Not so secret ballot

There are no easy ways to anonymise voting data beyond a point without allowing massive scope for post-poll rigging

TECH-ENABLED

DEVANGSHU DATTA

During this election campaign, voters have been threatened with consequences if they don't vote for the Bharatiya Janata Party (BJP). The BJP candidate for Sultanpur (UP), Menaka Gandhi told a predominantly Muslim crowd that she would know how many people voted for her, and she would not be inclined to help them find employment if they did not vote for her. She also said she would categorise villages "A, B, C, D" depending on the number of votes she received and structure development accordingly. Another BJP legislator, Gujarat MLA, Ramesh Katara, also reminded voters there were CCTVs in booths.

The threats were odious. But there is a deeper issue here. Citizens have the right to a secret ballot. However, the technology and processes used in Indian elections actually makes secrecy almost impossible to maintain.

It is now possible to make very accurate guesses about the votes of individuals. While few politicians will be crass enough to say this as bluntly as Gandhi or Katara, every major political party does its own data-analysis to work this out in as fine-grained detail, as possible.

The earlier system of paper ballots stuffed into boxes made it impossible to judge the order in which votes were cast and tally that with individual voters. In addition, ballot boxes were collected at a single location (as are EVMs) and the papers mixed up together before counting. So the vote was secret.

This is not how things work in the modern electoral system. The voters' rolls are open and accessible online, and include details like name, father's name, address, gender. The voter is tied to the voter ID, the assigned polling booth, and increasingly, to the Aadhaar number.

The electoral rolls have to be open in fact, since this gives citizens a chance to check if their names have been deleted, or to change address. Of course, electoral rolls have also enabled communal riots targeting one community or another. That started with 1984 long before rolls were online.

Voters go to their assigned booth, where their ID is checked and their names entered in a register before they vote. EVMs are used, where votes are registered in the order cast and there's a VVPAT record as well. If the register could be tallied with the order of votes cast, it would indeed be possible to figure out the vote cast by every individual voter. We have to rely on the integrity of the Election Commission in this respect.

Since each EVM services a specific booth, which services a specific neighbourhood, it is possible to figure out how entire neighbourhoods voted. This information is available publicly. The candidates have representatives observing the counting process. The ECI releases Form 20 Data for elections online, and this contains breakups for votes received down to EVM-level.

Political parties do a lot of big data analysis to guess religion, caste and other preferences of voters. Local workers usually have a good idea of economic status. There are new tools available, given the prevalence of social media and the linkages made possible through Aadhaar.

Aadhaar for example, gives access to mobile numbers, and it is also tied to IT Returns, welfare schemes, etc. It is easy enough to start mining for more information such as presences on Facebook, WhatsApp, Twitter, the educational background, employment pattern, family dynamics and so on. Very few people scrupulously sweep their online presence clear of their political biases, and family connections, and indeed, why should they?

When all this information is matched to Form20, algorithms can make accurate guesses as to how individuals, families, communities and villages have voted. Local party workers can flesh in details, create WhatsApp and Facebook groups and get cracking as "influencers".

Once "non-supporters" have been identified, skullduggery such as attempting to delete the names of non-supporters, or simply intimidating them to stay away on election day, is possible. So are carrot-and-stick threats like the ones Gandhi and Katara employed.

There has already been a scandal about a private firm mining Aadhaar data in Andhra Pradesh to profile voters. The data for almost 8 million persons has been copied and misused. This is probably just the tip of the Aadhaar iceberg. The penalties for this seem close to nil in practice, and the potential returns are obviously, large.

There are no easy ways to anonymise voting data beyond a point, without allowing massive scope for post-poll rigging. The Supreme Court vetoed a proposal in 2017 to "totalise" by clubbing together data from different EVMs. This is just another example of how the legal system has been overtaken by technology.

CHINESE WHISPERS

Election holiday

For the participants in Y S Jaganmohan Reddy's *(pictured)* political campaign, *achhe din* has arrived. The staff has been given paid holiday for a month. While the junior staff gets paid holiday only, some senior employees have been offered holiday at a destination of their choice. Only a core team of about 20 people has been retained to continue working with Reddy on the final details. They have been promised "good rewards" if the results are good.

Attorney General under 'attack'

During an unprecedented hearing in the Supreme Court on Saturday in which the chief justice of India heard "a case of grave national importance", Attorney General K K Venugopal *(pictured)* lamented that he had been "under attack" from a lawyer for defending the government. Venugopal said he was an officer of the court and was simply assisting the court in his capacity as government counsel. His comments led to speculation about the identity of the lawyer who had "attacked" him. While many names came up, the consensus in the courtroom and outside was that it was either senior advocate Indira Jaising or public interest lawyer Prashant Bhushan. Bhushan and the AG are locked in a legal battle after the former alleged that the AG had misled the court on Rafale. This prompted Venugopal to move a contempt petition against Bhushan.

Model code? What's that?

A report released by the Election Commission shows political parties in Tamil Nadu, especially the big two, are locked in some sort of a contest when it comes to committing the maximum number of violations of the model code of conduct. Of the total 4,690 violations reported in the state till April 19, around 1,450 cases were reported against the ruling All India Anna Dravida Munnetra Kazhagam (AIADMK), while 1,694 cases were reported against the Dravida Munnetra Kazhagam (DMK). The smaller parties in the state also tried their best with 1,546 cases against them during the period. Most of the violations reported related to defacement of property. Almost 1,368 cases were reported from the southern part of the state, including from Madurai, Theni, Ramanathapuram, Sivaganga, Thoothukudi and Kanyakumari.

To bank or not to bank on Indiabulls

A banking licence, unlike, say, a licence to enter the telecom or gas business, is not sold to the highest bidder; it goes to a "fit and proper" entity

BANKER'S TRUST

TAMAL BANDYOPADHYAY

A day after Indiabulls Housing Finance Ltd (Indiabulls) and Lakshmi Vilas Bank (LVB) announced their decision to merge and create Indiabulls Lakshmi Vilas Bank, the nation's eighth largest private bank by assets, a Reserve Bank of India (RBI) release clarified that the merger announcement didn't have the regulator's approval "at this stage". This was to quell the speculation that the central bank's nod was a given since its two nominee directors have been on the LVB's board. Incidentally, the mortgage company too has a couple of former RBI deputy governors on its board. One of them, S S Mundra, is heading a "reorganisation committee" to oversee the proposed merger.

The RBI will examine the proposal, "as and when received", in accordance with the regulatory guidelines. Both the entities, I understand, are yet to submit the proposal to the central bank even as the Indian financial system seems to be vertically divided on the deal. There have been animated discussions — not on the financials of the two or how long it will take for Indiabulls to get value out of the merger with a sick bank but whether the regulator should clear it.

The merger between a bank and a non-banking finance company or NBFC (in this case, a housing finance company) is not new. For instance, Bharat Financial Inclusion Ltd (formerly SKS Ltd) is being merged with IndusInd Bank Ltd; Capital First Ltd was merged with IDFC Bank Ltd; and Bandhan Bank Ltd is in the process of merging Gruh Finance Ltd with itself.

If Capital First is allowed to get the licence to bank (through merger with IDFC Bank), what's the harm in welcoming Indiabulls into this club? The detractors point out that Indiabulls was one of the 27 applicants when the RBI opened the window in 2014 but it didn't feature in the list of two that could make it. What has changed since then?

Also, Capital First and Indiabulls are chalk and cheese. The first was an NBFC, run by a banker-turned-entrepreneur, V Vaidyanathan. The latter is a housing finance company, the flagship entity of a diversified conglomerate with presence in housing finance, consumer finance, insurance, stock broking and even real estate.

Unlike Vaidyanathan who created an unconventional model of credit underwriting and collection at Capital First, Sameer Gehlaut, a mechanical engineer, started his entrepreneurship journey by setting up an online broking platform in 1999. In course of time, the group spawned many companies and Indiabulls today is the nation's second largest housing finance company by assets.

Indeed, things have changed since 2013 when it had applied for a banking licence. For instance, the real estate business assets accounted for one-third of the group's assets at that time; it has come down to almost one-tenth now. In an interview with a national business daily, Gehlaut recently said he is willing to get out of the real estate business entirely if it becomes a bank.

Besides, the new on-tap licensing guidelines stipulate that not more than 40 per cent of the total assets/gross income of an aspiring bank should be generated from non-financial activities. In case of Indiabulls, it is less than 20 per cent.

Finally, the shareholding of the promoters for a new bank is capped at 30 per cent of the paid-up voting equity capital within 10 years and 15 per cent by the 15th year. Gehlaut, who now holds 21.5 per cent stake in Indiabulls, will end up owning 19.5 per cent in the merged entity but is willing to pare it to 15 per cent before the merger becomes effective. I am sure he might also be willing to give up his executive role to ensure better governance.

Incidentally, after being denied a banking licence in 2014, in November 2015, Indiabulls acquired close to 40 per cent stake in OakNorth Bank, one of the so-called challenger banks in the UK. I presume that such an acquisition could not have been done without the nod of the RBI and, of course, the Bank of England. By November 2017, Indiabulls had sold part of its stake and made more than what it had invested in the bank that specialises in giving loans to small and medium enterprises (SMEs) on a smart technology platform.

If it gets the RBI nod, the proposed Indiabulls Lakshmi Vilas Bank may replicate this in India. To start with, its assets will be disproportionately tilted towards real estates but a large segment of Indiabulls consumers can be sold SME products to diversify the portfolio. Gehlaut, in his interview, said they would not look for any relaxation in the terms of meeting the RBI norms for holding government bonds and keeping cash with the regulator.

After being denied a banking licence in 2014, Indiabulls acquired close to 40 per cent stake in OakNorth Bank, one of the so-called challenger banks in the UK, in November 2015

Indiabulls has been discussing the proposal for months before both the boards met to seal it. To be sure, LVB had very little option but to be taken over by a stronger entity; and Indiabulls, or, for that matter, all NBFCs which do not have access to public deposits, eventually need to convert themselves into banks for growth and even survival, in some cases.

I would not like to second guess the regulator's call because a banking licence, unlike say a licence to enter the telecom or gas business, is not sold to the highest bidder. It goes to those who the RBI finds "fit and proper". Does Indiabull meet this criterion? Let the central bank decide on this but none can deny the fact that India needs more banks for competition and caring for customers and the NBFCs cannot survive in their present form. If LVB is merged with a bank instead, we will have one bank less.

Historically, India has been a paradise for NBFCs. Till 1997 when the RBI Act was amended to create a comprehensive regulatory framework for the NBFCs, there were 40,000 such companies. Now, after close to a thousand NBFCs have lost licences for not having adequate capital, there are at least 9,000 of them.

But the banking landscape is very different. If we leave the regional rural banks, local area banks, and payments banks out, India has 96 banks, translating into one bank for 13.8 million people. Including them, one bank caters to 8.2 million Indians. In the US, there are 5,358 banks, covered by the Federal Deposit Insurance Corp, each catering to 59,724 people. Even neighbouring Sri Lanka has one bank per 827,000 people.

Finally, the logic that NBFCs don't take deposits and hence are a lesser threat to the systemic stability compared with a bank is a fallacy. Large NBFCs are equally systemic risks as they too deal with people's money. It may not be in the form of public deposits but isn't the money they borrow from the banks and mutual funds also public money?

The columnist, a consulting editor with Business Standard, is an author and senior adviser to Jana Small Finance Bank Ltd.
Twitter: @TamalBandyo

INSIGHT

Are these seven deadly sins plaguing your supply chain in India?

NEELESH MUNDRA

The emergence of new digital and analytic capabilities, combined with significant policy changes and rising customer expectations, mean companies in India need to upgrade their supply-chain processes. Here are seven outdated, but all too common, practices that companies need to watch out for — and change.

■ **Having your planning team forecast demand.** With the advent of machine learning and neural networks, having demand-planning teams churn out numbers based on statistical models is not good enough. The best forecasts are now created from advanced analytics engines that crawl the web for digital signals, take into consideration crowd-sourced data, and can explore correlations with more than 2,000 data sets to estimate future demand. Leveraging such data can improve forecasts as much as 10 per cent to 20 per cent.

■ **Running a monthly sales and operations planning (S&OP) process.** In today's dynamic markets, meeting once a month is not nearly enough: If a particular assumption changes, chaos can set in. Leading companies have instead moved towards a circular planning loop. That means setting up a central team to track and coordinate events — the same way a control tower manages flights. This team gets live feedback of events, such as supply disruptions, and then reacts in real time. Setting this up is not easy, but companies that do it well have seen improvements in service levels consistently.

■ **Relying on a hub-and-spoke network.** With the advent of India's goods-and-services tax (GST), most companies re-examined their network model and perhaps closed a few depots. That is not enough. This policy change was the once-in-a-blue-moon opportunity for all departments (from sales to manufacturing) to come together and reconsider their entire supply-chain strategy. GST implementation presented the opportunity for Indian companies to finally innovate their distribution network and create segmented supply chains for different product groups that have different demand and supply patterns. This meant not each product needed to be stored at each hub and connected depot or 'spoke' — and multiple handlings and inventory pile ups can now be avoided with networks tailored for each category.

Indian companies need to see their supply chains are sources of value— and then take action to unlock that value. To do so, they need to innovate and eliminate traditional practices

■ **Treating domestic trucking as a per kilometer variable cost.** Historically, due to the fragmented and unorganised nature of the market, most Indian companies have not looked at trucking strategically. They have outsourced it to third-party vendors and treated this as a variable cost based primarily on the distance travelled between plant and depots/warehouses and capacity of the truck. The better approach is to treat trucking more like machinery — that is, to see trucks as a fixed cost that need to be used intensively. This concept has been demonstrated by e-commerce players in India who run trucks close to 15,000 to 18,000 kilometers per month, two to three times as much as other sectors. This "sweating the asset" mindset shift could lower transportation costs by 10 percent to 15 per cent. The key to do this is a robust digitally enabled tracking of the loading, unloading and transit times through a 24/7 control room coupled with a well-coordinated dispatch and receipt planning analytical engine.

■ **Staffing supply-chain teams with domain experts alone.** Supply-chain teams typically have centered around experts who understood specialties such as warehousing, logistics, or planning. Now best practice is to blend supply-chain practitioners with analytics experts, such as data scientists, in order to leverage the data generated through every transaction and uncover inefficiencies across inventory, service and cost in different nodes of the supply chain — for example, by analysing the usage of last mile trucks and creating a dynamic routing algorithm , a company was able to realise a forty per cent drop in last mile costs.

■ **Procuring off-the-shelf digital solutions and tools without clear business rationale.** Many companies that embark on massive and all-encompassing supply-chain digitisation programmes have struggled to define and eventually realise the return on investment of such efforts. Companies that have done well have picked specific use cases that can be cracked by digital and analytics such as the ones we have discussed above example, better demand forecasting, end-to-end closed loop planning, with impact that is linked clearly to a business objective such as improvement in cost by 10 per cent, or maybe, service levels increasing by 15 per cent.

■ **Treating your suppliers as vendors and not as partners in an eco-system.** At times, it is more pragmatic to partner with a start-up to build a routing algorithm for your trucks, for example, rather than trying to code it internally. Companies that are able to build an eco-system of partners across the supply chain have usually seen benefits, such as getting to market faster, cutting development costs, or just having access to talent and expertise. To do this, companies need to move away from traditional vendor management processes of having annual contracts, standard 'request for quote' (RFQ) processes and quarterly performance reviews toward an 'eco-system management' of a set of partners across the supply chain that feel joint ownership to improve your efficiencies. Examples include joint investments with reputed transporters to ensure dedicated capacity in customised trucks that will improve costs, taking a stake in a logistics start-up to co-develop business solutions relevant to you or even collaborating to create an open platform that facilitates all partners in the ecosystem to thrive and build on each other's efficiencies and scale.

Indian companies need to see their supply chains are sources of value— and then take action to unlock that value. To do so requires them to innovate rapidly, and eliminate traditional, but stale practices.

The author is a partner of McKinsey & Company

LETTERS

Worth a case study

This refers to, "The Empire strikes back: How print media is winning the internet"(April 20). Print media is not only winning the digital space, but is also consolidating its editions. New city editions are getting launched by newspapers. Chennai-based The Hindu group launched its Mumbai edition. In nations like the US and the UK, even well-known publications that have been there in the print form are either closing down or reducing the number of copies. They are focussing more on digital editions. Another factor behind the print media conquering the digital space is free content, as Indian readers are averse to paying for digital content. A number of big publications have made the digital content free. When one buys the print edition, he recovers a small amount of the subscription money when old newspapers are sold to a scrap dealer. Management schools should make a case study on the subject of print media winning the internet, both in India and abroad.

Deendayal M Lulla Mumbai

Holistic solution needed

The civil aviation industry in India, for about a decade now, is passing through the most complex phase. Many players have fallen like a pack of cards, unable to meet their debt obligations owing to a variety of reasons. That is serious and does not augur well for the industry and the country. The latest on the list is the cash strapped Jet Airways that has announced a temporary shutdown of its operations after the lenders thoughtfully turned down the airline's demand for emergency funding.

It may be stated here that, to give a boost to the domestic aviation sector, the government has been working on various initiatives including upgradation of airports as well as enhancing regional air connectivity. It is unfortunate that this turbulence should occur in a country like India that offers a huge potential for expansion.

While all concerned, including the Director General of Civil Aviation, are already seized of the matter, it is necessary that some kind of viable solution is expeditiously worked out to ensure business continuity. This is vital now when the world is recognising India’s steady advances in multiple fields. The industry is highly cyclical and operates on a thin margin with a heavy capex leading to a high leverage. The crux of the problem concerning the entire civil aviation industry will need to be addressed in a holistic manner instead of treating any single airline in isolation.

Srinivasan Umashankar Nagpur

Letters can be mailed, faxed or e-mailed to:
The Editor, Business Standard
Nehru House, 4 Bahadur Shah Zafar Marg
New Delhi 110 002
Fax: (011) 23720201 · E-mail: letters@bsmail.in
All letters must have a postal address and telephone number

HAMBONE

Business Standard
Volume XXIII Number 177
MUMBAI | MONDAY, 22 APRIL 2019

Lessons from Jet

No promoter can be treated bigger than the company

As the last flight of what once was India's second-largest private airline landed in Mumbai at 12.30 am on Wednesday last week, the pilot's message said: "We hope to fly again soon. When we do, do book with us." It was a poignant moment for 25-year-old Jet Airways, but the indefinite suspension of operations was hardly surprising for an airline that had only five functional planes after starting the year with 119. With ₹8,400 crore of debt, and the failure to receive a stopgap loan from its lenders as part of a rescue deal agreed in late March, Jet's wings had not only been clipped; they were simply taken away. The airline is now clearly staring down the barrel. It is not difficult to figure out why Jet's lenders developed cold feet after announcing on March 25 a resolution plan that envisaged stake sale and "priority funding". It became simply impossible to extend the funds for two reasons: One, the airline's cash flow was severely impacted; and two, the Supreme Court quashed the Reserve Bank of India's February 12, 2018, circular on stressed assets resolution. The resolution plan was built on the premise of that circular. The fear of witch-hunt by investigative agencies must have also weighed on the bankers' minds. Even a reduced amount of ₹400 crore as requested by the airline was an unviable option, as most of the funds sought were for the payment of salaries and dues to lessors.

But this does not absolve banks of the blame for the mess that Jet finds itself in. They gave a long rope to Naresh Goyal, the promoter of the airline, even though Jet was trapped in a vortex with seemingly no end in sight for months. There were many signals of protracted mismanagement before Jet defaulted on its repayments at the end of 2018. The airline was careening out of control with continuing losses and a severe cash crunch, and Jet's auditor raised questions over its survival in August last year. Yet, the banks did not think it was necessary to save the airline by forcing Mr Goyal to bring in strategic investors. Instead, they convinced themselves that they could convert their debt into equity and keep it going, even though past experience with such endeavours has been hardly encouraging. Banks also refused to take the Insolvency and Bankruptcy Code route, which was enacted precisely to handle situations such as what Jet found itself in.

What prompted banks to treat Mr Goyal with kid gloves for so long is unknown, but it is probably because the Jet promoter had many important friends on speed dial. The fear of annoying the political powers who would be wary of the nasty optics of large-scale job losses and spike in airfares seems to have also played a part, though it must be said that the government appears to have stayed out of the picture and left it to bankers and the airline management to sort things out, and minimised disruption by temporarily re-assigning airport slots to other airlines. At this point, however, it does appear that a miracle will be needed for Jet to take wing again. Finding an investor is hardly going to be an easy task, given that nothing much remains of the airline, except for some flying rights, a few landing and parking slots, an eroding talent base, and a shrinking brand value. The important lesson from the Jet saga is that no promoter should be treated bigger than the organisation.

Critical time for trade

India must have a balanced response to global pressures

According to the recent data, in March 2019 Indian trade in goods unrelated to petroleum or to gold snapped a five-year-long streak in the red to register a surplus. That was, as this newspaper has argued, a good sign that needs to be backed up with proper trade policy. A recovery in exports cannot be guaranteed on its own — a point that must be kept in mind by New Delhi's trade negotiators as they prepare to welcome the trade ministers of 25 developing nations to a mini-ministerial summit. This is the second such summit, after one last year, and comes in the context of major pressures on the world trading system.

The biggest symptom of this pressure is the slow-motion trade war between the US and China. Patience has run out within the US political system for entities it sees as flouting the rules and norms of the international trading system. While India in principle shares many of these objections, there is nevertheless little doubt that the US' response has been arbitrary, scatter-shot and short-sighted. The US' initial fusillade of the trade war, a tariff on aluminium and steel, hurt producers in allied countries as much as those in China. More concerning are the direct moves on India taken by Washington: In particular, the announced withdrawal of benefits under the Generalised System of Preferences (GSP), which allows tariff-free access to the US market for producers exporting certain goods from developing countries. Indian officials have shrugged off the GSP benefits as minimal, but a fairly large swathe of exports, particularly in sectors that India would wish to see benefit, will find themselves rendered less competitive in one of their major overseas markets, thanks to the withdrawal of the GSP. Finally, there are moves afoot to make changes to the world trading system, which might also affect India. In particular, the European Union, the US and Japan have sought to begin a discussion on the preferences set aside for developing countries within the trading architecture.

It will not be surprising if these possible changes to the international trading system will be a major topic of discussion at the mini-ministerial. India, however, must carefully calibrate its response. It is not in India's interests to be seen to be providing cover to exporters from China. There is a massive difference between the two countries' relative economic status and trading power. India must defend special rules for developing countries, but it is not necessary to also make the claim that Beijing should continue to benefit from those rules. Second, it is important to note that while systems such as the GSP are WTO-compliant, India does not have a right to tariff-free access. So it must not close the door on negotiating with the US to ensure that such access is retained. The India-specific waiver on the US' Iran sanctions is also discretionary, and New Delhi cannot afford to see this expire because it has alienated Washington. This is a critical time. India has so far been dragging its feet on firming up a position, but it cannot be allowed to delay — elections or no elections.

ILLUSTRATION: AJAY MOHANTY

The bird's eye view in finance

Micro prudential regulation of finance is essential

SNAKES & LADDERS

AJAY SHAH

We are seeing difficulties in banks, mutual funds, non-banking financial companies (NBFCs), the bond market, and real estate. There are interconnections between these difficulties: The components are not siloed. It is difficult for a siloed financial regulatory architecture to obtain information, engage in root cause analysis, and solve problems. There is a natural bias for micro-prudential regulators to postpone the recognition of a problem. System thinking diverges from the view of one firm at a time. We require the Fiscal Resolution and Deposit Insurance (FRDI) Bill, the Financial Data Management Centre (FDMC) and a technical secretariat at the Financial Stability and Development Council (FSDC). Absent these three components, we need an informal team which will self-consciously mimic the working of these institutions.

There is a perennial tension between the worm's eye view and the bird's eye view. The worm sees things that the bird does not, and vice versa. In recent months, we have been freshly reminded of the need to see the wood for the trees in Indian finance.

Micro-prudential regulation is the job of pushing financial firms to cap their failure probability. As an example, we may have an objective that no more than 2 per cent of banks should fail per decade. Roughly speaking, this corresponds to about two significant bank failures in India per decade. Micro-prudential regulation involves writing rules that prevent excessive risk taking by banks, so that the failure probability of any one bank does not exceed 2 per cent over a 10-year horizon.

With mutual funds, there is no possibility of firm failure. The Securities and Exchange Board of India's (Sebi's) concern in micro-prudential regulation is to ensure that net asset value (NAV) is always reported correctly, and promises of redemption are always met.

To achieve these objectives, micro-prudential regulation thinks deeply about one financial firm at a time. The regulator requires a deep understanding of the business and identifies a minimal set of interventions which achieve its narrow objective, while avoiding central planning of products and processes.

Micro prudential regulation of finance is essential. But it is different from system thinking. Let us look at events of recent years, at the interactions of components of the financial system.

Credit stress in non-financial firms (e.g. infrastructure and real estate) surfaced in 2008. Early bankruptcy solves the problem, but when this is not done, the amount of debt balloons. With stressed borrowers, new debt is required to pay off old debt. The balance sheet grows and increasingly leverages, as default is staved off by paying old lenders using money borrowed from new lenders. This raises the question: Where is the new debt going to come from?

For many years, banks and the RBI tried to grow out of the problem. Weak borrowers were given more debt by banks. When the banks got conscious about their over-leveraging, at first, a new funding channel was opened up through mutual funds, NBFCs and the bond market. This channel has run into difficulties in the last one year. Now we have a group of stressed borrowers running out of ways to roll over, and we have four stressed components of the financial system. There are feedback loops at work where the problems of borrowers, real estate prices, bond market, mutual funds, NBFCs and banks are reinforcing each other.

These two paragraphs constitute system thinking. We have to see the financial system from a high-level perspective, and see these pressures and relationships. This cannot be done by micro-prudential staff for two reasons. First, the day-job of micro-prudential regulators is to look at the failure probability of one firm at a time. Second, the failure of firms beyond the targeted rate (e.g. about two bank failures per decade for banks, about zero errors in NAV or redemption for mutual funds) is a failure of micro-prudential regulation. Micro-prudential regulators thus have a bias in favour of glossing over problems.

This question was examined by Justice Srikrishna's Financial Sector Legislative Reforms Commission (2011-13). System thinking in finance does not fit well with monetary policy, as this is primarily about macroeconomics, about delivering low and stable inflation. System thinking in finance does not fit well with sectoral micro-prudential regulators, as their orientation is to look one firm at a time, as their knowledge is siloed within one sub-sector of finance at a time, and as micro-prudential regulators have a bias in favour of not recognising difficulties.

This led to the design of a council, the Financial Stability and Development Council (FSDC), made up of chairmen of financial regulators and the finance minister. This would be backed by a technical secretariat, which would have expertise in system thinking, and a system-wide database that was named the Financial Data Management Centre (FDMC). Alongside this was the thought process about the bankruptcy of financial firms (to be done by the Resolution Corporation, and encoded into the FRDI Bill) and non-financial firms (Insolvency and Bankruptcy Code, IBC). We now have one out of these four components of the destination financial regulatory architecture (the IBC). The recent years would have worked out better if we had the other three tools also.

When we look back at the financial stress of 2000-01, the key actors were UTI, the BSE, and Calcutta Stock Exchange. There was no FSDC or FDMC in the picture. The resolution of financial firms requires the FRDI Bill (which constructs the financial Resolution Corporation), but this was deep in the future. Hence, that crisis was dealt with by putting together an informal team at the Ministry of Finance, which bundled together certain elements of the FSDC, FDMC and RC.

Such an approach may be useful in the present context, as about three years are required to build the FSDC, FDMC and RC. For such a team, there is one important lever that is now in hand, which was not available in 2000-01: For stressed real sector firms, we have the IBC. The ability to put firms through the IBC as soon as possible, and let creditors choose between resolution and liquidation, is an important arrow in the quiver, which is now available.

The writer is a professor at National Institute of Public Finance and Policy, New Delhi

Being the change

DOWN TO EARTH

SUNITA NARAIN

It is clear now that in this age of the Anthropocene, environment security is the biggest casualty. It is well known now that the world is fast exceeding its capacity to live within the boundaries that the Planet sets — news is exploding in our face of the local crisis of health because of our mismanagement of the environment and the global existential crisis of impacts of climate change.

What can I do then? This then is a question many of us ask. We want to make a difference. We want to clean up and protect the environment. We want to be part of the change that is so desperately needed today. We know that the air we breathe is so polluted that it is hazardous for our health. Our rivers are dying because of garbage and sewage, and our forests are under threat. We know that much has to be done to safeguard our environment, because without this our planet's survival is at stake.

We know this. But the question in our mind is: What can we do? Is there anything we can do, as individuals or as collectives belonging to schools, colleges or even residential complexes and colonies? Can we contribute? How?

We can. Many years ago, Mahatma Gandhi had said we need to be the change we want to see in the world. This is what we need to do in today's world.

It is clear that our lifestyle has an impact on the environment. What we do and how we do it make a crucial difference. This is why the first task of being the change is to become aware of what we do — benchmark how much water and energy we use and waste we generate. It is only then can we transform our ways so that we can use as little and waste as little as possible — "tread lightly on Earth" has to be our motto.

We must live the change.

Take the issue of water. We know that while, on the one hand, water scarcity is growing — many do not even have clean drinking water — on the other hand, available water is getting contaminated. The answer then is to do the following:

First, augment our water resources by capturing every drop of water where and when it falls — we can do rainwater harvesting so that every rooftop, every paved surface becomes a water catchment. We are then part of the solution. This is not just the "job" of government. It is within our own reach. Every village, every school, every colony and every other agency can and must be part of capturing the rain, harvesting it and then valuing the raindrop.

We can and must minimise our water demand — we can do this by making sure that we do not waste water and, in fact, come up with solutions to use recycled water and even ways to minimise what we use in our kitchens, bathrooms and gardens. This is not something that is often in our reach because wastewater is connected to official sewage systems — we flush and will forget.

But, it is also a fact that many households — many more than those that are "so-called" connected — are dependent on on-site collection systems — everything from well-designed septic tanks to boxes that contain the waste and then discharge it into the open drain or land. These are systems that can get connected locally to wastewater treatment, designed for reusing and recycling water. But all in all, we have to work to turn wastewater into water.

It is the same with garbage. If we measure our garbage we will know how much we generate. But if we deliberately separate out the wet waste — all the food peels, leaves and other biodegradables — from the plastic, glass, metal, etc., we will know the composition of our waste. Once we know this, we can manage it — as the biodegradable can be composted or used to make energy, and the plastic, glass and metal can be recycled. But more importantly, we will know what we use that generates non-degradable garbage and then plan deliberately to cut out the high-waste items. We can do this.

Added to this is all that we can do to reduce our energy needs — by first reducing what we need to consume, through efficiency and sufficiency, and then working to use renewable sources of energy on our individual homes and institutions — like the rainwater that we harvest or the sewage that we recycle and the garbage we compost — these small steps combine to make it a giant leap.

The Centre for Science and Environment (CSE), where I work, has a green school programme, where schools do not preach environmental change but practise it. It makes for amazing change-makers. In this programme, students and teachers first benchmark the environmental status of their school — how much water, energy or vehicles they use and how much garbage or pollution they generate. They then take steps to fix their own environmental footprint — they become the change. I believe if each school and each home becomes the laboratory of action, then the ripples will spread fast and furious. We will take these lessons of life to make them life itself. This has to be the way ahead.

The writer is at the Centre for Science and Environment
sunita@cseindia.org
Twitter: @sunitanar

2008: The first responders' view

BOOK REVIEW

PAUL KRUGMAN

For a few months in 2008 and 2009 many people feared that the world economy was on the verge of collapse. They had good reason to be afraid. Financial markets were virtually frozen, with credit almost unavailable to anyone except the safest of borrowers. The real economy was in free fall: Over the winter America was losing 700,000 jobs a month, while world trade and industrial output were falling as fast as they did in the first year of the Great Depression.

In the end, however, the worst didn't happen. What saved us? There were multiple factors. But one element was that key public officials didn't stand aside while the world burned. Instead, they acted — not always soon enough, not always forcefully enough, not always wisely, but pretty effectively all the same.

Firefighting is a brief account of that crucial moment by three of the most important actors. Ben S Bernanke was the chairman of the Federal Reserve Board, then and now the most influential economic position in the world. Henry M Paulson Jr was George W Bush's Treasury secretary. Timothy F Geithner was president of the Federal Reserve Bank of New York — another key position in the Fed system — then became Paulson's successor under Barack Obama. There are a number of forms a book by central players in a historic episode can take. *Firefighting* could have been a juicy tell-all; it could have been an exercise in boasting about how its authors saved the world; it could have been a litany of excuses, explaining why none of what went wrong was the authors' fault. And the truth is that there's a little bit of each of these elements — but not much, considering.

What Bernanke et al. — I'm going to call them BGP for short — have given us, instead, is a primer on why the crisis was possible (and why, even so, almost nobody saw it coming); a ticktock on how the crisis and the financial rescue unfolded; and a very scary warning about the future.

So why didn't people see it coming? Part of it was hubris: "Serious economists were arguing that financial innovations like derivatives ... had made crises a thing of the past." (How serious were these economists, actually?) And the reality was that financial innovation made things worse, not better: Most of "the leverage in US finance" — debt that was vulnerable to panic — had moved to "shadow banks" that, unlike conventional banks, were largely unregulated and lacked a financial safety net. Also, as they say, "it's hard to fix something before it breaks." As long as the housing bubble was still inflating, defaults were few and everything seemed sound. And BGP, to their credit, acknowledge their own failures to recognise the danger, including Bernanke's notorious declaration that problems in subprime lending were "contained."

Most of the book is concerned with the increasingly desperate efforts of BGP and other officials to prop up financial dominoes before they could topple and collapse the whole system. It's an intricate story, one whose details probably seem a lot more interesting to those who were involved than they will to a broader readership.

There is, however, a unifying theme to all that complexity: Containing this crisis was so hard precisely because of all that financial innovation. Conventional banks are both overseen and guaranteed by the Federal Deposit Insurance Corporation, which has the power "to wind down insolvent banks in an orderly fashion while standing behind their obligations." But "the federal government had no orderly resolution regime for nonbanks." So BGP and company had to engage in frantic innovation. For example, the Fed funnelled money through conventional banks into the hands of nonbanks, in effect lending to institutions they weren't really supposed to support. This exposed the Fed to new risks; Paulson effectively indemnified the Fed against those risks, apparently without real legal authority to do so.

But should we be worried about another crisis? Yes, the authors say.

Banking, they argue, is actually less risky than it was, thanks to financial reforms that, while far short of what should have been done, have nonetheless led to safer practices. But crises will still happen, and when they do, the firefighting abilities of policymakers will have been gravely compromised. Interest rates are too low for cutting them further to do much good. Fiscal stimulus, which BGP agree was crucial, will be much harder to sell given high levels of debt. And Congress has taken away much of the authority that made extraordinary measures possible in the crisis. It's hard to imagine BGP's modern successors carrying out the kind of rescue operation the authors managed a decade ago. The authors are too nice to say this, but today's top economic officials seem to be systematically drawn from the ranks of those who got everything wrong during the crisis. The failure of Bear Stearns was the first solid indication of how much trouble we were in; Donald Trump has just chosen David Malpass, Bear's chief economist at the time, to head the World Bank. Larry Kudlow, now the administration's top economist, ridiculed "bubbleheads" who claimed that housing prices were out of whack, then praised Paulson for refusing to bail out Lehman — just hours before financial markets went into full meltdown. We seem to have learned the wrong lessons from our brush with disaster. So, when the next crisis comes, it's likely to play out even worse than the last one. Isn't that a happy thought?

©2019 The New York Times News Service

FIREFIGHTING: THE FINANCIAL CRISIS AND ITS LESSONS
Ben S Bernanke, Timothy F Geithner and Henry M Paulson Jr
Penguin Books; $16; 230 pages