there have been similar finds in the recent past. Last year, restoration work at an ancient palace damaged by the earthquake threw up another tablet with writings in Akkadian. It was an agreement made by Yarim-Lim, the first king of Alalakh, to purchase another city — 3,800 years ago.

MARINE EXPLORERS

Self-powered bots set sail

N Nagaraj

Imagine a world where tiny robots, gliding across the surface of the ocean, continuously monitor the largely unexplored marine environment. These robots, untethered and autonomous, would silently gather data, driven by an energy source that never depletes, drawing power from the very water they traverse. What if these robots, rather than relying on bulky batteries, could harness the power of biological processes — like a digestive system converting food into energy? This is precisely what Anwar El-hadad, Yang Gao and Seokheun Choi at the State University of New York at Binghamton have explored with their paper, “*Revolutionising Aquatic Robotics: Advanced Biomimetic Strategies for Self-Powered Mobility Across Water Surfaces.*”

The team has created an innovative system that allows small aquatic robots to generate their own power. Inspired by the way living organisms process energy, these researchers are pushing the boundaries of what autonomous technology can achieve in challenging environments.



OCEAN PATROL. Autonomous robots powered by MFCs could provide real-time data on everything from pollution levels to the movement of marine species

ten unreliable or insufficient in the marine environment.

This has led researchers to explore alternative methods of energy generation, culminating in the development of a self-sustaining energy system.

The heart of this innovation lies in the use of microbial fuel cells (MFCs), which converts organic materials found in aquatic environments into electricity through catalytic redox reactions. The researchers selected the spore-forming *Bacillus subtilis* as the anodic biocatalyst. This bacterium is particularly resilient, capable of surviving in harsh conditions and reactivating in favourable environments, making it an ideal candidate for long-term energy generation in the fluctuating conditions of the ocean.

To ensure a steady supply of organic substrates necessary for microbial activity, the researchers integrated a biomimetic Janus membrane with asymmetric surface wettability into the system. This membrane allows for selective intake of substrates, mimicking natural processes found in organisms like cacti and water striders. The Janus membrane’s design also contributes to the robot’s ability to move across the water surface easily using a motor powered by the microbial metabolism.

It was found that the combination of *Bacillus subtilis* and the Janus membrane significantly enhanced the longevity and efficiency of the MFCs. The bacteria’s ability to enter a dormant spore state and reactivate when conditions improve ensures continuous power generation, even in the face of environmental stressors like tem-

While the scientific world is looking at ILs with renewed interest, by all accounts, the industry is a bit circumspect. Ashish Bansal, Managing Director, Pondy Oxides & Chemicals Ltd, which is into recycling of materials and is now putting up a plant for extracting metals from lithium-ion batteries, says the use of ionic liquids as solvents for the extraction of metals from used lithium-ion batteries “is progressing well on the R&D scale. In an emailed response to *quantum*, Bansal observed that ILs have an “ability to selectively extract metals at a certain pH, RPM and time period in the leaching process.” Additionally, they are environment-friendly, due to their ease of disposal and restoration, and they have an inherent nature for eco-friendly recycling as compared to other leaching agents, he said.

Yet, the company is not yet ready to use ILs, because of “certain shortcomings” — mainly, the higher cost compared with conventional leaching agents. “There is a need for further commercial-scale development before the process can be profitably scaled up for the recycling of lithium-ion batteries in a sustainable manner,” Bansal said.

RECOVERY IS KEY

The focus of scientific research is shifting to recycling ILs, to make them economically viable. “Numerous IL recycling techniques, such as distillation, membrane separation, ATPS, extraction and adsorption, have been introduced to recycle ILs. All these IL recovery methods have their own pros and cons,” notes a scientific paper published by a group of Singapore-based researchers.

For example, ‘membrane separation’ requires less capital investment, but the yields are low. ‘Distillation’ is effective but also energy intensive. ‘Extraction’ calls for solvents. If researchers could crack recovery of ILs, they would have a gamechanger in their hands.

CHANGING TIDES

India set to surpass US in scientific publications by 2029

Raman Research Institute study predicts major shift in global scientific rankings, with India leading the charge

M Ramesh

A study conducted by the Raman Research Institute (RRI), Bengaluru, has shown that India will surpass the US in terms of the number of annual scientific publications in 2029.

According to the study, while China, the ‘giant in scientific publications’, will remain at the top, the US will lose its second rank to Indonesia from this year (2024). India will have to wait for another 5 years to better the US, the statistical analysis done by Dipak Patra of the Soft Condensed Matter Group, RRI, says.

The study analysed scientific publications of 50 countries between 1996 and 2020, and investigated how the disparity in the number of publications varies with time, and when it will go away. It has determined that from 2046, all countries excluding China will contribute equally in terms of scientific publications.



The study uses statistical tools such as entropy (a measure of randomness and therefore, unpredictability, in a data set) and linear regression analysis (relationship between two variables). “Based on the regression analysis, it is estimated that three potential countries such as Indonesia, India and Iran may take the ranks ahead of the US around the years 2024, 2029 and 2041 respectively,” the study says.

ENTROPY DECAY

The findings of the study have been published in a yet to be peer reviewed paper. “It is found that en-

trophy mostly increases linearly with time implying the constant involvement of the countries in the growth of science and the increasing contribution of lagging countries,” the paper says.

The entropy continues to “decay significantly” after the year 2017 as the year-wise publication of China has been surging since then. Because China “has become a large giant in science publications”, the study excluded China from its scope.

By computing entropy between the US and other countries, the research assessed the stability of the current rank of the US against other prominent countries. “Three potential countries such as Indonesia, India and Iran may contribute much more to the growth of science than the US around the years 2024, 2029 and 2041, respectively,” it says.

The study makes two caveats. First, it points out that any prediction based on linear regression analysis “strongly depends on the cur-

rent pace of growth” and may not be warranted if countries change their policies towards research and development. Second, it stresses that the investigation is only on the number of scientific publications and has nothing to say about the quality of the publications. Quality is generally assessed using metrics such as citations or the ‘impact factor’, neither of which is safeguarded as they can be manipulated.

“The qualitative assessment is a major issue in the understanding of the actual growth of science as some researchers across the world publish substandard and fraudulent works to secure funds for research and uphold their academic position in the current ‘publish or perish’ environment,” it notes.

According to Scopus (a multidisciplinary abstract and citation database), India, with 1,91,590 publications, ranked 4th in terms of number of science publications in 2020, after China (7,44,042), the US (6,24,554) and the UK (1,98,500).

Flowing expressways

State-wise breakup of the 26 national waterways chosen for development as part of an action plan to expand the country's inland water transport system



| States | NW | Details of waterways | km |
|---|--------|---|-------|
| Uttar Pradesh, Bihar, Jharkhand and West Bengal | NW 1 | Ganga-Bhagirathi-Hooghly river system (Haldia-Allahabad) | 1,620 |
| | NW 2 | Brahmaputra river (Dhubri-Sadiya) | 891 |
| Assam | NW 16 | Barak river (Lakhipur-Tuker Gram) | 121 |
| | NW 57 | Kopili river (Banthai Gaon Tinali bus stop to Chandrapur No.2 confluence with Brahmaputra) | 50 |
| | NW 31 | Dhansiri river (Morongi TE village Bridge to Numaligarh) | 110 |
| | NW 3 | West Coast canal (Kottapuram-Kollam), Champakara and Udyogmandal canals | 205 |
| Kerala | NW 8 | Alappuzha-Changanassery canal | 29 |
| | NW 9 | Alappuzha-Kottayam-Athirampuzha canal | 40 |
| Kerala (alternative route: 11.5km) | NW 9 | Alappuzha-Kottayam-Athirampuzha canal | 40 |
| Andhra Pradesh | NW 4 | Krishna river (Vijayawada-Muktyala) | 82 |
| Odisha | NW 5 | Dhamra-Paradip via Mangalagadi to Pankopal | 233 |
| Goa | NW 27 | Cumberjua river (Cortalim-Ferry to Sao Martias Vidhan Parisad) | 17 |
| | NW 68 | Mandovi river (Usgao bridge to Arabian Sea) | 41 |
| | NW 111 | Zuari river (Sanvordem bridge to Mormugao Port) | 50 |
| | NW 25 | Chapora river (Bridge near Maneri village to Morjim, Arabian Sea) | 25 |
| West Bengal | NW 86 | Rupnarayan river (Pratap Pur to Geonkhali) | 72 |
| | NW 97 | Sunderbans waterway (Namkhana to Athara Banki Khal) | 172 |
| Bihar and UP | NW 44 | Ichamati river (Bridge at Gobra to Bansjhari near Bangladesh border) | 63 |
| | NW 40 | Ghagra river (Faizabad to Manjhi Ghat) | 345 |
| Bihar | NW 37 | Gandak river (Bhaisalotan barrage to Hazipur) | 296 |
| | NW 94 | Sone river (Sone barrage, Dehri to confluence with the Ganga) | 141 |
| Karnataka | NW 52 | Kali river (Kodasalli dam to Sadashivgad bridge, Arabian Sea) | 53 |
| | NW 10 | Amba river (Arabian Sea, Dharamtaar Creek to Nagothane ST Stand) | 45 |
| Maharashtra | NW 28 | Dabhol creek, Vasisti river (Arabian Sea at Dabhol to bridge at Pedhe) | 45 |
| | NW 85 | Revadanda creek-Kundalika river system (Arabian Sea at Revadanda to bridge near Roha Nagar) | 31 |
| Maharashtra and Gujarat | NW 73 | Narmada river (Pandharia to Gulf of Khambhat) | 226 |
| | NW 100 | Tapi river (Hatnur dam to Gulf of Khambhat) | 436 |

Source: Ministry of Ports, Shipping and Waterways

RE POSTS.

- ✕

Green Tug Transition Program aims at phasing out conventional fuel-based harbour tugs to Green tugs powered by alternate fuel

ASTDS-GTTP based tugs shall be built in Indian shipyard promoting @makeinindia

Direct & indirect employment in shipbuilding & ship designing

Ministry of Ports, Shipping and Waterways

@shipmin_india
- ✕

Jogighopa IWT Terminal work along National Waterway 2 in #Assam is near completion. This #Terminal is pivotal for improving trade with #Bangladesh through IBP route & for enhancing India's bilateral #trade with #Bhutan.

IWAI

@IWALShipMin
- ✕

The Voluntary Vehicle-Fleet Modernization Programme (V-VMP), also known as the Vehicle Scrapping Policy, is designed to establish and regulate a comprehensive ecosystem for the safe, environmentally-friendly, and efficient disposal of both commercial and passenger vehicles. This initiative provides a structured approach to phasing out outdated, polluting, and unfit vehicles from the roads, while offering incentives to encourage citizens to participate in this important endeavor.

By opting to scrap your old vehicle under the V-VMP Policy, you can play a crucial role in promoting a cleaner environment and enhancing road safety. Watch this space to learn more about the Policy, its numerous benefits, and the various financial and non-financial incentives available to citizens.

MORTHINDIA

@MORTHIndia

Truck rental rates

Rentals for 18-tonne payload

| Truck route | Rentals as on | | % change |
|--------------------------------|---------------|----------|----------|
| | Jul 30 | Aug 16 | |
| Delhi-Mumbai-Delhi | 1,52,000 | 1,53,000 | 0.65 |
| Delhi-Nagpur-Delhi | 1,48,000 | 1,49,000 | 0.67 |
| Delhi-Kolkata-Delhi | 1,46,000 | 1,48,000 | 1.35 |
| Delhi-Guwahati-Delhi | 1,80,000 | 1,82,000 | 1.10 |
| Delhi-Hyderabad-Delhi | 1,76,000 | 1,79,000 | 1.68 |
| Delhi-Chennai-Delhi | 2,05,000 | 2,07,500 | 1.20 |
| Delhi-Bengaluru-Delhi | 2,08,000 | 2,09,000 | 0.48 |
| Delhi-Ranchi-Delhi | 1,48,000 | 1,49,500 | 1.00 |
| Delhi-Raipur-Delhi | 1,44,000 | 1,46,500 | 1.71 |
| Delhi-Kandla-Delhi | 1,27,000 | 1,29,000 | 1.55 |
| Mumbai-Chennai-Mumbai | 1,47,000 | 1,49,500 | 1.67 |
| Ludhiana-Hyderabad-Ludhiana | 1,89,000 | 1,91,000 | 1.05 |
| Mumbai-Kolkata-Mumbai | 1,92,000 | 1,94,000 | 1.03 |
| Chennai-Ahmedabad-Chennai | 2,00,000 | 2,02,000 | 0.99 |
| Bengaluru-Kolkata-Bengaluru | 1,98,000 | 1,99,000 | 0.50 |
| Bengaluru-Mumbai-Bengaluru | 1,23,000 | 1,24,000 | 0.81 |
| Delhi-Thiruvananthapuram-Delhi | 2,74,000 | 2,76,500 | 0.90 |
| Guwahati-Mumbai-Guwahati | 2,63,000 | 2,64,500 | 0.57 |
| Nagpur-Chennai-Nagpur | 1,43,000 | 1,42,000 | -0.70 |
| Kolkata-Guwahati-Kolkata | 1,32,000 | 1,35,000 | 2.22 |
| Indore-Delhi-Indore | 1,30,000 | 1,31,500 | 1.14 |
| Ahmedabad-Indore-Ahmedabad | 79,000 | 83,000 | 4.82 |
| Vijayawada-Mumbai-Vijayawada | 1,45,000 | 1,43,500 | -1.05 |
| Vijayawada-Kolkata-Vijayawada | 1,41,000 | 1,43,500 | 1.74 |

Figures in ₹

Source: Subham Freight Carriers India Pvt Ltd

SHIPPING SUSTAINABILITY

Udupi-CSL tugs in global buyers

PULL FACTOR. Shipyard in Malpe, Karnataka, is raring to participate in global tenders for green hybrid tugboats

V Sajeew Kumar

Tugboats, or tugs, are the helpers in the world of marine transport, as they push and pull other vessels to manoeuvre them to a parking spot or rescue them from a tight spot. And they power a global business that was valued at \$19.7 billion in 2023 and projected to grow from \$23.81 billion in 2024 to \$74.29 billion by 2032. The fast-growing economies of China and India have led to a surge in demand for harbour tugs for maritime activities, according to industry experts.

And as the global marine industry looks for ways to reduce its carbon footprint, there is a push for tugboats run on green hybrid fuel. In India, Udupi-CSL — a subsidiary of Cochin Shipyard located in Malpe town, Udupi district, Karnataka — is gearing up to participate in the global tenders for green hybrid tugs, a segment that is currently dominated by Turkey and China.

Towards this end, Udupi-CSL is banking on added support from the Indian shipping ministry's Green Tug Transition Programme (GTTP), announced in March 2023, to convert existing tugs into green hybrid tugs by 2047.

NICHE SEGMENTS

Madhu S Nair, Chairman and Managing Director of Cochin Shipyard Ltd, says, "Udupi-CSL stands at the threshold of tremendous growth opportunities. With a clear roadmap and a solid foundation, we are poised to capitalise on emerging trends and consolidate our market presence. Udupi-CSL is not just a subsidiary but an integral part of CSL's strategic vision and diversified portfolio."

He says there is also high demand for vessels used in the short-sea shipping segment — which involves movement of cargo and passengers mainly by sea along a coast, without crossing an ocean. The confidence shown by Wilson ASA, Norway — the largest short-sea shipping company in Europe — in Udupi-CSL promises a growth in business from this sector, too, Nair says.



SHORING UP CARBON CREDITS. A tugboat manufactured by Udupi-CSL that runs on green hybrid fuel

According to Harikumar A, CEO, Udupi-CSL, the company's focus on emerging niche segments, coupled with strong execution capabilities, has yielded good results. Optimistic about bagging sufficient orders in the years to come, he says the company is confident of delivering excellent performance.

The company has turned profitable within four years after its insolvency resolution process was completed in 2020. It clocked ₹186 crore turnover in March 2024. With an order book worth around ₹1,900 crore, it targets a turnover of ₹350 crore by March 2026.

MAKEOVER AND AFTER

Udupi-CSL came into being in September 2020 after Cochin Shipyard acquired Tebma Shipyards Ltd. The subsidiary

company's first commercial order was contracted in March 2022 from Ocean Sparkle Ltd, an Adani Harbour Services Ltd company, for two 62-tonne bollard pull tugs. Next came an order from Polestar Maritime Ltd for two 70-tonne bollard pull tugs in November 2022. All the vessels were delivered within schedule. The yard has been assessed and technically evaluated by world majors in the tug segment ahead of its participation in the global tug tenders, company officials said.

Wilson ASA too, for instance, undertook multiple assessments and due diligence at the yard before placing an order for six dry cargo vessels of 3,800 tonnes deadweight (TDW) each in May 2023.

Officials say Udupi-CSL has collaborated with one of the best designers for short-sea shipping vessels, Conoship In-

ternational. Satisfied with the quality on offer, Wilson ASA has placed another order — eight dry cargo vessels of 6,300 TDW each; it inked the contract for the first four vessels in June 2024 and is expected to do so for the rest in September, the officials said.

Udupi-CSL has now shortlisted tugs, short-sea vessels, and aluminium crafts as its key manufacturing segments for at least the next five years. It is seeking more local collaborations to expand capacities to meet the market demand in these segments.

We value your feedback.
Do send your comments to
bl.logistics@thehindu.co.in

TRAIN TO VIKSIT BHARAT

‘Fund railways, fast-track growth’



IN PARALLEL. Improved rail connectivity can take trucks off roads, help India inch closer to net-zero goals |ISTOCK.COM



OLIVIER LOISON

To grow India's economy sustainably, the Indian government has prioritised the development and modernisation of its railways. With every investment in railways having a high multiplier impact on 250 industries, mass mobility is key to take a quantum leap towards a Viksit Bharat (developed nation).

The rail system has taken India places in more ways than one by facilitating economic and social development through geographic connectivity, citizen mobility, and commercial activity, as well as providing a world-class logistics and transportation infrastructure.

The Indian government recognises this crucial balance, and the Union budget has allocated a substantial ₹2.62 lakh crore to Indian Railways.

It is a clear signal of its intent for a modern, reliable, and more sustainable future.

ECONOMIC BACKBONE

Despite being small, relative to the large population, India's road sector contributes 14 per cent to the country's energy-related carbon dioxide emissions — a proportion anticipated to rise as the vehicle fleet expands. This paradox clearly

positions railways as a more sustainable mode of transport. Trains not only aid nations in achieving climate targets but also offer additional economic benefits such as job creation, increased trade, improved accessibility and connectivity, and urban spatial growth densification.

REDEFINING TRACKS

At the centre of the government's vision is the National Rail Plan (NRP), which outlines several strategies to make Indian Railways future-ready. These include increasing the railways' share in freight transportation, improving service delivery for both freight and passenger services, reducing transit time for freight, lowering the overall cost of rail transportation by nearly 30 per cent, and achieving net-zero carbon emissions by 2030. The NRP sets the stage for the capacity enhancement of relevant stakeholders, including policymakers, planners, and technical experts, to ensure successful introduction of modern technology, while working towards energy transition goals.

FUTURE FOCUS

The railway sector clearly has the potential to steer towards a fast growing and sustainable economy. Industry reports estimate that India's rail capacity augmentation through dedicated freight corridors, and improved rail connectivity, combined with heavy haul trains and multi-modal

freight hubs, can help increase India's rail freight share to 40 per cent by 2050.

This, in turn, has the potential to reduce the number of trucks plying on Indian roads by 7 million and achieve a staggering reduction of 4.3 gigatonnes in carbon dioxide emissions by 2050.

However, India requires substantial capital for its railways to complement the road infrastructure for both passenger and freight traffic. To achieve that, it is crucial to secure private and institutional capital for projects under construction. The government has commendably opened the door for private enterprises to expedite the completion of these projects.

Implementing a production-linked incentive scheme focused on key railway components could significantly benefit India. This would stimulate domestic manufacturing and further bolster the 'Make in India' initiative. Moreover, creating a policy environment that encourages private sector involvement and exports from India is crucial. This can be achieved through measures like streamlined taxation and fair contract terms.

Today's investments in railways will enable the country to achieve its long-term goals, not just in terms of sustainability, but also in driving broader socio-economic growth — a step closer to Viksit Bharat@2047.

The writer is Managing Director, Alstom India

SPEEDY LINK

Kolkata port's direct service to China is a hit



BOX FROM BEIJING. Weekly arrival at SMP Kolkata

Mithun Dasgupta

Syama Prasad Mookerjee Port, Kolkata, (SMP Kolkata) says it has received an overwhelming response for the direct weekly shipping service to China, which has reduced cost and transit time.

SMP Kolkata's China-Calcutta service was inaugurated in July in alliance with container shipping line Pacific International Lines.

"All direct call vessels from China have arrived fully loaded. Every week there is one vessel calling to Kolkata from China. The import from China and the Far East markets has been robust and we expect this to continue," SMP Kolkata Chairman Rathendra Raman said.

"The direct calling from China or the Far East has significantly reduced the cost to customers and cut down the transit time from 45 to 15 days (load port in China to discharge at Kolkata)," Raman said.

The maiden voyage under the China-Calcutta service culminated at the Kolkata Dock System on July 18.

SMP Kolkata, formerly known as Kolkata Port Trust, comprises two dock systems — Kolkata Dock System and Haldia Dock Complex (HDC).

The China-Calcutta service has three dedicated vessels — Kota Ria, Kota Rukun, and Kota Rakyat — each with an average parcel load of 622 TEUs, specially tailored to navigate lower draft conditions. The weekly service aims to aid the burgeoning trade across West Bengal, Odisha, Chhattisgarh, Bihar, and the North-East, as well as Nepal and Bhutan.

Raman said the cargo is largely composed of plastics, machinery and finished goods. "On an average about 750 containers in a vessel are inbound, of which about 20 per cent is Nepal-bound imports. Kolkata is the gateway port to Nepal and Bhutan, and we expect our friends in Nepal will benefit immensely from the reduced logistics cost and speedy transit," he said.

SMP is offering a 40 per cent rebate on vessel-related charges, which is around ₹5 lakh per vessel call for the direct service, and priority berthing.

The port authorities expect the China-Calcutta service to substantially increase container traffic.

"Given the four vessel calls each month, we expect to handle about 35,000 containers a year through direct service from China and the Far East. Other operators are also looking to start similar services. In that case, the expected volume may exceed 50,000 containers," Raman added.

The Haldia Dock Complex, meanwhile, inaugurated a direct weekly service linking Malaysia's Port Klang and Yangon of Myanmar in June, aimed at facilitating efficient and cost-effective cargo movement in the region.

CLEAN FACTS.

About greenhushing



We have all heard about greenwashing. It refers to a company or business establishment exaggerating or even faking its environmental initiatives to prove its green credentials.

However, another term that has been added in recent times to the lexicon of those monitoring corporate sustainability efforts is greenhushing. It relates to companies and businesses underreporting and underplaying their sustainability efforts. Greenhushing is often seen as the opposite of greenwashing.

Why do businesses indulge in greenhushing? One view is that it protects companies from



scrutiny or criticism until their sustainability efforts achieve results. It further insulates them from accusations of greenwashing. Greenhushing also helps the company alter or change its sustainability effort without attracting public attention.

It also reduces consumer guilt about using a product or brand since greenhushing pushes under the carpet issues surrounding sustainability. The manufacturer would never be questioned about whether it is doing enough for the environment.

THEY SAID IT.

“Digital progress does not necessarily equate with environmental progress. The environmental risks posed by digital technologies cannot simply be ignored.”



INGER ANDERSEN,
Executive Director, United Nations Environment Programme

Anatomy of a landfill remediation in progress

REVIVING EARTH. A visit to a dumpsite in Chennai illustrates the solution to the pile up of legacy waste across the country

Preeti Mehra

It is noon. Armed with a thick mask and trepid anticipation of a strong stench I am on my way to the Perungudi dumping ground, a landfill site in Chennai where some packages of legacy waste remediation are soon to be completed.

But at the site, I am in for a big surprise. As I weave my way through the road carved out along the waste, there are no scavengers circling the sky, no rats scurrying around and, believe it or not, no stench to speak of. As one reaches the operations office at the centre of the site, I remove my mask as if I were in an office anywhere in the city.

BIO-MINING PROCESS

My appointment is with a representative of Zigma Global Environ Solutions Pvt Ltd., part of Blue Planet Environmental Solutions Pvt. Ltd., the

group which is executing the project. She shows me the bio-mining process the company follows every time it transforms a gigantic landfill into land to be usefully repurposed.

At Perungudi, post remediation, the Greater Chennai Corporation's action plan is to set up a bio CNG plant, an automated material recovery facility, a windrow compost plant, phase-II of bio-mining, and above all, an ecopark, replete with a Miyawaki style forest. The idea is to treat fresh waste as it comes in and not let it pile up as legacy waste has for the past 30-40 years.

Legacy waste comprises a range of solid waste kept for years on barren land dedicated as a landfill. It includes construction and demolition material, waste stored in tanks, canisters, bins, buried waste, contaminated soil and structural waste.

The odour-free atmosphere at the landfill is thanks to the



INNOVATIVE BIO-MINING. A Blue Planet project in Chennai.

bio-mining process followed. “Our waste management is founded on a pragmatic and sustainable approach to addressing both legacy waste at landfills and fresh waste, explains Prashant Singh, Co-founder and CEO of Blue Planet. He explains the stages they follow for bio-mining. It begins with pre-stabilisation of waste by using excavators and an aerobic process called windrow to keep turning the waste. Bio-culture and deodorizer are then sprayed to

accelerate the degradation process and control odour. This speeds composting and leachate collection pits ensure complete waste treatment. Result: good enough soil to pass the germination test and for afforestation.

Of the waste that remains the segregated combustible fraction undergoes RDF (refuse derived fuel) processing and is sent to cement plants to use as alternative fuel. Coarse soil and stones are best for reclamation of low-lying areas.

Alternative financial solutions needed for an EV ecosystem

Will a green line of credit help a net-zero transition in the auto sector?

Divya Trivedi

If India is to achieve its target of net-zero emissions by 2070, it must switch from fossil fuel to low-carbon technology, especially in the critical sectors of power, industry and transport. Of these, transport alone contributes to 13 per cent of total greenhouse gas emissions.

Climate and Sustainability Initiative, a Singapore-based research firm, has outlined the net-zero pathway in a new report, ‘India’s Auto Industry – Mapping the Course to Net Zero by 2070’. It focuses on the financial implications of realising a net-zero transition in the auto sec-

tor — the investments and costs involved and potential gains in the economic and environmental fields.

The report’s main finding suggests that original equipment manufacturers (OEMs) in various vehicle sectors will need to invest \$323 billion to produce EVs alongside existing technologies. Further, to meet the calculated annual battery demand of around 1,716 GWh by 2070 and achieve complete domestic production, manufacturers will have to invest \$196 billion until 2070. Eventually, by 2070, the battery demand for all EVs in the country will be met locally by 172 gigafactories of 10 GWh capacity each.



DUAL DRIVE. OEMs in various vehicle sectors must invest \$323 billion to produce EVs alongside existing technologies BLOOMBERG

To meet the demands locally, this could begin with building a single factory around 2025.

The report recommends that to finance this major transition, policymakers, financial institutions, OEMs and other stakeholders work on solutions, such as first-loss guarantees for financial institutions and green lines of credit for EVs.

It suggests both short- and long-term solutions. Policymakers will need to consider alternative financial solutions to develop EV ecosystems, including charging, which can help alleviate the range anxiety associated with EVs and encourage wider adoption, states the report.

It adds that since the long-term needs of the sector could outgrow the pace of automobile loan financing in India, focusing on refinan-

cing could help FIs increase their participation in the auto loan market.

POLICY CHANGES NEEDED

But once the initial financial effort is put in and the necessary policy changes made to facilitate the switchover to EVs effected, then returns could accrue for the automobile sector and the State exchequer.

According to the report, the investment could generate \$14.1 trillion revenue for OEMs till 2070. Additionally, the automobile sector’s transition could lead to revenue collection of \$4.1 trillion in GST between 2020-2070.

‘Closing the gap’ to ensure healthy babies

BY INVITATION



DR R KISHORE KUMAR



BREASTFEEDING. A lifeline for the newborn ISTOCK.COM

The health of a nation is often measured by its Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). A key strategy in reducing IMR is successful breastfeeding, which has been shown to significantly enhance infant health and survival. Despite this, data from the National Family Health Survey (NFHS) reveals that only between 43 to 56 per cent of infants in India are successfully breastfed. Why does this dismal picture persist?

It has been 18 years since I founded Cloudnine, and my ultimate focus has been on providing comprehensive breastfeeding support for mothers. This year, the World Alliance for Breastfeeding Action (WABA) has chosen the slogan “Closing the Gap” for World Breastfeeding Week, aiming to bridge the gap between those who breastfeed and those who do not.

Early initiation of breastfeeding within the first hour of birth is critical, yet only about 41 per cent of newborns in India receive this timely start.

The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months, followed by breastfeeding and appropriate complementary foods, upto two years.

Several factors contribute to suboptimal breastfeeding rates, including socio-cultural beliefs, lack of awareness, inadequate support systems, and economic pressures. For instance, traditional beliefs in some communities may promote the use of pre-lacteal feeds (feeding substances other than breast milk before breastfeeding is initiated),

which can interfere with the establishment of successful breastfeeding practices.

The primary issue in India is the scarcity of trained lactation consultants. Despite its vast population, India has fewer than 200 lactation consultants, compared to over 200 in a small country like New Zealand. This shortage is a significant barrier to providing the necessary hands-on support that mothers need. While many lectures and informational sessions are organized, as noted by WHO field workers, they are insufficient without practical, hands-on help. Active support should be provided during the antenatal, natal, and postnatal periods to ensure successful breastfeeding. Lectures alone will not encourage mothers to seek help; they need direct assistance and encouragement.

Breastfeeding is a critical component of infant health and survival, yet many mothers face significant challenges that prevent successful breastfeeding. By working together to “close the gap,” we can ensure that more mothers and babies experience the benefits of successful breastfeeding, leading to a healthier future for all.

The writer is Founder Chairman, Pediatrician and Neonatologist at Cloudnine Group of Hospitals. Views expressed are personal.

Clinical trial waiver, a step to improve patient access, in need of guardrails

PROGRESS WITH CAUTION. Experts call for ensuring patient safety while expanding access to new drugs

PT Jyothi Datta

Last year, patient families from India took part in an international “right to breathe” campaign seeking access to cystic fibrosis (CF) therapy Trikafta, from the American biotech company Vertex Pharmaceuticals.

Cystic Fibrosis causes sticky mucus to build up in the lungs and digestive system, and the undiagnosed often die in their infancy, patient families said, in their letter to the Government. Besides India, campaigns were mounted from South Africa, Ukraine and Brazil, coordinated by a United Kingdom-based campaigner for patient rights, along with other international organisations.

The experience, though, repeats itself with different illnesses — where patients seek access to newer therapies that are still to come to India.

LANDMARK WAIVER

Earlier this month, the Centre took a step to address such situations, by waiving clinical trials in five categories, if the drugs had been approved in stringent regulatory markets including the US, UK, Japan, Australia, Canada and the European Union.

The waiver covered drugs and vaccines falling into categories including orphan drugs for rare diseases, gene and cellular therapy products, new drugs used in pandemic situations, new drugs used for special defence purposes and new drugs having significant therapeutic advances over the current standard care. The waiver was facilitated under Rule 101 of the New Drugs and Clinical Trial Rules, 2019.

The move was welcomed in sections of civil society as being in the interest of patients. However, some industry-watchers have expressed caution, concerned about



THE AFFORDABILITY QUESTION. New policy may speed up access but must address high costs and local testing concerns ISTOCK.COM

introducing a therapy without local trials. There are drugs approved by stringent authorities sitting on the periphery, while patients cannot access or afford it, says Chetali Rao, legal and policy advisor with Third World Network.

Earlier, drugs made it to India only if the country was part of the multinational company’s global trials. The waiver decision takes it a step ahead by making these drugs available to the local population if countries with stringent authorities approve it, she explains. However, she adds, this may not do much to reduce the high prices (running into lakhs of rupees) of these drugs. “Affordability is still an issue,” she says, noting that some of these new therapies are not even registered in India.

Drug companies, especially multi-nationals, point to their pa-

tient assistance programmes as avenues to improve patient access. But Rao says they come with conditions that makes it difficult for all patients who may need the medicine.

Besides, in the absence of patient registries, there is no clear picture on the number of patients who actually need the therapy. Only local production by indigenous companies will help to make these drugs more accessible, she says.

CALL TO EXPAND

Following the Government’s decision, the Organisation of Pharmaceutical Producers of India (OPPI) said, the move was progressive and would benefit domestic and foreign drug manufacturers “by expediting the approval process and facilitating faster ac-

cess to essential medications for Indian patients.”

Calling it a “commendable beginning”, the OPPI called for the waivers to be extended to a broader range of therapeutic categories, to enhance access to cutting-edge treatments. “We urge the Government of India to consider additional therapeutic areas where similar waivers could significantly impact patient access. Moreover, it is pertinent to understand how the criterion for ‘new drugs having significant therapeutic advance over the current standard care’ is defined and implemented. This could set a precedent for recognising and adopting breakthrough therapies that offer superior clinical benefits,” the platform, largely for multinational companies, said.

PATIENT SAFETY

A report by the Global Trade Research Initiative, however, raised patient safety concerns, if there was a waiver. “By overlooking India’s unique genetic diversity, the waiver could lead to unexpected safety and effectiveness issues,” says the report.

Ajay Srivastava, former Indian Trade Service Officer and founder of GTRI, further points to the lack of reciprocity in the move, besides the high costs Indian companies incur in undertaking trials abroad. Also, insisting on post marketing surveillance after a drug is launched, will result in mere data collection, he says, without a local trial.

While it’s true that patients need quicker access to break-through drugs, S Srinivasan of LOCOST (a producer of less-expensive drugs) and representative of Aidan (All India Drug Action Network), says, it should not involve dilution of governance. He calls for “bridging trials” to evaluate therapies in a local population, adding that the option of waivers can be adopted in special cases. The process to make new drugs available to patients, he says, should be both simple and safe.

MY FIVE.



Hemanshu Jain
Founder & CEO, Khyaal

Mindful eating, short walks and melatonin window of sleep

- 1 Set the tone:** I kick-start the day with a 30-45 minute workout, boosting my energy and setting a positive tone for the day.
- 2 Meditation:** Post workout, I spend 15 minutes on guided meditation, for calm and clarity. It helps me stay focused and fully engaged.
- 3 Short walks:** Taking short walks during calls or after meals, helps me to stay active, refreshes my mind, and boosts energy and focus.
- 4 Balanced nutrition:** I prioritise mindful eating, focusing on balanced, nutritious meals. I don't follow strict diets but make conscious choices to sustain energy and overall well-being.
- 5 Quality sleep:** I follow a calming bedtime routine and aim to sleep during the melatonin window, ensuring I wake up refreshed and ready to go.

COMING UP.

Mosquito Day

The World Mosquito Day (August 20) raises awareness on mosquito-borne diseases. Mosquitoes, one of the world's deadliest creatures, transmit diseases, including chikungunya, dengue, lymphatic filariasis, Japanese encephalitis, malaria, Rift Valley fever, yellow fever and Zika virus. And many of these diseases are preventable, through protective measures and community mobilisation.

