In search of low-cost wave energy

Costs will remain high until technology stabilises and there is serious scaling up in capacity. The potential is huge for India and the world

TECH-ENABLED

DEVANGSHU DATTA

One of the least used forms of renewable energy is wave energy from the ocean. Waves generate a lot of power. If this can be harnessed and converted into electricity, it is also endlessly renewable. Unlike solar or wind, it's 24x7 under most weather conditions.

Although the idea has been around for a long time, it remains a low-key research area. The first attempts to use waves go back to 1799 when French polymath, Pierre-Simon Girard, invented a water turbine and filed patents. Modern experiments were pioneered by Yoshio Masuda in the 1940s. Masuda, a commander in the Imperial Japanese Navy invented a buoy that used oscillating water columns (OWC).

The OWC is a simple concept. The Masuda buoy had a floating chamber with a trapped column of air, and a hole below the waterline. The water level inside oscillated up and down due to wave motion, compressing / decompressing the air column. This moved a piston, generating electricity. More sophisticated turbines based on the OWC concept are very much in use nowadays.

Many other ingenious concepts have also been utilised. The Salter Duck is another commonly seen float, which uses a pendulum that bobs back and forth. There are hydraulic rams, which work by creating pressure differentials in a dual valve (or multi-valve) system. As a wave peaks, it forces water into the ram. One valve closes and the other opens, creating higher pressure that forces water up against gravity to move a turbine. As the wave ebbs, pressure eases, the second valve closes, while the first valve re-opens and the turbine moves again.

Other generators use motion by for example, putting together a string of oscillating buoys, anchored in shallow water. Wave attenuators are long segmented floats placed perpendicular to the length of waves. As the floats flex due to waves, the motion is converted to electrical power.

Another concept is a submerged "carpet" converter made from flexible material (such as rubber). The carpet flexes and bends with wave motion. The movement is used to drive a piston. "Overtoppers" are inclined ramps, which work like floating hydro-electric dams. When a wave peaks, the water climbs the ramp and fills a reservoir. The water is then drained off, using hydro turbines.

Wave energy depends on local geography, wind factors and the mathematics of the interactions among multiple waves. There are several computer models that study these variables to judge where wave power will be consistently at ideal levels.

Conversions to power can be surprisingly high, with claimed conversion rates of 80-90 per cent of kinetic energy to electricity for some devices. However, wave energy is expensive for multiple reasons. It requires tricky engineering to take power, and transmit it somewhere useful through the sea. Wave converters also incur high repair and maintenance costs. Sea water is corrosive and bad weather often damages and destroys installations.

There are also serious environmental concerns, as always, with any new technology. Wave converters could damage the marine environment in many ways. They can also cause noise pollution that upsets marine life (sound is amplified and travels much faster in water). Since seawater is also a good electrical conductor (unlike air), the converter and the transmission system have to be carefully though through and insulated, adding to the challenge.

There are experiments happening all over the world, with wave energy installations in Europe, Australia, the US, West Indies and Australia. India's only major wave energy pilot project was located in Vizhinjam, Kerala and run by IIT, Madras. But it was decommissioned a few years ago. Unlike with solar, wind or biogas, there's no mission target for wave power.

The US Department of Energy has an interesting ongoing Waves to Water competition offering $2.5 million in prizes. Competitors have to produce clean desalinated water using only ocean waves as power source. They must submit concept, technical design, build a prototype, and demonstrate it in an open water testing competition. This would be win-win.

As of now, wave energy is very expensive with many technologies developed to somewhere between proof of concept and pilot projects. Costs will remain high until technology stabilises and there is serious scaling up in capacity. If a technology scales, waves may even be cheaper and more reliable than wind or solar.

The potential is huge, for India and for the world. India with its 7,500 km coastline and islands, could generate anywhere upto 60 Gigawatts of wave energy. The US Dept of Energy estimates that upto 65 per cent of the US's power needs could be met by waves.

CHINESE WHISPERS

No water, no meals

A quick roadside bite in Chennai may be a thing of the past. As the water crisis deepened in the city, small restaurants and eateries have decided to stop serving full meals, following a decision on this by the Chennai Hotel Owners' Association. The Association members, who operate roadside restaurants, say snacks like idli and dosa, which consume less water, might still be continued, but full meals with dishes like sambar and rasam and require a lot of water to cook, might be stopped for the time being. That will also help tackle the problem of cleaning huge utensils and tumblers. The price of water sold in 12,000-litre tanker lorries shot up to ₹2,500 from ₹1,800 earlier this month, and is now available at ₹5,000.

On the back foot

A few years ago, when a customer would enquire about a luxury real estate project in South Mumbai, the sales people would reply that the apartments would be sold "only on an invitation" basis. Sometimes, the builders would enquire about the car the customer was driving to assess whether the customer could buy their ₹5 crore flat.Thanks to demonetisation and crackdown on black money by the Narendra Modi government, real estate hoarders have run away from the market. Now the same builders are sourcing the customer data base from car dealers, telecom companies, luxury shops, and enticing potential customers with "wine and cheese" events, high tea and even dinners in the buildings that are almost ready but have no takers.

Communists of India, unite?

It is one of the longest-running debates in Indian politics — when, if at all, the Communist Party of India (CPI) and Communist Party of India (Marxist) will reunite. After this year's Lok Sabha polls, the CPI has once again reached out to the CPI(M) for reunification. The CPI(M) is the bigger of the two parties but in the current Lok Sabha it has only three members against the CPI's two. CPI chief S Sudhakar Reddy recently met the CPI(M)'s Sitaram Yechury on the reunification process and handed him a letter to that effect. The CPI(M) circulated the letter in its central committee meeting, but no decision has been taken. The CPI is hopeful that at least the CPI(M) cadre would put pressure on its party leadership to reunify. The CPI(M) was formed in 1964, when several leaders walked out of the CPI.

The three Rs of public sector banking

These are recovery, risk management & retail loans

BANKER'S TRUST

TAMAL BANDYOPADHYAY

NOT ENOUGH: **Even if we are hugely successful in the consolidation drive, it will bring down the number of banks, not their market share**

In a recent conversation, Rajkiran Rai, managing director of Union Bank, has made an interesting remark. "When we started our career in 1980s, we were not in the business of banking. Since we were government owned (even now, they are), people walked into our branches and kept their money; we did not have to ask for it. Neither did we go out looking for borrowers. They came to us, seeking loans. On our own, we didn't have to do anything," he said with rare candour.

Rai's primary job these days is to teach his colleagues the business of banking. All public sector banking bosses seem to be doing this. They roughly have close to 70 per cent of the market share of banking assets in Asia's third largest economy — disproportionately higher than most markets across the globe. To cut down the number of government-owned banks, consolidation is the new buzzword in the industry. Even if we are hugely successful in the consolidation drive, it will bring down the number of banks — not their market share.

The market share can shrink — and it has started shrinking — if some of the public sector banks become irrelevant because of their inefficiency. It is in this context, Rai's observation is important. The government-owned mammoth banking industry in India is trying to reinvent itself. How?

Before we get into the details of their transformation strategy, let's look at their performance in fiscal year 2019 that ended in March. This bunch of banks made a net loss of ₹72,952 crore in 2019 which is less than the previous year's loss (₹85,371 crore). In 2017, they made a measly profit of ₹474 crore after making close to ₹20,000 crore loss in 2016. Essentially, in past four years, their losses equal 1 per cent of India's gross domestic product (GDP).

Fourteen public sector banks made losses in 2019 and the amount of loss varied between ₹15,116 crore (IDBI Bank Ltd) and ₹543 crore (Punjab & Sind Bank). Of course, IDBI Bank is no longer owned by the government. The can is now being carried by Life Insurance Corporation of India, which is wholly owned by the government.

Why did they make so much loss? Well, they had to provide for a pile of bad loans, created over the years. The provision for such loans in 2019 was to the tune of ₹2.57 trillion, less than ₹2.86 trillion in the previous year. A lesser amount of provision contributed to the shrinking of overall net loss of these banks in 2019. To be fair to them, their net interest income — or the difference between what they pay for deposits and what they earn on deploying such deposits in the form of loans — also rose, from ₹2.05 trillion to ₹2.30 trillion.

Overall, the pile of gross non-performing assets (NPAs) of such banks dropped from ₹8.96 trillion in 2018 to ₹7.68 trillion. However, at least 12 of these banks still have their gross NPAs more than 15 per cent of loan assets. Of these, two have at least 20 per cent and one 27 per cent gross NPAs. After setting aside money for bad loans or making provisions, their net NPAs dropped from ₹4.54 trillion to ₹2.92 trillion. At least two of them have 10 per cent or more net NPAs and 14 of them have between 5 per cent and 9 per cent net NPAs.

Indeed, there is marginal improvement in the performance of some of the public sector banks. Recognising that, the banking regulator has taken a few of them out of the ambit of the so-called prompt corrective action quarantine which restricts their activities. But many are not out of the woods yet.

What's the game plan of these banks? How do they come out of the mess and create an ecosystem not to repeat the same mistakes again? The three Rs of public sector banking now are recovery, risk management and retail loans.

For most banks, the primary focus is on recovery of bad assets and not necessarily creation of new assets to earn interest. While the insolvency law is aggressive and bringing many of the defaulters to the discussion table, the time taken to recover bad loans through this route is much longer than what the bankers had anticipated. The woefully inadequate infrastructure is only one part of the story. The corporate India's proclivity to game the system is adding to this.

So, most bankers are using the insolvency law as a threat and trying to recover, whatever they could, outside it, through discussions. Since most banks have already provided for such bad loans, even after a relatively smaller recovery, they can be "in the money".

While the recovery drive is aimed to clean up the books and make some money that can add to the profits, all banks are taking risk management seriously. The general manager, risk management, is now the most critical position among the senior executives in a public sector bank.

For balance sheet growth, they are now focusing on retail assets in a big way. If you are driving down on the Western Express Highway in Mumbai from the airport to the business district of Bandra Kurla Complex, you can't miss the bill boards of even weak public sector banks, screaming to sell home loans. Almost all managing directors want to de-risk their banks by paring the exposure to corporate loans and pushing hard for retail loans such as mortgage, auto loans and even personal loans.

In every investor presentation, they are showing a graph —how corporate loans as a percentage of total loans is coming down and retail loans going up. Theoretically, the interest margin on retail loans is higher than corporate loans (that is if the bank is giving loans to highly-rated corporations) and most such loans are backed by securities. So, it's a foolproof strategy. Right?

There are two key questions. If these banks stop giving corporate loans, where will the corporations source funds to invest? We do not have a vibrant corporate bond market.

A more critical question is: Is retail business the next time bomb ticking away? Typically, the public sector banking industry has a herd mentality and not every bank has the expertise for retail loans; they have jumped onto the bandwagon as they need to de-risk their balance sheets. In the March quarter, the Indian economy grew at its 20-quarter low, dragging the overall growth for 2019 to a five-year low. If the slowdown is not arrested, we may start seeing cracks in the retail loan portfolio of banks.

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INSIGHT

Can Hong Kong protect its 'freedom'?

Even if the extradition bill has been suspended, Beijing will eventually impose its system on Hong Kong

NITIN PAI

NO WIN SITUATION: **What is happening in Hong Kong is everything Beijing has methodically prevented from happening in China**

"One country, two systems", the brilliant formulation that allowed Britain to transfer Hong Kong to the People's Republic of China in 1997, allowed a lot of people to believe that the two systems would converge over time. That while the mainland would adopt free markets and democracy, Hong Kong would become better integrated with its motherland. That Hong Kong would change the mainland. In China, economic freedom would lead to political freedom and it would follow Japan, South Korea and Taiwan towards democracy.

Like many other comfortable stories that the West and China told us and each other over the past three decades, this too turned out to be a fairy tale. Trapped in ugly reality, the people of Hong Kong are putting up a massive resistance to preserve their system. Unfortunately for them, it might already be too late.

Even if the extradition bill that caused a million people to take to the streets earlier this month has been suspended, Beijing will eventually impose its system on Hong Kong.

In fact, the protests reinforce Beijing's belief that unfettered access to the world, personal freedoms, rule of law and participatory government will be the death of their hold on power. What is happening in Hong Kong is everything they have methodically prevented from happening elsewhere in China. Hong Kong is the exception that proves their rule.

Indeed, the city presents an existential threat to the legitimacy narrative of Communist Party of China. Hong Kong has not bartered freedom for prosperity. It is comfortable with Western norms without losing its Chinese character. The Party's claim on the monopoly of power is weakened by freewheeling Hong Kong next door. The two systems in the "one country" threaten one another. One has guns and the other has umbrellas.

Actually, it's more than guns. When the British handed over Hong Kong in 1997, the city's economy was around 20 per cent of the China's GDP. Today it is less than 3 per cent. Shanghai, Beijing and Shenzhen have bigger economies than Hong Kong. Guangzhou, Chongqing, Tianjin and others are catching up fast. Despite being a global financial centre, Hong Kong's relative economic importance is declining.

Hong Kongers are concerned that the proposed extradition law will damage the city's economic prospects, scaring off investors and even precipitating a financial crisis. As J Kyle Bass, a hedge fund manager, told Yahoo Finance, "If the law passes, the autonomy of Hong Kong will come into question by the US. That means that the US is going to treat Hong Kong as China, that is, no more most favoured nation trading status. We will impose tariffs, and when you look at Hong Kong's trade as a percentage of its GDP, it's enormous. So if all of a sudden a free trade zone becomes impeded by the US treating them as China, it literally changes the calculus."

But Beijing might not lose too much sleep over the loss. From the perspective of China's leaders, keeping Hong Kong under their political thumb is more important. That is why Chief Executive Carrie Lam's administration tried to brazen it out, tone deaf to overwhelming popular opinion. For Beijing, putting the extradition bill on the back burner is merely a tactical concession to contain the protests.

China's leaders will also be further convinced that their policy of online censorship and surveillance is crucial in preventing such large scale protests from breaking out in other cities. Hong Kongers could mobilise effectively in such larger numbers because they used secure messaging platforms that were outside China's control. Telegram, one of the social media platforms that the protestors used, reported being at the receiving end of distributed denial of service (DDoS) attacks from state-actors traced back to China. So Beijing is likely to double down on domestic censorship and international cyber-attack capabilities.

Even if Hong Kongers are prepared for an extended confrontation with their government, China will prevail by sheer attrition. As long as the protests remain non-violent, the Hong Kong authorities will be able to wear them down. If there is an outbreak of violence that the police cannot handle on their own, the PLA garrison will be called out. No one wants that to happen, limiting the levels of violence. Yes, it's all very bleak for Hong Kongers who wish to preserve their freedoms.

LETTERS

This is not 'normal'

The deaths of children hit by encephalitis in Bihar is being underplayed by the government and that is understandable. But the episode being underreported by the media is puzzling. They have not made front-page news or produced editorials. Nor have they become a topic for 'panel discussions' on prime-time television. May be, it is still a 'developing story'. Anyway, they are a sad commentary on the abysmal state of food security and health care systems in the state. It would be a betrayal of humanity to ignore them, develop a sort of mental resistance to them or accept them as normal state of affairs in our country.

The central government has a convenient excuse — the state machinery could not undertake awareness drives because of election-related work. Clearly, the victims were undernourished infants from impoverished families. These are all avoidable deaths caused by chronic malnutrition and woefully inadequate health care. Much was promised under food security and health care, but little has been delivered.

In a state like Kerala with high human development indices, mass infant deaths like that in Muzaffarpur, do not occur. There is no reason why Bihar cannot take Kerala as a model and improve its public health care delivery system. Saving the lives of children is an enormous task in the present social and economic context. Needless to say, it must get priority.

G David Milton Maruthancode

Silence of Opposition

Opposition leaders of different political parties including West Bengal Chief Minister Mamata Banerjee have always been united on various aspects in agitating against the ruling Bharatiya Janata Party. All those leaders have maintained a curious silence over the lawful agitation by doctors of government hospitals in West Bengal, which has started affecting health care services in other parts of the country as well, with the doctors there standing united with their counterparts in West Bengal.

The leaders of other political parties should exhibit their loyalty to national and public interest by going to Kolkata to persuade Banerjee to mend her ways, and help end the strike by government doctors. She should take strict action against those guilty of beating doctors in the government hospitals.

It is praiseworthy that Union health minister Harsh Vardhan has made a humble appeal to Banerjee to ensure an immediate end to the strike of doctors in government hospitals of West Bengal by accepting their genuine demands.

Madhu Agrawal New Delhi

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HAMBONE

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Walk the talk

Global trade architecture is changing, and India can't opt out

At the Shanghai Cooperation Organisation Summit, held in the Kyrgyz capital of Bishkek, Prime Minister Narendra Modi reiterated India's position regarding the importance of open and frictionless trade and the vital nature of the World Trade Organization (WTO). New Delhi has traditionally supported multilateral over plurilateral trading arrangements as the former are in India's best interests. Speaking at the summit on Friday, Mr Modi hit out at unilateralism and trade protectionism, and said there was a need for a rules-based, anti-discriminatory and all-inclusive WTO-centred multilateral trading system, amid the raging trade war between the US and China. Mr Modi's stand is nothing new. At the World Economic Forum in Davos last year, he had warned countries against closing their economies by saying the forces of protectionism were raising their heads against globalisation.

But Mr Modi's government has to walk his talk, as India has not been setting a good example when it comes to support for freer trade. The last few years have seen a rise in protectionist impulses in New Delhi and recent Union Budgets featured tariff increases with the goal of protecting domestic industry. Many aspects of India's industrial policy have been poorly designed and may violate WTO rules. Japan has in fact just taken India to dispute settlement at the WTO because of measures designed to promote the domestic manufacturing of mobile handsets. This is an unfortunate failure of trade diplomacy on New Delhi's part — and, what is worse, it is one of many.

Washington DC has also ended the privileges due to some Indian exports under the Generalised System of Preferences, which permitted duty-free access to the US market. India has allowed the US to turn it into a target, thanks to clumsy attempts to control the operation of multinational companies, including those in e-commerce and IT. A recent meeting in New Delhi of several trade ministers from developing countries revealed that there was little support for India's desire to prevent discussion under the WTO framework of a multilateral framework that would regulate international e-commerce. India is once again isolated.

This attitude of India towards global trade is unfortunate, given that the economy has a great deal to gain from integration with the world economy. It is only through being open to global supply chains that there are hopes of reviving exports, and thus creating sustainable and well-paying jobs. The US-China trade war should not be seen in isolation. It is part of an attempt to create a fairer framework for international trade that restrains the hidden subsidies in the Chinese economy, which have distorted the world trading system. This is also a matter of concern for India, and it should seek to help shape the new trading architecture instead of withdrawing from it. Efforts to promote domestic manufacture of electronic goods and solar panels are welcome, but they should be WTO-compliant so that India does not lose trade disputes. After all, India has to be part of the global value chain and integrate itself with the global economy. Exports from India have already suffered a great deal, remaining broadly flat for the past five years — while peer countries like Bangladesh and Vietnam have snapped up the opportunities offered by the flux in global trade. Several moves by the government have raised questions about whether India is still pursuing market-friendly reforms, or would prefer to return to the failed import substitution model of the past. Unless the new government and the commerce ministry now re-orient themselves towards a more open stance, India will miss the boat once again.

The power of civil society

Even illiberal rulers bow to united and sustained opposition

In an age of illiberal democracy, it is worth noting that there are still methods by which civil society can exert pressure on powerful ruling establishments. There have been two recent examples of the dubious use of law to violate human rights. One comes from the Hong Kong Special Administrative Region and one from the Russian Federation. Both have had, of a sort, a happy ending.

Hong Kong has been wracked by protests for some weeks against a proposal by its government for a new law that would permit extradition to mainland China for Hong Kong residents. The government of Hong Kong, which is not elected by universal suffrage but by an electoral college of 1,200 people, many of whom being closely tied to Beijing, insisted that the point of the law was not to allow extradition to the People's Republic of China per se. The stated justification was, in fact, a murder case involving a Taiwanese national. But the government of the Republic of China, or Taiwan, rejected the law as violating its own sovereignty. Thus, the government of Hong Kong found its fig leaf of justification had gone astray. In the event, few believed the Hong Kong government or its chief executive, Carrie Lam. Most viewed the law as allowing the Beijing government to clamp down on freedoms in Hong Kong, particularly on political dissidents. Naturally there was great fear and trepidation, which culminated in mass protests not seen in Hong Kong since the time of the so called umbrella movement some years ago. In the end, the pressure on the government was successful. Faced with mounting concern in the word press and from business interests concerned about the future of Hong Kong as an investment paradise, the Hong Kong government had to suspend the law. Protestors are still not satisfied, however, and on Sunday they gathered in order to try and force the resignation of Ms Lam, who they saw as having betrayed Hong Kong on behalf of Beijing.

At least in Hong Kong there is a long tradition of protest and assembly; For Russia under President Vladimir Putin the same cannot be said. And yet, even there, the power of protest had made itself visible. After the crusading anti-corruption journalist Ivan Golunov was arrested by the police on drug charges, which appeared fabricated, the government found it had overreached itself. This came after 400 people were arrested in central Moscow following a demonstration that included many journalists. Several newspapers also put the slogan "We are Golunov" on their front pages, which was also the slogan on several placards at the demonstration. The main opposition leader, Alexei Navalny, was also arrested. Mr Putin himself appeared to have stepped in, with Mr Golunov being released on Live state-controlled television and news that senior police officials might be fired. Again the protestors are not entirely satisfied, given that so many journalists are still in prison in Russia. But the power of organised opposition, even if not mediated through the political process, is visible here as in Hong Kong. Sustained civil society activism can control even powerful, illiberal governments.

ILLUSTRATION: BINAY SINHA

Stabilising stressed firms

A formal bankruptcy process stabilises the stressed firm, and directs the energy of lenders into the right channel

SNAKES & LADDERS

AJAY SHAH

Once a firm has substantial debt, borrowing is an everyday activity; new debt is taken to repay old debt on a regular basis. When lenders become suspicious, this flow of borrowing gets restricted and this creates stress. Stressed firms are then under pressure to obtain cash to pay down debt. All or most lenders tend to step forward and ask for their money back. In the absence of a formal resolution process, the management has the ability to choose who gets repaid. The great advantage of a formal resolution process is that an order of priority is written into law. This calms all lenders and creates stability.

Some firms borrow occasionally. They need to worry about how lenders think about them only at the time when fresh borrowing is desired. Other firms build up substantial borrowing. Once there is a lot of borrowing, the normal way to repay old debt is to take on new debt. Borrowing now becomes a critical raw material to keep the company going. Every month or two, the company has to go to lenders and ask for new debt.

A company that regularly borrows is on a tight leash. At any point in time, if the credit risk perception of lenders changes, it can interrupt the flow of lending. This is a problem particularly in India, where the bond market works poorly. We do not have a graceful escalation of the interest rates charged as credit quality degrades. Instead, when the credit quality worsens a bit, credit access chokes.

As a consequence, we get a few leveraged firms in an uncomfortable place, where there are repayments coming up, and fresh credit market access is not forthcoming. Let us first consider the ideal situation: The firm is solvent and has liquid assets. In this case, it is possible to get a graceful deleveraging. One by one, the firm sells off its assets, obtains cash and meets all the repayments.

India is a much more capable financial ecosystem today, as compared with the conditions of 10 or 20 years ago, in the extent to which markets exist for assets such as a loan book, a division, or a subsidiary. It is now much more possible to hawk such assets and get a reasonable transaction within a reasonable time. This takes care of some situations, where lenders have turned their back on a healthy company. The assets are liquidated at decent prices, and repayment obligations are met in time. The firm deleverages in a graceful fashion, suffers from a bruised ego, licks its wounds, and lives on to fight another day.

Things need not work so nicely. Suppose the firm has illiquid assets. In the hunt for cash, it may be forced to sell good assets at a steep discount. This induces a loss which is paid for by equity capital. Alternatively, suppose the firm is actually insolvent, where the value of its assets is not large enough to pay off all its lenders.

Under these conditions, sale of assets keeps the firm in a downward spiral. Each sale of asset leaves the remainder of the firm looking worse. As an example, suppose there is a balance sheet of ₹100 with ₹20 of equity and ₹80 of debt. Under a fire sale, ₹50 of assets are sold for ₹30. While this produces ₹30, which is used to meet debt obligations, the loss of ₹20 wipes out the equity capital, which makes the firm look worse.

Alternatively, suppose there is a balance sheet of ₹100, where ₹50 are good assets and ₹50 are bad assets. Suppose the ₹50 of good assets are sold off for the full value of ₹50, and debt is paid off. But after this, the firm has ₹50 of bad assets against liabilities of ₹20 of equity and ₹30 of debt. This firm does not look so good.

In either of these two cases, the early moves of deleveraging to meet debt repayments do not stabilise the firm. Access to fresh debt remains blocked. The phone lines are ablaze as all existing lenders clamour for prepayment.

This is where the formal institutional apparatus of a bankruptcy process helps. Under the Insolvency and Bankruptcy Code (IBC), there comes a date where the corporate insolvency resolution process (CIRP) commences, and a "calm period" starts, where all claims against the firm are suspended. This is the opportunity for the committee of creditors to stabilise the firm. And if the firm cannot be protected as a going concern, then there is a clear waterfall that governs the order in which various creditors are paid off.

Such a rule set stabilises the lenders. They channel their energy into the constructive process of being on the committee of creditors, trying to restructure the firm in a way that maximises their own value. There is no possibility open, for any one lender, to pressure the management trying to get his/her own money out. This is the key difference in India today, between stress in a non-financial firm versus stress in financial firm. For the former, there is an orderly institutional mechanism, the IBC, and for the latter this is lacking.

The correct design, which was done by the Financial Sector Legislative Reforms Commission (FSLRC), involves two elements. For financial firms that make intense promises to unsophisticated households (e.g. banks) and for systemically important financial firms (e.g. HDFC), the bankruptcy process would work through a resolution corporation (RC). This is encoded into the Financial Resolution and Deposit Insurance (FRDI) Bill. For all other firms, we should have the IBC in its full glory, as envisioned by the Bankruptcy Law Reforms Committee (BLRC). We may emphasise that this split is not a simple financial vs non-financial firm's separation. This two-part machinery needs to be put into place.

The other key weakness of our environment is the lack of a sensible bond market. When credit risk goes up, it should be associated with costlier borrowing, and not a collapse in credit market access. This collapse in bond market access is the key culprit of the present environment, which is destabilising firms. Addressing this requires bond market reforms.

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Circular economy is by the poor

DOWN TO EARTH

SUNITA NARAIN

I am looking at massive mounds of garbage — but with a difference. This garbage — from your and my house and countless others — has been sorted, segregated and made into almost neat piles of different stuff. I am at what can be called Asia's largest wholesale market for junk — located in Delhi's Tikri Kalan — obviously on the outskirts of the city, because our waste must be out of sight, out of mind. We then go to the Haryana side of the market, located in Bahadurgarh district, adjoining Delhi. Here again, there are mounds and mounds of sorted and unsorted garbage. While the Delhi market is formal in some ways, the land has been provided by the Delhi Development Authority (DDA); the Haryana side is located on agricultural land.

I ask farmers why they have leased their land for this waste trade. They point their fingers at development, ironically called Modern Industrial Estate, located near their fields. Here industry, they say, has pumped industrial discharge into the ground through reverse boring. As a result, our groundwater is contaminated and full of chemicals. Now agriculture is not possible. We could see chimneys and smoke from this "Modern" ground. Pollution Control Board officials, who were with us, said, "Give us proof and we will close down units that do reverse boring." It was a rhetorical question — they did not really want the answer. Just near the farms and coming from the factories we could smell and see the massive drain full of stink and dirt. The same Haryana government has stipulated that its pollution board officials can only "inspect" a unit once in five years. Really rhetorical!

So, the cycle has closed. This could well be called the perverse circular economy of our times — we produce waste, destroy land and livelihoods, and then provide no option to the very poor but to make a business out of the same waste we have created and dumped.

I was there with the chairman of the Environment Pollution (Prevention and Control) Authority (EPCA) as we want to understand the steps taken to ensure that waste is not burnt in the open. The last time the chairman, Bhure Lal, had visited the area, he had found massive (this is an understatement) quantities of discarded waste in the Mundka plastic factory area as well as in Tikri. He directed this waste be lifted and taken to an energy plant for controlled burning. It made a huge difference in the last winter season.

This time, there was much less "waste" in the open. As the traders informed us, waste is a resource. They cannot afford to let it be burnt. But it is also a fact that there is waste that cannot be recycled — for all of us who need and like to buy shoes, one green tip is that "uppers" cannot be recycled. They have to be burnt. There are other items like this, including multi-layered plastic; what we consume and throw every time, we eat processed food packed in shiny and indestructible plastic.

But it is also undisputable that these markets, in Tikri and in Bahadurgarh, which employ the poorest of the poor, are the reasons why we are not (yet) drowning in our own waste. These markets are built on the labour of the poor, who rummage through our waste, pick up the pieces of any value, and then sell it to the first collector, who then sells it on to the next, and so on. It is an informal trade but extremely well organised. I was told that the market sorts out some 2,000 products from the waste and the value of each is ₹5-50 per kg. The trade pays the goods and services tax — earlier the government has imposed a ridiculous 18 per cent, but has now corrected it to 5 per cent. So, the government earns from this trade, which should, by all logic, be supported, as it provides a waste to resource business and saves us from building landfill sites, which take valuable land. We know nothing about this business, but we believe it is considered dirty. The municipal corporations will provide land for dumping waste but nothing for its recycling. Where are the spaces for junk shops in our city plans?

But there is an issue that niggles and eats away at my thoughts. What should be the right model for this waste business? Should we accept the fact that this trade provides livelihoods for the poor so it is good? This would mean that we should use more and reject more. Is this the way ahead? I ask this, not just in the context of Tikri but the world around us. Once China closed its borders on "foreign garbage", recyclers started looking for countries to sell this waste. Is this the answer to our waste problem? Surely not. Let's discuss this next fortnight.

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Appeasement: A cautionary tale

BOOK REVIEW

LYNNE OLSON

Three months after Hitler came to power in Germany, the British ambassador in Berlin dispatched a prescient 5,000-word report to London. Having just read *Mein Kampf*, Sir Horace Rumbold correctly saw the book as Hitler's master plan for the conquest of Europe. To his superiors, Rumbold outlined how the German leader planned to pick off countries one by one, all the while promising that his latest victim would be his last.

In *Appeasement*, Tim Bouverie notes that Rumbold's April 1933 dispatch caused a momentary stir in the Foreign Office. But the ambassador's warning, like later admonitions from Winston Churchill and others, made no dent in the British government's unflagging commitment to come to terms with Hitler, no matter the consequences.

Bouverie, a former British television journalist, offers few fresh details or insights into Britain's disastrous appeasement policy — a subject that has been exhaustively mined in a plethora of previous books. Nonetheless, living as we do in an era with uncomfortable parallels to the political turmoil of the 1930s, *Appeasement* is valuable as an exploration of the often catastrophic consequences of failing to stand up to threats to freedom, whether at home or abroad. Particularly timely is the book's examination of Neville Chamberlain. It highlights the dangers to a democracy of a leader who comes to power knowing little or nothing about foreign policy, yet imagines himself an expert and bypasses the other branches of government to further his aims.

Throughout his minutely detailed survey, Bouverie rightly rejects the arguments of revisionist historians who claim that Britain's lack of military preparedness, as well as the strength of pacifist public opinion, justified its determination to offer repeated concessions to Hitler. In fact, from the early 1930s, British leaders, fearful of further damaging their Depression-afflicted economy, fought to keep military spending to a minimum. They then used the country's military deficiencies as an excuse to turn a blind eye to Germany's increasing aggression and explosive rearmament, a flagrant violation of the 1919 Versailles Treaty.

Although Britain's appeasement toward Germany began before Chamberlain became prime minister in 1937, he was its high priest throughout. As chancellor of the Exchequer for most of the 1930s, he oversaw the government's strict budgetary limits on rearmament. According to one associate, Chamberlain, a former businessman who had spent two years as mayor of Birmingham, thought of Europe as simply "a bigger Birmingham." He convinced himself that if he dealt with Hitler in a "practical and businesslike" way, he could convince the Führer of the efficacy of peace and bring him to heel.

Chamberlain clung to that delusion even as Hitler annexed Austria in March 1938 and, two months later, demanded that Czechoslovakia, Eastern Europe's only democracy, surrender the Sudetenland, a vital area containing most of the country's formidable defence fortifications and major centres of industry. Czechoslovakia refused and mobilised its highly trained, well-equipped army to counter a German invasion; France, which had a military treaty with the Czechs, did the same.

But when Chamberlain refused to join the French premier, Édouard Daladier, in confronting Hitler, Daladier fell into line. At the Munich conference in September 1938, the British and French leaders strong-armed the Czechs to give in to German demands. In defence of his betrayal of a fellow democracy, Chamberlain, like later defenders of appeasement, argued that Britain was not ready to fight a major war at the time. True enough, but as Bouverie points out, neither was Germany.

For his part, Hitler took advantage of the year after Munich to accelerate his country's rearmament. The British people, meanwhile, knew virtually nothing about the deplorable state of British rearmament or their government's behind-the-scenes activities. Using tactics that have striking resonance today, Chamberlain and his men badgered the *BBC* and newspapers to follow the government's lead on appeasement, restricted journalists' access to government sources and claimed that critics of Chamberlain's policies were disloyal to him and to Britain. Most of the news media did what the prime minister demanded.

When Hitler invaded Poland in September 1939, Chamberlain had no choice but to declare war against Germany, but he remained committed to finding a peaceful way out. In April 1940, however, Germany invaded Norway and Denmark, and Chamberlain's campaign of secrecy and misinformation finally rebounded on him. Caught off guard by the surprise attacks, the British government scrambled to dispatch troops to aid the Norwegians. Barely two weeks later, Chamberlain made a stunning admission to Parliament and the nation: The badly armed and equipped British forces had been routed by the enemy and were being evacuated from Norway.

On May 7 and 8, 1940, the House of Commons, in perhaps the most consequential debate in parliamentary history, engaged in a passionate examination of the prime minister's conduct of the war. Before the debate, almost no one believed that Chamberlain could be ousted. Yet in the vote of confidence that followed, more than 80 MPs deserted him. Even though Chamberlain actually won the vote, such a large Tory defection was widely considered a resounding defeat.

On May 10, Chamberlain resigned and Winston Churchill became prime minister. That same day, Hitler launched his blitzkrieg of Western Europe. In the nick of time, the House of Commons had reasserted itself as a guardian of democracy and taken the first critical step toward victory in the war.

With their action, the MPs underscored the truth of a comment made earlier by one of them: "No government can change men's souls. The souls of men change governments."

APPEASEMENT
Chamberlain, Hitler, Churchill and the Road to War
Time Bouverie
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